21st Century Community Learning Centers: Texas Afterschool Centers on Education

Final Evaluation Report: 2016–17 to 2018–19

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List of Abbreviations

21st CCLC	21st Century Community Learning Centers
AIR	American Institutes for Research
APT-O	Assessing Afterschool Program Practices Observation Tool
CTE	career and technical education
ED	U.S. Department of Education
ES	executive summary
EOC	end-of-course
ESEA	Elementary and Secondary Education Act
ESL	English as a second language
ESSA	Every Student Succeeds Act
HLM	hierarchical linear modeling
KPI	key performance indicator
LEAG	Local Evaluation Advisory Group
LESI	Local Evaluation Support Initiative
NCES	National Center for Education Statistics
NIOST	National Institute on Out-of-School Time
NYSAN	New York State Association of Neuropsychology
PEIMS	Public Education Information Management System
PQA	Program Quality Assessment
PSM	propensity score matching
RFA	request for applications
SAYO	Survey of Academic Youth Outcomes
SACERS	School-Age Care Environment Rating Scale
SAPQA	School-Age Program Quality Assessment
STAAR®	State of Texas Assessments of Academic Readiness®
STEM	science, technology, engineering, and mathematics
TAPR	Texas Academic Performance Report
TEA	Texas Education Agency
Texas ACE	Texas Afterschool Centers on Education
Tx21st	Texas 21st Student Tracking System
YPQA	Youth Program Quality Assessment

Executive Summary

The 21st Century Community Learning Centers (21st CCLC) program, funded by Title IV, Part B of the Elementary and Secondary Education Act, as renewed by the Every Student Succeeds Act (ESSA), provides grant funding to states to support "academic enrichment opportunities during non-school hours for children, particularly students who attend high-poverty and low-performing schools" (U.S. Department of Education [ED], 2018). By means of state-level subgrant competitions, states allocate this funding to schools, community-based organizations, faith-based institutions, and other agencies to provide this programming in their communities. Community learning centers are meant to "offer students a broad array of additional services, programs, and activities that are designed to reinforce and complement the regular academic program of participating students" (ED, 2015, p. 233).[1]

Since 2002, the Texas Education Agency (TEA) has provided 21st CCLC funding to hundreds of grantees and supported thousands of community learning centers, also known as Texas Afterschool Centers on Education (Texas ACE), across the state. This evaluation report focuses on a sample of 60 Texas ACE centers that the evaluation team visited in spring 2017, spring 2018, and spring 2019. The focus of this report is to examine how key center characteristics associated with the 60 Texas ACE centers represented in the site visit samples were associated with Texas ACE program attendance and school-related outcomes.

Evaluation Objectives

This report is the culminating product of a 4-year evaluation of the Texas ACE program undertaken by the American Institutes for Research (AIR), in collaboration with the Gibson Consulting Group and the Diehl Consulting Group. The evaluation of the Texas ACE program was designed to address the following six objectives:

- **Objective 1.** *Conduct an evaluation of the implementation of the Texas ACE program statewide.* This part of the evaluation involved providing a descriptive profile of Texas ACE program implementation based on administrative data captured in the state's tracking system (i.e., TX21st Student Tracking System [TX21st]) and information on program design and delivery obtained from site visits conducted at a sample of programs. In this report, examination of this objective also involves comparing centers represented in the site visits with the full domain of centers funded in the same grant cycle for the programming period in question.
- **Objective 2.** *Conduct an evaluation of the impact of the Texas ACE program on a series of school-related outcomes.* This part of the evaluation involved a quasi-experimental design to explore how youth participating in Texas ACE at various levels of attendance performed on key outcomes relative to similar youth not participating in Texas ACE. This objective included an analysis of how various center characteristics and practices may relate to youth achievement of various outcomes.
- **Objectives 3–5.** *Explore how the impact of the Texas ACE program may relate to various approaches to design and delivery and synthesize that information to identify potential best practices*

[1] "The term 'community learning center' means an entity that—
(A) assists students to meet the challenging State academic standards by providing the students with academic enrichment activities and a broad array of other activities (such as programs and activities described in subsection (a)(2)) during non-school hours or periods when school is not in session (such as before and after school or during summer recess) that—
(i) reinforce and complement the regular academic programs of the schools attended by the students served; and
(ii) are targeted to the students' academic needs and aligned with the instruction students receive during the school day; and
(B) offers families of students served by such center opportunities for active and meaningful engagement in their children's education, including opportunities for literacy and related educational development" (ED, 2015, p. 234). Activities offered by centers may include youth development activities, service learning, nutrition and health education, drug and violence prevention programs, counseling programs, arts, music, physical fitness and wellness programs, technology education programs, financial literacy programs, environmental literacy programs, mathematics, science, career and technical programs, internship or apprenticeship programs, and other ties to an in-demand industry sector or occupation for high school students.

to share with the Texas ACE community more broadly.[2] Addressing this objective largely relied on qualitative and quantitative data collected from centers included in the site visit samples.

- **Objective 6.** *Provide support and assistance to Texas ACE grantees and centers on how to undertake effective and meaningful local evaluation activities.* This part of the evaluation involved the design and implementation of the Local Evaluation Support Initiative (LESI), which involved guiding a sample of centers through an intentional process of local evaluation design and implementation.[3]

This report primarily addresses evaluation Objectives 2–6, with particular attention given to the identification of center characteristics and approaches found to be positively associated with Texas ACE attendance and school-related outcomes. Such practices and approaches may warrant consideration on the part of ACE grantees in terms of how to best design and deliver Texas ACE programming.

Evaluation Questions

The content of this report focuses on answering the following set of evaluation questions:

Chapter 2

- To what extent were the sampled Texas ACE centers representative of all active centers during the programming period in question?

Chapter 3

- What characteristics were found to be significantly related to levels of Texas ACE program attendance among centers represented in the site visit samples?[4]
- How are students' experiences in Texas ACE programs related to program attendance?
- What characteristics were found to be significantly related to positive center-level effects among centers represented in the site visit samples?

Chapter 4

- What effect does the program have on students attending Texas ACE programming for 60 days or more at centers with high adoption of Assessing Afterschool Program Practices Observation Tool (APT-O) mathematics practices relative to similar students not participating in programming or participating for less than 30 days?
- What effect does the program have on students attending Texas ACE programming for 60 days or more at centers with high adoption of practices that employ active forms of learning relative to similar students not participating in programming or participating for less than 30 days?

Chapter 5

- What is the status of efforts to support the local evaluation efforts of Texas ACE grantees?

[2] Objective 5 specifically refers to best practice briefs based on various data gathered during data collection and from information gleaned while working with Texas ACE programs through the LESI. The briefs are stand-alone, separate handouts that are not part of the current evaluation report but are cited in this report summary to emphasize their role as part of a broad strategy to inform centers of lessons learned during the evaluation years in question.
[3] These six objectives summarize those specified in TEA's Request for Proposals: Evaluation of the Texas 21st Century Community Learning Centers Program (released in 2016).
[4] In this report, the word *significant* refers to statistical significance when the null hypothesis (i.e., the chance explanation) can be rejected so that no relationship exists between variables, and any observed relationship is only a function of chance (Ary et al., 2010). The level of significance, or the probability that a Type I error (i.e., rejecting a true null hypothesis) will occur, used in this report is typically reported at the .05 and .01 levels. In addition, the term moderately significant refers to a level of significance at the $p<.10$ or the 90 percent confident interval, which means that in hypothesis testing 90 out of 100 times the decision is reached to not reject the null hypothesis (Shavelson, 1996).

- What has been learned through the development and deployment of local evaluation tools and processes?
- What steps are being taken to help codify local evaluation tools and processes?

Summary of Evaluation Findings

Chapter 2: Representation of the Site Visit Samples

In this chapter, steps were taken to examine differences in the full domain of Texas ACE centers over the 2016–17 to 2018–19 period, as well as variation between the sample of 20 centers visited in each of the 3 years and all Texas ACE centers operational in those years. Some important differences in key characteristics (e.g., the locale of the Texas ACE center, race/ethnicity of students served, number of days of program attendance, and how students spend their time during regular school year and summer Texas ACE programs) between the site visit sample and the full domain of Texas ACE centers operational in each year are evident.

For example, substantive differences in the locale of centers between the site visit sample and all centers in the state are among the largest. In spring 2017, the evaluation team visited a higher proportion of Texas ACE centers that were located in cities (58% versus 43% statewide) and a lower proportion of centers in suburban (16% versus 25% statewide) and rural locations (16% versus 21% statewide) when compared to the full domain of centers. The 2018 site visit sample contained a larger proportion of centers from suburban areas (50% versus 34% statewide), and it contained no rural centers (compared to 12% for the statewide domain). Meanwhile, the 2019 site visit sample contained a smaller proportion of centers from suburban areas (5%) than the full domain of centers across the state (28%) and a larger proportion of rural centers (35% versus 17% statewide).

Major differences in the racial/ethnic makeup of the spring 2019 sample and the full domain of centers in the state was also noted, while differences are much more modest in 2017 and 2018 samples. Hispanic students were overrepresented in the 2017 site visit sample (71% versus 64% statewide) and underrepresented in the 2019 sample (52% versus 70% statewide). African American (24% versus 14% statewide) and White students (21% versus 13% statewide) were also overrepresented in the 2019 site visit sample relative to the full domain of centers in the state.

The differences observed between the site visit samples and the full domain of centers in the state and across the 3 years of samples is not surprising. These findings are especially true for the spring 2018 and 2019 site visit samples, which were based on data that targeted lower and higher implementing centers for inclusion in the sample. Although variation between samples and the full population of centers and across the 2017 to 2019 site visit samples were observed, it is important to recognize that there was also a lot of similarity on a wide variety of characteristics, including socioeconomic status, at-risk status, English learner status, and many center-level program-related characteristics. Because of the differences observed between centers in the site visit sample and all centers statewide, some caution should be used when attempting to generalize the site visit sample to the full population of centers in a given year or pooled results across years and interpreting findings related to data collected from sampled centers.

Chapter 3: Center-Level Characteristics and Texas ACE Program Attendance and School-Related Outcomes

This chapter explores the correlation between center characteristics and youth outcomes as theorized by a conceptual framework used to guide the evaluation of the Texas ACE program. The goal in presenting the findings described in this chapter was to conduct an initial and preliminary examination of what center characteristics may be positively related to student attendance in Texas ACE programming and desirable school-related outcomes.

Center Characteristics Examined

A series of variables was constructed in the following five primary categories based on data obtained from the Texas ACE centers represented in the site visit samples:

- **Observed Quality.** Center characteristics in this group represented measures of process quality and content-specific practices derived from the Program Quality Assessment (PQA) and APT-O observation tools, respectively.
- **Organizational Processes.** Organizational processes included variables related to program goals, school community engagement, continuous quality improvement, and staffing and operational attributes.
- **Activity Practices.** Variables related to activity practices assessed the types of learning opportunities and attributes associated with Texas ACE activities students attended during the site visit period.
- **Youth Experiences.** Center characteristics in this group represented measures of the quality of interactions students participating in Texas ACE had with adult activity leaders and other youth in the program, opportunities to experience a sense of agency and autonomy, and key facets associated with motivation and engagement in learning environments.
- **Intermediate, Youth-Reported Outcomes.** Variables in this category represent those outcomes that are more likely to be directly impacted by Texas ACE program participation. That is, growth in these areas has a tendency to happen within the confines of the program and often can be observed directly by the staff leading afterschool activities. These outcomes included areas like supporting interest development, helping youth to think about their future, helping youth feel good about themselves, and boosting confidence.

Texas ACE Attendance Outcomes

Analyses conducted in relation to Texas ACE attendance outcomes were designed to answer the following question: What characteristics were found to be significantly related to Texas ACE program attendance among centers represented in the site visit samples? To answer this question, the following student-level, program attendance metrics were calculated:

- The total number of Texas ACE programming hours attended during the school year in question (hours).
- The duration of student participation in Texas ACE programming represented by the number of days between their first and last day of participation during the school year (duration).
- The total number of Texas ACE activities the student participated in during the school year (# of activities).
- Whether the student was a returning participant to the program after being enrolled in the program during the preceding summer or school year (sustained attendance).

To assess whether there was evidence of a significant relationship between center characteristics and each of the aforementioned Texas ACE attendance metrics, a series of hierarchical linear models (HLM) were constructed, with students nested in centers. The goal of these analyses was to explore how various center characteristics were related to each of the aforementioned Texas ACE program attendance outcomes. Center-level characteristics found to be significantly and positively associated with a given Texas ACE program attendance outcome are outlined in Figure ES.1. It is important to note that the analyses resulting in these findings were correlational and descriptive and should not be interpreted as a given characteristic causing a program attendance-related outcome. In this report, statistical significance occurs when a *p* value is less than .05. Moderate significance is defined as a *p* value greater than .05 but less than .10. Moderately significant findings represent a greater probability that a Type I error (i.e., incorrectly rejecting a true null hypothesis that there is no relationship between the variables being examined) will occur. Most tables and figures include findings that are both significant and moderately significant, including Figure ES.1.

Figure ES.1. Center Characteristics Found to Be Significantly and Positively Associated with Texas ACE Program Attendance Outcomes

ACE Attendance Hours	ACE Attendance Duration	Number of ACE Activities Attended	Sustained Attendance in ACE
Process Quality • PQA Interaction **Content-Specific Practices** • APT-O Writing Practices • APT-O Mathematics Problem-Solving Practices – Youth-based **Program Goals** • Build social and emotional learning skills • Address behavioral issues • Provide academic and creative enrichment opportunities **Data Use and Evaluation** • Periodic review of program data **Staffing or Operational Practice** • High summer programming hours **Youth Experiences** • Challenge **Youth-Reported Outcomes** • With my confidence • Support new interest development	**Process Quality** • PQA Interaction • PQA Engagement **Content-Specific Practices** • APT-O Writing Practices • APT-O Verbal Practices – Staff-based • APT-O Mathematics Problem-Solving Practices –Youth-based **Program Goals** • Build social and emotional Learning skills • Provide academic and creative Enrichment activities **Data Use and Evaluation** • Periodic review of program data **Advisory Board Practices** • Programming input **Staffing or Operational Practice** • High summer programming hours • Activity practices • Working alone on tasks	**Process Quality** • PQA Supportive Environment **Content-Specific Practices** • APT-O Reading Practices **Data Use and Evaluation** • Obtaining youth input on programming **Advisory board practices** • General guidance and feedback **Activity Practices** • Working alone on tasks • Working in small groups • Exploration and discovery **Youth Experiences** • Opportunities for agency • Positive perceptions of other youth • Learned something	**Content-Specific Practices** • APT-O Reading Practices **Program Goals** • Provide academic and creative enrichment activities **Activity Practices** • Working alone on tasks • Students planning future activities **Youth Experiences** • Positive perceptions of other youth • Challenge • Engagement **Youth-Reported Outcomes** • School-related outcomes • Think about the future

Note. ACE – Afterschool Centers on Education. Exhibit includes both statistically significant ($p<.05$) and moderately significant ($p<.10$) findings.

School-Related Outcomes

To examine how center characteristics were related to school-related outcomes, steps were first taken to calculate center-level effects in relation to the following school-related outcomes:

- Performance on the State of Texas Assessments of Academic Readiness (STAAR)-Mathematics assessment
- Performance on the STAAR-Reading assessment
- Percentage of school days attended
- Number of disciplinary incidents

To calculate center-level effects, propensity score matching (PSM) was used to match Texas ACE program participants with similar nonparticipants at the center level. That is, for each center, students were matched to non-attending students who were enrolled in the school or schools affiliated with the center. This approach allowed the evaluation team to explore more carefully how participation in Texas ACE may be related to school-related outcomes by controlling for preexisting differences between students that would otherwise influence analysis results. This process resulted in each center having a specific effect estimate of how Texas ACE participation was associated with school-related outcomes. It is important to note that this approach to calculating center-level effects does not control for some student characteristics such as student interest or motivation to attend programming or certain family characteristics like parent involvement. In this sense, there may be some key differences between students attending programming and those who opted not to attend that are not controlled for in these models, which could be biasing the results.

Two sets of center-level effects were calculated. For one set, students attending the program for 60 days or more during the school year in question were matched with students attending the same schools served by the center but not participating in the program. For the second set of analyses, students attending Texas ACE for 60 days or more in both the current and preceding school year were matched with nonparticipating students.

Center-level characteristics found to be significantly and positively associated with a given school-related outcome are outlined in Figure ES.2. The results highlighted in Figure ES.2 involve both significant and moderately significant findings. If a given characteristic was positively associated with the school-related outcome after 1 year of participation in Texas ACE programming for 60 days or more (1 year) and/or 2 years of participation at this level (2 years), it is noted in parentheses. It is important to note that the analyses resulting in these findings were correlational and descriptive and should not be interpreted as a given characteristic causing a school-related outcome.

Almost all of the variables in Figures ES.1 and ES.2 have a basis in the youth development and afterschool literature as being associated with positive youth outcomes and/or have some representation in the Texas ACE Blueprint. As a result, although the findings highlighted in this chapter are correlational and descriptive, there still may be some value in Texas ACE programs considering these practices, processes, youth experiences, and intermediate outcomes in the design and delivery of Texas ACE programming.

Figure ES.2. Center Characteristics Found to Be Significantly and Positively Associated with School-Related Outcomes

STAAR-Reading	STAAR-Mathematics	School-Day Attendance	Disciplinary Incidents
Content-Specific Practices • APT-O Writing Practices (2 years) • APT-O Writing Practices – Youth-based (2 years) • APT-O Mathematics Practices (2 years) • APT-O Mathematics Communication and Reasoning Practices – Youth-based (2 years) **Program Goals** • Build social and emotional learning skills (1 year, 2 years) **Data Use and Evaluation** • Periodic review of program data (2 years) • Obtaining youth input on programming (1 year) **Advisory Board Practices** • Planning input (2 years) **Target Population** • Broader target population (2 years) **Activity Practices** • Working in small groups (1 year) **Youth Experiences** • Relevance (2 years)	**Process Quality** • PQA Interaction (1 year) **Content-Specific Practices** • APT-O Mathematics Practices (2 years) **Data Use and Evaluation** • Obtaining youth input on Programming (1 year) **Activity Practices** • Working alone on tasks (1 year) **Youth-Reported Outcomes** • With my confidence (2 years)	**Process Quality** • PQA Supportive Environment (1 year) **Content-Specific Practices** • APT-O Writing Practices (1 year) • APT-O Writing Practices – Youth-based (1 year) **Activity Practices** • Planning future activities (1 year) • Exploration and discovery (1 year) **Youth Experiences** • Positive perceptions of other Youth (1 year) • Relevance (1 year) • Learned something (2 years)	**Process Quality** • PQA Supportive Environment (2 years) **Data Use and Evaluation** • Obtaining youth input on Programming (2 years) **Activity Practices** • Planning future activities (1 year) • Learning or practicing nonacademic skills (2 years) • Direct instruction (2 years) • Engaged in discussion (2 years) • Designed to make a contribution (2 years) **Youth-Reported Outcomes** • School-related outcomes • Think about the future

Note. Exhibit includes both statistically significant and moderately significant findings. Indications of *1 year* represent significant or moderately significant findings after students had participated in Texas ACE programming for 60 days or more over 1 year, and indications of *2 years* represent significant or moderately significant findings after students had participated in Texas ACE programming for 60 days or more over 2 years.

Chapter 4: The Impact of Texas Afterschool Centers on Education on Youth Outcomes

This chapter explores how centers characterized by two types of center-level practices that were associated with a specific school-related outcome in Chapter 3 were found to be associated with positive program effects when adoption of that practice exceeded a specific threshold. There are two types of center-level practices examined in this chapter:

1. **APT-O Mathematics Practices.** The evaluation team hypothesized that greater adoption of these practices would be associated with positive program effects in STAAR-Mathematics specifically and potentially STAAR-Reading. Positive, center-level effects were especially noteworthy when centers were found to have adopted 15 or more APT-O mathematics practices across the Texas ACE activities observed during the site visits. A total of 36 centers in the site visit samples met or exceeded the 15-practice threshold.
2. **Activities That Represent Active Forms of Learning.** Results from Chapter 3 also demonstrated that activities that offer more active forms of learning were associated with fewer disciplinary incidents. Three specific types of activities were found to be associated with fewer disciplinary incidents: activities during which (1) youth planned future activities or projects; (2) youth participated in whole-group discussions facilitated by staff; and (3) youth participated in an activity that was designed to make a contribution or be helpful to others or the community.

   For example, one threshold for which center-level effects seemed to tilt toward greater reduction in disciplinary incidents occurred when 38% or more of the activities involved youth spending most of their time planning future activities. In centers at or above this threshold, students participating in Texas ACE for 60 days or more over a year had a disciplinary rate that was 19.5% lower on average than that for similar nonparticipating youth. In centers below this threshold, students participating at the 60 days or more threshold only had a disciplinary rate that was 3.9% lower on average than that for similar nonparticipating youth. In addition, greater reduction in disciplinary incidents appeared to occur when 29% or more of the activities involved youth spending most of their time engaging in discussion and 54% or more of the activities involved working to make a contribution. Collectively, a total of 26 centers across the site visit samples exceeded the threshold level on one or more activity practices associated with active forms of learning.

A series of analyses using PSM and HLM were undertaken with those centers that were found to have adopted 15 or more APT-O mathematics practices in relation to STAAR-Mathematics outcomes and those centers adopting more active forms of learning in relation to disciplinary incidents. The goal in undertaking these analyses was to create effect estimates that could be compared with the effectiveness analyses conducted in previous evaluation reports employing similar methods to determine whether there was an indication that program effects would be greater in centers that had adopted these specific practices.

In terms of centers with higher adoption of APT-O mathematics practices, no significant program effects were found across any of the analyses conducted. However, most of the analyses related to higher adoption of practices reflective of active forms of learning were found to result in significant findings, indicating an association with fewer disciplinary incidents. These results may suggest that greater adoption of these practices was associated with fewer disciplinary incidents among students participating in Texas ACE programming for 60 days or more; however, the analyses that were undertaken did not result in evidence of a direct link between adoption of practices that support active forms of learning and a reduction in disciplinary incidents among Texas ACE participants.

The results from analyses examining the effect of centers more aggressively adopting active forms of learning on disciplinary incidents are among the most notable from the effectiveness analyses undertaken by the evaluation team over the past 4 years. In the preceding two evaluation reports, analyses examined the effect of participating in Texas ACE programming for 60 days or more for 2 years across all centers active during a given programming period. These results also demonstrated that participation in Texas

ACE programming for 60 days or more for 2 years was associated with a significant reduction in disciplinary incidents relative to similar students not participating in programming. However, the results of these analyses demonstrated that sustained participation in Texas ACE programming at the 60 days or more level was associated with a disciplinary rate that was 6% to 36% lower than the rate for similar nonparticipating youth.

When limiting the treatment group to include only students attending centers adopting more active forms of learning, participation in Texas ACE programming at the 60 days or more threshold was associated with a disciplinary rate that was 51% lower than the rate for similar nonparticipating students. For students in Grades 1–5 participating in Texas ACE for 60 days or more over 2 years, the disciplinary rate was 70% lower than the rate for similar nonparticipating students.

Chapter 5: Local Evaluation Summary

One of the guiding objectives of the statewide evaluation of the Texas 21st CCLC program is to provide support and assistance to Texas ACE grantees and centers on how to engage in effective and meaningful local evaluation activities. To accomplish this objective, the statewide evaluation team has supported a LESI for the last 3 years.

Meaningful Local Evaluation Key Principles. The purpose of the LESI is to support centers' capacity to engage in and conduct relevant, meaningful local evaluations that direct program improvement and support sustainability in a tangible way. The vision for this work was based on several key principles that drove the development and use of meaningful local evaluations: (1) collaborative processes, (2) intentional program design, (3) assessment of implementation, (4) locally informed and accessible measures, and (5) a focus on center capacity.

Local Program Evaluation Concept. In 2017–18, up to 32 Cycle 9 centers were invited to participate in LESI if they met the requirements related to their center's capacity to participate in the process and met all expectations. Participants attended five training webinars on principles of local evaluation and submitted items (e.g., logic models, evaluation plans, actions plans, and evaluation report [optional]) to the evaluation team for feedback throughout the year. During that same year, a local evaluation advisory group (LEAG) was created to provide input on a new Local Evaluation Guide and accompanying Local Evaluation Toolkit, which replaced the original Texas ACE Independent Evaluation Guide. The guide walks Texas ACE programs through a step-by-step process to plan and conduct an evaluation, while providing a toolkit of templates, tools, and measures to support implementation.

A similar model was implemented in Year 2 of LESI with 19 grantees and 31 centers from Cycles 9 and 10 in 2018–19. An updated Local Evaluation Guide and Toolkit was also produced in Year 2 to reflect additional input from centers and stakeholders. In Year 3 (2019–20), the statewide evaluation team proposed a new more personalized coaching approach for LESI that included working with fewer centers to provide more frequent, individualized feedback to centers and grantees throughout the year to gain a deeper understanding and implementation by centers. Nine Texas ACE centers were initially recruited in the fall of 2019; however, only six stayed throughout the initiative, as one grantee with three centers withdrew due to competing responsibilities. In Year 3, the statewide evaluation team updated the Local Evaluation Toolkit with a local evaluation capacity checklist that Texas ACE centers can use to reflect as a team on their center's capacity to engage in meaningful local evaluation in various areas. From November 2019 to July 2020, a total of 64 coaching support contacts were made between LESI liaisons and participants through email or phone conversations. The coaching support typically focused on providing feedback on logic models, evaluation plans, action plans, or evaluation reports. The coaching approach taken in Year 3 of the initiative was more labor intensive, as it was intended to provide individualized support; however, the process was not fully implemented due to disruptions prompted by the COVID-19 pandemic.

Perspectives and feedback were gathered both formally and informally from LESI participants through a reflection survey and email communications. Five themes emerged from the participants about the success or challenges of the initiative:

Local Evaluation Plans helped Texas ACE programs make program improvements. Also, the feedback process provided to programs on logic models and evaluation plans by LESI liaisons was noted as particularly useful. Challenges with the process included finding time to organize evaluation teams around busy schedules.

Quality Assessment Trainings were noted as some of the most significant successes as Texas ACE programs gained new ideas from trainings and progressed toward quality assessment goals. Centers noted challenges implementing a quality assessment process, including conducting multiple observations when a variety of activities are offered.

Action Planning was highlighted by some participants for helping to facilitate collaboration better between school-day and Texas ACE staff. However, some Texas ACE programs noted that challenges included lack of awareness among new [school-day] teachers' understanding of ACE and how students could be identified and connected to the program.

Impacts of the COVID-19 Pandemic in early spring 2020 led to school closures and a move toward virtual learning, which also led to less frequent contact between LESI liaisons and Texas ACE participants. Survey participants reported general challenges with the transition to virtual learning and being disconnected from staff, which affected communication, and LESI liaisons also saw a decrease in coaching contacts in the spring of 2020.

Overall Value of Participation in LESI was noted by survey participants or noted by those in contact with LESI liaisons. Specifically, participants reported that LESI helped them gain a different perspective on data collection and how to use the information in planning and program improvement. As with all aspects of LESI, participation in coaching was voluntary. As a result, levels of participation varied across grantees. There was some evidence that grantees saw the value of the work through follow-up correspondence and requests to review materials.

Local Evaluation Resources. Another initiative during the 2019–20 academic year focused on producing a set of resources on local evaluation to sustain the initiative beyond the 21st CCLC evaluation grant and to reach the broader set of Texas ACE grantees. The resources include five short tutorial training videos related to key concepts from the Texas ACE Local Evaluation Guide and Toolkit as well as a LESI technical assistance process guide. The 15- to 20-minute tutorials focus on the main takeaways from the guide and toolkit to appeal to a wide range of adult learners and to engage centers in ways the written documents might not. Topics included logic models, process and outcome evaluation, PQA, action planning, and evaluation reporting.

The individual coaching aspects of LESI during the 2019–20 school year provided an additional layer of support to grantees participating in LESI that was different from the process from Years 1 and 2. Coaching contacts served to individualize information shared with participants, provide a consistent contact throughout the experience, and provide continuity for the review of submitted materials. Although there was some evidence of the overall value of a centers' participation in the experience, LESI liaisons reported some challenges with communication, which contributed to variance in the level of support provided to specific centers. In addition, because there was no collaboration between the LESI evaluation team and the 21st CCLC technical assistance team, the activities across the two areas might not always have been clear in their distinction and intent to LESI participants.

Chapter 6: Summary of Findings and Recommendations

Figure ES.3 outlines those practices, processes, and youth experiences and intermediate outcomes that were found to be positively associated with more than one Texas ACE attendance or school-related outcome based on the results summarized in Chapter 3. Again, the goal in conducting these analyses was to identify those variables that may warrant additional attention when considering the design and delivery of Texas ACE programming. Almost all of the variables highlighted in Figure ES.3 have a basis in the youth development and afterschool literature as being associated with positive youth outcomes and/or

have some representation in the Texas ACE Blueprint, particularly in sections related to strategic planning, community engagement, and internal quality assurance.

- Portions of both the PQA and APT-O were found to be positively associated with Texas ACE program attendance and school-related outcomes. Use of these types of observation-based instruments are representative of the internal quality assurance processes described in the Texas ACE Blueprint, as are processes used to conduct a periodic review of program data and obtain youth input on programming. The evaluation team also took steps to support grantees in engaging in these processes through the LESI described in Chapter 5.
- The focus on social and emotional learning and youth having positive perceptions of other youth attending Texas ACE programming was also found to be associated with several of the ACE attendance- and school-related outcomes. There is meaningful evidence in the youth development and afterschool literature that programs like Texas ACE can have a substantive impact on social and emotional outcomes and that the types of process quality-related practices described in the PQA can help support the achievement of these outcomes as well (Durlak & Weissberg, 2007; Durlak, Weissberg et al., 2010; Payton et al., 2008; Smith et al., 2016). Findings related to student perceptions of other youth attending programming suggested that this was one area in which there was an opportunity for growth on the part of Texas ACE centers.
- Obtaining youth input on programming, providing youth with opportunities to plan future activities, and affording them the opportunity to participate in activities through which they can independently explore and discover support youth in experiencing a sense of agency by allowing choice and autonomy in program offerings. As noted by Larson and Dawes (2015), 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 goals they are pursuing. This approach 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. This factor may also be part of the reason why youth reporting that the program helped them with their confidence was found to be positively associated with some of the outcomes examined.
- Youth experiencing challenge, relevance, and a sense they were learning something or getting better at something while participating in Texas ACE programming was also associated with multiple Texas ACE and school-related outcomes. Each of these experiences are supported by the literature on student motivation and engagement (Assor et al., 2002; Csikszentmihalyi, 1990; Csikszentmihalyi & Schneider, 2000; Larson & Dawes, 2015; Shumow & Schmidt, 2014). Youth experiencing challenge in particular was one experience that was not commonly associated with student participation in Texas ACE programming. More work could be done in this area to help programs provide additional levels of challenge in the activities they offer, although the evaluation team strongly recommends this be coupled with activities designed to provide youth with an opportunity to experience a sense of agency and autonomy. Larson and Angus (2011) provide especially helpful insights into connecting challenge in youth development programming with positive student outcomes.
- One center-level characteristic that was not hypothesized by the evaluation team to be associated with either Texas ACE attendance or school-related outcomes was related to students working alone on tasks associated with the ACE activity. It seems likely that this activity in particular is associated with student skill-building, particularly in academic content areas like STAAR-Reading and STAAR-Mathematics.
- Finally, high levels of Texas ACE summer programming (defined as offering 150 hours or more of programming) was found to be positively associated with outcomes related to Texas ACE program attendance during the following school year. This finding would seem to suggest that keeping students engaged in programming may help promote continued attendance in programming during the following school year.

Although these findings are correlational, there still may be some value in Texas ACE programs considering practices, processes, youth experiences, and intermediate outcomes in the design and

delivery of Texas ACE programming, particularly because almost all of these considerations are reinforced as effective practices in both the Texas ACE Blueprint and the youth development and afterschool literature.

Recommendations

Most of the center-level characteristics found to be related to Texas ACE program attendance and school-related outcomes are consistent with practices described both in the Texas ACE Blueprint and youth development and afterschool literature. In light of this, it seems that the primary way that TEA can capitalize on the results highlighted in this report is to engage in dialogue with the Texas ACE grantee community about whether some of the practices outlined in this report could be elevated to a greater degree when ACE programs go about the process of designing and delivering programming. For example, TEA may want to explore how existing program infrastructures can be leveraged to communicate about these types of practices:

- Are there ways to further elevate some of these practices in the professional development opportunities provided to Texas ACE grantees?
- Are there ways that the Texas ACE Blueprint, quality assurance process, and local evaluation guidelines can be modified to help Texas ACE grantees further reflect on their efforts to adopt practices found to be related to program attendance and school-related outcomes?

Given the evaluation findings, TEA may want to consider elevating active forms of learning given the association found between the presence of these activities and fewer disciplinary incidents in particular. It may also be appropriate to take additional steps to study these types of activities as part of future evaluation efforts with the goal of validating the efficacy of these approaches, while collecting additional contextual data on what constitutes effective practice when undertaking such offerings.

In addition, TEA may consider the ways in which it will continue to sustain local evaluation efforts on the part of Texas ACE grantees and centers that began under LESI and as part of the development work to create the Texas ACE Local Evaluation Guide and Toolkit. There is a range of support options for TEA to consider as well as whether those options should offer less hands-on support by continuing to make the Local Evaluation Guide and Toolkit and associated learning tutorials available to grantees and centers statewide. Other options to consider include a coaching model to support local evaluation efforts by an external provider based on elements and lessons learned from Year 3 of LESI implementation or bringing together a LEAG periodically to understand whether the Local Evaluation Guide and Toolkit need to be updated or whether resources should be added as programs continue to evolve in their programming and services.

Figure ES.3. Variables Found to Be Significantly and Positively Associated with More Than One Texas ACE Program Attendance and/or School-Related Outcome

Point-of-Service Quality Area	Organizational Processes	Activity Practices	Youth Experiences	Intermediate Youth-Reported Outcomes
• PQA Interaction • PQA Supportive Environment • APT-O Reading Practices • APT-O Writing Practices • APT-O Writing Practices – Youth-based • APT-O Mathematics Practices	• Build social and emotional learning skills • Provide academic and creative enrichment opportunities • Obtain youth input on programming • Periodic review of program data • High summer programming hours	• Working alone on tasks • Planning future activities • Working in small groups • Exploration and discovery	• Positive perceptions of other youth • Challenge • Relevance • Learned something	• Increased confidence

Note. ACE – Afterschool Centers on Education. Exhibit includes both statistically significant and moderately significant findings.

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Chapter 1: Introduction

The 21st Century Community Learning Centers (21st CCLC) program, funded by Title IV, Part B of the Elementary and Secondary Education Act, as renewed by the Every Student Succeeds Act (ESSA), provides grant funding to states to support "academic enrichment opportunities during non-school hours for children, particularly students who attend high-poverty and low-performing schools" (U.S. Department of Education [ED], 2018). By means of state-level subgrant competitions, states allocate this funding to schools, community-based organizations, faith-based institutions, and other agencies to provide this programming in their communities. Community learning centers are meant to "offer students a broad array of additional services, programs, and activities that are designed to reinforce and complement the regular academic program of participating students" (ED, 2015, p. 233).[5]

Since 2002, the Texas Education Agency (TEA) has provided 21st CCLC funding to hundreds of grantees and supported thousands of community learning centers, also known as Texas Afterschool Centers on Education (Texas ACE), across the state. This evaluation report focuses on a sample of 60 Texas ACE centers that the evaluation team visited in spring 2017, spring 2018, and spring 2019. The focus of this report is to examine how key center characteristics associated with the 60 Texas ACE centers represented in the site visit samples were associated with Texas ACE program attendance and school-related outcomes.

Evaluation Objectives

This report is the culminating product of a 4-year evaluation of the Texas ACE program undertaken by the American Institutes for Research (AIR), in collaboration with the Gibson Consulting Group and the Diehl Consulting Group. The evaluation of the Texas ACE program was designed to address the following six objectives:

- **Objective 1.** *Conduct an evaluation of the implementation of the Texas ACE program statewide.* This part of the evaluation involved providing a descriptive profile of Texas ACE program implementation based on administrative data captured in the state's tracking system (i.e., TX21st Student Tracking System [TX21st]) and information on program design and delivery obtained from site visits conducted at a sample of programs. In this report, examination of this objective also involves comparing centers represented in the site visits with the full domain of centers funded in the same grant cycle for the programming period in question.
- **Objective 2.** *Conduct an evaluation of the impact of the Texas ACE program on a series of school-related outcomes.* This part of the evaluation involved a quasi-experimental design to explore how youth participating in Texas ACE at various levels of attendance performed on key outcomes relative to similar youth not participating in Texas ACE. This objective included an analysis of how various center characteristics and practices may relate to the achievement of various youth outcomes.

[5] "The term 'community learning center' means an entity that—
(A) assists students to meet the challenging State academic standards by providing the students with academic enrichment activities and a broad array of other activities (such as programs and activities described in subsection (a)(2)) during non-school hours or periods when school is not in session (such as before and after school or during summer recess) that—
(i) reinforce and complement the regular academic programs of the schools attended by the students served; and
(ii) are targeted to the students' academic needs and aligned with the instruction students receive during the school day; and
(B) offers families of students served by such center opportunities for active and meaningful engagement in their children's education, including opportunities for literacy and related educational development" (ED, 2015, p. 234).

Activities offered by centers may include youth development activities, service learning, nutrition and health education, drug and violence prevention programs, counseling programs, arts, music, physical fitness and wellness programs, technology education programs, financial literacy programs, environmental literacy programs, mathematics, science, career and technical programs, internship or apprenticeship programs, and other ties to an in-demand industry sector or occupation for high school students.

- **Objectives 3–5.** *Explore how the impact of the Texas ACE program may relate to various approaches to design and delivery and synthesize that information to identify potential best practices to share with the Texas ACE community more broadly.*[6] Addressing this objective largely relied on qualitative data collected from centers included in the site visit samples.
- **Objective 6.** *Provide support and assistance to Texas ACE grantees and centers on how to undertake effective and meaningful local evaluation activities*. This part of the evaluation focused on the design and implementation of the LESI, which involved guiding a sample of centers through an intentional process of local evaluation design and implementation.[7]

This report primarily addresses evaluation Objectives 2–6, with particular attention given to the identification of center characteristics and approaches found to be positively associated with Texas ACE attendance and school-related outcomes. Such practices and approaches may warrant consideration on the part of ACE grantees in terms of how to best design and deliver Texas ACE programming.

Texas ACE Programming Periods

This report presents statewide program evaluation findings pertaining to Texas ACE programs funded as part of grant Cycles 8, 9, and 10. TEA typically awards 21st CCLC grants for a 5-year period. In any given year, two cycles are in operation at different years of their grants. This report focuses on Cycle 8 centers operating in 2016–17, Cycle 9 centers operating in 2017–18, and Cycle 9 and 10 centers operating in 2018–19. In addition, one chapter of this report also explains work done on a local evaluation initiative in 2019–20 for Cycle 9 and 10 grantees. Table 1.1 includes the grant year of the Texas ACE centers represented in the site visit samples, the cycle in which they were funded, and the programming year when data collection took place.

Table 1.1. 21st Century Community Learning Centers Cycles 8–10 Grantees, by Grant Years Represented in This Evaluation Report

Grant Year	Cycle 8	Cycle 9	Cycle 10	Notes
2013–14	Year 1	—		
2014–15	Year 2	—		
2015–16	Year 3	—		
2016–17	Year 4	Year 1		Extant and site visit data covered in report – Cycle 8
2017–18	Year 5	Year 2		Extant and site visit data covered in report – Cycle 9
2018–19	—	Year 3	Year 1	Extant and site visit data covered in report – Cycles 9 and 10
2019–20	—	Year 4	Year 2	Local Evaluation Support Initiative (LESI) period covered in report

Note. The period covered in this report includes the following: Cycle 8: Year 4, Cycle 9: Years 2 and 3, and Cycle 10: Year 2. The Local Evaluation Support Initiative occurred in 2019–20 and included Cycles 9 and 10.

Summary of Findings from Previous Reports

Texas ACE programs support the academic development of participating students and promote behaviors that will contribute to school-day success. In terms of effectiveness analyses undertaken in relation to the 2014–15 to 2017–18 programming periods, it was hypothesized that the more students participated in programming, as measured by days of attendance, the more likely they would benefit from their

[6] Objective 5 specifically refers to best practice briefs based on various data gathered during data collection and from information gleaned while working with Texas ACE programs through the LESI. The briefs are stand-alone, separate handouts that are not part of the current evaluation report but are cited in this report summary to emphasize their role as part of a broad strategy to inform centers of lessons learned during the evaluation years in question.
[7] These six objectives summarize those specified in TEA's Request for Proposals: Evaluation of the Texas 21st Century Community Learning Centers Program (released in 2016).

participation. This hypothesis was tested in a series of effectiveness analyses conducted to assess how student participation in Texas ACE at various levels during the course of a school year was related to improvement on a series of school-related outcomes relative to similar students not participating in Texas ACE. As evidenced in previous evaluation report findings (Arellano et al., 2020; Naftzger, Arellano et al., 2020), the results from these analyses were generally mixed.

The hypothesized relationship between higher levels of program attendance and student outcomes was consistently supported by evidence of a positive relationship between participation in Texas ACE and both school-day attendance and the earning of career and technical education (CTE) credits compared to similar students not participating in ACE programming. These results were found across the 2014–15 to 2017–18 programming periods. However, the differences observed between students participating in Texas ACE and similar students not participating in the program were rather small. Most effects associated with Texas ACE participation at 45 days or more were indicative of an improvement in school-day attendance of only 0.3 to 1.4 percentage points in terms of the percentage of school days attended during the school year. This approximates to a half day to 2.5 more school days attended from Texas ACE participants compared with similar youth in the comparison group (assuming a 180-day school year). The difference in the CTE credits earned ranged from 1.80 to 3.20 percentage points in favor of Texas ACE participants relative to similar students not participating in Texas ACE programming.

For both disciplinary incidents and student performance on the STAAR-Mathematics assessment, lower levels of participation in Texas ACE were associated with a significant, undesirable effect (i.e., more disciplinary incidents and lower STAAR-Mathematics scores among Texas ACE participants) when compared with similar students not participating in Texas ACE.[8] However, this result changed as participation in Texas ACE increased, ultimately resulting in a significant and desirable association between higher levels of program participation and performance on each outcome. These results were found across the 2014–15 to 2017–18 programming periods for disciplinary incidents and the 2015–16 to 2017–18 programming periods for STAAR-Mathematics. These results were particularly significant in the case of students participating in Texas ACE for 120 days or more, who had disciplinary incident rates that were 21% to 25% lower than the rates for similar nonparticipating youth.

In terms of reading achievement, a negative relationship was found between participation in Texas ACE and STAAR-Reading assessment scores, although most differences between students participating in Texas ACE and those students who were not enrolled in programming were relatively small. These results were found across the 2014–15 to 2017–18 programming periods.

Finally, a notable difference on the grade-level promotion outcome was observed between single-year and 2-year participation in Texas ACE for 60 days or more. When examining pooled effect estimates related to various program attendance bands for 1 year of program participation, no significant differences were found between students participating in Texas ACE and similar students not enrolled in the program. However, when considering participation in Texas ACE across two programming years at the 60 days or more threshold, students participating in Texas ACE had a 42% to 60% higher chance of being promoted to the next grade level relative to nonparticipating youth. These results were found across the 2014–15/2015–16 and 2016–17/2017–18 programming periods. Some important grade-level differences were noted here as well, with negative effects on grade-level promotion associated with students in elementary grade levels and positive effects associated with students in middle and high school.

Generally, the effectiveness analyses summarized in the previous evaluation reports related to this project found relatively few definitive indications that participation in Texas ACE is having a substantial positive effect on the school-related outcomes examined. The most substantive effects were associated

[8] In this report, the word *significant* refers to statistical significance when the null hypothesis (i.e., the chance explanation) can be rejected so that no relationship exists between variables, and any observed relationship is only a function of chance (Ary et al., 2010). The level of significance, or the probability that a Type I error (i.e., rejecting a true null hypothesis) will occur, used in this report is typically reported at the .05 and .01 levels. In addition, the term *moderately significant* refers to a level of significance at the $p<.10$ or the 90% confident interval, which means that in hypothesis testing 90 out of 100 times the decision is reached to not reject the null hypothesis (Shavelson, 1996).

with a reduction in disciplinary incidents when students participated for 120 days or more and in relation to grade-level promotion for students attending Texas ACE for 2 years or more at 60 days or more.

However, as summarized in the evaluation report pertaining to the 2017–18 programming period (Naftzger, Arellano et al., 2020), steps were taken to explore how centers varied in terms of what effect they may have had on student outcomes by calculating individual effect sizes for each center. One goal for calculating center-level effect sizes for each active center during the 2017–18 programming period was to identify how many centers were found to have a positive effect associated with student outcomes and how many centers had a negative effect associated with youth outcomes. These data also allowed for an examination of how center-level effects varied across different center characteristics. Results from these analyses suggested a possible pathway from select program practices to key youth experiences in programming to positive youth outcomes that looked akin to the following:

- Higher Program Quality Assessment (PQA) and Assessing Afterschool Program Practices Observation Tool (APT-O) scores were associated with better youth-reported experiences in programming.
- Certain types of youth experiences in programming, notably more opportunities to experience a sense of agency, better relationships with activity leaders and other youth in the program, and feelings of being engaged in program activities, were associated with students' indicating that the program helped them with their confidence and feel better about themselves.
- When a greater proportion of Texas ACE participants indicated that the program helped them feel good about themselves or with their confidence, centers were more likely to demonstrate larger effect sizes in relation to STAAR-Mathematics and Reading assessment scores, fewer disciplinary incidents, and greater school-day attendance.

Finally, some content-specific practices were associated with larger effects in the school-related outcomes examined. Centers with greater adoption of mathematics and verbal communication practices outlined on the APT-O were associated with larger center-level effects related to STAAR-Mathematics achievement. Specifically, these larger center-level effects were associated with students attending Texas ACE programming for 60 days or more for 2 years.

Evaluation Questions

Building on findings from the evaluation report associated with the 2017–18 programming period, this report summarizes findings from analyses further exploring the relationship between a select set of center characteristics and program outcomes, specifically Texas ACE program attendance and school-related outcomes. These center characteristics were largely derived based on data collected from a sample of 60 Texas ACE centers visited by members of the evaluation team each spring across 3 years from 2017 through 2019. The content of this report focuses on answering the following set of evaluation questions:

Chapter 2

- To what extent were the sampled Texas ACE centers representative of all active centers during the programming period in question?

The focus of this chapter is to explore how representative the site visit samples were relative to the full domain of Texas ACE centers operating during a given reporting period.

Chapter 3

- What characteristics were found to be significantly related to levels of Texas ACE program attendance among centers represented in the site visit samples?
- How are students' experiences in Texas ACE programs related to program attendance?

- What characteristics were found to be significantly related to positive center-level effects among centers represented in the site visit samples?

Chapter 3 outlines the domain of center characteristics that were explored in terms of how they may be related to Texas ACE program attendance and school-related outcomes. The chapter contains descriptions of each characteristic and the degree to which the characteristics were represented among centers in the site visit samples. The chapter also describes positive associations found between the center characteristics examined and Texas ACE program attendance and school-related outcomes through a series of multilevel and regression analyses.

Chapter 4

- What effect does the program have on students attending Texas ACE programming for 60 days or more at centers with high adoption of APT-O mathematics practices relative to similar students not participating in programming or participating for less than 30 days?
- What effect does the program have on students attending Texas ACE programming for 60 days or more at centers with high adoption of practices that employ active forms of learning relative to similar students not participating in programming or participating for less than 30 days?

Chapter 4 focuses on centers that had high adoption of either APT-O mathematics practices or practices related to active forms of learning. Based on results summarized in Chapter 3, it was hypothesized that students attending Texas ACE programming with high adoption of APT-O mathematics practices may be associated with larger effects on STAAR-Mathematics scores compared to what has been observed in previous effectiveness analyses conducted in relation to the 2014–15 to 2017–18 programming periods. A similar hypothesis was formulated in relation to students attending Texas ACE programming at centers with greater adoption of practices related to active forms of learning and fewer disciplinary incidents. A quasi-experimental design was used to assess the effect of Texas ACE participation specifically within those centers with high adoption of APT-O mathematics practices and those practices related to active forms of learning. When conducting these analyses, the treatment group consisted of students in these centers who had participated in Texas ACE programming for 60 days or more for 1 or 2 years. Comparison groups were based on similar students not participating in programming or students who had attended Texas ACE programming but for less than 30 days.

Chapter 5

- What is the status of efforts to support the local evaluation efforts of Texas ACE grantees?
- What has been learned through the development and deployment of local evaluation tools and processes?
- What steps are being taken to help codify local evaluation tools and processes?

This chapter discusses the approach taken to implement a local evaluation approach with a set of Texas ACE programs over 3 years of implementation. The chapter focuses on Year 3 of the LESI implementation during the 2019–20 academic year. The approach to supporting a set of Texas ACE centers consisted of group training through webinars and feedback provided throughout the year by LESI Evaluation Liaisons on artifacts produced by participating centers related to their local evaluation efforts. A unique aspect of the Year 3 LESI was a more personalized coaching support approach with a small set of Texas ACE programs from Cycles 9 and 10 around supporting local evaluation efforts and continuous improvement. Feedback and support was provided to LESI participants in the following focus areas: (1) local evaluation plan development, (2) quality assessments, (3) action planning, (4) impact of the COVID-19 pandemic on engaging in local evaluation, and (5) overall value and suggestions.

In the final year of LESI, there was a focus on sustaining the local evaluation efforts that were generated over the 3 years of the initiative. As part of this endeavor to continue to sustain the work beyond the current evaluation contract, the Texas ACE Local Evaluation Guide and Toolkit were finalized and can continue to serve as living documents and resources to guide programs in their continuous improvement

efforts. In Year 3 of LESI, a local evaluation capacity checklist was added to the toolkit. The toolkit is meant for center staff to reflect as a team in various areas of local evaluation. In addition, a series of five short tutorial training videos related to key concepts from the Texas ACE Local Evaluation Guide and Toolkit was created. The idea for the training videos was to create a variety of learning opportunities and styles for adult learners. Moving forward, TEA may consider how to continue to make the local evaluation activities and support available statewide and provide the level of support needed to engage programs in continuous improvement.

Summary of Limitations
There are several important limitations to the findings described in this report:

- The findings in this report are based on a sample of 60 Texas ACE centers. The process of selecting the site visit samples varied somewhat by year. It is especially notable that for the 2018 and 2019 samples, the intention of the sample selection process was to select particularly lower and higher implementing centers based on a series of key performance indicators (KPIs). In this sense, the samples selected for the 2018 and 2019 site visits were not meant to be fully representative of the broader population of Texas ACE centers in terms of implementation quality. As a result, this factor may limit the generalizability of some evaluation findings to the broader population of Texas ACE centers.
- The analyses conducted in Chapter 3 related to exploring the association between center characteristics and Texas ACE program attendance and school-related outcomes were correlational and descriptive. As a result, although significant associations were found and noted, it is not possible to infer from these results that adoption of a given center characteristic caused a given outcome. In addition, for some analyses summarized in Chapter 3, the sample sizes involved were small, which may have resulted in insufficient power to detect some associations that would have been significant with a larger sample size.
- The analyses conducted in Chapter 4 employ a more robust design than those in Chapter 3 to assess school-related outcomes in centers with higher adoption of APT-O mathematics practices and those practices related to active forms of learning; however, these analyses were also not done in a way that can be used to infer that greater adoption of these practices caused certain outcomes.

Organization of the Report

This report has six chapters and appendices as follows:

- Chapter 1 provides an overview of the evaluation objectives and organization of the report.
- Chapter 2 reviews the site visit samples that are focused on in the report.
- Chapter 3 summarizes findings from analyses exploring the relationship between center characteristics and Texas ACE program attendance and school-related outcomes.
- Chapter 4 summarizes findings from analyses exploring the effectiveness of centers' high adoption of APT-O mathematics practices and those practices related to active forms of learning.
- Chapter 5 summarizes a LESI conducted with a set of centers operated by Texas ACE.
- Chapter 6 briefly summarizes the findings and recommendations.
- Appendix A contains Chapter 2 site visit sample selection criteria.
- Appendix B contains additional data tables from Chapter 2.
- Appendix C contains a description of the hierarchical linear modeling (HLM) technique and regression analysis conducted in Chapter 3. Tables C3.2 to C3.15 are referenced explicitly in the description of findings and can be found in this document, while Tables C3.16 to C3.26 contain additional analysis results but appear in a supplemental technical appendix external to this document.
- Appendix D is a description of Propensity Score Matching and Rasch Analysis procedures.

- Appendix E contains additional data tables from Chapter 3 related to youth experiences in programming.
- Appendix F documents the extant data sources utilized in the evaluation.
- Appendix G documents the site visit methodology.
- Appendix H contains Chapter 5 local evaluation artifacts.

Chapter 2: Representation of the Site Visit Samples

Evaluation Question

- To what extent were the sampled Texas ACE centers representative of the full domain of active centers during the programming period in question?

Introduction

A primary goal of the statewide evaluation was to explore what center characteristics and approaches to program design and delivery were associated with positive student outcomes. Once these characteristics were identified, this information could then be used to further develop key guidance documents like the Texas ACE Blueprint (2020–2021) and the Local Evaluation Guide and Toolkit inform training and technical assistance efforts aimed at helping centers better adopt such approaches. [9]

A critical component of the evaluation was using site visits to a sample of Texas ACE centers to collect data on a wider domain of center characteristics that could be used in analyses examining how these characteristics were associated with school-related outcomes. Texas ACE centers were selected for spring site visits during the 2016–17, 2017–18, and 2018–19 programming years. A total of 20 centers were selected for site visits in each year for a total of 60 centers across the 3 years. See Appendix A for further detail on the site visit sample selection process.

Each of the 2-day site visits consisted of extensive data collection, including the following:

- Interviews with project directors, site coordinators, principals, family engagement specialists, and advisory board members
- Observations of four different afterschool offerings at each center, with a focus on academic enrichment activities
- Focus groups with youth activity leaders whose afterschool sessions were observed

While on site, evaluation team members also administered paper Scantron® surveys to students and youth activity leaders. Site coordinators assisted in the survey administration process at each center.[10]

Site visits resulted in rich qualitative and quantitative data on program quality, organizational processes related to the design and delivery of Texas ACE programming, types of activities embedded in Texas ACE offerings, and youth-reported experiences and outcomes. More specifically, the detailed interviews and focus groups resulting the collection of important implementation-related data presented in Table 2.1.

[9] The Texas ACE Blueprint is a document that is meant to guide Texas ACE programs toward full implementation of program components that define high quality programming. The Local Evaluation Guide and Toolkit are resources to help ACE grantees design and undertake local evaluation efforts that support program improvement and document the achievement of desired student outcomes. The most updated version of the Blueprint is 2020–2021 and addresses funding Cycles 9 and 10.

[10] See Arellano et al. (2020) and Naftzger, Arellano et al. (2020) for a complete description of data collection protocols and survey instruments under Appendix I.

Table 2.1. Texas ACE Centers Key Measures of Program Implementation

Implementation Constructs Investigated through Site-Based Data Collection Activities
• Program goals and objectives
• Intentionality of program design
• Linkages of the afterschool program activities to the regular school-day
• Professional development and training support for Texas ACE staff
• Program quality and the use of data to inform continuous program improvement
• The development of external partnerships and community connections
• Family engagement and involvement in the Texas ACE program
• The development of lesson plans for afterschool programming
• Perceived impact of the program on students
• Facilitators and barriers to effective program implementation
• The role of advisory boards in Texas ACE center operations and programming
• Program sustainability
• Activity leader-reported activity elements
• Youth experiences in programming
• Youth-reported program outcomes

Methods for Selecting Texas ACE Centers for Site Visits

Methods for selecting Texas ACE centers for site visits varied across the 3 years of on-site data collection (i.e., spring 2017, 2018, and 2019). For spring 2017 site visits, a random sample of 40 centers were initially selected for possible inclusion in the site visit sample. The centers were then organized by geographic region of the state (i.e., Central Texas, Houston/Gulf Coast, North Texas/Dallas Metroplex, South Texas, and West Texas), and 20 centers were selected for inclusion in the final sample. Logistical considerations, such as the ending date of the spring program were also considered when selecting centers for late April/May 2017 site visits.

The evaluation team selected the 2018 and 2019 samples in a way that highlighted both higher implementing and lower implementing centers. The goal was to maximize the contrast between these two categories of centers to more easily identify practices and approaches found in the higher implementing centers that may be lacking or absent in the lower implementing centers. Administrative and youth survey data were used to identify a sample of Texas ACE centers as being higher or lower implementing based on a set of KPIs developed by the evaluation team. These data helped provide answers to the following three questions to determine whether a given center warranted identification as either a higher or lower implementing center:

- *To what extent was the center retaining youth in Texas ACE?* Ideally, students will benefit more from Texas ACE programming the more they participate. Keeping students enrolled in programming is theorized to be linked both to the underlying quality of a center's activities and ensuring that students have access to developmentally appropriate activities across time that keep them interested and engaged.
- *To what extent were students participating in Texas ACE demonstrating improvement on school-related outcomes?* The charge for Texas ACE programs is to develop and implement programming that will have a positive impact on a series of school-related outcomes. Data were examined to assess the extent to which students participating regularly in the program were improving on school-related outcomes, including fewer school-day absences and disciplinary incidents and greater academic achievement.
- *To what extent did students report positive experiences in Texas ACE?* Understanding the subjective experiences youth have while participating in programming is key to assessing whether the program

was successful in ensuring a "goodness of fit" between where students are and what learning supports and opportunities the program is providing.

Higher implementing centers were generally more successful in retaining students in Texas ACE. They were characterized by students who demonstrated improvement on key academic and behavioral outcomes and reported having positive experiences in programming. Appendix A provides a detailed description of the KPIs and how these data were used to select the 2018 and 2019 site visit samples.

Profile and Representativeness of Site Visit Centers

The next chapter of this report uses data on observed program quality, organizational processes, program offerings and activities, and youth experiences collected from each of the 60 Texas ACE centers visited each spring during the 3-year period to conduct a series of analyses which examine the relationship between these center characteristics and students' academic and nonacademic outcomes. In this section of the report, steps are taken to compare centers represented in the site visit sample with all centers across the state. This comparison is important because the more similar the sample of visited centers and the full domain of centers are, a greater degree of confidence can be placed in the extrapolation of results to the statewide population of Texas ACE centers. Because sample selection was designed in some years to select especially high- and low-implementing centers based on the KPIs, it is important to explore how similar or different the site visit samples may be relative to all centers active in the state during the programming period in question. This section first describes the full domain of Texas ACE centers serving students during the 2016–17, 2017–18, and 2018–19 grant years in terms of the following characteristics:

- Locale of center (e.g., city, suburb, rural, or town)
- Participant time in Texas ACE by activity type (during the regular school year and summer sessions)
- Participant time in Texas ACE by content area (during the regular school year and summer sessions)
- Number of days attended by students participating in Texas ACE (during the regular school year and summer sessions)
- Texas ACE center staff by position type
- Demographic characteristics of students attending Texas ACE centers[11]

After presenting key center characteristics for all centers in 2016–17, 2017–18, and 2018–19, and reporting on key differences across years, steps are taken to report on the extent to which the site visit samples for each year were representative of the full domain of Texas ACE centers in each year.

Locale of Texas ACE Centers

Regardless of grant year, the plurality of Texas ACE centers were located in jurisdictions categorized as cities (43% in 2016–17, 40% in 2017–18, and 37% in 2018–19). Centers located in suburban areas accounted for the next largest percentage of centers in 2016–17 (25%), 2017–18 (34%), and 2018–19 (28%). Texas ACE centers in rural areas accounted for between 12% and 21% of centers, with larger proportions of rural centers in 2016–17 than the later years. Between 12% and 18% of Texas ACE centers were located in towns (Table 2.2).

[11] Appendix B contains additional tables which present Texas ACE grantee and center data for the 2016–17 to 2018–19 period and compare the characteristics of the sampled centers visited in spring 2017, 2018, and 2019 to the full domain of centers for each year.

Table 2.2. Texas ACE Centers by Locale Type, Centers Visited Compared to Statewide Centers 2017–2019, by Year

Locale Type	2017		2018		2019	
	Centers Visited (*N* = 19)	All Centers (*N* = 209)	Centers Visited (*N* = 20)	All Centers (*N* = 250)	Centers Visited (*N* = 20)	All Centers (*N* = 609)
City	58%	43%	35%	40%	45%	37%
Suburb	16%	25%	50%	34%	5%	28%
Town	11%	12%	15%	15%	15%	18%
Rural	16%	21%	0%	12%	35%	17%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19 and National Center for Education Statistics (NCES) data in 2017 (most recent year with geography data).
Note. ACE – Afterschool Centers on Education. Center locales are based on NCES school locale classification. A center's locale is the most common school locale of students attending the center. Data for 2017 include Cycle 8 centers, 2018 data include Cycle 9 centers, and 2019 data include grantees from Cycles 9 and 10. Because of rounding, some of the percentage totals exceed 100%.

As Table 2.2 shows, variation between the locale of centers visited in spring 2017, 2018, and 2019 and the full domain of centers across the state for each grant year is evident. In spring 2017, the evaluation team visited a higher proportion of Texas ACE centers that were located in cities (58% versus 43%) and lower proportion of centers in suburban (16% versus 25%) and rural locations (16% versus 21%) when compared to the full domain of centers. The 2018 site visit sample contained a larger proportion of centers from suburban areas (50% versus 34%), and it contained no rural centers (compared to 12% for the statewide domain). Meanwhile, the 2019 site visit sample contained a smaller proportion of centers from suburban areas (5%) than the full domain of centers across the state (28%) and a larger proportion of rural centers (35% versus 17% statewide).

Percentage of Time Spent on Various Activities While at Texas ACE Centers

Tables 2.3 and 2.4 present 2016–17 to 2018–19 data on the types of activities in which students spent their time while attending Texas ACE programs during the regular school year (Table 2.3) and during the summer session (Table 2.4). As Table 2.3 shows, the following three activities accounted for the bulk of time spent by students while attending Texas ACE centers during the regular school year:

- Academic enrichment learning (27% to 29%)
- Recreational activities (25% to 27%)
- Homework help (22% to 25%)

Differences between how students spent their time at centers visited by the evaluation team and how students at all Texas ACE centers in Texas spend their time during regular school-year programs were relatively modest. The largest difference (nine percentage points) was observed in spring 2017 where students at visited centers spent somewhat more time on recreational activities (36%) than students at all centers active in 2016–17 (27%).

Table 2.3. Percentage of Participants' Time (Hours) in Texas ACE by Activity Type during the Regular School Year, 2017–2019

Activity Type	2017		2018		2019	
	Centers Visited (*N* = 634,973)	All Centers (*N* = 6,447,563)	Centers Visited (*N* = 684,378)	All Centers (N = 7,551,924)	Centers Visited (*N* = 677,451)	All Centers (*N* = 6,447,563)
Recreational activity	36%	27%	29%	25%	27%	25%
Academic enrichment learning program	24%	28%	30%	27%	30%	29%
Homework help	20%	25%	19%	22%	19%	23%
Tutoring	11%	5%	3%	10%	12%	8%
Career training	3%	5%	4%	4%	4%	4%
Expanded library service hours	2%	1%	0%	1%	0%	1%
Activity to promote youth leadership	2%	3%	1%	3%	3%	3%
Supplemental education services	1%	3%	3%	2%	0%	3%
Counseling or character education	1%	1%	7%	2%	2%	2%
Mentoring	0%	1%	4%	3%	2%	3%
Community service	0%	1%	0%	1%	2%	1%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. Substance use prevention and violence prevention accounted for less than 1% of the time spent, so they were excluded from the table. Figures may not sum to 100% because of rounding. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

Not surprisingly, during Texas ACE summer sessions, homework help, which accounted for the third most time of any activity during the regular school year Texas ACE program, largely did not occur in the summer program (0% to 2% of time, depending upon the grant year). During summer, more time was spent by students on academic enrichment learning programs (43% to 44%), recreational activities (29% to 32%), and career training activities (5% to 9%) than any other activity (Table 2.4).

The amount of time students spent on various activities during summer Texas ACE sessions was comparable between Texas ACE centers visited in spring 2017 and all centers in the state operating during the of 2016–17 programming period. However, the 2018 site visit sample included centers where students spent a larger percentage of time in academic enrichment program activities (53%) than students at all centers active in 2017–18 (44%). In contrast, the 2019 site visit sample included centers where students spent a smaller percentage of time in academic enrichment program activities (25%) than students at all centers active in 2017–18 (44%). The 2019 site visit sample also included centers where students spent a larger percentage of time engaged in tutoring (10% versus 5%), supplemental education services (10% versus 4%), and activities to promote youth leadership (9% versus 5%) when compared to all centers across the state in 2018–19 (Table 2.4).

Table 2.4. Percentage of Participants' Time (Hours) in Texas ACE by Activity Type during the Summer, 2017–2019

Activity Type	2017		2018		2019	
	Centers Visited (*N* = 89,296)	All Centers (*N* = 788,593)	Centers Visited (*N* = 98,807)	All Centers (*N* = 926,323)	Centers Visited (*N* = 41,595)	All Centers *N* = 821,811)
Academic enrichment learning program	44%	43%	53%	44%	25%	44%
Recreational activity	35%	32%	22%	29%	34%	32%
Career training	7%	9%	9%	8%	9%	5%
Tutoring	6%	4%	1%	3%	10%	5%
Supplemental education services	4%	3%	10%	7%	10%	4%
Activity to promote youth leadership	3%	4%	0%	3%	9%	5%
Substance use prevention	0%	2%	0%	0%	4%	1%
Counseling	0%	2%	3%	2%	0%	1%
Homework help	0%	2%	0%	0%	0%	1%
Mentoring	0%	1%	2%	2%	0%	2%
Community service	0%	1%	0%	1%	0%	0%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. Expanded library service hours and violence prevention accounted for less than 1% of the time spent, so they were excluded from the table. Figures may not sum to 100% because of rounding. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include summer data for grantees from Cycle 9 only. Data for 2019 reflect the grant year summer data (August 1, 2018–July 31, 2019) and represent information from the first reporting cycle of this federal grant year (summer 2018). Because Cycle 10 began on August 1, 2018, this table only includes information for Cycle 9 centers in 2019.

Percentage of Time Spent on Various Content Areas While at Texas ACE Centers

The next two tables include 2016–17 to 2018–19 data on the content areas where students spent their time while attending Texas ACE centers during the regular school year (Table 2.5) and during the summer session (Table 2.6). As Table 2.5 shows, the following five activities accounted for the most time spent by all students across the state attending Texas ACE centers during the regular school year:

- Reading (59% to 66%)
- Mathematics (56% to 59%)
- Science (48% to 52%)
- STEM[12] (48% to 50%)
- Art and music (33% to 34%)

Students who attended school year Texas ACE programs that were visited by the evaluation team in spring 2017, 2018, and 2019 generally tended to spend approximately the same amount of time on the

[12] STEM refers to activities that integrate science, technology, engineering, and mathematics.

various content areas as students enrolled in Texas ACE programs across the state in each of these grant years (Figure 2.5).

Table 2.5. Percentage of Participants' Time (Hours) in Texas ACE Spent on Various Content Areas during the Regular School Year, 2017–2019

Content Area	2017		2018		2019	
	Centers Visited (*N* = 634,973)	All Centers (*N* = 6,447,563)	Centers Visited (*N* = 684,378)	All Centers (*N* = 7,551,924)	Centers Visited (*N* = 677,451)	All Centers (*N* = 17,139,012)
Reading	54%	59%	64%	66%	63%	61%
Mathematics	52%	56%	52%	59%	55%	58%
Science	44%	48%	49%	52%	49%	50%
STEM	42%	48%	47%	50%	48%	49%
Art and music	31%	33%	44%	33%	36%	34%
Health and nutrition	27%	35%	40%	35%	42%	37%
Cultural and social	25%	39%	35%	32%	33%	33%
Telecom technology	24%	27%	32%	28%	35%	26%
Entrepreneurship	13%	13%	17%	13%	20%	15%
Other	4%	5%	11%	12%	5%	9%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. STEM – science, technology, engineering, and mathematics. Centers could select more than one subject for activities, so the percentages may not sum to 100%. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

Like regular school year participation, students enrolled in summer Texas ACE programs over the 2016–17 to 2018–19 grant years spent much of their time engaged in content areas such as reading (46% to 58%), mathematics (44% to 54%), science (40% to 49%), STEM (37% to 45%), and art and music (35% to 44%) (Table 2.6).

Some differences between how students in the site visit sample and students enrolled at centers across the state spent their summer program time were observed. For instance, students at centers visited in spring 2017 spent a higher proportion of their summer program time engaged in art and music content (54%) than did students at other centers during the summer session of the 2016–17 grant year (35%). Students at centers visited in spring 2018 spent a higher proportion of their summer program time engaged in health and nutrition (52% versus 45%), mathematics (65% versus 54%), and reading (64% versus 58%) than their peers at other centers across the state during the summer session of the 2017–18 grant year. In contrast, Texas ACE participants at centers visited in spring 2019 spent a smaller percentage of their summer program time engaged in art and music (21% versus 40%), health and nutrition (32% versus 42%), and mathematics (42% versus 49%) content than students at other Texas ACE centers during the summer session of the 2018–19 grant year (Table 2.6).

Table 2.6. Percentage of Participants' Time (Hours) in Texas ACE Spent on Various Content Areas during Summer, 2017–2019

Content Area	2017		2018		2019	
	Centers Visited (*N* = 89,296)	All Centers (*N* = 788,593)	Centers Visited (*N* = 98,807)	All Centers (*N* = 926,323)	Centers Visited (*N* = 41,595)	All Centers (*N* = 821,811)
Reading	43%	46%	64%	58%	54%	52%
Mathematics	44%	44%	65%	54%	42%	49%
Science	40%	40%	47%	49%	48%	45%
STEM	41%	37%	43%	45%	40%	40%
Art and music	54%	35%	47%	44%	21%	40%
Health and nutrition	48%	43%	52%	45%	32%	42%
Cultural and social	42%	40%	36%	39%	28%	34%
Telecom technology	34%	27%	37%	34%	28%	33%
Entrepreneurship	18%	17%	33%	24%	7%	17%
Other	6%	9%	21%	14%	16%	16%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. STEM – science, technology, engineering, and mathematics. Centers could select more than one subject for activities, so the percentages may not sum to 100%. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include summer data for grantees from Cycles 9 only. Data for 2019 reflect the 8/1/18 to 7/31/19 grant year (August 1, 2018–July 31, 2019), and summer data represent information from the first reporting cycle of this federal grant year (summer 2018). Because Cycle 10 began on August 1, 2018, this table only includes information for Cycle 9 centers in 2019.

Number of Days of Student Participation in Texas ACE Programming

Program attendance is an indicator that highlights the intensity (or dosage) of afterschool programming that a student may receive. While the federal definition for regular attendance in the 21st CCLC program is 30 or more days in a programming period, Texas ACE programs are directed to target 45 days or more of programming to improve student outcomes (TEA, 2020–2021).

As Table 2.7 shows, on a statewide basis, a smaller percentage of students attended 45 or more days of regular school-year Texas ACE programming during 2016–17 (45%) than in either 2017–18 (69%) or 2018–19 (64%). This finding may be explained by the change in state policy requiring 45 days of student attendance, which began with Cycle 10 Texas ACE centers. A larger percentage of students attending Texas ACE across the state in 2017–18 (21%) and 2018–19 (18%) also attended the regular school-year program for 120 or more days than did students in 2016–17 (12%).

Some differences also exist between program attendance at the centers visited over the 3-year period and all centers operating across the state during those grant years. For example, 48% of the students from centers visited attended the regular school-year program less than 45 days compared to 55% in the other centers in operation during the 2016–17 grant year. A larger proportion of students from centers visited in spring 2018 (26% versus 21%) and spring 2019 (30% versus 18%) attended the regular school year program for 120 days or more compared to students at other centers in operation during the those grant years.

Table 2.7. Percentage of Students Participating in Texas ACE in 2017–2019 during the Regular School Year, by Number of Days Attended

Attendance	2017		2018		2019	
	Centers Visited (*N* = 5,121)	All Centers (*N* = 58,786)	Centers Visited (*N* = 4,391)	All Centers (*N* = 50,451)	Centers Visited (*N* = 4,116)	All Centers (*N* = 125,136)
Less than 45	48%	55%	32%	30%	26%	37%
45 to 59	12%	10%	9%	15%	12%	16%
60 to 89	14%	12%	16%	18%	18%	17%
90 to 119	13%	11%	17%	15%	13%	13%
120+	13%	12%	26%	21%	30%	18%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. Figures may not sum to 100% because of rounding. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

As Table 2.8 illustrates, the Texas ACE summer program attendance statewide trend mirrors that of the regular school year discussed previously. Across the state, a higher percentage of students in 2016–17 (41%) attended less than 10 program days compared to 32% in 2017–18 and 33% in 2018–19.

Some differences in summer program attendance between centers visited by the evaluation team and the full domain of centers for each grant year were observed. For example, 22% of the students at Texas ACE Centers visited in spring 2019 had less than 10 days of summer programming attendance, compared to 33% for all 2018–19 centers (Table 2.8). Although some differences were noted between visited centers and all centers active during a given summer, there were no consistent patterns in these differences across years.

Table 2.8. Percentage of Students Participating in Texas ACE in 2017–2019 during the Summer, by Number of Days Attended

Attendance	2017		2018		2019	
	Centers Visited (*N* = 1,426)	All Centers (*N* = 13,977)	Centers Visited (*N* =1,205)	All Centers (*N* = 12,883)	Centers Visited (*N* = 558)	All Centers (*N* = 11,420)
Less than 10	36%	41%	37%	32%	22%	33%
10 to 19	40%	35%	29%	39%	49%	40%
20 to 29	22%	24%	26%	27%	27%	26%
30+	3%	1%	8%	2%	1%	1%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. Figures may not sum to 100% because of rounding. Data for 2019 reflect the grant year summer data (August 1, 2018–July 31, 2019) and represent information from the first reporting cycle of this federal grant year (summer 2018). Because Cycle 10 did not begin until August 1, 2018, this table only includes information for Cycle 9 centers in 2019.

Texas ACE Program Staffing

Regardless of grant year, the plurality of statewide Texas ACE program staff (38% to 44%) consisted of regular school-day teachers, while other staff accounted for 18% and 19% of Texas ACE program staff, and college or high school students accounted for 12% to 14% of Texas ACE program staff. With the exception of regular school-day teachers being slightly overrepresented in the spring 2017 site visit

sample and being slightly underrepresented in the spring 2019 site visit sample, the staffing makeup of visited centers was relatively comparable to the full domain of Texas ACE centers for each year (Table 2.9).

Table 2.9. Percentage of Texas ACE Centers Staff during 2017–2019, by Position Type

Staff Type	2017		2018		2019	
	Centers Visited (*N* = 19)	All Centers (*N* = 209)	Centers Visited (*N* = 20)	All Centers (*N* = 256)	Centers Visited (*N* = 20)	All Centers (*N* = 609)
Teachers	51%	44%	32%	38%	43%	41%
Staff	18%	18%	16%	19%	15%	18%
College and high school students	12%	14%	13%	13%	14%	12%
Center administrators	6%	9%	8%	8%	15%	10%
Youth development	3%	6%	13%	7%	8%	6%
Parents and community members	0%	3%	2%	2%	1%	2%
Other	10%	7%	16%	13%	4%	11%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. Figures may not sum to 100% because of rounding. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

As Table 2.10 illustrates, approximately half of statewide Texas ACE program attendees were male and half were female for each of the 3 years (2016–17 to 2018–19) represented. The majority of students attending Texas ACE programs across the state in 2016–17 (64%), 2017–18 (72%), and 2018–19 (70%) were Hispanic, and 14% to 17% (depending upon grant year) were African American. In addition, the vast majority (80% to 83%) of students participating in Texas ACE program were economically disadvantaged, and 60% to 66% were categorized as being in at-risk situations of academic failure.[13] In addition, 8% to 9% of Texas ACE attendees received special education services, and 23% to 25% were designated as English learner students. Some differences between the demographic and socioeconomic makeup of centers visited by the evaluation team and the full domain of centers for each year were observed. For example, Hispanic students were overrepresented in the 2017 site visit sample and underrepresented in the 2019 sample. African American and White students were also overrepresented in the 2019 site visit sample relative to the full domain of centers in the state.

[13] At-risk status is defined by the TEC (§ 29.081) and specified in Public Education Information Management System (PEIMS) under criteria for identification (TEA, n.d.).

Table 2.10. Texas ACE Students Demographic Characteristics during 2017–2019

Demographic Characteristic	2017		2018		2019	
	Centers Visited (*N* = 5,031)	All Centers (*N* = 58,006)	Centers Visited (*N* = 4,517)	All Centers (*N* = 50,224)	Centers Visited (*N* = 4,339)	All Centers (*N* = 127,876)
Gender						
Female	51%	50%	48%	50%	51%	51%
Male	49%	50%	52%	51%	49%	50%
Race/Ethnicity						
African American	13%	16%	17%	17%	24%	14%
Asian	1%	1%	0%	1%	1%	1%
Hispanic	71%	64%	73%	72%	52%	70%
White	14%	18%	8%	10%	21%	13%
Two or more	1%	1%	1%	1%	2%	1%
English Learner Student Status						
English learner	24%	23%	24%	24%	23%	25%
Not English learner	76%	77%	76%	76%	78%	75%
Economic Disadvantage Status						
Economically disadvantaged	81%	80%	84%	83%	80%	83%
Not economically disadvantaged	19%	20%	16%	17%	20%	17%
Special Education Status						
Not special education	90%	91%	92%	92%	92%	91%
Special education	10%	9%	8%	8%	9%	9%
At-Risk Status						
At risk	59%	60%	70%	66%	62%	63%
Not at risk	41%	40%	30%	34%	38%	37%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. American Indian and Pacific Islander race/ethnicity demographic categories combined to less than 1% of the time spent, so they were excluded from the table. Students may have attended more than one center. In these calculations, students are included in all of the centers they attended. Figures may not sum to 100% because of rounding. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

Summary of Findings Related to Center Characteristics across Years and between the Site Visit Sample and the Full Domain of Centers in the State

This chapter examined differences in the full domain of Texas ACE centers over the 2016–17 to 2018–19 period, as well as variation between the sample of 20 centers visited in each of the 3 years and all Texas ACE centers operational in those years. Some of the more substantive differences between the site visit samples and all centers in Texas for the 3 years are presented in Table 2.11. Differences in excess of 10 percentage points are bolded. When examining differences in key characteristics (e.g., the locale of the Texas ACE center, race/ethnicity of students served, number of days of program attendance, and how students spend their time during regular school year and summer Texas ACE programs) between the site visit sample and the full domain of Texas ACE centers operational in each year, some important differences

are evident. These differences are not surprising, especially for the spring 2018 and 2019 site visit samples, which were based on data that targeted lower and higher implementing centers for inclusion in the sample.

Table 2.11. Texas ACE, Substantive Differences between Site Visit Samples and Full Domain of Centers, 2017–2019

Characteristic	2017		2018		2019	
	Centers Visited	All Centers	Centers Visited	All Centers	Centers Visited	All Centers
Locale of Center						
City	**58%**	**43%**	35%	40%	45%	37%
Suburb	**16%**	**25%**	**50%**	**34%**	**5%**	**28%**
Town	11%	12%	15%	15%	15%	18%
Rural	16%	21%	**0%**	**12%**	**35%**	**17%**
Race/Ethnicity						
African American	13%	16%	17%	17%	**24%**	**14%**
Asian	1%	1%	0%	1%	1%	1%
Hispanic	71%	64%	73%	72%	**52%**	**70%**
White	14%	18%	8%	10%	21%	13%
Two or more	1%	1%	1%	1%	2%	1%
Days of Regular School Year Attendance						
Less than 45	48%	55%	32%	30%	**26%**	**37%**
120+	13%	12%	26%	21%	**30%**	**18%**
Percentage of Hours Spent on Regular School Year Program Activities/Content						
Recreational activity	36%	27%	29%	25%	27%	25%
Cultural and social	**25%**	**39%**	35%	32%	33%	33%
Art and music	31%	33%	**44%**	**33%**	36%	34%
Telecom technology	24%	27%	32%	28%	35%	26%
Tutoring	11%	5%	3%	10%	12%	8%
Percentage of Hours Spent on Summer Program Activities/Content						
Academic enrichment learning program	44%	43%	53%	44%	**25%**	**44%**
Tutoring	6%	4%	1%	3%	10%	5%
Entrepreneurship	18%	17%	33%	24%	**7%**	**17%**
Art and music	**54%**	**35%**	47%	44%	**21%**	**40%**
Health and nutrition	48%	43%	52%	45%	**32%**	**42%**
Mathematics	44%	44%	**65%**	**54%**	42%	49%

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

For example, substantive differences in the locale of centers between the site visit sample and all centers in the state are among the largest. The percentage of centers located in cities, suburbs, and rural areas also varies substantially across the spring 2017, 2018, and 2019 samples. Major differences in the racial/ethnic makeup of the spring 2019 sample and the full domain of centers in the state is clear; while differences are much more modest in 2017 and 2018 samples (Table 2.11).

The differences observed between the site visit samples and the full domain of centers in the state and across the 3 years of samples is not surprising. This is especially true for the spring 2018 and 2019 site visit samples, which were based on data that targeted lower and higher implementing centers for inclusion in the sample. Although variation between samples and the full population of centers and across the 2017 to 2019 site visit samples was observed, it is also important to recognize that there was a lot of similarity on a wide variety of characteristics, including socioeconomic status, at-risk status, English learner status, and many center-level program-related characteristics. Because of the differences illustrated in Table 2.11, some caution should be used when attempting to generalize the site visit sample to the full population of centers in a given year or pooled results across years and interpreting findings related to data collected from sampled centers.

Chapter 3. Center-Level Characteristics, Program Attendance, and School-Related Outcomes

Evaluation Questions

- What characteristics were found to be significantly related to levels of Texas ACE program attendance among centers represented in the site visit samples?
- How are students' experiences in Texas ACE programs related to program attendance?
- What characteristics were found to be significantly related to positive center-level effects among centers represented in the site visit samples?

Introduction

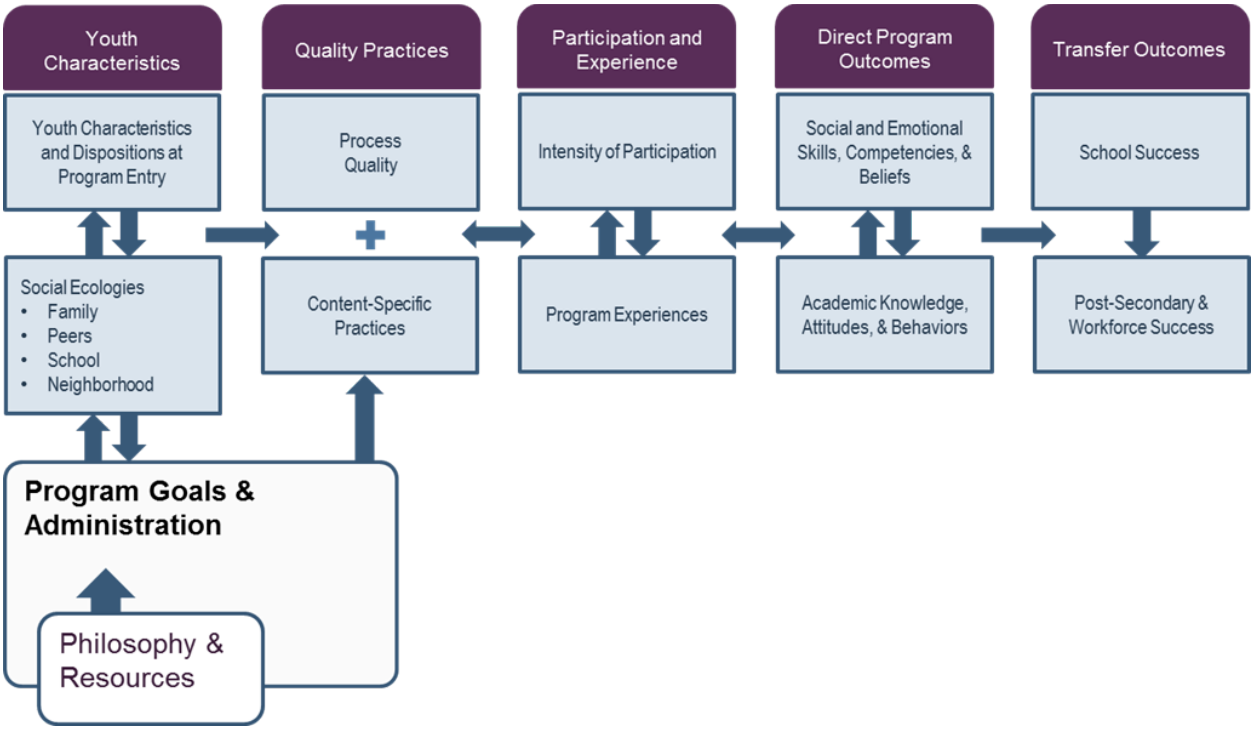
A primary goal of the statewide evaluation was to explore what center characteristics and approaches to program design and delivery were associated with positive student outcomes. This information can then be used to inform both potential refinements to the Texas ACE Blueprint (2020–2021) and training and technical assistance efforts aimed at helping centers better adopt such approaches. The findings presented in this chapter of the report are designed to support achievement of this goal.

Most of the center characteristics examined in this chapter reflect the conceptual framework used to guide the evaluation of the Texas ACE program (see Figure 3.1). Based on the afterschool and youth development literature, the conceptual framework is predicated on the hypothesis that there is a cascading set of opportunities and experiences that students have while participating in programming that lead to the types of positive academic and behavioral outcomes sought by the program.

The conceptual framework starts with the youth themselves and how they are influenced and supported by the environments in which they live and go to school. Past programming experiences, relationships with peers and teachers, the level of interest in programming topics and content, expectations regarding program experience, and the level of choice in attending all have a bearing on how youth will engage in and experience 21st CCLC programming (Durlak, Mahoney et al., 2010). Predispositions and contextual factors influence youth before they even enter a program, as well as the program goals and administration. Various factors—notably program quality—then influence the experiences that youth have after they are in the program. If youth engage in quality activities during multiple sessions, they are then likely to change in ways that are direct consequences of 21st CCLC participation (immediate program outcomes). In turn, the direct program outcomes will eventually lead to greater school success and, in turn, greater workforce success.

This chapter seeks to explore correlations between center characteristics and youth outcomes as theorized by this framework. The goal in presenting the findings described in this chapter is to conduct an initial and preliminary examination of which center characteristics may be positively related to student attendance in Texas ACE programming and desirable school-related outcomes. However, given that the analyses described in this chapter were correlational, the findings described in this report cannot be used to infer that the presence of a positive relationship between a given center characteristic and a program attendance or school-related outcome means that the center characteristic caused the outcome. The methods used to perform the analyses described in this chapter do not support this type of conclusion.

Figure 3.1. A Conceptual Framework for How Afterschool Programs Can Have an Impact on Youth Participants



Center Characteristics Examined

A series of variables was constructed in the following five primary categories based on data obtained from the Texas ACE centers represented in the site visit samples:

1. **Observed Quality.** Center characteristics in this group represented measures of process quality and content-specific practices derived from the PQA and APT-O observation tools, respectively (see Process Quality and Content-Specific Practices in Figure 3.1).
2. **Organizational Processes.** Organizational processes included variables related to program goals, school community engagement, continuous quality improvement, and staffing and operational attributes (see Program Goals and Administration in Figure 3.1).
3. **Activity Practices.** Variables related to activity practices assessed the types of learning opportunities and attributes associated with Texas ACE activities students attended during the site visit period (see Program Goals and Administration in Figure 3.1).
4. **Youth Experiences.** Center characteristics in this group represented measures of the quality of interactions students participating in Texas ACE had with adult activity leaders and other youth in the program, opportunities to experience a sense of agency and autonomy, and key facets associated with motivation and engagement in learning environments (see Program Experiences in Figure 3.1).
5. **Intermediate, Youth-Reported Outcomes.** Variables in this category represent those outcomes that are more likely to be directly impacted by Texas ACE program participation. That is, growth in these areas has a tendency to happen within the confines of the program and often can be observed directly by the staff leading afterschool activities. These outcomes included areas like supporting interest development, helping youth to think about their future, helping youth feel good about themselves, and boosting confidence (see Direct Program Outcomes in Figure 3.1).

A complete list of center characteristics examined can be found in Appendix C. The remainder of this chapter is largely organized around how variables in each of these five categories were found to be

associated with a series of Texas program attendance and school-related outcomes. Before presenting these findings, however, steps are taken to describe which outcomes in each of these categories were examined and which approaches were used to conduct these analyses.

Texas ACE Attendance Outcomes

Analyses conducted in relation to Texas ACE attendance outcomes were designed to answer the following question: What characteristics were found to be significantly related to Texas ACE program attendance among centers represented in the site visit samples? To answer this question, several types of student-level, program attendance metrics were calculated:

- **The total number of Texas ACE programming hours attended during the school year in question (hours).** As shown in Table 3.1, across all 60 centers represented in the site visit samples, students attended an average of 146 hours of Texas ACE programming during the school year, although this ranged from 121 hours to 166 hours depending on the sample year. While the average number of hours students attended Texas ACE programming increased from 2017 to 2019 among the site visit centers, the total number of students attending ACE programming during the school year at these centers decreased.

Table 3.1. Average Number of Hours Students Attended Texas ACE Programming during the School Year – Site Visit Samples

Sample	Average Hours	Standard Deviation	# of Students	# of Centers
2017 Sample	121	108	5,164	20
2018 Sample	159	130	4,165	20
2019 Sample	166	132	3,978	20
All Years	146	124	13,307	60

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. Students represented in this table attended Texas ACE programming and were found to have valid Public Education Information Management System (PEIMS) records allowing for the inclusion of student demographic variables in some of the models referenced in this section of the report.

- **The duration of student participation in Texas ACE programming represented by the number of days between their first and last day of participation during the school year (duration).** Duration was calculated by subtracting the last date of Texas ACE participation from the first date of program participation during the school year in question. Across all 60 centers represented in the site visit sample, the duration of students' participation in ACE programming spanned an average of 189 days (see Table 3.2). The average duration of student participation in Texas ACE programming was shorter among students from the 2017 sample centers (182 days) relative to students from the 2018 and 2019 samples (195 and 191 days, respectively).

Table 3.2. Average Number of Calendar Days between the First and Last Day of Attendance in Programming during the School Year– Site Visit Samples

Sample	Average Days	Standard Deviation	# of Students	# of Centers
2017 Sample	182	86	5,164	20
2018 Sample	195	83	4,165	20
2019 Sample	191	85	3,978	20
All Years	189	85	13,307	60

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. Duration was calculated by subtracting the last date of Texas ACE participation from the first date of program participation during the school year in question. As a result, this measure does not represent the consistency of Texas ACE participation during this period but merely the span of Texas ACE participation. Students represented in this table attended Texas ACE programming and were found to have valid Public Education Information Management System (PEIMS) records, allowing for the inclusion of student demographic variables in some of the models referenced in this section of the report.

- **The total number of Texas ACE activities the student participated in during the school year (# of activities).** For this metric, an activity is defined as an out-of-school time offering provided according to a defined schedule with established start and end times and dates led by an activity leader and attended by an established list of participating students. Examples of activities would include Chess Club, Girls on the Run, Ballet, and 5th Grade Tutoring. Activities have a tendency to be offered by a Texas ACE program for several weeks at a minimum and can involve students being individually enrolled in the activity and attending that activity for the duration of time it is offered. As shown in Table 3.3, the average number of Texas ACE activities that students attended at site visit centers was relatively consistent across years and averaged eight activities per year across the 60 centers represented in the site visit samples.

Table 3.3. Average Number of Different Texas ACE Activities Attended during the School Year – Site Visit Samples

Sample	Average # of Activities	Standard Deviation	# of Students	# of Centers
2017 Sample	8	8	5,164	20
2018 Sample	7	6	4,165	20
2019 Sample	7	7	3,978	20
All Years	8	7	13,307	60

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. Students represented in this table were found to have attended Texas ACE programming and to have valid Public Education Information Management System (PEIMS) records, allowing for the inclusion of student demographic variables in some of the models referenced in this section of the report.

- **Whether the student was a returning participant to the program after being enrolled in the program during the preceding summer or school year (sustained attendance).** Table 3.4 presents the percentage of students attending Texas ACE programming during the school year who also attended ACE programming at that same center either during the preceding summer or the previous school year.[14] Across all 60 centers represented in the site visit sample, 61% of students had attended Texas ACE programming in the preceding summer or prior school year, although this

[14] Students attending Texas ACE programming during the school year of interest who could not have attended ACE programming at that center in the previous year were excluded from these calculations (e.g., they were enrolled in a grade level in the previous year not served by the ACE program).

percentage was slightly higher in centers associated with the 2017 sample and slightly lower in centers associated with the 2019 sample.

Table 3.4. Percentage of Students Attending Texas ACE Programming Who Also Attended ACE Programming in the Preceding Summer or School Year at the Same Center

Sample	Percent Attending ACE in Prior Year	# of Students	# of Centers
2017 Sample	64%	4,130	20
2018 Sample	61%	3,258	20
2019 Sample	59%	3,026	20
All Years	61%	10,414	60

Source. Tx21st Student Tracking System, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education. Students attending Texas ACE programming during the school year of interest that could not have attended ACE programming at that center in the previous year because their grade level was not being served by the program were excluded from these calculations. Students represented in this table attended Texas ACE programming and were found to have valid Public Education Information Management System (PEIMS) records, allowing for the inclusion of student demographic variables in some of the models referenced in this section of the report.

To assess whether there was evidence of a significant relationship between center characteristics and each of the aforementioned Texas ACE attendance metrics, a series of hierarchical linear models (HLM) were constructed, with students nested in centers.[15] The outcomes examined in these analyses were each of the Texas ACE program attendance metrics detailed in Tables 3.1 to 3.4 measured at the student level:

- The total number of Texas ACE programming hours attended during the school year
- The duration of student participation in Texas ACE programming
- The total number of Texas ACE activities the student participated in during the school year
- Whether the student was a returning participant to the program after being enrolled in the program during the preceding summer or school year

Center characteristics were included in each model at the center level. HLM is a process used to account for situations when data are at different levels (i.e., some data at the center level and some data at the student level). The construction of these models allowed for an exploration of how individual center-level characteristics were associated with each of the Texas ACE program attendance outcomes listed previously. Additional information about how these analyses were conducted can be found in Appendix C. In this chapter, positive associations between center characteristics and Texas ACE program attendance outcomes are highlighted. Full findings resulting from the construction of all models can be found in select tables in Appendix C (Tables C3.2 to C3.15 when a finding is referenced in the text) and a supplemental technical appendix separate from this document (Tables C3.16 to C3.26).

In the next section of the report, steps are taken to describe the school-related outcomes that were examined. Then, results are outlined by each center characteristic category relative to the Texas ACE attendance and school-related outcomes examined.

[15] In this report, the word *significant* refers to statistical significance when the null hypothesis (i.e., the chance explanation) can be rejected so that no relationship exists between variables, and any observed relationship is only a function of chance (Ary et al., 2010). The level of significance, or the probability that a Type I error (i.e., rejecting a true null hypothesis) will occur, used in this report is typically reported at the .05 and .01 levels.

School-Related Outcomes

To examine how center characteristics were related to school-related outcomes, steps were first taken to calculate center-level effects in relation to the following school-related outcomes:

- Performance on the STAAR-Mathematics assessment
- Performance on the STAAR-Reading assessment
- Percentage of school days attended
- Number of disciplinary incidents

To calculate center-level effects, propensity score matching (PSM) was used to match Texas ACE program participants with similar nonparticipants at the center level. That is, for each center, students were matched to non-attending students who were enrolled in the school or schools affiliated with the center. This approach allowed the evaluation team to explore more carefully how participation in Texas ACE may be related to school-related outcomes by controlling for preexisting differences between students that would otherwise influence analysis results. This process resulted in each center having a specific effect estimate of how Texas ACE participation was associated with school-related outcomes. It is important to note that this approach to calculating center-level effects does not control for some student characteristics such as student interest or motivation to attend programming or certain family characteristics like parent involvement. In this sense, there may be some key differences between students attending programming and those who opted not to attend that are not controlled for in these models that could be biasing the results. The reader should keep these limitations in mind. Additional information about PSM can be found in Appendix D.

Two sets of center-level effects were calculated. For one set, students attending the program for 60 days or more during the school year in question were matched with students attending the same schools served by the center but did not participate in the program. For the second set of analyses, students attending Texas ACE for 60 days or more in both the current and preceding school year were matched with nonparticipating students. The number of centers included in each type of analysis differed, depending on how many centers had a viable number of Texas ACE participants with data available on the outcome being examined and the extent to which matched students could be found for participating students. The 60 days threshold was selected based on results from analyses undertaken in the evaluation report for the 2017–18 programming period. These results suggested that positive associations between a number of center characteristics and school-related outcomes were more prevalent when program effects were examined specifically for students participating in Texas ACE programming for 60 days or more over 2 years (Naftzger, Arellano et al., 2020).

Once these analyses were completed, an effect size had been created for most centers represented in the site visit sample across the four school-related outcomes examined: (1) STAAR-Mathematics, (2) STAAR-Reading, (3) school-day attendance, and (4) disciplinary incidents. Each center-level effect was then used as an outcome in a series of regression analyses involving the center characteristics associated with the five categories described previously (i.e., observed quality, organizational processes, program activities, youth experiences, and intermediate youth-reported outcomes). The purpose of these analyses was to answer the following question: What characteristics were found to be significantly related to positive center-level effects among centers represented in the site visit samples? Additional information about these regression analyses can be found in Appendix C. In this chapter, positive associations between center characteristics and school-related outcomes are highlighted. Full findings resulting from the construction of all models can be found in select tables in Appendix C and a supplemental technical appendix separate from this document.

Before detailing these findings, steps are first taken to summarize what was learned about average program effects across the four school-related outcomes examined among centers represented in the site visit samples. This information will help the reader understand what typical program effects looked like among centers in the site visit sample overall. Table 3.5 summarizes the average effect among the site

visit centers for each school-related outcome examined when 1 or 2 years of Texas ACE program participation at 60 days or more was considered. All average effects were found to be quite small overall, suggesting that program outcomes for students attending Texas ACE programming at this level were not substantially different than outcomes for students not participating in programming on average.

Table 3.5. Summary of Average Center-Level Effects across All Site Visit Centers

Outcomes	60 Days or More – 1 Year		60 Days or More – 2 Years	
	Average Effect	# of Centers	Average Effect	# of Centers
STAAR-Reading	-7.89 points	50	-7.91 points	33
STAAR-Mathematics	+0.38 points	50	-3.68 points	33
School-Day Attendance	0.81 percentage points	57	0.86 percentage points	40
Disciplinary incidents	-6.70% chance of an incident occurring	56	-4.33% chance of an incident occurring	38

Source. State of Texas Assessments of Academic Readiness (STAAR), 2015–16 to 2018–19; Public Education Information Management System data, 2015–16 to 2018–19; and Tx21st Student Tracking System, 2015–16 to 2018–19.
Note. The number of centers included in each type of analysis differed, depending on how many centers had a viable number of Texas ACE participants with data available on the outcome being examined and the extent to which matched students could be found for participating students.

In light of the results highlighted in Table 3.5, steps were also taken to summarize the degree of variation in program effects in Tables 3.6 and 3.7 when participation in Texas ACE programming exceeded 60 days or more for 1 year and when program participation exceeded 60 days or more over 2 years. With greater variation in effects, there may be a greater potential to identify which center characteristic may be associated with larger, desirable effects. Tables 3.6 and 3.7 show the prevalence of positive center-level effects across each of the school-related outcomes. Table 3.6 presents data pertaining to youth attending 60 days or more across 1 school year, and Table 3.7 presents data pertaining to youth attending across 2 school years. Across both Tables 3.6 and 3.7, centers were commonly associated with positive effects in relation to school-day attendance (85% to 90%) and disciplinary incidents (66% to 71%). Positive effects were least commonly found in relation to STAAR-Reading scores (26% to 42%).

However, what is especially notable about the findings in Tables 3.6 and 3.7 is the difference in average effect between centers found to have a positive effect on student outcomes and those found to have a negative effect. For example, in Table 3.7, when centers were found to have a positive effect on STAAR-Reading scores, the average effect in centers with a positive effect was +27.91 points. In contrast, in centers found to have a negative effect, the average effect was -34.30 points. Across all centers, the range of STAAR-Reading effects ranged from -85.84 points to +85.75 points, a substantive difference. Similar substantive effect ranges were observed in relation to STAAR-Mathematics and disciplinary incidents (see Tables 3.6 and 3.7).

Table 3.6. Percentage of Centers, Average Effect, and Range of Effects by Centers Having Either a Positive or Negative Effect on Student Outcomes: 1 Year of Participation

Student Outcome	Total Centers	Centers with a Positive Effect			Centers with a Negative Effect		
		% of Total	Average Effect	Range of Effects	% of Total	Average Effect	Range of Effects
Academic Performance							
STAAR-Reading	50	26%	+18.81 points	+0.36 to +75.09 points	74%	-17.28 points	-0.13 to -58.93 points
STAAR-Mathematics	50	52%	+16.19 points	+2.04 to +84.76 points	48%	-16.75 points	-0.51 to -75.85 points
Student Behaviors							
School-day attendance	57	90%	+0.93 percentage points	+.07 to +5.00 percentage points	10%	-0.25 percentage points	-0.72 to -0.02 percentage points
Disciplinary incidents	56	71%	-11.09% chance of an incident occurring	-0.52% to -46.90% chance of an incident occurring	29%	+10.33% chance of an incident occurring	+0.22% to +26.40% chance of an incident occurring

Source. State of Texas Assessments of Academic Readiness (STAAR), 2015–16 to 2018–19; Public Education Information Management System data, 2015–16 to 2018–19; and Tx21st Student Tracking System, 2015–16 to 2018–19.

Table 3.7. Percentage of Centers, Average Effect, and Range of Effects by Centers Having Either a Positive or Negative Effect on Student Outcomes: 2 Years of Participation

Student Outcome	Total Centers	Centers with a Positive Effect			Centers with a Negative Effect		
		% of Total	Average Effect	Range of Effects	% of Total	Average Effect	Range of Effects
Academic Performance							
STAAR-Reading	33	42%	+27.91 points	+1.86 to +85.75 points	58%	-34.30 points	-3.26 to -85.84 points
STAAR-Mathematics	33	52%	+24.12 points	+0.21 to +85.90 points	48%	-33.22 points	-8.25 to -94.91 points
Student Behaviors							
School-day attendance	40	85%	+1.07 percentage points	+.13 to +5.44 percentage points	15%	-0.35	-0.01 to -0.83 percentage points
Disciplinary incidents	38	66%	-13.07% chance of an incident occurring	-0.06% to -84.03% chance of an incident occurring	34%	+12.47% chance of an incident occurring	+0.32% to +44.64% chance of an incident occurring

Source. State of Texas Assessments of Academic Readiness (STAAR), 2015–16 to 2018–19; Public Education Information Management System data, 2015–16 to 2018–19; and Tx21st Student Tracking System, 2015–16 to 2018–19.

It is clear from the results in Tables 3.6 and 3.7 that while the average effects highlighted in Table 3.5 were quite small, there was substantial variation within the site visit sample in terms of the range of effects. As previously noted, this variation may facilitate efforts to identify center characteristics that may be associated with positive program effects across the school-related outcomes examined.

In the sections that follow, steps are taken to explore how various types of center characteristics were found to be related to both Texas ACE program attendance and school-related outcomes. Results are reported separately for each of the five center characteristic categories in relation to Texas ACE program attendance and school-related outcomes. Again, in order to conserve space and support a more parsimonious reporting of findings, an emphasis has been placed on reporting positive associations between center characteristics and the outcomes examined. Full findings for all analyses highlighted in this chapter can be found in select tables in Appendix C and the supplemental technical appendix separate from this document.

Data on Observed Quality

Evidence suggests that afterschool programs are more likely to have an impact if they are high quality (Durlak, Weissberg et al., 2010; Naftzger et al., 2014). Generally, there are two categories of quality: process quality and 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 students. In such settings, participants feel safe and supported and are afforded opportunities to form meaningful relationships, experience belonging, and actively participate in their own learning and development in ways that promote skill-building, knowledge acquisition, and new interests. These practices are generally seen as being universal because they apply to any type of youth programming, regardless of content, approach, or setting (Naftzger et al., 2015).

A common mechanism for supporting the development of process quality involves the use of a validated observation tool to assess the extent to which research-based supports and opportunities associated with high process quality are available for participating students. Various versions of the PQA are the most commonly used observation tools to assess process quality in afterschool and summer learning activities (Naftzger et al., 2015). Texas ACE centers are encouraged to use the PQA and other validated observation instruments like the APT-O to monitor the quality of the afterschool and summer programming they provide (Texas ACE Blueprint, 2020–2021).

Youth and School-Age Program Quality Assessment (YPQA and SAPQA, respectively) data were collected during the site visits performed by members of the evaluation team. The YPQA was used when conducting activity observations in those Texas ACE centers serving middle and high school students. The SAPQA was scored when observing activities provided in ACE centers serving elementary students. Although the majority of items appearing on the YPQA and SAPQA are similar, some differences do exist between the two tools to better reflect those practices that are relevant to students in a given grade level. Appendix D includes additional information about how YPQA and SAPQA measures were created. Approximately four activities were observed per center across two programming days.

The YPQA and the SAPQA are organized into three broad domains. Each domain consists of items describing supports and opportunities that can be provided during activities that do the following:

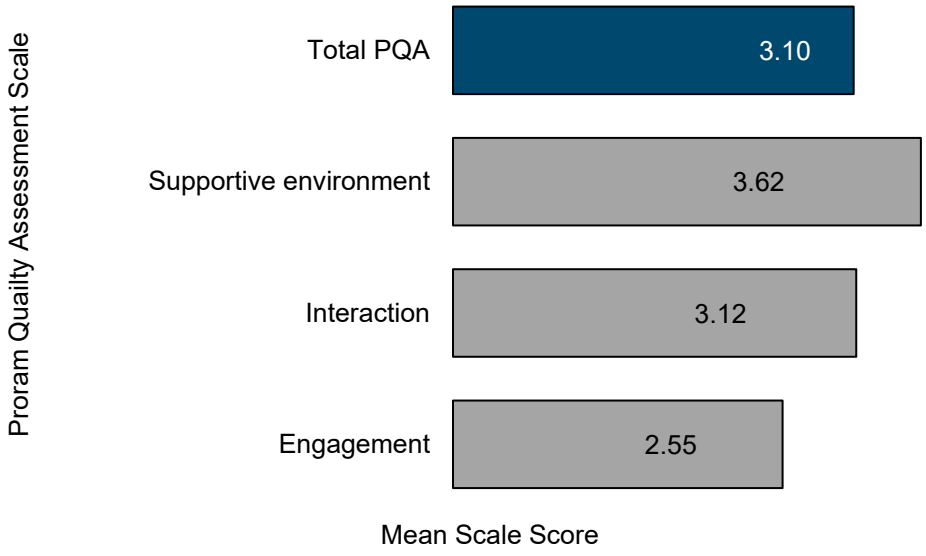
- Create a **supportive environment** for participating students.
- Promote positive **interactions** among activity participants.
- Support **engagement** among participating students.

Separate scores were calculated for each of these three primary domains at the activity level, then averaged to create a center-level quality score for each domain. Generally, practices described in the supportive environment domain are more commonly observed than practices within the interaction and engagement domains. As a result of these differences, scores are typically highest in relation to the supportive environment domain, followed by the interaction and engagement domains, respectively.

A PQA total score for each activity was also created by averaging the domain scores for each activity, and a center-level, average total PQA score was created by averaging each activity total score.

In Figure 3.2, the center-level average scores for each PQA-based measure are aggregated across the 60 centers represented in the site visit sample. Each score was placed on a scale ranging from 1 to 5, with higher scores representing higher process quality. As expected, the average center-level score was highest for the supportive environment domain (3.62), followed by the interaction (3.12) and engagement (2.55) domains, respectively.

Figure 3.2. Average Program Quality Assessment (PQA) Scores by Scale for Centers Represented in the Site Visit Sample



Source. Youth and School-Age PQAs collected in spring 2017, 2018, and 2019 in 60 Texas Afterschool Centers on Education, N = 238 activities.

Steps were also taken to measure the other major form of afterschool quality during the site visits—content-specific practices. This was done by scoring sections of the APT-O, which allows for the identification of specific content area-specific practices present in observed afterschool activities. The practices can be performed by afterschool staff (staff-based) or by students participating in the activity (youth-based). Each of these areas are outlined as follows in Table 3.8, with examples provided of the types of practices counted within each area. A full listing of these practices and tasks can be found in Arellano et al. (2020) and Naftzger, Arellano et al. (2020) under Appendix I site interview protocols and surveys.

Table 3.8. Summary of Assessment of Program Practices Tool – Observation (APT-O) Content Scales and Example Items

APT-O Content Scale	Examples of Staff-Based Practices	Examples of Youth-Based Practices
Reading	Staff read to youth. Staff model reading comprehension strategies.	Youth investigate unfamiliar vocabulary words. Youth discuss or write about books they are reading.
Written Communication	Staff explain strategies for reviewing and editing writing. Staff offer examples to illustrate a writing style or technique.	Youth edit written work and share writing with peers. Youth write about topics that matter to them.
Verbal Communication	Staff encourage youth to verbally elaborate on their ideas. Staff model use of standard English (e.g., proper grammar and pronunciation) when interacting or reading to youth.	Youth present in front of peers or other audience. Youth participate in group discussions or debate.
Mathematics – Communication and Reasoning	Staff use mathematical terms when talking about math or using math to solve problems or accomplish a task. Staff encourage youth to verbally explain "how" they solved a problem using math.	Youth engage in projects that require talking about math. Youth explain their math approach or questions about math to peers.
Mathematics – Problem Solving	Staff encourage youth to use math in practical situations and see connections to math in their everyday life. Staff explain their reasoning when they talk about how they solved or would solve a math problem.	Youth play math games or engage in activities requiring mathematical reasoning. Youth explain their math reasoning or justify their thinking through drawing pictures or creating graphs.

Scorers indicated the presence or absence of a given content practice when observing an afterschool activity during the site visit observations. The data were used to create a sum of the practices observed for a given activity in each of the five content areas outlined in Table 3.8.[16] Separate sums were created for staff- and youth-based practices for each content area, as was a total sum that combined counts of staff- and youth-based practices observed in that content area. Center-level measures were based on the sum of practices identified across all activities observed during the site visit in each content area.

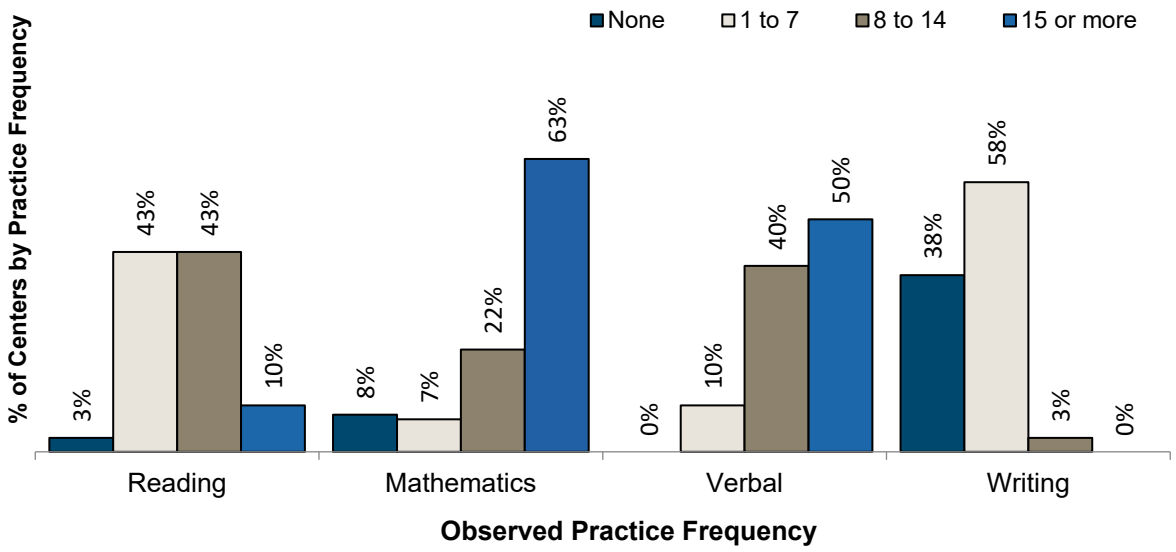
Figures 3.3 to 3.5 summarize the prevalence of APT-O content practices observed for all practices in each content area (Figure 3.3) and those practices classified as being staff- or youth-based (Figures 3.4. and 3.5, respectively). As shown in Figure 3.3, the most frequent content practices observed were in the area of mathematics, with 15 or more APT-O mathematics practices observed in 63% of centers represented in the site visit samples. As shown in Figures 3.4. and 3.5., mathematics communication and reasoning practices were more commonly offered than those related to problem-solving.

In addition, verbal communication practices were relatively common in observed activities, with 15 or more APT-O verbal communication practices observed in 50% of centers represented in the site visit samples (see Figure 3.3). Writing practices were the least commonly observed practices, with only one to seven written communication practices observed in the majority of site visit centers, while no writing practices were observed in 38% of centers represented in the sample. Youth-based writing practices

[16] Some offering observations were scored by two raters. When creating offering scores, practices were counted as being present if they were identified as being present by at least one rater.

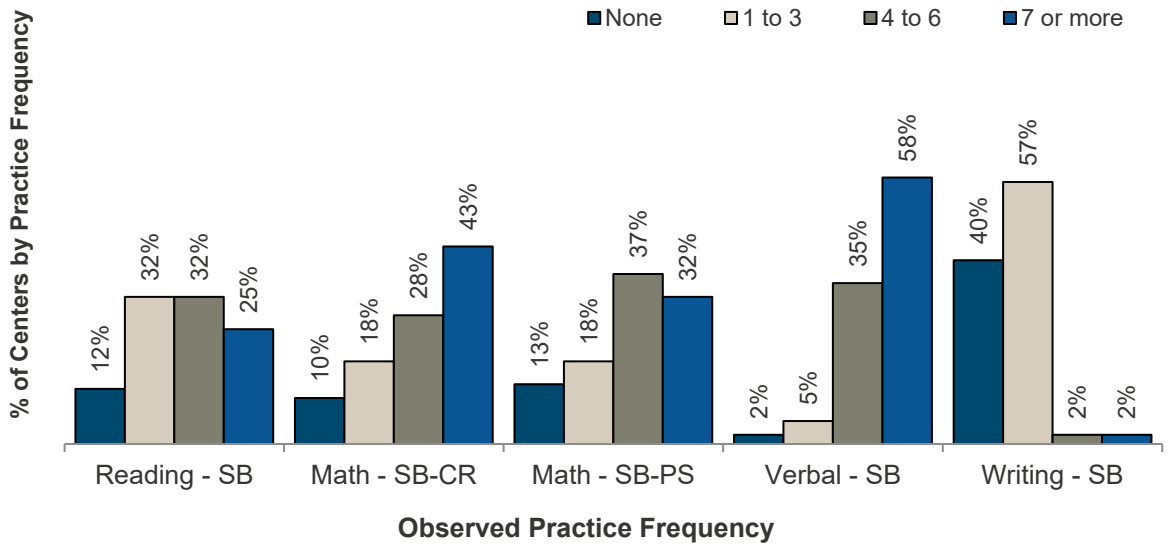
were particularly uncommon, with 57% of centers observed as having none of these practices present during the activities assessed by members of the evaluation team (see Figure 3.5).

Figure 3.3. Prevalence of Assessment of Program Practices Tool – Observation (APT-O) Practices within Observed Centers, by Content Area



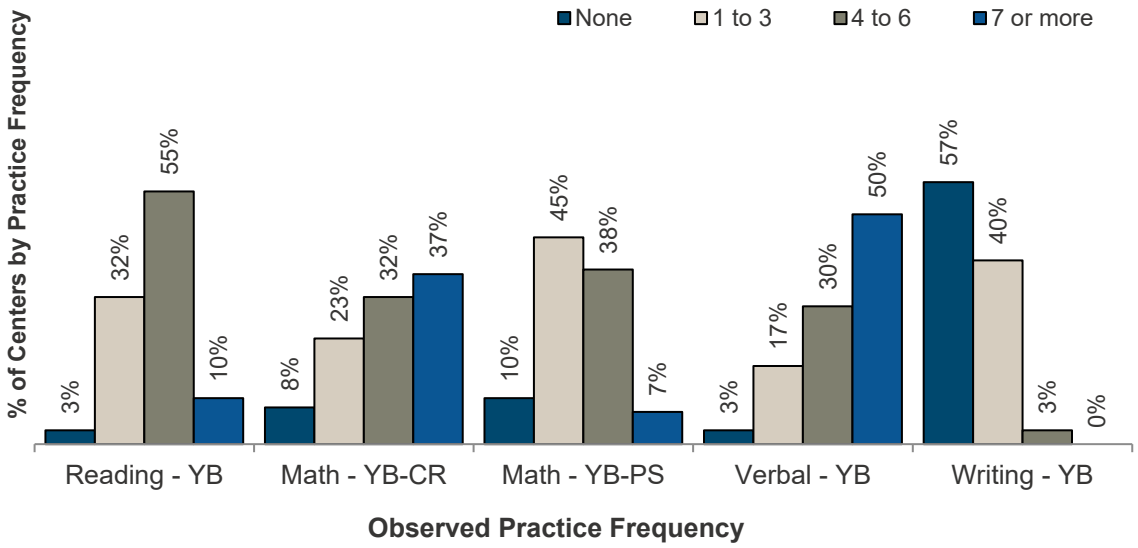
Source. APT-O data collected during site visits in spring 2017, 2018, and 2019 in 60 Texas Afterschool Centers on Education, N = 238 activities.

Figure 3.4. Prevalence of Staff-Based Assessment of Program Practices Tool – Observation (APT-O) Practices within Observed Centers, by Content Area



Source. APT-O data collected during site visits in spring 2017, 2018, and 2019 in 60 Texas Afterschool Centers on Education, N = 238 activities.
Note. SB – staff-based. *CR* – communication and reasoning. *PS* – problem-solving.

Figure 3.5. Prevalence of Youth-Based Assessment of Program Practices Tool – Observation (APT-O) Practices within Observed Centers, by Content Area



Source. APT-O data collected during site visits in spring 2017, 2018, and 2019 in 60 Texas Afterschool Centers on Education, N = 238 activities.
Note. YB – youth-based. *CR* – communication and reasoning. *PS* – problem-solving.

In light of the research related to the importance of program quality in supporting student outcomes (Durlak, Mahoney et al., 2010; Eccles & Gootman, 2002; Kataoka & Vandell, 2013; Larson & Dawes, 2015; Vandell et al., 2007), the evaluation team hypothesized that program quality as measured by the PQA and APT-O would be related to both student attendance in Texas ACE programming and school-related outcomes. Generally, the research supporting the efficacy of practices related to process quality is more substantive and extensive than studies related to content-specific practices, so the evaluation team expected measures derived from the PQA to have a greater likelihood of being associated with both program attendance and school-related outcomes than those derived from APT-O. In the sections that follow, results are outlined regarding how PQA and APT-O measures were found to be related to both Texas ACE program attendance and center-level effects related to school outcomes.

Program Quality and Texas ACE Program Attendance

Table 3.9 shows the center-level, program quality measures from both the PQA and APT-O that were found to be significantly and positively associated with one or more Texas ACE program attendance outcomes based on a series of multilevel models described previously. As shown in Table 3.9, supportive environment, interaction, and engagement were found to be significantly and positively related to one or more Texas ACE attendance outcomes.[17]

- **PQA interaction score.** The center-level PQA interaction score was the only PQA-based measure that was found to be positively and significantly related to more than one Texas ACE program attendance outcome. For observed centers, a higher PQA interaction score was associated with higher hours of Texas ACE program participation during the school year in question. A similar, moderately significant finding was found in relation to the number of calendar days youth attended Texas ACE programming. However, while not shown in Table 3.9, a significant negative association was also found between elementary centers with higher interaction scores and the duration of Texas ACE program participation (see Appendix Table C3.3).

[17] In this report, statistical significance occurs when a *p* value is less than .05. Moderate significance is defined as a *p* value greater than .05 but less than .10.

- **PQA supportive environment score.** Supportive environment scores were found to be significantly and positively associated with the number of Texas ACE activities students participated in during this school year. When the analyses were run separately for centers serving elementary and middle/high school students, this significant relationship was no longer observed. However, although it is not shown in Table 3.9, a significant negative association was also found between centers with higher supportive environment scores and both hours of Texas ACE program participation and the duration of program participation (see Appendix Table C3.2). In addition, a negative and moderately significant association was found between elementary centers with higher supportive environment scores and hours of Texas ACE program participation (see Appendix Table C3.3).
- **PQA engagement score.** Engagement scores were found to be significantly and positively associated with the number of days students spent in programming but only in centers serving elementary students.

Although each of the PQA subscales were found to be positively associated with at least one Texas ACE attendance outcome, the average PQA total score was not found to be significantly associated with any of the program attendance outcomes examined.

Table 3.9. Point-of-Service Quality Areas Positively Associated with Texas ACE Program Attendance Outcomes

Point-of-Service Quality Area	Hours			Duration			# of Activities			Sustained Attendance		
	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS
Program Process Quality (as measured by PQA)												
Supportive Environment							**					
Interaction	***			†								
Engagement					**							
Program Content-Specific Practices (as measured by APT-O)												
Reading Practices							†			†		
Writing Practices		*			**							
Verbal Practices – Staff-based					**							
Mathematics Problem-Solving Practices – Youth-based	*			†								

Source. Tx21st Student Tracking System and Public Education Information Management System data, 2016–17 to 2018–19. 238 scored PQA and APT-O assessments, 2017–2019.
Note. ACE – Afterschool Centers on Education. EL – centers serving elementary students. MS/HS – centers serving middle and/or high school students.
† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Although it was expected that content-specific practices would be less likely than process quality measures to have positive relationships with Texas ACE program attendance outcomes, some significant and positive associations were found, particularly in centers serving elementary school students:

- **APT-O – Writing.** The APT-O writing score was the only APT-O-based measure examined that was significantly associated with more than one Texas ACE program attendance outcome. Specifically, in elementary centers, the adoption of a greater number of APT-O writing practices was associated with more hours of Texas ACE program attendance and a greater duration in Texas ACE attendance across the school year. These findings are potentially of interest because written communication practices were the least frequently observed practices among the APT-O content areas assessed by

the evaluation team. However, although it is not shown in Table 3.9, a significant negative association was also found between elementary centers with greater adoption of APT-O writing practices and the number of Texas ACE activities students participated in during the school year (see Appendix Table C3.3).

- **APT-O – Verbal Communication (staff-based).** The duration of time students spent in Texas ACE programming, in days, was also found to be positively associated with staff-based, verbal communication practices assessed on the APT-O in elementary centers specifically.
- **APT-O – Mathematics – Problem-Solving (youth-based).** When all centers were included in the model, the greater adoption of practices related to youth-based problem-solving in mathematics was positively associated with more hours of participation in Texas ACE programming during the course of the school year. A similar, but moderately significant, positive relationship was found between practices related to youth-based problem-solving in mathematics and the duration of time students spent in ACE programming.
- **APT-O – Reading.** More frequent adoption of APT-O reading practices was found to be only moderately related to the Texas ACE attendance outcomes, specifically in relation to the number of activities students participated in during the school year and sustained attendance in ACE programming across multiple school years when all site visit centers were included in the model.

In terms of the relationship between content-specific practices measured on the APT-O and Texas ACE attendance outcomes, potentially notable associations were found among centers serving students in elementary grade levels and for written and staff-based verbal communication practices. These may be areas that warrant future examination, particularly writing practices because they were less commonly observed in visited centers.

Program Quality and School-Related Outcomes

Table 3.10 presents program quality measures from both the PQA and APT-O that were found to be significantly and positively associated with one or more school-related outcomes. These results are from a series of regression analyses described previously in this chapter (see the School-Related Outcomes section). Center-level effect sizes served as outcomes in these analyses and were constructed separately for students attending Texas ACE programming for 60 days or more during the course of 1 programming year or 60 days or more in each of 2 consecutive programming years. PQA interaction and supportive environment scores were found to be significantly and positively related to at least one of the school-related outcomes examined:

- **PQA interaction score.** The mean center-level PQA interaction score was found to be positively and significantly related to center-level effect sizes in STAAR-Mathematics for those students participating in Texas ACE programming for 60 days or more for 1 year. In this sense, when the PQA interaction score was higher for a center, the center was found to have a larger effect in terms of STAAR-Mathematics scores. To provide additional context in relation to this finding, when centers in the site visit sample were split into higher and lower groups based on their PQA interaction score with an even number in each group, the higher scoring centers demonstrated an average center-level effect of 16.75 scale score points among students participating in Texas ACE programming for 60 days or more. For the lower scoring centers, the average center-level effect was -16.00 scale score points.
- **PQA supportive environment score.** The mean center-level PQA interaction score was found to be positively related to center-level effect sizes in school-day attendance for those students participating in Texas ACE programming for 60 days or more for a year, although this association was only moderately significant. In addition, the mean, center-level supportive environment score was also found to be negatively associated with center-level effect sizes related to disciplinary incidents for those students participating in Texas ACE programming for 60 days or more over 2 years. In this sense, when a center scored higher on the supportive environment scale, the center demonstrated less disciplinary incidents among students participating in Texas ACE programming for 60 days or more over 2 years. This relationship was moderately significant.

In terms of APT-O quality scores, the evaluation team expected that greater adoption of certain center-level practices, like those related to reading and mathematics, would be positively associated with the center-level effect sizes for these content areas, respectively. As shown in Table 3.10., this expectation was met to some extent.

- **APT-O writing practices.** A moderately significant and positive association was found between greater adoption of APT-O writing practices and center-level effect sizes related to STAAR-Reading scores for those students participating in Texas ACE programming for 60 days or more for 2 years. However, most center-level effects related to reading were negative, meaning Texas ACE participants scored lower on the STAAR-Reading assessment than similar students not participating in programming. For example, when centers in the site visit sample were split into higher and lower groups based on their APT-O writing practices score, the higher scoring centers demonstrated an average center-level effect of -5.38 scale score points among students participating in Texas ACE programming for 60 days or more. For the lower scoring centers, the average center-level effect was -11.33 scale score points.

  However, when focusing on youth-based writing practices specifically, a greater adoption of these practices was found to be significantly and positively associated with center-level effect sizes related to STAAR-Reading scores at the 2-year level of Texas program participation. In this case, centers in the top quartile for adoption of youth-based writing practices were found to have a positive effect of 16.44 scale score points on the STAAR-Reading assessment on average. However, this mean was only based on seven centers in the site visit sample, so some caution needs to be exercised in interpreting this result.

  For those students participating in Texas ACE programming for 60 days or more for a year, greater center adoption of APT-O writing practices was found to be significantly and positively associated with center-level effects related to the percentage of school days attended. However, the practical relevance of this association is small. When centers in the site visit sample were split into higher and lower groups based on their APT-O writing practices scores with an even number in each group, the higher scoring centers demonstrated an average center-level effect of 0.99 percentage points among students participating in Texas ACE programming for 60 days or more. For the lower scoring centers, the average center-level effect was 0.64 percentage points, which equates to less than a day difference between the two groups. Similar results were found when examining youth-based writing practices specifically, which were also found to be positively and significantly associated with the percentage of school days attended.

- **APT-O mathematics practices.** There was a significant and positive association between greater adoption of APT-O mathematics practices and center-level effect sizes related to STAAR-Mathematics scores for those students participating in Texas ACE programming for 60 days or more for 2 years. When centers in the site visit sample were split into higher and lower groups based on their APT-O mathematics practices score, the higher scoring centers demonstrated an average center-level effect of 9.56 scale score points among students participating in Texas ACE programming for 60 days or more. For the lower scoring centers, the average center-level effect was -14.71 scale score points.

  Greater adoption of APT-O mathematics practices, and youth-based practices related to communication and reasoning specifically, were also found to be significantly and positively associated with STAAR-Reading scores for those students participating in Texas ACE programming for 60 days or more for 2 years, although in each of these cases, this association was only moderately significant. However, when examining higher and lower centers in terms of center adoptions of APT-O mathematics practices, centers in the higher adoption group did have an average positive effect on STAAR-Reading scores at 2.82 scale score points, while the mean effect in the lower adoption group was -18.00 scale score points.

Summary of Findings Related to Quality Practices

Taking into consideration both results from analyses examining outcomes related to Texas ACE program attendance and school-related outcomes, three quality-related practices seemed especially noteworthy

given significant or moderately significant associations with the Texas ACE attendance and school-related outcomes examined. As noted previously, moderately significant findings represent a greater probability that a Type I error (i.e., rejecting a true null hypothesis that there is no relationship between the variables being examined) will occur. In addition, given that the analyses described in this section were correlational, the findings cannot be used to infer that the presence of a positive relationship between a given center characteristic and a program attendance or school-related outcome means that the center characteristic caused the outcome.

- **PQA interaction score.** Higher PQA interaction scores were found to be positively associated with higher hours of Texas ACE program participation, the duration of time students spent in ACE programming (moderately significant), and center-level effect sizes in STAAR-Mathematics for those students participating in ACE programming for 60 days or more for a year.
- **APT-O mathematics practices.** Greater adoption of youth-based, problem-solving practices in mathematics was positively associated with more hours of participation in Texas ACE programming during the school year.

  Multiple positive associations were also found between APT-O mathematics practices and STAAR assessment scores. Centers that adopted a greater number of APT-O mathematics practices were found to have more positive center-level effect sizes related to STAAR-Mathematics when students participated in Texas ACE programming for 60 days or more over 2 years. In addition, a positive and moderately significant relationship was even found between greater adoption of APT-O mathematics practices and center-level effects on STAAR-Reading scores.
- **APT-O writing practices.** In elementary centers, greater adoption of APT-O writing practices was associated with more hours of Texas ACE program attendance and a greater duration of attendance across the school year. In terms of school-related outcomes, greater adoption of APT-O writing practices was positively associated with STAAR-Reading scores (moderately significant) and the percentage of school days attended, although the practical significance of these relationships was found to be more limited than some of the other quality practices examined. The fact that APT-O writing practices were the least common content-specific practice observed in site visit centers may also suggest that additional study may be warranted in terms of how such practices affect student experiences in Texas ACE programming and what these experiences mean in terms of student outcomes.

Table 3.10. Point-of-Service Quality Areas Positively Associated with Center-Level Effects by Level of Texas ACE Participation and Outcome

	60 Hours or More – 1 Year				60 Hours or More – 2 Years			
Point-of-Service Quality Area	**Reading**	**Mathematics**	**Attendance**	**Disciplinary**	**Reading**	**Mathematics**	**Attendance**	**Disciplinary**
Program Process Quality (as measured by PQA)								
Supportive Environment			†					†
Interaction		*						
Content-Specific Practices (as measured by APT-O)								
Writing Practices			*		†			
Writing Practices – Youth-based			*		*			
Mathematics Practices					†	*		
Mathematics Communication and Reasoning Practices – Youth-based					†			

Source. Tx21st Student Tracking System, Public Education Information Management System, and STAAR, 2015–16 to 2018–19. 238 scored PQA and APT-O assessments, 2017–2019.
Note. ACE – Afterschool Centers on Education.
† $p < .10$. * $p < .05$.

Organizational Processes

Organizational processes affect the type of Texas ACE programming selected and the way in which it is delivered at a center, who provides that programming, and who receives it. An organizational process related to Texas ACE implementation can be classified into two primary categories:

- Organizational processes that can be identified as being representative of research-supported best practices
- Organizational processes that represent attributes related to how Texas ACE centers operate without a strong connection to the afterschool quality practice literature

It is relatively common for state education agencies to adopt tools and frameworks that describe research-supported best practices for their 21st CCLC-funded grantees to help ensure the creation of developmentally appropriate settings for participating youth (Naftzger et al., 2015). These tools commonly describe criteria for effective management and financial practices, intentional program design, staff development, school alignment, partnership development, evaluation, and sustainability. Organizational processes Texas ACE grantees are expected to adopt are described in the Texas ACE Blueprint and assessed through an aligned quality assurance process (QAP).

Protocols employed by the evaluation team when conducting site visits included several practices described in the Texas ACE Blueprint. However, steps were taken only to assess how a subset of these practices were related to the program attendance and school outcomes examined as part of the correlational analyses described in this chapter of the report. More specifically, organizational processes specified in the Texas ACE Blueprint were examined in the regression and multilevel models if (a) there was shown to be a difference between higher and lower performing centers based on KPI data on the practice in question or (b) the practice was found to be significantly and positively associated with school outcomes in one of the preceding two evaluation reports where findings specific to the 2017 and 2018 site visits were reported. The practices that meet these criteria are outlined in Table 3.11 and are aligned with the relevant Texas ACE Blueprint component and subcomponent.

Table 3.11. Organizational Processes Examined by Connection to Texas ACE Blueprint Components

Vision, Mission, and Goals	School Community Engagement	Continuous Quality Improvement
Strategic Planning – Program Goals • Provide academic and creative enrichment opportunities • Facilitate parental involvement • Build social and emotional learning skills • Provide a safe learning environment • Address behavioral issues • Improve grade promotion and graduation rates	**Student Recruitment and Attendance** • Targeting academically at-risk students • Broader target population **Community Engagement – Advisory Board Role** • General guidance and feedback • Programming input • Operational input • Planning input **Family Engagement** • ESL classes • HSE classes	**Internal Quality Assurance** • Using PQA/other observational rubrics • Periodic review of program data • Obtaining youth input on programming **Local Independent Program Evaluation** • Working with an external evaluator

Note. ACE – Afterschool Centers on Education.

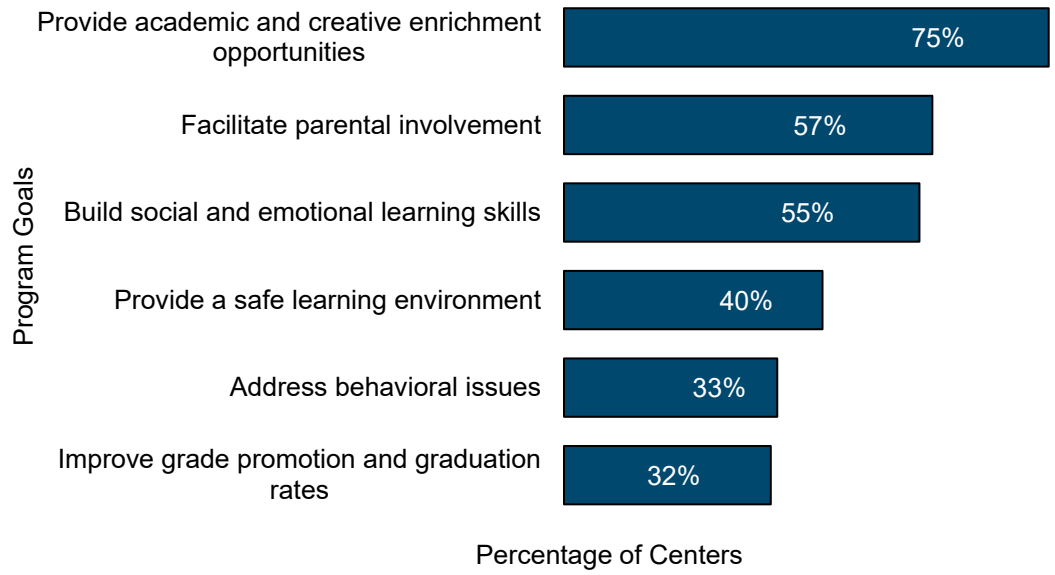
The second category of organizational processes examined reflect those attributes without a strong connection to the afterschool quality practice literature. Two of the center characteristics considered fell

within this category: (1) centers where the majority of staff were school-day teachers and (2) centers that were identified as providing a high level of summer programming (150 hours or more). These two characteristics represent operational decisions made by a subset of centers across the site visit samples relative to how to go about staffing their program and deciding how much summer programming to offer.

Figures 3.6 to 3.10 present various organizational processes reflective of key program design and delivery components described in the Texas ACE Blueprint. Figure 3.6 outlines the percentage of centers represented in the site visit samples indicating a given program goal. Program goals referenced during interviews with center coordinators and principals related both to Texas ACE service provision and student outcomes.

As shown in Figure 3.6, the majority of centers represented in the site visit samples indicated that it was a program goal to provide academic and creative enrichment opportunities (75%), facilitate parental involvement (57%), and build social and emotional skills among participating students (55%). Other less commonly referenced goals included providing a safe learning environment for participating students (40%), addressing student behavioral issues (33%), and improving grade promotion and graduation rates (32%). The results outlined in Figure 3.6 reflect the diversity in goals and objectives site visit centers were seeking to meet through the design and delivery of Texas ACE programming.

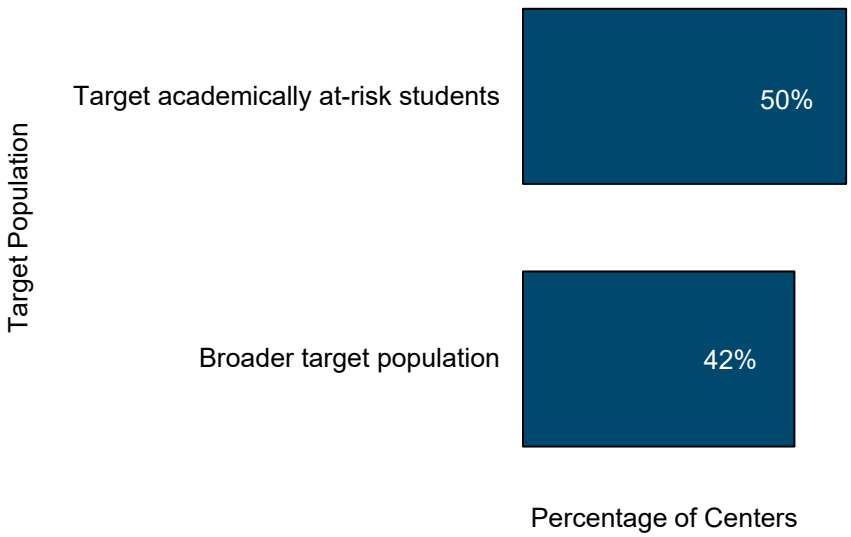
Figure 3.6. Percentage of Centers Indicating a Given Program Goal



Source. Interviews and focus groups conducted during site visits in spring 2017, 2018, and 2019 in 60 Texas Afterschool Centers on Education.

Site visit centers also demonstrated some diversity in terms of how they defined students targeted for participation in Texas ACE programming. As illustrated in Figure 3.7, half of the centers represented in the site visit samples indicated that students at risk for academic failure were the primary target for the Texas ACE programming provided by the center. Another 42% of centers represented in the site visit sample indicated that while they did make an effort to make sure at-risk students were served in programming, they also made an effort to serve a broader population of students attending the schools served by the center. Generally, 21st CCLC-funded programming is designed to provide supports and opportunities to students from high-poverty communities and lower performing schools.

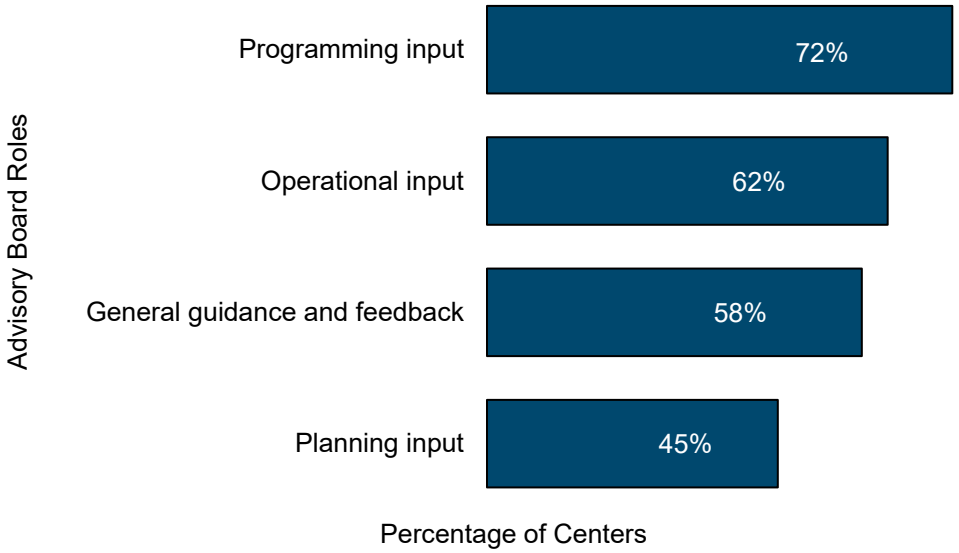
Figure 3.7. Percentage of Centers Indicating a Given Target Population Definition



Source. Interviews and focus groups conducted during site visits in spring 2017, 2018, and 2019 in 60 Texas Afterschool Centers on Education.
Note. Eight percent of site visits centers could not be classified relative to how they defined their target population.

Each Texas ACE grantee is expected to form an advisory board that both informs program development and supports improvement efforts. Interview and focus group data collected by the evaluation team during the site visits allowed for an exploration into how centers represented in the site visit samples relied upon their advisory board. As shown in Figure 3.8, the majority of centers indicated that their advisory board provided input on programming (72%) and operations (62%), in addition to providing general guidance and feedback (58%). Slightly fewer advisory boards at site visit centers were involved in supporting planning efforts related to service and activity design and delivery (45%).

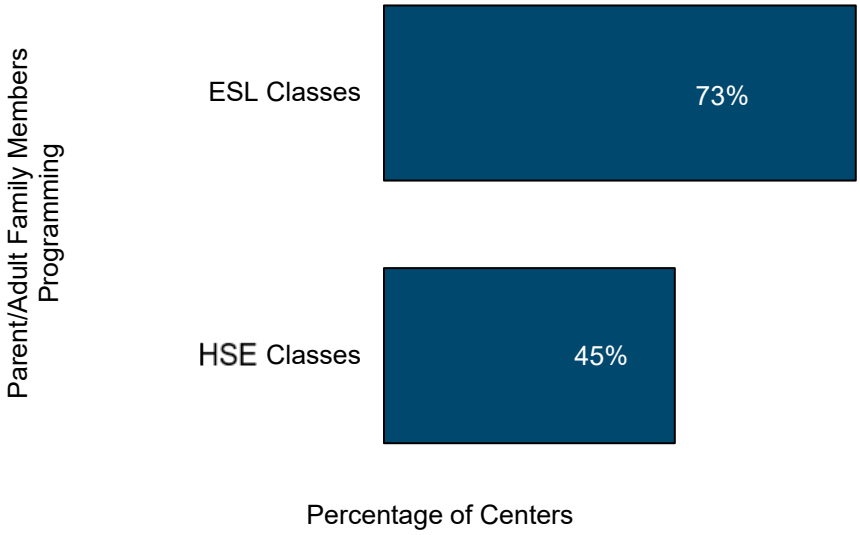
Figure 3.8. Percentage of Centers Indicating a Given Role for the Advisory Board



Source. Interviews and focus groups conducted during site visits in spring 2017, 2018, and 2019 in 60 Texas Afterschool Centers on Education.

Texas ACE centers are also expected to provide family engagement activities to address family needs and to respond to preferences for services and activities. Among the more common ways programs opted to meet this expectation was to provide activities designed to help parents and adult family members without a high school diploma obtain their high school equivalency (HSE). In addition, centers also frequently provided activities to support the acquisition of English language skills for those parents and adult family members who needed to further develop these skills. As shown in Figure 3.9, nearly three-quarters of centers (73%) represented in the site visit samples provided ESL programming for parents and adult family members, while just under half provided HSE classes (45%).

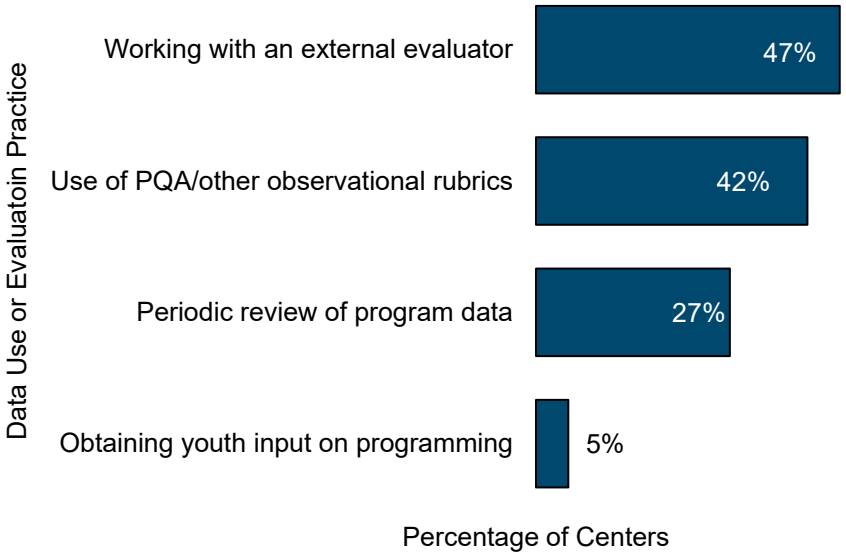
Figure 3.9. Percentage of Centers Providing High School Equivalency (HSE) or English as a Second Language (ESL) Programming for Parents and Adult Family Members



Source. Interviews and focus groups conducted during site visits in spring 2017, 2018, and 2019 in 60 Texas Afterschool Centers on Education.

Texas ACE centers are also expected to engage in program improvement activities by engaging in internal quality assurance efforts and working with an external evaluator to assess both implementation and center outcomes. As illustrated in Figure 3.10, the extent to which centers reported investing time and effort in these processes was somewhat mixed. More specifically, only 47% of site visit centers reported working with an external evaluator to enhance program effectiveness. In terms of engagement in quality improvement processes, 42% of centers reported using the PQA or another observation rubric to inform quality improvement processes, while 27% of centers reporting reviewing program data on a periodic basis to inform such efforts. Few centers represented in the site visit samples reported obtaining data from students directly to guide decision making, with only 5% of centers relying on these data to inform quality improvement efforts.

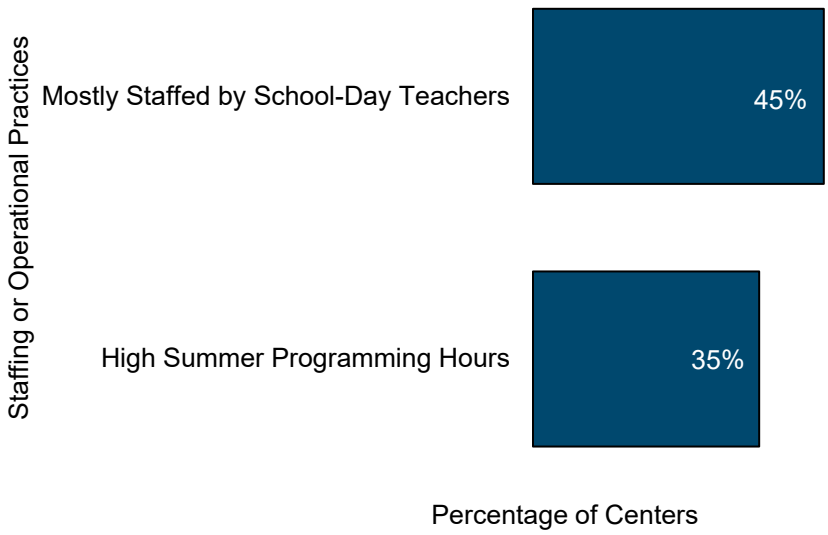
Figure 3.10. Percentage of Centers Indicating a Data Use or Evaluation Practice



Source. Interviews and focus groups conducted during site visits in spring 2017, 2018, and 2019 in 60 Texas Afterschool Centers on Education.

As previously noted, the final two center characteristics examined in models related to Texas ACE attendance and school-related outcomes were those centers that relied on school-day teachers to staff programming and those centers that operated summer programming for a relatively high number of hours (150 hours or more during the preceding summer). As shown in Figure 3.11, 45% of centers were characterized by school-day teachers making up the majority of staff working at the center to provide Texas ACE programming to participating students. In terms of high levels of summer programming, 35% of site visit centers were found to operate a summer program for 150 hours or more during the preceding summer.

Figure 3.11. Percentage of Centers Indicating a Particular Staffing or Operational Practice



Source. Tx21st data for 60 Texas Afterschool Centers on Education represented in site visits conducted in spring 2017, 2018, and 2019.

Organizational Processes and Texas ACE Program Attendance

Table 3.12 outlines those organizational processes that were found to be significantly and positively associated with one or more Texas ACE program attendance outcomes based on the HLM analyses undertaken to examine the relationship between center-level organizational processes and student-level Texas ACE program attendance outcomes. When conducting these analyses, variables representing a given organizational practice represented those centers that had adopted the practice in question relative to those centers that had not. As shown in Table 3.12, organizational processes found to be significantly and positively related to one or more ACE attendance outcomes fell within three primary groups, each related to components outlined in the Texas ACE Blueprint: (1) program goals, (2) data use and evaluation, and (3) advisory board practices.

Program Goals

- **Provide academic and creative enrichment opportunities.** Providing creative enrichment opportunities is closely aligned with the core purposes of the Texas ACE program. Most centers would be expected to have this as a program goal. Centers seeking to achieve this goal were found to have students who attended programming for a longer duration on average, both when all centers were included in the model and when the model only included centers serving middle/high school students. Each of these associations were significant and positive. In addition, in centers serving students in elementary grade levels, a moderately significant and positive association was found between attending a center that reported this particular goal and the number of hours students participated in Texas ACE programming. However, while not shown in Table 3.12, a significant, negative association was also found between centers seeking to provide academic and creative enrichment opportunities and the number of Texas ACE activities students participated in during the school year (see Appendix Table C3.4). A similar, but moderately significant, negative association was also found specifically among elementary centers (see Appendix Table C3.5).
- **Build social and emotional learning skills.** Centers that referenced building social and emotional learning skills as a program goal were found to have students who attended Texas ACE programming over a longer duration on average. This relationship was found to be true across all grade levels. In

addition, students attending centers serving middle/high school students specifically were also found to attend a greater number of total hours in Texas ACE programming. Each of these associations were statistically significant and positive.

- **Address behavioral issues.** Centers serving elementary students seeking to address behavioral issues were found to have students who attended a greater number of hours in Texas ACE programming during the school year on average. This was a significant and positive association.

Data Use and Evaluation

- **Periodic review of program data.** Elementary students attending centers that reported engaging in a periodic review of program data attended Texas ACE programming both for a greater number of hours during the school year and for a longer duration on average, relative to centers that did not report engaging in such a practice. Each of these findings was positive and statistically significant.
- **Obtaining youth input on programming.** Centers that took steps to obtain youth input on programming, normally through youth surveys, were found to have participating students attend a greater number of Texas ACE activities during the school year on average relative to centers that did not report taking steps to obtain youth input on programming. This was a positive and significant association. However, although it is not shown in Table 3.12, a significant, negative association was also found between centers obtaining youth input on programming and the number of Texas ACE activities students participated in during the school year (see Appendix Table C3.4).

Advisory Board Practices

- **General guidance and feedback.** Centers that reported relying on their advisory board to provide general guidance and feedback relative to Texas ACE program design and delivery were found to have students who attended a significantly greater number of activities on average when all centers were included in the model. A similar positive relationship was found between this practice when models involving only centers serving middle/high school students were considered, but in this case, the association was found to be only moderately significant.
- **Programming input.** When centers serving elementary students reported obtaining input on what programming should be offered as part of the Texas ACE program, students in those centers had a tendency to attend programming for a longer duration during the school year on average. This finding was statistically significant.

Staffing or Operational Practice

- **High summer programming hours.** Centers that provided a higher number of summer programming (150 hours or more during the preceding summer) were found to have students who attended more hours of programming. This finding was significant and positive for elementary centers specifically, and moderately significant when all centers were included in the model. In addition, students were found to attend Texas ACE programming for a longer duration when attending centers offering a high number of summer programming hours. A similar, significant finding was also found among centers serving middle and high school students specifically.

Table 3.12. Organizational Processes Positively Associated with Texas ACE Attendance Outcomes

Organizational Process	Hours			Duration			# of Activities			Sustained Attendance		
	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS
Program Goals												
Build social and emotional learning skills			*	*	**	**						
Address behavioral issues		*										
Provide academic and creative enrichment opportunities		†		*		**				*		*
Data Use and Evaluation												
Periodic review of program data		*			*							
Obtaining youth input on programming							**					
Advisory Board Practices												
General guidance and feedback							*	†				
Programming input					*							
Staffing or Operational Practice												
High summer programming hours	†	*		*		*						

Source. Tx21st Student Tracking System and Public Education Information Management System data, 2016–17 to 2018–19. 320 interviews conducted during the site visits, 2017–2019.
Note. ACE – Afterschool Centers on Education. EL – centers serving elementary students. MS/HS – centers serving middle and/or high school students.
† $p < .10$. * $p < .05$. ** $p < .01$.

Most of the organizational processes outlined in Table 3.12 have some connection to criteria outlined in the Texas ACE Blueprint. These results further support the adoption of these practices. Practices associated with obtaining input from key stakeholders (from both youth and advisory boards) were primarily associated with students participating in a greater number of Texas ACE activities. Select program goals and periodic data use were more often connected to greater levels of Texas ACE participation, both within and across school years (as indicated by sustained attendance in programming) depending on the practice.

Organizational Processes and School-Related Outcomes

Table 3.13 outlines organizational processes that were found to be significantly and positively associated with one or more school-related outcomes. As previously noted, center-level effect sizes served as outcomes in these analyses and were constructed separately for students attending Texas ACE programming for 60 days or more during the course of one programming year or 60 days or more in each of two consecutive programming years. As outlined in Table 3.13, a number of organizational processes found to be related to the Texas ACE program attendance outcomes described in the previous section (see Table 3.12) were found to also be significantly and positively related to STAAR-Reading performance and fewer disciplinary incidents; however, each of these associations were only found to be moderately significant (p<.10).

Program Goals

- **Build social and emotional learning skills.** Centers seeking to build social and emotional learning skills were found to have larger center-level effect sizes in STAAR-Reading for those students participating in Texas ACE programming for 60 days or more for a year and for those students participating at this threshold for 2 years. These were positive and moderately significant relationships. More specifically, when considering students who participated in Texas ACE programming for 60 days or more for a year, the average center-level effect in centers indicating that building social and emotional skills was a goal of the program was -2.14 scale score points. In centers not indicating adoption of this goal, the average center-level effect was -13.65 scale score points.

  However, when considering students who participated in Texas ACE programming for 60 days or more over 2 years, the average center-level effect for STAAR-Reading for centers adopting a program goal related to cultivating social and emotional learning was 7.67 scale score points. In centers lacking this goal, the average center-level effect was -22.56 scale score points.

Data Use and Evaluation

- **Periodic review of program data.** Centers that reported engaging in a periodic review of program data were found to have larger center-level effect sizes in STAAR-Reading for those students participating in Texas ACE programming for 60 days or more for 2 years. Here again, this was a positive and moderately significant relationship. For centers that reported adopting this practice, the average center-level effect on STAAR-Reading scores was 6.83 scale score points. For centers that did not report adopting these practices, the average center-level effect was -17.49 scale score points.
- **Obtaining youth input on programming.** Centers that took steps to obtain youth input on programming, typically through youth surveys, were found to have moderately significant, larger center-level effect sizes in both STAAR-Reading and STAAR-Mathematics for those students participating in Texas ACE programming for 60 days or more. However, unlike many other findings related to STAAR-Reading effects, after just 1 year of participation at the 60 days or more threshold, the average center-level was actually positive. Among centers that reported seeking youth input on programming, the average center-level effect was 12.95 scale score points. For centers that did not report this practice, the average center-level effect for STAAR-Reading was -9.22 scale score points.

  In addition, obtaining youth input on programming was the only organizational process found to be at least moderately significant and associated with STAAR-Mathematics scores. In this case, centers that adopted this practice were found to have an average center-level effect of 23.54 scale score points, while centers that did not report seeking input from youth had an average effect of -1.10 scale score points.

  Finally, centers obtaining youth input on programming were also found to have larger negative effects on disciplinary incidents among students participating in Texas ACE programming for 60 days or more for 2 years. Again, these findings were moderately significant.

  However, while not shown in Table 3.13, a moderately significant, negative association was found between centers obtaining youth input on programming and STAAR-Mathematics scores after 2 years of participation in Texas ACE programming for 60 days or more (see Appendix Table C3.14).

  However, substantive caution is urged when interpreting this set of findings because relatively few centers were found to have adopted this practice (three centers total out of the 60 represented in the site visit samples).

Advisory Board Practices

- **Planning input.** Centers that indicated relying on their advisory board to help plan Texas ACE program design and delivery were also found to have larger center-level effects on STAAR-Reading scores among those students participating in Texas ACE programming for 60 days or more for 2 years. Although this was a positive and moderately significant finding, the average center-level effect associated with centers that utilized their advisory boards in this way was a mere 0.98 scale score

points. In centers not adopting this practice, the average center-level effect was found to be -13.68 scale score points.

Target Population Definition

- **Broader target population.** Centers that reported being more expansive in how they defined their target population were also found to have larger center-level effects on STAAR-Reading scores among students participating in Texas ACE programming for 60 days or more for 2 years. This finding was positive and moderately significant. The average center-level effect associated with centers that sought to enroll a broader target population into Texas ACE programming was 8.33 scale score points. In centers not adopting this practice, the average center-level effect was found to be -21.44 scale score points. However, although it is not shown in Table 3.12, a significant, negative association was also found between centers with a broader target population and STAAR-Mathematics scores after 1 year of participation in Texas ACE programming for 60 days or more (see Appendix Table C3.13).

Table 3.13. Organizational Processes Positively Associated with Center-Level Effects by Level of Texas ACE Participation and Outcome

Practices and Approaches	60 Hours or More – 1 Year				60 Hours or More – 2 Years			
	Reading	Mathematics	Attendance	Disciplinary	Reading	Mathematics	Attendance	Disciplinary
Program Goals								
Build social and emotional learning skills	†				†			
Data Use and Evaluation								
Periodic review of program data					†			
Obtaining youth input on programming	†	†						†
Advisory Board Practices								
Planning input					†			
Target Population								
Broader target population					†			

Source. Tx21st Student Tracking System, Public Education Information Management System, and STAAR, 2015–16 to 2018–19.
Note. Between 2017–2019, 320 interviews conducted during the site visits.
Note. ACE – Afterschool Centers on Education.
† $p < .10$.

Summary of Findings Related to Organizational Processes

What is particularly noteworthy about the findings related to organizational processes is the overlap in practices found to be both significantly and positively associated with Texas ACE attendance outcomes and the school-related outcomes examined, although the school-related outcomes were only moderately significant.[18] This was found to be the case with four organizational processes in particular:

1. **Adoption of program goals related to building social and emotional learning skills.** Centers referencing this program goal were found to have students who attended Texas ACE programming over a longer duration, middle and high school students who attended more hours of programming, and larger center-level effect sizes in STAAR-Reading (moderately significant) than centers not referencing social and emotional skill building as a program goal.

   During the past decade, there has been a growing recognition of the importance in supporting social and emotional learning among youth and a fuller awareness that afterschool programming may be well-positioned to support growth on these outcomes given the youth development principles widely adopted in the field (Little & Pittman, 2018). For example, the core youth development practices outlined in tools like the APT-O and PQA are seen as being conducive to supporting the social and emotional development of participating youth. Each tool reflects a common set of principles of program quality that underlie both effective afterschool and SEL programs (Jones et al., 2017):

   - Providing a safe and positive environment for children and adults
   - Supporting the development of high-quality relationships between adults and children
   - Providing developmentally appropriate, relevant, and engaging programs
   - Providing opportunities for direct skill building

   In particular, the importance of relationships is confirmed by research that suggests that when youth connect with supportive adults and engage in meaningful activities with peers in afterschool programs, they have an opportunity to develop and apply skills and personal talents, including those related to social and emotional development (Eccles & Templeton, 2002; Jones et al., 2017; Mahoney et al., 2003; Smith et al., 2016). In light of this finding, there is an established body of research that is consistent with what was found in relation to program attendance and school-related outcomes among centers adopting a goal related to developing social and emotional outcomes.

2. **Periodic review of program data.** Elementary students attending centers that reported engaging in a periodic review of program data were found to attend Texas ACE programming for a greater number of hours during the school year. In addition, center-level effect sizes for STAAR-Reading were larger in centers adopting this practice for those students participating in ACE programming for 60 days or more for 2 years (moderately significant).

   The collection and review of data to support improvement efforts are key facets of both the QAP described in the Texas ACE Blueprint and the processes supported through the LESI described in Chapter 5 of this report. As noted previously, only 27% of centers reported engaging in a periodic review of program data; however, both revisions to the Texas ACE Blueprint and the development of the LESI were being undertaken after some visits had been conducted. As a result, expectations around the need for Texas ACE programs to participate in these efforts are likely to be more clearly understood by grantees presently than was the case during the site visit period.

   However, members of the evaluation team also hypothesize that key to these processes being effective in supporting program improvement efforts is underlying motivation on the part of program staff to dedicate time and effort to collecting accurate and timely data and earnestly considering those

[18] Moderately significant findings represent a greater probability that a Type I error (i.e., rejecting a true null hypothesis that there is no relationship between the variables being examined) will occur. Moderate significance is defined as a *p* value greater than .05 but less than .10. In addition, given that the analyses described in this section were correlational, the findings cannot be used to infer that the presence of a positive relationship between a given center characteristic and a program attendance or school-related outcome means that the center characteristic caused the outcome.

data to drive improvement efforts. This motivation can be potentially enhanced if the level of effort associated with carrying out these processes is seen as commensurate with the benefits gained from participation, the data being collected and used are considered to be both relevant and timely to support decision making, and there are supports and scaffolding available to help the improvement team move forward.

3. **Obtaining youth input on programming.** Centers that took steps to obtain youth input on programming, typically through youth surveys, were found to have participating students attend a greater number of Texas ACE activities during the school year and have larger center-level effect sizes in both STAAR-Reading and STAAR-Mathematics outcomes for those students participating in ACE programming for 60 days or more (moderately significant). However, substantive caution should be exercised in relation to these findings because the number of centers documented as obtaining youth input on programming was relatively small among the centers included in the site visit samples (three out of 60 centers).

   It is hypothesized that taking steps to get feedback on programming from youth results in program offerings that support better engagement, as well as a greater sense among participating youth that what they are doing is relevant to their lives. As students enter early adolescence in particular, youth have both an emerging set of cognitive skills and needs related to agency and autonomy that enhance the importance of providing youth with the opportunity to play a more active role in determining which activities are undertaken and how those activities are carried out (Larson & Angus, 2011).

4. **Reliance on advisory boards for programming input and feedback.** A series of positive associations were found between obtaining guidance and feedback from advisory boards and Texas ACE program attendance and school-related outcomes. Adoption of these practices were found to be associated with students attending a greater number of activities, attending programming for a longer duration during the school year, and larger center-level effects on STAAR-Reading scores (moderately significant).

   Here again, the creation and utilization of advisory boards is identified as one of the quality criteria outlined in the Texas ACE Blueprint in relation to engaging in practices that support community engagement. Generally, advisory boards help provide access to family and community voice and leadership. This approach helps ensure that programs are fully informed of the realities on the ground in terms of what families are facing and what they want and need programming to do for their children when making and implementing decisions. Collaborative leadership relies on effective relationships with all stakeholder groups—including families—to make decisions, where there is a shared commitment for achieving key goals and broad participation in the decision making and implementation process oriented at improving youth outcomes (Maier et al., 2017).

Data on Program Activity Practices

One of the advantages of afterschool programming is the high degree of flexibility program activity leaders have in terms of designing programming that allows youth the opportunity to learn and engage with content in ways that are less easily adopted during the course of the school day. For example, project-based learning is a common strategy employed when designing and delivering afterschool activities, allowing youth the opportunity to experience a sense of agency and autonomy, work through challenges and hone problem-solving skills, and cultivate group-process skills in working with others to bring the project to fruition. One of the goals of the data collection activities adopted by the evaluation team was to explore the types of activity practices made available to students while participating in Texas ACE programming at the site visit centers.

As part of these data collection activities, centers were asked to administer a survey to activity leaders providing programming on the same day that end-of-session survey data were collected to explore youth experiences in programming (additional information about the end-of-session survey can be found in the next section under the End-of-Session Survey heading). A survey was completed for each activity provided on the programming day in question, meaning some staff completed more than one survey if they had provided more than one activity that day. Surveys were collected on two programming days. The

survey asked whether the set of activity practices outlined in Table 3.14 was part of the activity provided on the day in question.

Table 3.14. List of Activity Practices Examined on the Activity Leader Survey

List of Activity Practices	
• Youth primarily worked alone on tasks related to the activity. • Youth primarily worked in small groups on tasks related to the activity. • Youth received *direct instruction* in a particular academic content area (e.g., mathematics, science, reading). • Youth worked on a project that required them to make or build things. • Youth worked on a group project that will take multiple sessions to complete. • Youth participated in activities that allowed them to explore and discover new things on their own. • Youth participated in a competition, contest, or game.	• Youth participated in whole-group discussions facilitated by staff. • Youth delivered a presentation to the whole group or an external audience. • Youth went on a field trip. • Youth listened to a presentation from a speaker or a special guest from outside the program. • Youth planned future activities or projects. • Youth participated in an activity that was designed to make a contribution or be helpful to others or the community (e.g., a service-learning project). • Youth learned or practiced a skill that is not related to a specific school-day content area (e.g., learning Tae Kwon Do).

The activity practices represented on the survey addressed a number of concepts:

- **Was the activity designed to be done as part of a group, or were students largely working alone?** (e.g., Youth primarily worked in small groups on tasks related to the activity. Youth primarily worked alone on tasks related to the activity). Generally, activities that afford youth the opportunity to work in small groups are seen as opportunities to develop group process skills, while supporting youth motivation and experiencing a sense of belonging, connection, and collaboration in achieving a shared purpose (Eccles & Gootman, 2002; Larson et al., 2019).
- **Was the activity connected to previous sessions?** (e.g., Youth worked on a group project that will take multiple sessions to complete). Projects that span multiple sessions allow for youth to take on more complex and challenging tasks, which further supports engagement, skill building, and the opportunity to cultivate a sense of competency and agency (Csikszentmihalyi, 1990; Csikszentmihalyi & Schneider, 2000; Larson & Angus, 2011; Larson et al., 2019).
- **Did the activity place students in more of an active or passive role?** (e.g., Youth listened to a presentation from a speaker or a special guest from outside the program. Youth worked on a project that required them to make or build things). Generally, more active forms of learning are associated with youth experiencing both greater motivation while participating in activities and skill-development (Larson et al., 2019). Common quality assessment tools like the PQA and the APT-O also detail several practices that provide examples of active forms learning.
- **Did the activity provide opportunities for youth to experience a sense of agency or autonomy?** (e.g., Youth participated in activities that allowed them to explore and discover new things on their own. Youth planned future activities or projects). Providing youth with the opportunities to experience a sense of agency and autonomy is particularly important to address the developmental needs of youth once they enter early adolescence (Larson & Dawes, 2015). When these opportunities are available to youth, they can develop positive mindsets and beliefs about their capacities, including confidence and a sense of self-efficacy (Beymer et al., 2018; Larson & Angus, 2011; Naftzger & Sniegowski, 2018; Nagaoka, 2016).
- **Was the activity overtly academic in nature?** (e.g., Youth received *direct instruction* in a particular academic content area (e.g., mathematics, science, reading). A critical facet of the Texas ACE program is supporting academic skill-building in reading and mathematics in particular. One key

component of supporting these academic outcomes is ensuring academic content is present in activities, although normally direct instruction akin to what occurs during the school day is not considered the primary vehicle by which academic skill-building is supported in Texas ACE programs. Typically, this content is embedded in enrichment programming characterized by more active forms of learning that capitalize on the flexibility afforded by programming being provided outside the confines of the school day.

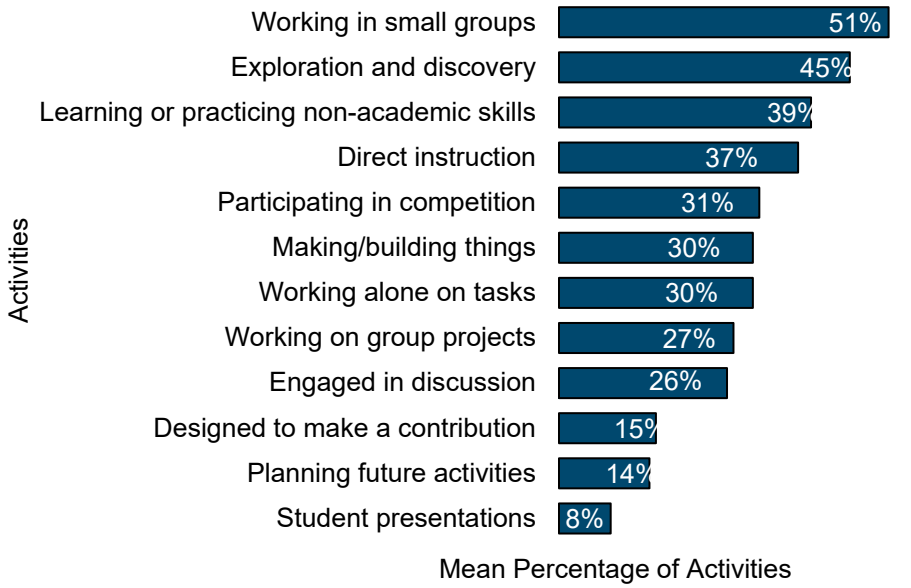
- **Did the activity allow for the pursuit of self-transcendent goals and objectives?** (e.g., Youth participated in an activity that was designed to make a contribution or be helpful to others or the community, such as a service-learning project). Many Texas ACE programs offer service learning activities that provide opportunities for youth to develop a sense of responsibility for or contribute to the well-being of others or their community. Providing youth with opportunities to participate in activities that allow them to pursue goals that go beyond their own self-interest has been shown to support engagement in youth-serving programs (Dawes & Larson, 2011; Yeager et al., 2014).

To assess the extent to which the activity practices listed in Table 3.14 were present in the Texas ACE activities provided on the day in question, activity leaders selected from three response options on the survey: *(1) No programming time was spent doing this; (2) Less than half of the programming time today was spent doing this; and (3) Most programming time today was spent doing this.*

To create a center-level metric, activity practices were first identified for which the activity leader selected the *Most programming time today was spent doing this* response option on the activity leader survey for a given activity practice outlined in Table 3.8. Then, center-level percentages were calculated that represented the total percentage of activities reported on for which most of the programming time was characterized by a specific activity practice.

For example, as shown in Figure 3.12, on average, 51% of the activities provided at site visit centers involved youth spending most of their time in small groups. In addition, both activities that allowed youth substantive time to explore and discover new things on their own and learn or practice a skill that was not related to a specific school-day content area (e.g., learning Tae Kwon Do) were also relatively common among the site visit centers (45% and 39% of offerings, respectively). Just under 40% of activities involved students spending most of their activity time receiving direct instruction in a given content area like reading or mathematics.

Figure 3.12. Average Percentage of Activities with a Given Practice for Centers Represented in the Site Visit Sample



Source. Activity leader surveys administered in spring 2017, 2018, and 2019 in 59 Texas Afterschool Centers on Education, *N* = 577 responses.

Some activity practices outlined in Table 3.14 were found not to have been offered frequently. Activity practices falling in this category were as follows:

- Youth went on a field trip.
- Youth listened to a presentation from a speaker or a special guest from outside the program.

In light of how infrequently these activities were reported to have been provided, a decision was made by the evaluation team to not include them in the models examined in this section of the report.

Activity Practices and Texas ACE Program Attendance

Table 3.15 outlines how various activity practices were found to be significantly and positively associated with one or more Texas ACE program attendance outcomes. As shown in Table 3.15, the most consistent activity practice found to be significantly and positively related Texas ACE program attendance outcomes involved youth working alone on tasks, a finding which was not expected. Other activity practices found to be significantly associated with an attendance outcome were found to be only moderately significant in most cases.

- **Working alone on tasks.** Students attending centers that were found to have a higher percentage of activities during which students spent most of their time working alone on tasks attended programming for a longer duration, attended more activities during the school year, and were more apt to continue participation in Texas ACE programming after having participated in the previous school year. Each of these significant and positive associations were found when all site visit centers were included in the analysis. Centers serving elementary students that had a higher percentage of activities during which students spent most of their time working alone on tasks were also found to have students who attended programming for a longer duration and attended more activities (both findings were significant).

- **Working in small groups.** Centers with a higher percentage of activities during which students spent most of their time working in small groups attended a greater number of activities in elementary centers specifically. This relationship was moderately significant and positive.
- **Students planning future activities.** Students attending centers that were found to have a higher percentage of activities during which students spent most of their time planning future activities were more apt to continue participation in Texas ACE programming after having participated in the previous school year. This relationship was also moderately significant and positive. However, although it is not shown in Table 3.15, a significant, negative association was also found between elementary centers where students were more involved in planning future activities and the number of Texas ACE activities students participated in during the school year (see Appendix Table C3.7).
- **Exploration and discovery.** Centers with a higher percentage of activities during which students had an opportunity to explore and discover new things on their own were found to have students who attended a greater number of activities on average. Here again, this was a moderately significant and positive finding when all centers were included in the model but significant among centers serving middle and high school students specifically. However, although it is not shown in Table 3.15, a significant, negative association was also found between centers with a higher percentage of activities during which students had an opportunity to explore and discover new things and sustained attendance in Texas ACE programming across multiple years (see Appendix Table C3.6). A similar, but moderately significant, negative association was found among centers serving middle and high school students (see Appendix Table C3.8).

Table 3.15. Activity Practices Positively Associated with Texas ACE Attendance Outcomes

Activity	Hours			Duration			# of Activities			Sustained Attendance		
	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS
Working alone on tasks				*	*		*	**		*		
Working in small groups								†				
Students planning future activities											†	
Exploration and discovery							†		*			

Source. Tx21st Student Tracking System and Public Education Information Management System data, 2016–17 to 2018–19. 577 activity leader surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education. EL – centers serving elementary students. MS/HS – centers serving middle and/or high school students.
† $p < .10$. * $p < .05$. ** $p < .01$.

Although some of the results from these analyses were consistent with what was expected given the research literature on effective youth development and afterschool practices, the relatively pervasive association between centers where students were largely working alone on tasks and ACE attendance outcomes was not expected. This area may warrant additional exploration in the future.

Activity Practices and School-Related Outcomes

Table 3.16 presents activity practices that were found to be significantly and positively associated with one or more center-level effect sizes associated with the school-related outcomes under consideration. Generally, most of the activity practices found to be significantly and positively associated with the school-based outcomes considered represent more active forms of learning.

Activity Practices That Reflect More Active Forms of Learning

- **Planning future activities.** When centers dedicated more activity time to providing participating students with the opportunity to plan future activities, centers demonstrated larger center-level effects in relation to improved school-day attendance and fewer disciplinary incidents when students participated in programming for 60 days or more during the course of a school year. Each of these associations were statistically significant.
- **Exploration and discovery.** Centers that afforded students more opportunities to explore and discover new things on their own were found to have larger center-level effects in relation to improved school-day attendance when students participated in programming for 60 days or more during the course of a school year. This finding was positive and statistically significant.
- **Making a contribution and engaging in discussion.** Greater center adoption of activities in which youth were able to make a contribution or engage in discussions were both associated with larger center-level effects pertaining to fewer school-day disciplinary incidents when students participated in Texas ACE programming for 60 days or more over the course of 2 school years. While a statistically significant relationship was found for activities that provided students with the opportunity to make a contribution or be helpful to others or the community, the finding related to engaging student in discussion was found to be only moderately significant.

Other Activity Practices

- **Learning or practicing nonacademic skills and direction instruction.** Greater center adoption of each of these activities was associated with larger center-level effects pertaining to fewer school-day disciplinary incidents when students participated in Texas ACE programming for 60 days or more over the course of 2 school years. However, each of these findings were only moderately significant. In addition, centers with greater adoption of each of these practices were found to be significantly associated with more disciplinary incidents after 1 year of participation in Texas ACE programming for 60 days or more (see Appendix Table C3.15).
- **Working alone on tasks.** When centers dedicated more activity time to providing participating students with the opportunity to work alone on tasks, centers demonstrated larger center-level effects in relation to improved STAAR-Mathematics scores when students participated in programming for 60 days or more during the course of 1 school year. This association was only moderately significant. When centers were split evenly into high and low groups in terms of the percentage of activities during which the majority of time was spent working alone, the mean effect for centers in the higher group was still positive at 7.26 scale score points. Among schools in the lower groups, the average effect was -5.67 scale score points.

Table 3.16. Activity Practices Positively Associated with Center-Level Effects by Texas ACE Participation and Outcome

	60 Hours or More – 1 Year				60 Hours or More – 2 Years			
Practices and Approaches	**Reading**	**Mathematics**	**Attendance**	**Disciplinary**	**Reading**	**Mathematics**	**Attendance**	**Disciplinary**
Activity Practices								
Working in small groups	†							
Exploration and discovery			*					
Learning or practicing nonacademic skills								†
Experiencing direct instruction								†
Working alone on tasks		†						
Engaging in discussion								†
Making a contribution								*
Planning future activities			*	**				

Source. Tx21st Student Tracking System, Public Education Information Management System, and STAAR, 2015–16 to 2018–19. 577 activity leader surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education.
† p < .10. * p < .05. ** p < .01.

Summary of Findings Related to Activity Practices

The results related to activity practices in this section of the report were both consistent with what was expected in light of the research on effective afterschool practices and surprising in some ways.

Activity Practices That Reflect More Active Forms of Learning

Generally, it was expected that activity practices that represented more active forms of learning would be positively associated with both outcomes related to Texas ACE attendance and school-based effect sizes. This expectation was realized to some extent, although more in relation to the school-based outcomes. Notable findings related to activity practices associated with active forms of learning include the following[19].

- **Planning future activities.** When centers dedicated more activity time to providing participating students with the opportunity to plan future activities, elementary students were found to be more apt to attend programming across multiple school years (a moderately significant finding), while centers demonstrated larger center-level effects in relation to improved school-day attendance and fewer disciplinary incidents. As noted previously, this activity practice reflects the needs of older students to have opportunities to experience a sense of agency and autonomy, while also providing these youth with settings to capitalize on growing cognitive capacities to work through challenges and problem solve in ways that promote development (Larson & Angus, 2011; Larson et al., 2019).
- **Making a contribution and engaging in discussion.** Greater center adoption of each of these activity practices was associated with fewer school-day disciplinary incidents, although in relation to engaging in discussion, this was a moderately significant findings. It is hypothesized that each of these practices may further help students experience a sense of belonging and mattering and positive affect by creating a motivating social environment and consequential goals for undertaking the activity (Larson et al., 2019).
- **Exploration and discovery.** Centers that afforded students more opportunities to explore and discover new things on their own were found to have larger center-level effects in relation to improved school-day attendance and Texas ACE activity participation, particularly in relation to middle and high school students. In addition to responding to student needs for agency and autonomy, these practices may also contribute to interest development. 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).

Activities in Which Students Work Alone on Tasks

Among the more surprising activity practices that emerged as being positively associated with a number of Texas ACE program attendance and school-related outcomes was students working alone on tasks. Working alone on tasks was particularly found to be positively associated with Texas ACE program attendance. Students attending centers that were found to have a higher percentage of activities during which students spent most of their time working alone on tasks also did the following:

- Attended programming for a longer duration
- Attended more activities during the school year

[19] This summary is based on both significant and moderately significant findings. Moderately significant findings represent a greater probability that a Type I error (i.e., rejecting a true null hypothesis that there is no relationship between the variables being examined) will occur. Moderate significance is defined as a *p* value greater than .05 but less than .10. In addition, given that the analyses described in this section were correlational, the findings cannot be used to infer that the presence of a positive relationship between a given center characteristic and a program attendance or school-related outcome means that the center characteristic caused the outcome.

- Were more apt to continue participation in Texas ACE programming across multiple school years

In addition, centers adopting this practice more frequently demonstrated larger center-level effects in relation to improved STAAR-Mathematics scores. This finding may relate to students having the opportunity to have additional time to practice and internalize key mathematics concepts during homework help and mathematics-related enrichment activities. It may be worthwhile to invest some effort in the future to determine whether these findings are replicated in additional samples, and if they are, to further explore what specifically may be accounting for these relationships.

Data on Youth Experiences in Programming

The domain of outcomes Texas ACE programs are trying to achieve through the provision of afterschool and summer programming are hypothesized to be the result of youth having a key set of positive experiences while participating in Texas ACE programming. Among centers represented in the site visit samples, youth experiences in programming were measured using two approaches:

- **Youth experience survey.** The youth experience survey was administered online to students in Grades 4–12 in relation to centers visited in the spring of 2018 and 2019 (39 of the 40 centers visited during this period). These data were collected as part of a larger sample of centers during the process of trying to create a final site visit sample where there was a meaningful contrast between higher and lower performing centers (see Appendix A for additional details on which centers were included in youth experience survey data collection processes).[20]
- **End-of-session survey.** The end-of-session 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 to students in Grades 4–12 and asked about what they experienced in the Texas ACE program on that specific day. This approach was designed to obtain relatively immediate reactions from students about the Texas ACE programming in which they had just participated. A key advantage of this approach was that students reported on recent events and experiences, thereby enhancing the quality and authenticity of their responses given less difficulty with recall. Surveys were administered at the end of Texas ACE programming during 2 days in a given week.[21]

Youth Experience Survey

Questions asked on the youth experience survey focused on the following:

- Students' perceptions of how positive their relationships were with program activity leaders and other youth attending the Texas ACE-funded center
- The degree to which students perceived opportunities to experience a sense of agency through voice and choice

Collectively, these types of experiences have been shown to be related to youth developing a sense of agency, a positive self-concept and 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).

Respondents were asked to indicate the degree to which statements expressing a positive perception of activity leaders (eight items) and other youth enrolled in the program (five items) were true. The questions appearing on these scales are presented in Figures 3.13 and 3.14.

[20] A copy of the Youth Experience Survey can be found in Arellano et al. (2020), Naftzger, Arellano et al. (2020) under Appendix I site interview protocols and surveys.
[21] A copy of the End-of-Session Survey can be found in Arellano et al. (2020), Naftzger, Arellano et al. (2020) under Appendix I site interview protocols and surveys.

Figure 3.13. Survey Items Measuring Perceptions of Activity Leaders

Now think about the adults in this afterschool 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 if 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 (something I'm good at)?
Who asks me about my life and goals?
Who helps me do better in school?
Who I will miss when the program is over?

Source. Youth experience surveys administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, *N* = 1,737 responses to eight questions asked on the perceptions of activity leaders' scale.

Figure 3.14. Survey Items Measuring Perceptions of Other Youth

Now think about the kids in this afterschool program. How true are these statements for you?
Kids here are friendly with each other.
Kids here treat each other with respect.
Kids here listen to what the teachers tell them to do.
Kids here don't tease or bully others.
Kids here support and help one another.

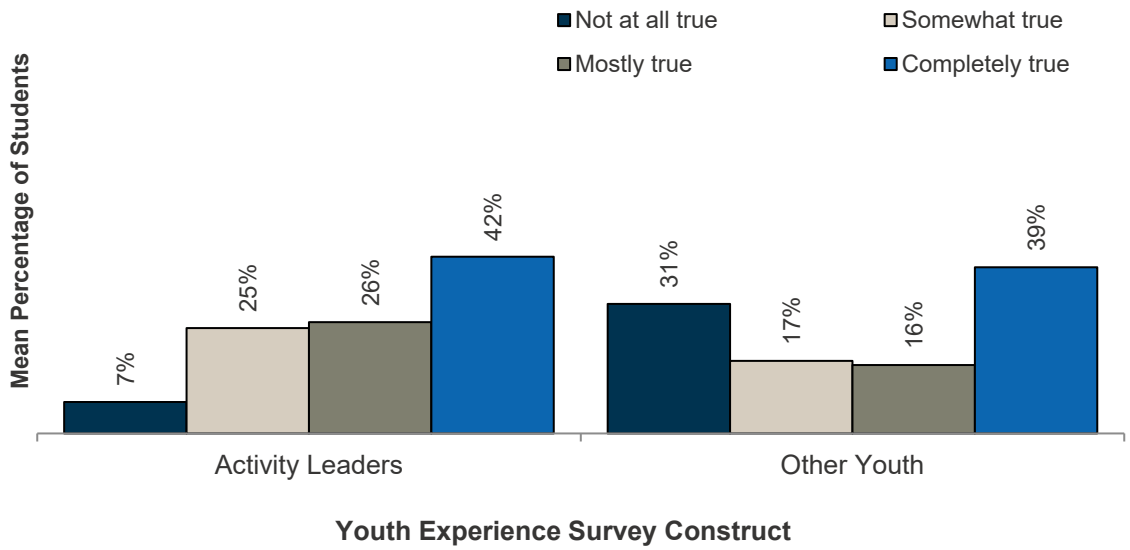
Source. Youth experience surveys administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, *N* = 1,715 responses to five questions asked on the perceptions of other youth scale.

Responses to all items for a given scale were combined into one overall scale score for each respondent using Rasch analysis techniques (see Appendix D for how scale scores were created). 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—*not at all true*, *somewhat true*, *mostly true,* or *completely true*. The percentage of respondents falling in each response category was calculated at the center level and then averaged. Generally, the results associated with student perception of activity leaders were more positive than results related to the perceptions of other youth in the program scale, as shown in Figure 3.15.

For example, 68% of respondents on average found the positive descriptions about staff represented by the survey items to be *completely true* or *mostly true*. This finding 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 (74% responding *completely true* or *mostly true*) and (b) In this program, there is an adult here who helps me when I have a problem (73% 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 is interested in what I think about things (49% responding *completely true* or *mostly true*). Responses for all items are in Table E3.1 in Appendix E.

However, student perceptions of other youth in the program were not quite as positive. As shown in Figure 3.15, slightly more than one half of the respondents on average fell into the *completely true* or *mostly true* portion of the scale. However, an almost equivalent percentage fell in the *not at all true* and *somewhat true* portions of the scale, with 31% of students on average falling in the former category. In terms of individual items, students were most positive about the following two items: (a) Kids here support and help one another (57% responding *completely true* or *mostly true*), and (b) Kids here are friendly with each other (54% responding *completely true* or *mostly true*). The item students were least apt to find true was as follows: Kids here don't tease or bully others, with the majority of respondents finding this only *somewhat true* (31%) or *not at all true* (21%). This last finding may be of some concern because the percentage of youth responding *not at all true* is substantively higher than what has been observed in other samples where the evaluation team employed this scale. Responses for all items are in Table E3.2 in Appendix E.

Figure 3.15. Perceptions of Activity Leaders and Other Youth Scales: Average Percentage of Students by Response Category for Centers Represented in the Site Visit Sample



Source. Youth experience surveys administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, *N* = 1,737 responses to eight questions asked on the perceptions of activity leaders scale and *N* = 1,715 responses to five questions asked on the perceptions of other youth scale.

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 (see Figure 3.16). Rasch analysis techniques were again used to combine items on the scale into one overall scale score for each respondent. When responding to questions asked on the opportunities for agency scale, respondents selected from one of four response options—*never*, *rarely, sometimes*, or *often*.

Figure 3.16. Survey Items Measuring Opportunities for Agency

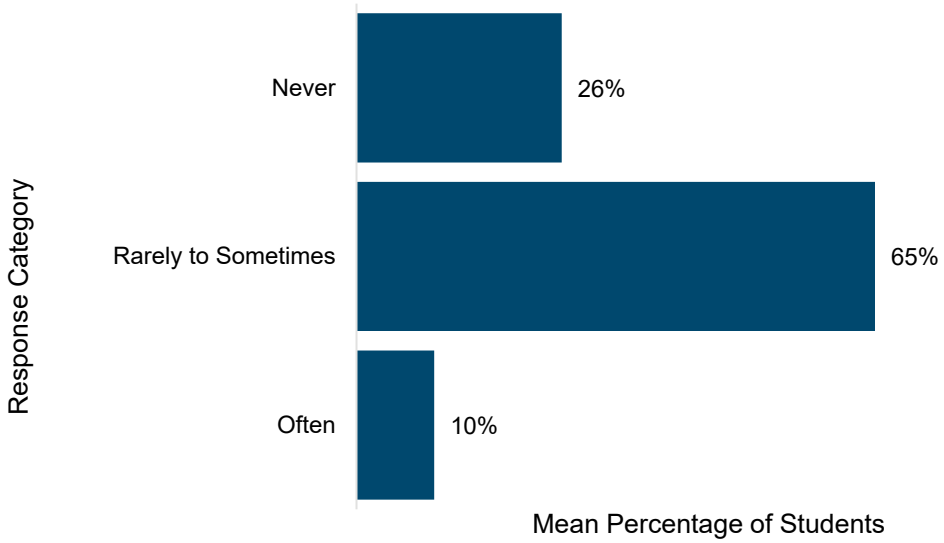
When you are at this program, how often . . .
Do you get to choose how you spend your time?
Do you get to suggest your own ideas for new activities?
Do you get to choose which activities you do?
Do you get to help plan activities for the program?
Do you get the chance to lead an activity?
Do you get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

Source. Youth experience surveys administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, *N* = 1,733 responses to seven questions asked on the opportunities for agency scale.

Figure 3.17 summarizes the average center-level percentage of responses for the opportunities for agency scale. Note that the *rarely* and *sometimes* portions of the scale were combined because respondents appeared to have a difficult time distinguishing between these two options. As a result of collapsing these two categories into one, 65% of the respondents on average fell within the combined *rarely* to *sometimes* portion of the scale, indicating that these types of opportunities were not a common part of what they experienced in the program. Another 26% of the respondents on average indicated that these types of opportunities were never afforded as part of the program, leaving 10% of the respondents on average with a scale score that placed them in the often range of the scale.

When examining responses to individual items, students reported most frequently being able to choose which activities to do (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 (54% indicating never having this opportunity). Responses for all items are in Table E3.3 in Appendix E.

Figure 3.17. Opportunities for Agency: Average Percentage of Students by Response Category for Centers Represented in the Site Visit Sample



Source. Youth experience surveys administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, *N* = 1,733 responses to seven questions asked on the opportunities for agency scale.

End-of-Session Survey

The end-of-session survey asked students about a different set of experiences than what was asked on the youth experience survey, drawing more heavily on constructs from the literature on student motivation in learning environments. More specifically, questions on the end-of-session survey focused on five areas of youth experience:

- **Engagement.** *Engagement* refers to active participation, investment, and value in learning (Naftzger et al., 2018). 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). The end-of-session survey measured engagement with four items: (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 was used in other studies related to engagement in out-of-school time programs (e.g., Naftzger et al., 2018).
- **Relevance.** Relevance occurs when students perceive an activity as having meaning, importance, or utility beyond the learning activity in which they are currently engaged. Promoting relevance has been shown to be one of the best strategies for triggering and sustaining student interest and engagement in learning environments (Assor et al., 2002). On the end-of-session survey, relevance was measured by the following three items: (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?*
- **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 in which they feel generally competent, putting them in a position where there is a need to focus and concentrate to undertake the

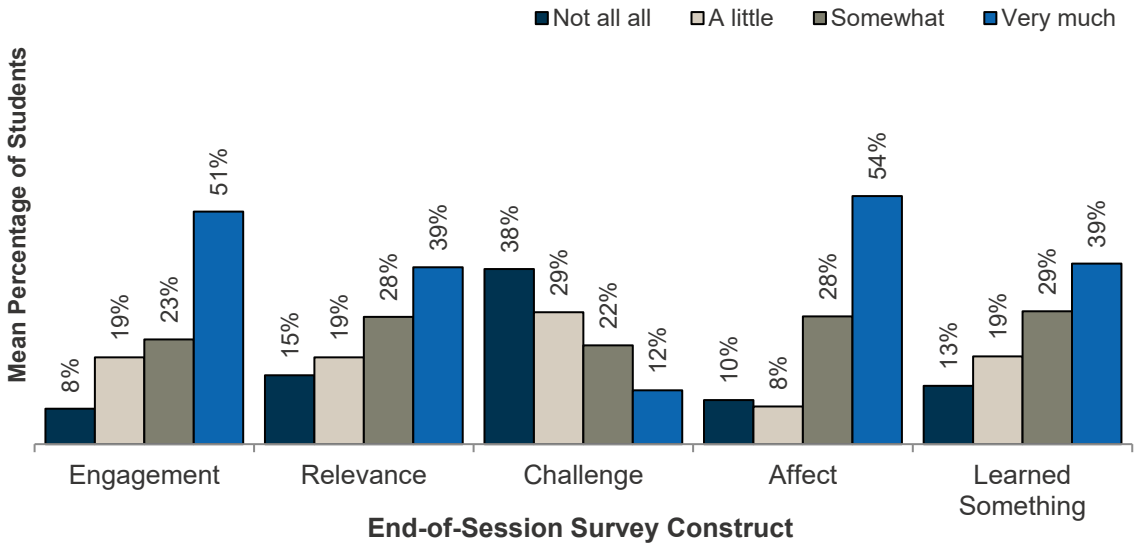
task in question. When this balance is achieved, students will experience an appropriate level of challenge in the activity they are undertaking. The end-of-session survey measured challenge by the following question: *How challenging were today's activities*?

- **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 learning task or activity given the enjoyment and joy they receive from doing so (Ashby et al., 1999; Linnenbrink & Pintrich, 2000). On the end-of-session survey, positive affect was measured by the following two survey items: (a) *How happy were you feeling in the program today?* and (b) *How excited were you feeling in the program today?*
- **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 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 experience while participating in skill-building activities can also support the development of a positive self-concept and enhance motivation to participate in additional learning opportunities (Larson et al., 2019). The end-of-session survey measured learning something by asking the following question: *Do you feel like you learned something or got better at something today*?

In Figure 3.18, the average, center-level percentage of scores associated with a given type of experience (i.e., engagement, relevance, challenge, positive affect, and expression of learning something or getting better at something) are presented across all four response options used on the end-of-session survey—*not at all*, *a little*, *somewhat*, and *very much*. Key findings include the following:

- Youth demonstrated the most positive responses to questions related to positive affect, with 54% of students on average having scores that put them in the *very much* category. In this sense, most students indicated being very happy and excited during the Texas ACE programming they participated in on the day in question.
- Results for engagement were similar, with 51% of youth on average indicating being *very much* engaged in programming. Again, engagement here is a composite variable consisting of students being interested in what they are doing, enjoying it, having to concentrate, and expressing having worked hard while undertaking program activities.
- Students largely did not feel very challenged by program activities, with 38% of the respondents on average providing responses of *not at all* in terms of experiencing challenge while participating in program activities. This common finding occurred when the evaluation team used this survey in other 21st CCLC-related settings in Chicago, Illinois, and Rhode Island (Naftzger, Diehl et al., 2020; Vinson et al., 2020).
- Responses were more varied in terms of relevance or expressed learning or getting better at something, although most responses fell in either the *somewhat* or *very much* response category for these two constructs (28% to 39% of respondents).

Figure 3.18. Summary of Responses to Key Constructs from the End-of-Session Survey: Average Percentage of Students by Response Category for Centers Represented in the Site Visit Sample



Source. End-of-session surveys administered in spring 2017, 2018, and 2019 in 59 Texas Afterschool Centers on Education, *N* = 2,457 responses to the four questions asked on the engagement scale, *N* = 2,452 responses to the three questions asked on the relevance scale, *N* = 2,443 responses to the one question asked on the challenge scale, *N* = 2,438 responses to the two questions asked on the affect scale, and *N* = 2,394 responses to the one question asked on the learned something scale.

In light of the research connecting key youth experiences in afterschool programming to youth outcomes (Larson & Angus, 2011; Larson & Dawes, 2015; Larson et al., 2019; Naftzger & Sniegowski, 2018), more positive experiences in programming as measured by the youth experience and end-of-session surveys were hypothesized to be positively associated with both the Texas ACE attendance and school-related outcomes being examined in this chapter of this report. The extent to which this hypothesis was found to be true is examined in the next section of the report.

Youth Experiences and Texas ACE Program Attendance

Table 3.17 outlines youth experiences measured by the youth engagement and end-of-session surveys found to be significantly and positively associated with one or more Texas ACE program attendance outcome. As shown in Table 3.20, the only experience found to be positively and significantly associated with multiple Texas ACE attendance outcomes was challenge.

- **Challenge.** When centers provided more challenging activities to participating students, students attended programming a greater number of hours during the school year and were more likely to stay enrolled in Texas ACE programming across multiple school years. Each of these findings were statistically significant. However, a significant and negative association was found between centers' providing more challenging activities and the number of Texas ACE activities students participated in during the school year (see Appendix Table C3.9). A similar, but moderately significant, negative association was found among centers serving elementary students in terms of the relationship between centers providing more challenging activities and the number of Texas ACE activities students attended (see Appendix Table C3.10).
- **Opportunities for agency.** A positive and moderately significant association was found between the number of Texas ACE activities elementary students participated in and students reporting greater opportunities to experience a sense of agency.

- **Positive perceptions of other youth.** A positive and significant association was found between the number of Texas ACE activities middle and high school students participated in and positive perceptions of other youth attending the ACE program. In addition, a positive and moderately significant association was found between students remaining enrolled in Texas ACE programing across multiple school years in elementary centers and students reporting more positive perceptions of other youth attending programming.

  However, multiple significant and moderately significant negative associations were found between centers scoring higher on the positive perceptions of other youth scale and the Texas program attendance outcomes examined. In middle and high school centers, a significant and negative association was found between the perceptions of other youth scale and the duration of time students spent in Texas ACE programming (see Appendix Table C3.11). A similar, but moderately significant, negative association was found when all centers were included in the model (see Appendix Table C3.9). Also, in middle and high school centers, a moderately significant and negative association was found between the perceptions of other youth scale and the number of hours students attended Texas ACE programming (see Appendix Table C3.11).

- **Learned something and engagement.** Centers where middle and high school students reported learning something or experiencing engagement to a greater extent while participating in Texas ACE programming were found to have students who attended a greater number of ACE activities and were more likely to stay enrolled in ACE programming across multiple school years. Each of these findings was statistically significant. In addition, centers where students reported experiencing more engagement in programming remained enrolled in programming for a moderately significant, longer duration, although in elementary, this was found to be a moderately significant, negative association (see Appendix Table C3.10). In addition, when all centers were included in the model, a moderately significant, positive association was found between students who reported learning something to a greater extent while participating in programming and the number of Texas ACE activities students participated in during the school year. However, a moderately significant and negative association was found in middle and high school centers between a higher percentage of students who reported learning something and both the number of hours students participated in Texas ACE programming and the duration of program participation (see Appendix Table C3.11).

Table 3.17. Youth Experiences Positively Associated with Texas ACE Attendance Outcomes

Youth Experience	Hours			Duration			# of Activities			Sustained Attendance		
	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS
Youth Experience Survey												
Opportunities for agency								†				
Positive perceptions other youth									*		†	
End-of-Session Survey												
Challenge	**									**	*	†
Learned something							†		*			
Engagement						†						*

Source. Tx21st Student Tracking System and Public Education Information Management System data, 2016–17 to 2018–19. 1,737 youth experience surveys, 2018–2019 and 2,459 end-of-session surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education. EL – centers serving elementary students. MS/HS – centers serving middle and/or high school students.
† $p < .10$. * $p < .05$. ** $p < .01$.

Some of the youth experiences found to be significantly related to the program attendance outcomes examined were positively associated with student attendance in a greater number of Texas ACE

activities. This finding may suggest provision of a greater variety of activities to participating youth may afford greater opportunities for students to have the types of experiences shown in the literature to be associated with positive youth development. In addition, centers where students participated in more challenging activities were found to have more total hours of Texas ACE program participation and cross-year retention in programming. This finding is of particular interest because students generally reported experiencing relatively little challenge when participating in Texas ACE program activities (see Figure 3.18).

Youth Experiences and School-Related Outcomes

Table 3.18 outlines those youth experiences in programming that were found to be significantly and positively associated with one or more school-related outcomes. Most of the following significant findings related to youth experiences in programming were associated with effects related to school-day attendance:

- **Positive perceptions of other youth.** Centers where students had more positive perceptions of other youth attending Texas ACE programming were found to have larger center-level effect sizes related to school-day attendance for those students participating in ACE programming for 60 days or more for 1 year.
- **Relevance.** When students felt that what they were doing in Texas ACE programming was relevant, centers were found to have moderately significant larger, positive effects in terms of supporting school-related attendance for those students participating in ACE programming for 60 days or more for 1 year. In addition, relevance was also positively associated with larger center-level effects on STAAR-Reading scores when students participated in Texas ACE programming for 60 days or more for 2 years. This finding was moderately significant.
- **Learned something.** Centers where students were more apt to report learning something while participating in Texas ACE programming were found to have larger center-level effect sizes related to school-day attendance for those students participating in ACE programming for 60 days or more for 2 years. This finding was moderately significant.

Table 3.18. Youth Experiences Positively Associated with Center-Level Effects by Level of Texas ACE Participation and Outcome

	60 Hours or More – 1 Year				60 Hours or More – 2 Years			
Practices and Approaches	**Reading**	**Mathematics**	**Attendance**	**Disciplinary**	**Reading**	**Mathematics**	**Attendance**	**Disciplinary**
Youth Experience Survey								
Positive perceptions other youth			*					
End-of-Session Survey								
Relevance			†		†			
Learned something							†	

Source. Tx21st Student Tracking System, Public Education Information Management System, and STAAR, 2015–16 to 2018–19. 1,737 youth experience surveys, 2018–2019 and 2,459 end-of-session surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education.
† p < .10. * p < .05.

Summary of Findings Related to Youth Experiences

The evaluation team hypothesized that positive youth experiences in Texas ACE programming were important in terms of supporting positive youth development and contributing to positive student outcomes. It was expected, then, that more positive youth experiences in programming would be associated with both program attendance and school-related outcomes. Some of the associations found to be significant support this hypothesis[22]. Especially notable findings highlighted in this section include the following:

- **Positive perceptions other youth.** Centers where students had more positive perceptions of other youth attending Texas ACE programming were found to have students who attended more ACE activities and have larger center-level effect sizes related to school-day attendance. This finding is notable in that a relatively sizable percentage of students attending site visit centers (slightly less than half of respondents) fell into the not all true or somewhat true portions of the scale related to positive perceptions of other youth in the program (see Figure 3.13). It is possible that taking steps to improve interactions among youth in Texas ACE programming may help support additional participation in programming and potentially school-day attendance.
- **Learned something.** When students felt that they were learning something or getting better at something while participating in Texas ACE programming, students were found to attend more activities, particularly in middle and high school, and centers were found to have larger positive effects in terms of supporting school-related attendance (moderately significant). This finding is consistent with other evaluations of 21st CCLC programs, which have shown a positive relationship between skill-building experiences and positive student outcomes (Vinson et al., 2020).
- **Challenge and opportunities for agency.** Potentially connected to the preceding finding, students who felt more challenged by the Texas ACE activities were found to attend more hours of ACE programming during the school year in question and were apt to have been retained in programming from the preceding school year. However, like the previously mentioned findings related to positive perceptions of other youth, students feeling challenged was not a common experience among most Texas ACE participants (see Figure 3.14). Opportunities for youth to experience a sense of agency can also commonly be associated with youth experiencing challenge (Larson et al., 2019). When elementary students reported having more opportunities to experience a sense of agency, students were found to attend more Texas ACE activities (moderately significant findings).

Finally, those youth experiences found to be significantly and positively associated with school-related outcomes were largely associated with higher levels of school-day attendance specifically. Other studies completed by the evaluation team have shown that schools where youth have more positive experiences in afterschool programming demonstrated more growth on a series of school climate-related scales than a set of matched comparison schools (Naftzger, Diehl et al., 2020). It may be the case that the positive experiences youth are having in Texas ACE programming are supporting a broader sense of school connectedness and belonging that is conducive to supporting school-day attendance.

Intermediate Youth-Reported Outcomes

Participation in Texas ACE programming is also hypothesized to lead to a series of more immediate youth-reported outcomes that result from the positive experiences students have while participating in programming. Although Texas ACE programs should be oriented at helping students develop skills and knowledge that will help them improve academically (as most interviewees noted), the AIR team has

[22] This summary is based on both significant and moderately significant findings. Moderately significant findings represent a greater probability that a Type I error (i.e., rejecting a true null hypothesis that there is no relationship between the variables being examined) will occur. Moderate significance is defined as a *p* value greater than .05 but less than .10. In addition, given that the analyses described in this section were correlational, the findings cannot be used to infer that the presence of a positive relationship between a given center characteristic and a program attendance or school-related outcome means that the center characteristic caused the outcome.

found that it is common for programs funded by the program take a broader view of how the programming they provide can contribute to positive youth development (Vinson et al., 2020).

On the youth experience survey, students were asked to identify the top three areas in which they thought the program had helped them the most by selecting from a list of possible impact areas. This allowed students to indicate how they thought they may have benefitted from participating in their Texas ACE program. Overall, youth-reported outcomes were classified into six main categories:

- **New interest development.** Afterschool programming can afford youth opportunities for new experiences, which supports both identity development and young people's ability to make sense of themselves and the world around them. Afterschool programming can also help youth develop new interests in domain-specific content areas, such as STEM and the arts. Interest development 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).

  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.

  On the youth experience survey, responses from three items were employed to determine whether youth felt coming to the program had helped them develop new interests: (1) Find out what I like to do; (2) Discover things I want to learn more about; and (3) Find out what is important to me.

- **Think about the future.** Afterschool programming has also been shown to help youth discover a connection between the knowledge and skills being acquired through participating in program activities and what goals they may want to pursue in the future, both educationally and in terms of careers they may want to pursue (Dawes & Larson, 2011). On the youth experience survey, responses from three items were employed to determine whether youth felt coming to the program had helped them think more about their future: (1) Think about what I might like to do when I get older; (2) Learn things that will be important for my future; and (3) Think about the kinds of classes I want to take in the future.

- **Self-concept.** The successes that youth have while participating in afterschool programs and the relationship they develop with adult activity leaders and other youth in the program can 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, Arellano et al., 2020; Naftzger & Sniegowski, 2018; Vinson et al., 2020). 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. On the youth experience survey, responses to one item were employed to determine whether youth felt coming to the program had helped them feel better about themselves: (1) Feel good about myself.

- **Confidence.** Youth can develop positive mindsets and beliefs about their capacities, including confidence and a sense of self-efficacy by participating in high-quality afterschool programs. As previously noted, 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 et al., 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 (Larson et al., 2019). On the youth experience survey, responses from one item were employed to determine whether youth felt coming to the program had helped them with their confidence: (1) With my confidence.

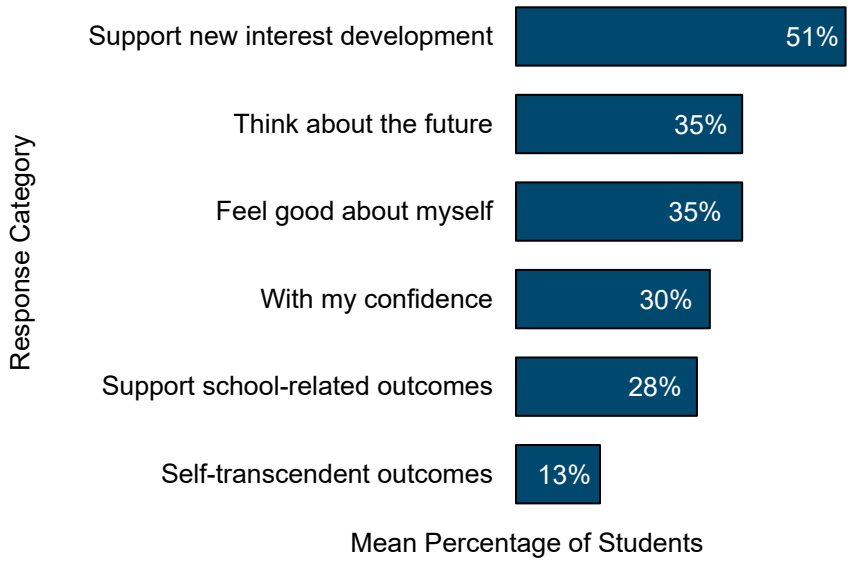
- **School-related outcomes.** Youth participating in high-quality afterschool programs have the opportunity to learn new content and develop and practice new skills. In Texas ACE-funded programs, the focus is typically on supporting student skill building in reading and mathematics specifically.

  Youth participating in high-quality afterschool programs also can 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), including students' motivation to attend school. On the youth experience survey, responses from two items were employed to determine whether youth felt coming to the program had helped them in relation to school-related outcomes: (1) Learn things that will help me in school and (2) Go to school more often.

- **Self-transcendent outcomes.** Although not as common as some types of Texas ACE activities, many centers provide service learning activities for participating students, which can also help promote positive youth development. For example, Dawes and Larson (2011) found that youth development programs that facilitated youth in working toward accomplishing moral, civic, and social change goals that were consequential to others in their community or the world writ large helped youth form personal connections to and enhanced their engagement in program activities. Yeager et al. (2014) constructed and implemented an intervention that was designed to get youth to reflect on their own self-transcendent goals for learning (i.e., goals oriented at helping others or making a contribution to society). Participation in the intervention resulted in youth reporting a greater sense of personal meaning in undertaking school-related tasks and demonstrating significant improvement in science and mathematics grades compared to similar youth enrolled in the control group. On the youth experience survey, responses from two items were employed to determine whether youth felt coming to the program had helped them experience self-transcendent outcomes: (1) Feel good because I was helping my community and (2) Learn about things that are important to my community.

Figure 3.19 outlines the mean percentage of students indicating a particular program impact for centers represented in the site visit samples in each of the six categories just described. As shown in Figure 3.19, the most common self-reported benefit was related to the development of new interests, with 51% of respondents on average endorsing an item related to interest development when selecting the top three ways they benefitted from participating in Texas ACE programming. Just more than one third of survey respondents on average identified that the program had helped them think about the future and feel good about themselves (both 35% of respondents on average), followed closely by youth who reported that the program had helped them with their confidence (30%) and supported the achievement of school-related outcomes (28%). Items related to self-transcendent outcomes were the least commonly endorsed, with only 13% of respondents indicating that they would identify these outcomes as one of the top three ways they had been impacted by Texas ACE program participation.

Figure 3.19. Average Percentage of Students Indicating a Particular Program Impact for Centers Represented in the Site Visit Sample



Source. Youth experience survey administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, N = 1,643 responses.

Intermediate Youth-Reported Outcomes and Texas ACE Program Attendance

Table 3.19 summarizes how intermediate youth-reported outcomes reported on the youth experience survey were found to be significantly and positively associated with one or more Texas ACE program attendance outcome. As shown in Table 3.19, some notable differences were found between centers serving elementary and middle/high school students.

- **Confidence and new interest development.** When elementary students indicated that participating in Texas ACE programming helped them with their confidence or develop new interests, students attended programming for a greater number of hours during the school year, although each of these associations were only moderately significant.
- **Support for school-related outcomes and thinking about the future.** A significant and positive association was also found between centers serving middle and high school students where a greater percentage of survey respondents indicated that participating in Texas ACE programming helped them with school and students demonstrating sustained attendance in Texas ACE programming from the prior school year. A similar finding was found between sustained attendance in Texas ACE programming and middle and high school students who indicated that the program helped them think more about their future. However, a moderately significant and negative association was found between elementary centers where students indicated that participating in Texas ACE programming helped them with school and the duration of time spent in programming (see Appendix Table C 3.12).

Table 3.19. Youth-Reported Outcomes Positively Associated with Texas ACE Attendance Outcomes

Youth-Reported Outcome	Hours			Duration			# of Activities			Sustained Attendance		
	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS	All	EL	MS/HS
With my confidence		†										
Support new interest development		†										
Support school-related outcomes												**
Think about the future												***

Source. Tx21st Student Tracking System and Public Education Information Management System data, 2016–17 to 2018–19. 1,737 youth experience surveys, 2018–2019. Youth experience survey administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, N = 1,643 responses.
Note. ACE – Afterschool Centers on Education. EL – centers serving elementary students. MS/HS – centers serving middle and/or high school students.
† $p < .10$. ** $p < .01$. *** $p < .001$.

Intermediate Youth-Reported Outcomes and School-Related Outcomes

When steps were taken to explore how intermediate youth-reported outcomes were associated with each of the school outcomes examined, only one significant and positive relationship was identified. Centers where a greater percentage of students indicated that attending the Texas ACE program had helped them with their confidence were found to have significantly larger effect sizes in relation to STAAR-Mathematics when students had attended programming for 60 days or more over 2 years. In order to provide some additional context for this finding, when centers were split evenly into higher and lower groups in terms of the percentage of students taking the youth experience survey that indicated that the program helped them with their confidence, the mean effect for centers in the higher group was positive at 17.14 scale score points. Among schools in the lower group, the average effect was -22.22 scale score points.

Summary of Findings Related to Intermediate Youth-Reported Outcomes

Generally, relatively few significant relationships were found between the intermediate youth-reported outcomes reported on the youth experience survey and both the Texas ACE program attendance and school-related outcomes examined.[23] Centers where a higher percentage of students reported that the program had helped them with their confidence were found to attend both a greater number of hours of Texas ACE programming during the school year in question (moderately significant) and were found to have higher center-level effects in relation to STAAR-Mathematics.

Middle and high school students who were more apt to report that the program helped them in relation to school and to think about their future were also more likely to stay enrolled in Texas ACE programming across multiple school years. This finding may indicate that adolescent youth who participate in Texas ACE programming see an underlying value to participating in ACE as a way to help support their educational and career goals.

[23] This summary is based on both significant and moderately significant findings. Moderately significant findings represent a greater probability that a Type I error (i.e., rejecting a true null hypothesis that there is no relationship between the variables being examined) will occur. Moderate significance is defined as a *p* value greater than .05 but less than .10. In addition, given that the analyses described in this section were correlational, the findings cannot be used to infer that the presence of a positive relationship between a given center characteristic and a program attendance or school-related outcome means that the center characteristic caused the outcome.

Chapter Summary

The purpose of this chapter was to highlight those practices, processes, and youth-reported experiences and intermediate outcomes that were found to be positively related to a series of Texas ACE program attendance and school-related outcomes. The variables examined were classified into five primary categories:

1. Point-of-service quality
2. Organizational processes
3. Program activities
4. Youth experiences
5. Intermediate youth-reported outcomes

The goal in conducting these analyses was to identify those variables that may warrant additional attention when considering the design and delivery of Texas ACE programming.

Center Characteristics and Texas ACE Program Attendance

In exploring the relationship between center characteristics and Texas ACE program attendance, several types of student-level, program attendance metrics were calculated:

- The total number of Texas ACE programming hours attended during the school year in question (ACE Attendance Hours)
- The duration of student participation in Texas ACE programming represented by the number of days between their first and last day of participation during the school year (ACE Attendance Duration)
- The total number of Texas ACE activities the student participated in during the school year (# of ACE Activities Attended)
- Whether or not the student was a returning participant to the program after participating in the program during the preceding summer or school year (Sustained Attendance in ACE)

Center-level characteristics found to be significantly and positively associated with a given Texas ACE program attendance outcome are outlined in Figure 3.20. It is important to note that the analyses resulting in these findings were correlational and descriptive and should not be interpreted to mean that a given characteristic caused a program attendance-related outcome.

Figure 3.20. Center Characteristics Found to Be Significantly and Positively Associated with Texas ACE Program Attendance Outcomes

ACE Attendance Hours	ACE Attendance Duration	# of ACE Activities Attended	Sustained Attendance in ACE
Process Quality • PQA Interaction **Content-Specific Practices** • APT-O Writing Practices • APT-O Mathematics Problem-Solving Practices – Youth-based **Program Goals** • Build social and emotional learning skills • Address behavioral issues • Provide academic and creative enrichment opportunities **Data Use and Evaluation** • Periodic review of program data **Staffing or Operational Practice** • High summer programming hours **Youth Experiences** • Challenge **Youth-Reported Outcomes** • With my confidence • Support new interest development	**Process Quality** • PQA Interaction • PQA Engagement **Content-Specific Practices** • APT-O Writing Practices • APT-O Verbal Practices – Staff-based • APT-O Mathematics Problem-Solving Practices – Youth-based **Program Goals** • Build social and emotional learning skills • Provide academic and creative enrichment activities **Data Use and Evaluation** • Periodic review of program data **Advisory Board Practices** • Programming input **Staffing or Operational Practice** • High summer programming hours • Activity practices • Working alone on tasks	**Process Quality** • PQA Supportive Environment **Content-Specific Practices** • APT-O Reading Practices **Data Use and Evaluation** • Obtaining youth input on programming **Advisory Board Practices** • General guidance and feedback **Activity Practices** • Working alone on tasks • Working in small groups • Exploration and discovery **Youth Experiences** • Opportunities for agency • Positive perceptions of other youth • Learned something	**Content-Specific Practices** • APT-O Reading Practices **Program Goals** • Provide academic and creative enrichment activities **Activity Practices** • Working alone on tasks • Students planning future activities **Youth Experiences** • Positive perceptions of other youth • Challenge • Engagement **Youth-Reported Outcomes** • School-related outcomes • Think about the future

Note. ACE – Afterschool Centers on Education. Exhibit includes both statistically significant ($p<.05$) and moderately significant ($p<.10$) findings.

Center Characteristics and School-Related Outcomes

When assessing the relationships between center characteristics and school-related outcomes, two sets of center-level effects were calculated. For one set, students attending the program for 60 days or more during the school year in question were matched with students attending the same schools served by the center but did not participate in the program. For the second set of analyses, students attending Texas ACE for 60 days or more in both the current and preceding school year were matched with nonparticipating students.

Center-level characteristics found to be significantly and positively associated with a given school-related outcome are outlined in Figure 3.21. In parentheses, it is noted when a given characteristic was positively associated with the school-related outcome after 1 year of participation in Texas ACE programming for 60 days or more (1 year) and/or 2 years of participation at this level (2 years). It is important to note that the analyses resulting in these findings were correlational and descriptive and should not be interpreted to mean that a given characteristic caused a given school-related outcome.

Almost all of the variables highlighted in Figures 3.20 and 3.21 have a basis in the youth development and afterschool literature as being associated with positive youth outcomes and/or have some representation in the Texas ACE Blueprint. As a result, although the findings highlighted in this chapter are correlational and descriptive, there still may be some value in Texas ACE programs considering these practices, processes, youth experiences, and intermediate outcomes in the design and delivery of Texas ACE programming.

Figure 3.21. Center Characteristics Found to Be Significantly and Positively Associated with School-Related Outcomes

STAAR-Reading	STAAR-Mathematics	School-Day Attendance	Disciplinary Incidents
Content-Specific Practices • APT-O Writing Practices (2 years) • APT-O Writing Practices – Youth-based (2 years) • APT-O Mathematics Practices (2 years) • APT-O Mathematics Communication and Reasoning Practices – Youth-based (2 years) **Program Goals** • Build social and emotional learning skills (1 year, 2 years) **Data Use and Evaluation** • Periodic review of program Data (2 years) • Obtaining youth input on Programming (1 year) **Advisory Board Practices** • Planning input (2 years) **Target Population** • Broader target population (2 years) **Activity Practices** • Working in small groups (1 year) **Youth Experiences** • Relevance (2 years)	**Process Quality** • PQA Interaction (1 year) **Content-Specific Practices** • APT-O Mathematics Practices (2 years) **Data Use and Evaluation** • Obtaining youth input on Programming (1 year) **Activity Practices** • Working alone on tasks (1 year) **Youth-Reported Outcomes** • With my confidence (2 years)	**Process Quality** • PQA Supportive Environment (1 year) **Content-Specific Practices** • APT-O Writing Practices (1 year) • APT-O Writing Practices – Youth-based (1 year) **Activity Practices** • Planning future activities (1 year) • Exploration and discovery (1 year) **Youth Experiences** • Positive perceptions of other Youth (1 year) • Relevance (1 year) • Learned something (2 years)	**Process Quality** • PQA Supportive Environment (2 years) **Data Use and Evaluation** • Obtaining youth input on Programming (2 years) **Activity Practices** • Planning future activities (1 year) • Learning or practicing nonacademic skills (2 years) • Direct instruction (2 years) • Engaged in discussion (2 years) • Designed to make a contribution (2 years) **Youth-Reported Outcomes** • School-related outcomes • Think about the future

Note. Exhibit includes both statistically significant and moderately significant finding. Indications of *1 year* represent significant or moderately significant findings after students had participated in Texas ACE programming for 60 days or more over 1 year, while *2 years* represent significant or moderately significant findings after students had participated in Texas ACE programming for 60 days or more over 2 years.

Chapter 4: The Impact of Texas Afterschool Centers on Education on Youth Outcomes

Evaluation Questions

- What effect does the program have on students attending Texas ACE programming for 60 days or more at centers with high adoption of APT-O mathematics practices relative to similar students not participating in programming or participating for less than 30 days?
- What effect does the program have on students attending Texas ACE programming for 60 days or more at centers with high adoption of practices which employ active forms of learning relative to similar students not participating in programming or participating for less than 30 days?

Introduction

Participation in Texas ACE is meant to support student growth and development on a variety of school-related outcomes. Although previous evaluations of the program demonstrated that participation in Texas ACE was associated with higher academic performance in mathematics, fewer school-day absences and disciplinary incidents, and greater likelihood of grade-level promotion (Devaney et al., 2016; Naftzger et al., 2013), more recent analyses have shown an association with fewer positive student outcomes and, in some cases, a negative relationship between program participation and student performance on school-related outcomes, particularly in relation to academic achievement (Arellano et al., 2020; Naftzger, Arellano et al., 2020). However, other recent analyses have suggested that students are more likely to benefit in terms of performance on school-related outcomes the more they participate in Texas ACE (Arellano et al., 2020; Naftzger, Arellano et al., 2020). In this sense, previous analyses examining the relationship between student participation in Texas ACE and student outcomes have been mixed and have not always been consistent in terms of depicting the relationship between participation and outcomes.

As highlighted in the preceding chapter, the data collected during spring site visits to sampled centers from 2017 to 2019 provided an opportunity to explore how center characteristics may be related to both Texas ACE program attendance and school-related outcomes. In reviewing the findings outlined in Chapter 3, steps were taken to identify a set of center-level practices (a) that were positively associated with school-related outcomes and (b) where there appeared to be a threshold related to adoption of that practice that when exceeded was associated with greater positive center-level effects on that outcome. This identification process began with those center-level characteristics that were found to be significantly associated with more than one school-related outcome that were examined in Chapter 3. Next, values associated with center characteristics meeting this criterion were graphed with the effect sizes across the outcome(s) in question to determine whether a cut-point could be determined for the characteristic where effect sizes appeared to be consistently larger once this cut-point was exceeded. Finally, center characteristics for which a cut-point could be identified were selected for further analysis if there were enough centers exceeding the cut-point on the characteristic in question to warrant further examination. There were two types of center-level practices examined in Chapter 3 that especially seemed to meet each of these criteria:

1. **APT-O Mathematics Practices and STAAR-Mathematics scores.** As highlighted in Table 3.10, greater adoption of APT-O mathematics practices (the APT-O is an observation tool that allows for the identification of specific content area-specific practices present in observed afterschool activities, including mathematics-related practices) was found to be positively associated with center-level effect estimates related to STAAR-Mathematics scores for those students participating in Texas ACE programming for 60 days or more for 2 years. Positive center-level effects were especially noteworthy when centers were observed to have adopted 15 or more APT-O mathematics practices during the site visits. When centers in the site visit sample adopted 15 or more APT-O mathematics practices, the average center-level effect was 10.14 scale score points among students participating in Texas ACE programming for 60 days or more for 2 years. For centers below the 15-practice threshold, the average center-level effect on STAAR-Mathematics was -24.85 scale score points. This difference in

average effects between centers adopting 15 APT-O mathematics practices or more and those centers that adopted fewer of these practices represents one of the greatest observed differences in center-level effects on STAAR assessment results observed among the domain of center characteristics considered as described in Chapter 3. A total of 36 centers in the site visit samples met or exceeded the 15-practice threshold.

2. **Activity practices that represent active forms of learning and disciplinary incidents.** One theme that emerged in the preceding chapter was that activity practices measured by the activity leader survey that provided more active forms of learning were associated with fewer disciplinary incidents in centers that adopted these types of practices more frequently (see Table 3.16). Three types of specific activity practices were found to be associated with fewer disciplinary incidents: those during which (1) youth planned future activities or projects; (2) youth participated in whole-group discussions facilitated by staff; and (3) youth participated in an activity that was designed to make a contribution or be helpful to others or the community. Steps were taken to determine whether a threshold existed where more frequent presence of these activity practices appeared to be associated with greater reduction in disciplinary incidents.

   As initially described in Chapter 3, to create a center-level metric, activities were first identified where the activity leader selected the *Most programming time today was spent doing this* response option on the activity leader survey for a given activity practice. Then, center-level percentages were calculated that represented the total percentage of activities reported on where most of the programming time was spent doing a given type of activity practice.

   The threshold levels identified for each of the three activity practices found to be associated with fewer disciplinary incidents are outlined in Table 4.1. To establish these thresholds, scatterplots were used to pinpoint the place in the distribution where the percentage of activities primarily characterized by one of the three activity practices outlined in Table 4.1 was consistently associated with larger desired center-level effect size related to disciplinary incidents than centers with percentages below this threshold. For example, one threshold where center-level effects seemed to tilt toward greater reduction in disciplinary incidents occurred when 38% or more of the activities involved youth spending most of their time planning future activities. In centers at or above this threshold, students participating in Texas ACE for 60 days or more over 1 year had a disciplinary rate that was 19.5% lower on average than that for similar nonparticipating youth. In centers below this threshold, students participating at the 60 days or more threshold only had a disciplinary rate that was 3.9% lower on average than that for similar nonparticipating youth. For activities in which youth participated in whole-group discussions facilitated by staff or when youth participated in an activity that was designed to make a contribution or be helpful to others or the community, thresholds were selected at 29% and 54% of activities, respectively, where the activity practice in question constituted how most of the time in the activity was spent. Collectively, a total of 26 centers across the site visit samples exceeded the threshold level on one or more activity practices associated with active forms of learning.

Table 4.1 Average Center-Level Effects on Disciplinary Incidents by Activity Practice

Activity Practice	Threshold Level	Average Center-Level Effect on Disciplinary Incidents	
		Centers above the Threshold	Centers below the Threshold
Planning future activities	>= 38%	-19.47%	-3.94%
Engaged in discussion	>= 29%	-10.45%	1.79%
Designed to make a contribution	>= 54%	-11.06%	-1.67%

Source. Tx21st Student Tracking System. Public Education Information Management System data, 2015–16 to 2018–19. Activity leader surveys administered in spring 2017, 2018, and 2019 in 59 Texas Afterschool Centers on Education, N = 577 responses.

With these two types of center-level practices identified, the evaluation team then took steps to assess the effectiveness of centers with high adoption of APT-O mathematics practices and active forms of

learning relative to the outcomes they were hypothesized to affect using more robust designs. A series of analyses using PSM and HLM were deployed, similar to what was presented in Chapter 3 but only with those centers that were found to have adopted 15 or more APT-O mathematics practices in relation to STAAR-Mathematics outcomes and those centers adopting more active forms of learning in relation to disciplinary incidents. The analyses described in this chapter are also somewhat different than those described in Chapter 3. While the analyses outlined in Chapter 3 resulted in individual effect sizes for each center, the analyses described in this chapter resulted in a pooled effect across the centers adopting the practices being focused on, which is consistent with how statewide effect estimates were calculated in the two previous Texas ACE evaluations reports (Arellano et al., 2020; Naftzger, Arellano et al., 2020). The goal in undertaking these analyses was to create effect estimates that could be compared with the effectiveness analyses conducted in previous evaluation reports employing similar PSM/HLM methods to determine whether there was an indication that program effects would be greater in centers that had adopted these specific practices.

Undertaking these analyses relate to the broader TEA objective of including elements in the evaluation that may help in the identification of potentially promising or effective practices in order to further inform how Texas ACE grantees go about the process of designing and delivering programming. The results described in this chapter represent an initial step in further understanding the potential viability of these practices in supporting desired student outcomes.

Important limitations should be noted about this set of analyses. Although the evaluation team hypothesized that program effects related to STAAR-Mathematics and disciplinary incidents may be larger among centers adopting APT-O mathematics practices and active forms of learning, respectively, positive results from these analyses cannot be interpreted as meaning that greater adoption of these practices caused larger program effects to occur. It is possible that other, unmeasured characteristics associated with each center could be influencing these results, including approaches to program recruitment and the design and delivery of programming that were not captured or understood through the measurement strategy that was implemented as part of the evaluation. The PSM/HLM design used does not support such a conclusion. Further, as was mentioned in Chapter 3, the PSM approach used to create comparisons groups did not guarantee that students were matched for other key differences that may have existed between the two groups of students not represented in the data used to support the matching process, which could influence the outcomes being assessed (e.g., student motivation, interests). In this sense, there may be some key differences between students attending programming and those who opted not to that are not controlled for in these models that could be biasing the results. These limitations should be considered when interpreting the final results.

Table 4.2 summarizes the analyses undertaken in this chapter of the report. As was seen in the approach highlighted in Chapter 3, students were included in the treatment group in these analyses if they attended Texas ACE programming for 60 days or more in 1 year or 2 years. Two comparison groups were used when conducting these analyses, however. The first comparison group consisted of similar students attending the same schools as the treatment group, but who did not participate in Texas ACE programming (i.e., nonparticipants). The second comparison group consisted of students who attended ACE programming for less than 30 days at the same centers during the programming period under consideration. This comparison group of ACE participants (less than 30 days) was only compared to the treatment group based on 1-year of ACE participation, as it was not possible to find a sufficient number of student matches to the 2-year ACE participant treatment group. Additional information about the use of PSM to create matched comparison groups is in Appendix D.

Finally, a decision was also made to calculate STAAR-Reading effects among centers that had adopted 15 or more APT-O mathematics practices. As noted in Chapter 3, a moderately significant and positive relationship was found between greater adoption of APT-O mathematics practices and center-level effect estimates in STAAR-Reading (see Table 3.10).

Table 4.2. Summary of Effectiveness Analyses Performed

Treatment Definition	Comparison Definition	STAAR-Mathematics	STAAR-Reading	Disciplinary Incidents
Centers with High APT-O Mathematics Practices				
Students participating in ACE programming for 60 days+, 1 year	Nonparticipants	X	X	
Students participating in ACE programming for 60 days+, 2 years	Nonparticipants	X	X	
Students participating in ACE programming for 60 days+, 1 year	Attending ACE for less than 30 days	X	X	
Centers with High Adoption of Active Forms of Learning				
Students participating in ACE programming for 60 days+, 1 year	Nonparticipants			X
Students participating in ACE programming for 60 days+, 2 years	Nonparticipants			X
Students participating in ACE programming for 60 days+, 1 year	Attending ACE for less than 30 days			X

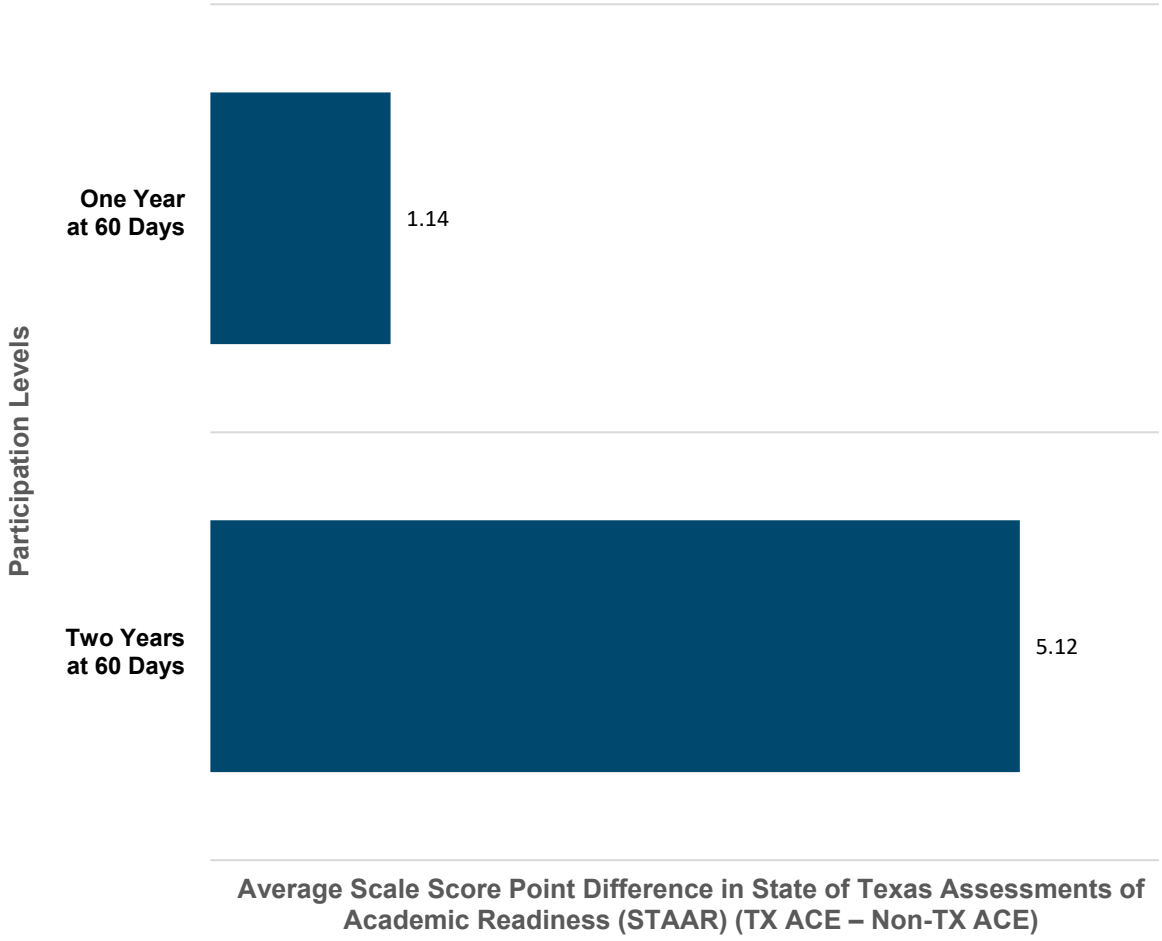
Pooled results spanning all grade levels are in the sections that follow. Analyses involving STAAR assessment scores only included students in Grades 4–8, while analyses relating to disciplinary incidents included students in Grades 1–8. These latter analyses were further disaggregated by grade level (i.e., 1–5 and 6–8), where applicable.

APT-O Mathematics Practices and STAAR Scores

Figures 4.1 and 4.2 summarize the pooled results for students in Grades 4–8. The outcome in each Figure is the average difference in scale score points obtained on the STAAR assessment between Texas ACE participants and similar youth not participating in Texas ACE. Negative results indicate that Texas ACE participants had lower scores, on average. Positive results indicate that Texas ACE participants had higher scores.

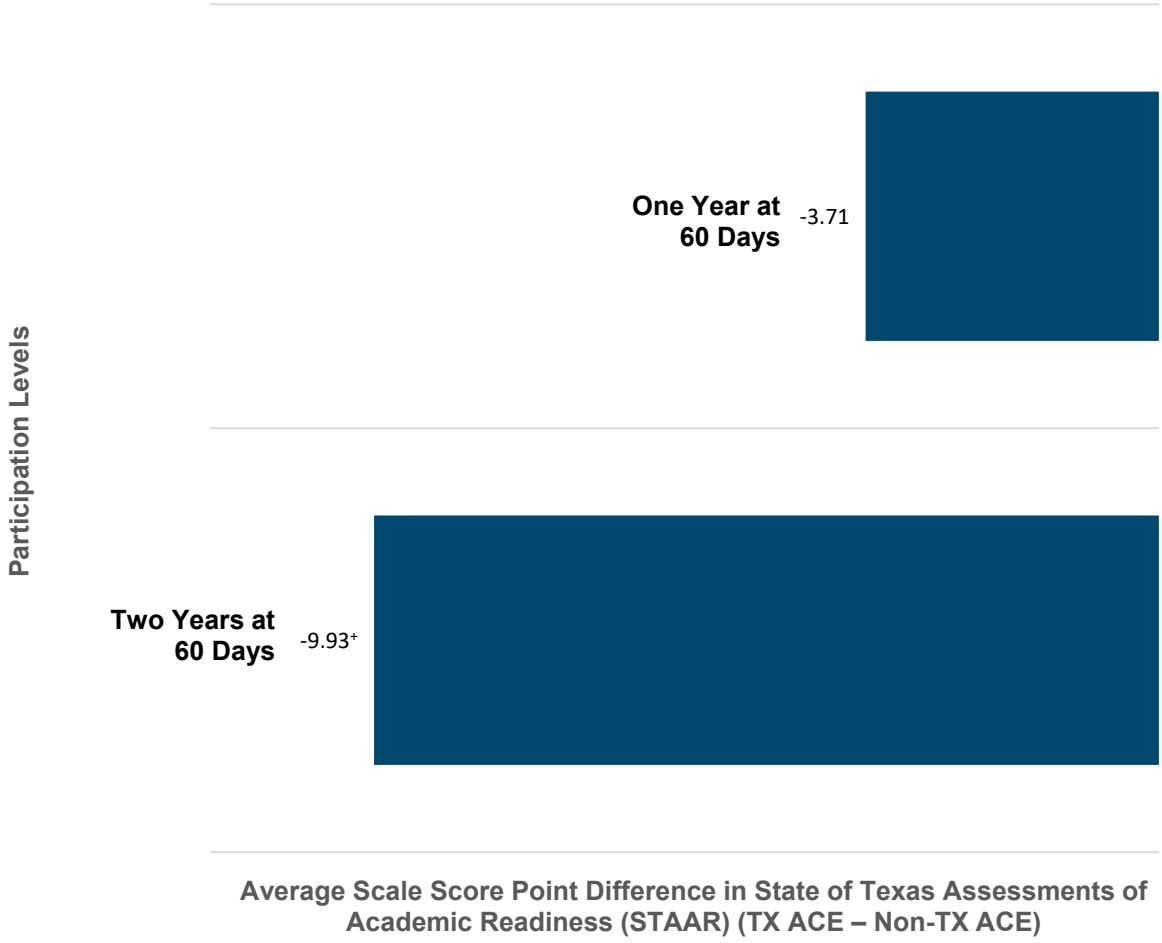
- Although effects were found to be positive, participation in Texas ACE at centers characterized by high adoption of APT-O mathematics practices was not found to have a statistically significant association with STAAR-Mathematics achievement when students participated in programming for 60 days or more across either 1 or 2 years (see Figure 4.1). The nonsignificant findings could potentially be related to the much smaller sample size associated with only including students from 36 centers in the analyses compared to the statewide analyses conducted in previous reports, which included hundreds of Texas ACE centers. Even if the findings would have been statistically significant, the standardized effects would be very small (between 0.009 and 0.039 standard deviation units).
- A moderately significant finding emerged showing that participation in Texas ACE at centers characterized by high adoption of APT-O mathematics practices was negatively associated with STAAR-Reading achievement when students participated in programming for 60 days or more across 2 years (see Figure 4.2). Students participating in Texas ACE at this level scored almost 10 scale score points lower, on average, on the STAAR-Reading assessment compared with similar youth who did not participate in Texas ACE. This translates to a standardized effect of -0.073 standard deviation units. Although these results are in the opposite direction of what was expected, they are consistent with what has been observed in terms of the effect of Texas ACE participation on student achievement on STAAR-Reading assessments as summarized in previous Texas ACE evaluation reports.

Figure 4.1. Effect of Texas ACE Participation on Mathematics: Grades 4–8 in Centers with Greater Adoption of Mathematics Practices Outlined in the Assessment of Program Practices Observation Tool (APT-O)



Source. Public Education Information Management System data, 2014–15 to 2018–19, State of Texas Assessments of Academic Readiness (STAAR), 2014–15 to 2018–19, Tx21st, 2015–16 to 2018–19
Note. ACE – Afterschool Centers on Education. Estimates represent the average difference in STAAR-Mathematics scale scores between students who participated in Texas ACE and similar students who did not participate in Texas ACE.

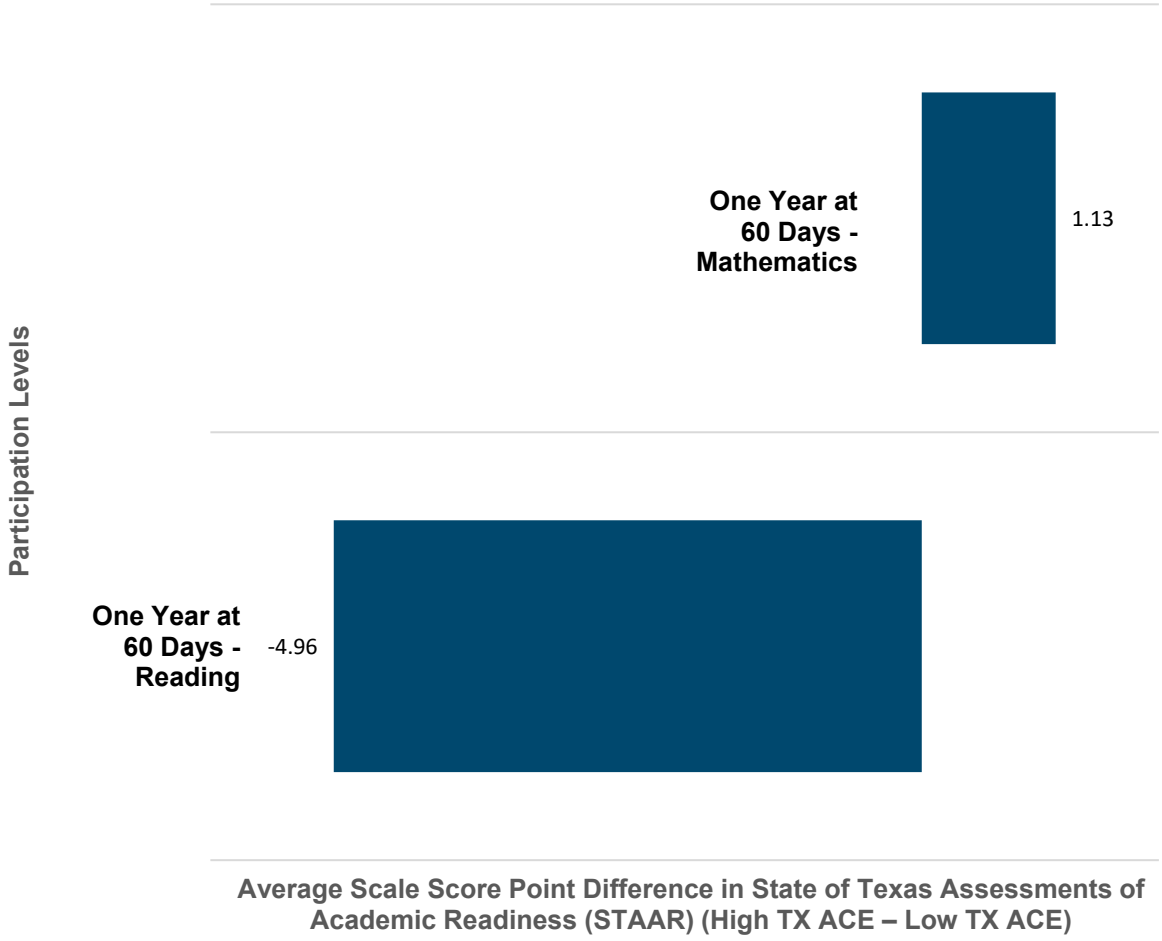
Figure 4.2. Effect of Texas ACE Participation on Reading: Grades 4–8 in Centers with Greater Adoption of Mathematics Practices Outlined in the Assessment of Program Practices Observation Tool (APT-O)



Source. Public Education Information Management System data, 2014–15 to 2018–19, State of Texas Assessments of Academic Readiness (STAAR), 2014–15 to 2018–19, Tx21st, 2015–16 to 2018–19
Note. ACE – Afterschool Centers on Education. Estimates represent the average difference in STAAR-Reading scale scores between students who participated in Texas ACE and similar students who did not participate in Texas ACE.
$^{+}p < .10$.

Similar results were found when the comparison group was made up of students who had attended Texas ACE programming for less than 30 days as shown in Figure 4.3. Although the effect was positive, participation in Texas ACE at centers characterized by high adoption of APT-O mathematics practices was not found to have a statistically significant association with STAAR-Mathematics achievement when students participated in programming for 60 days or more across 1 year. Similar nonsignificant results were found in relation to STAAR-Reading, although in this case, the effect of participating in Texas ACE programming for 60 days or more over the course of the school year was found to be negative.

Figure 4.3. Effect of Texas ACE Participation on Mathematics and Reading: Grades 4–8 in Centers with Greater Adoption of Mathematics Practices Outlined in the Assessment of Program Practices Observation Tool (APT-O)



Source. Public Education Information Management System data, 2014–15 to 2018–19, Tx21st, 2015–16 to 2018–19
Note. ACE – Afterschool Centers on Education. Estimates represent the average difference in STAAR-Mathematics and STAAR-Reading scale scores between students who participated in Texas ACE for 60 days or more for 1 year and similar students who participated in Texas ACE for less than 30 days.

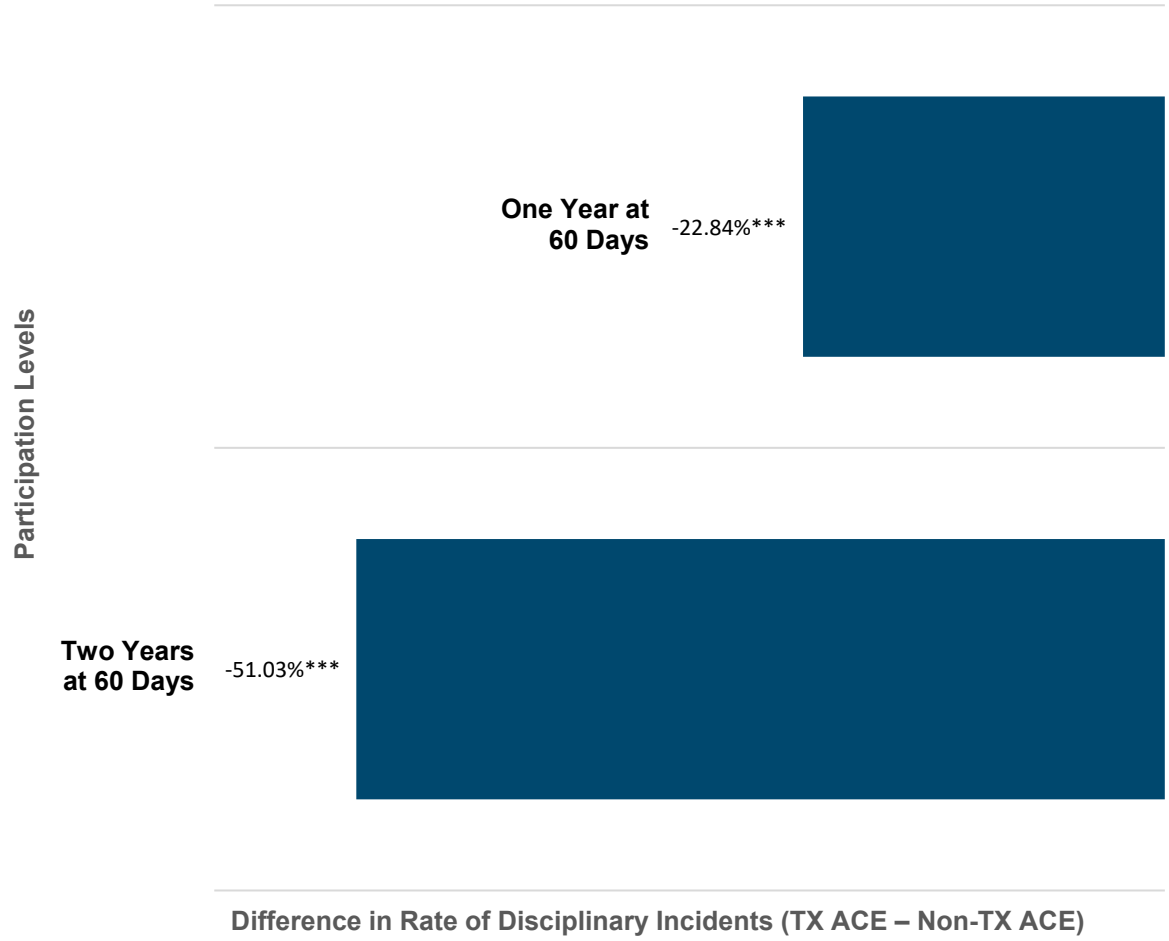
Active Forms of Learning and Disciplinary Incidents

Figure 4.5 summarizes the pooled results for students in Grades 1–8, presenting the percentage difference in rates of disciplinary incidents between Texas ACE participants attending centers with high adoption of active forms of learning and nonparticipants. A percentage of 0 represents no difference between the disciplinary incident rate of Texas ACE participants and nonparticipating youth. A percentage greater than 0 indicates that Texas ACE participants had a higher disciplinary incident rate than nonparticipating youth. A percentage less than 0 indicates that Texas ACE participants had a lower disciplinary rate.

Students participating in Texas ACE for 60 days or more over a year in centers with higher adoption of active forms of learning had a disciplinary rate that was 23% lower than that for similar nonparticipating youth, which represents a ratio of 0.77 disciplinary incidents for every 1.0 incident among nonparticipating youth. This finding was statistically significant.

In addition, students participating in Texas ACE for 60 days or more across 2 years in centers characterized by high adoption of active forms of learning also demonstrated a statistically significant lower rate of incidents than nonparticipating students. In this case, students participating in Texas ACE programming had a disciplinary rate that was 51% lower than that of similar nonparticipating youth, which represents a ratio of 0.49 disciplinary incidents for every 1.0 incident among nonparticipating youth.

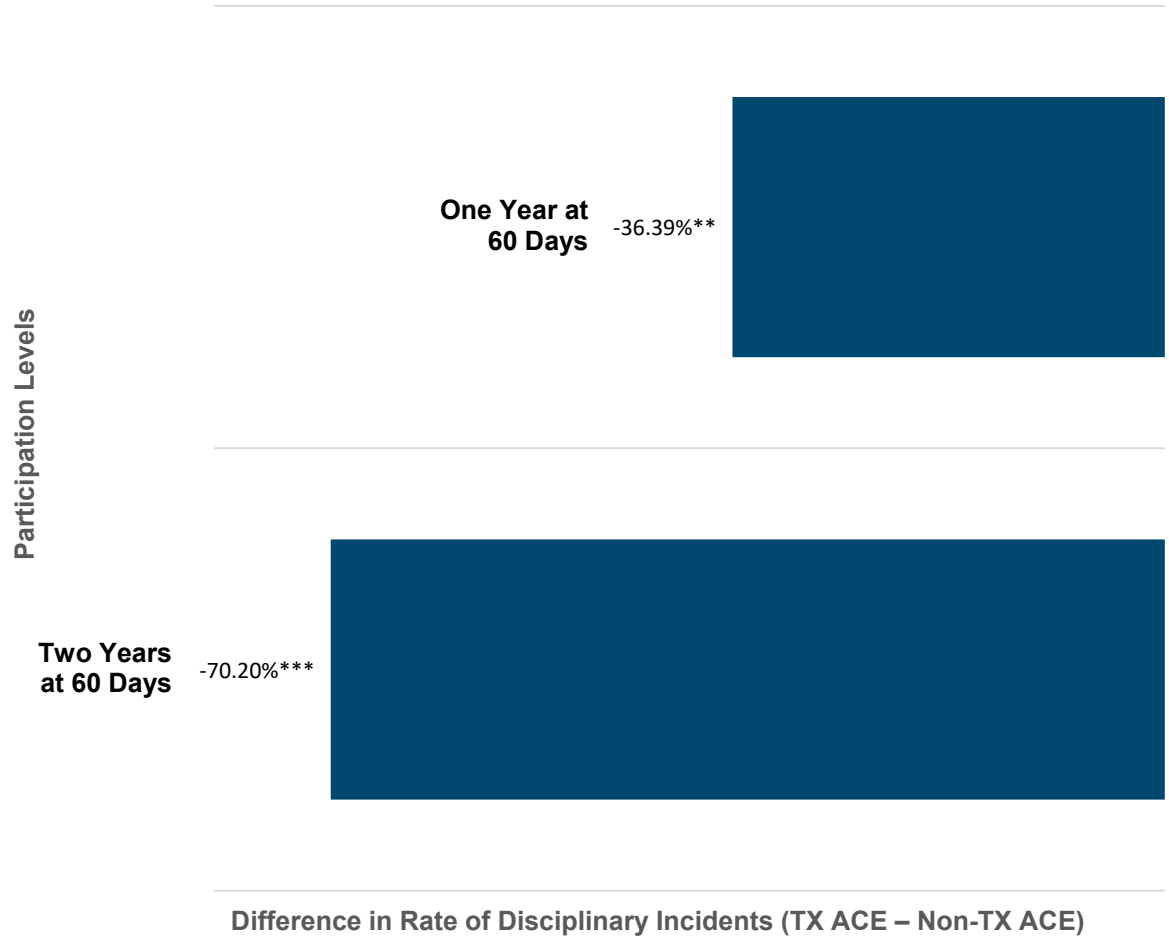
Figure 4.5. Effect of Texas ACE Participation on Disciplinary Incidents: Grades 1–8 in Centers with Greater Adoption of Active Forms of Learning



Source. Public Education Information Management System data, 2014–15 to 2018–19, Tx21st, 2015–16 to 2018–19
Note. ACE – Afterschool Centers on Education. Estimates represent the average percentage increase/decrease in the odds of a disciplinary incident occurring between students who participated in Texas ACE and similar students who did not participate in Texas ACE.
***$p < .001$.

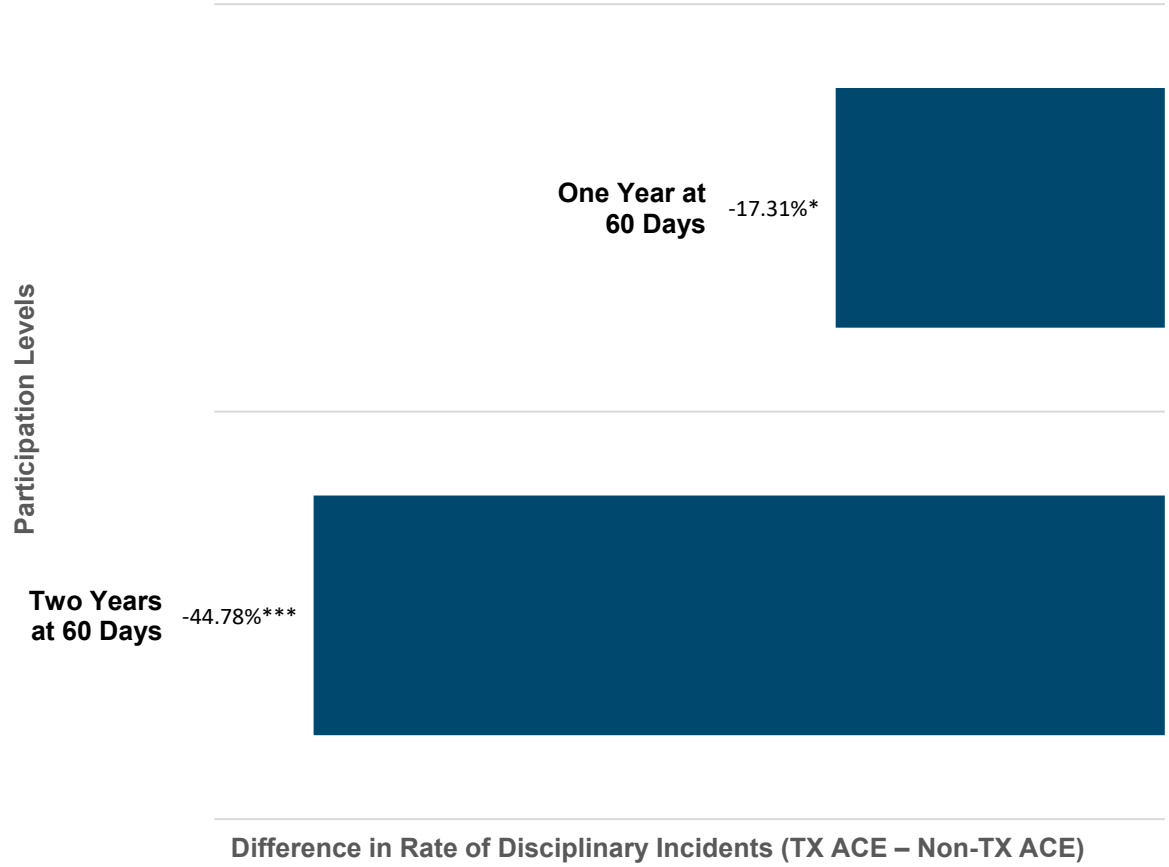
Similar results were found when exploring program effects separately for students in Grades 1–5 and 6–8 as shown in Figures 4.6 and 4.7. While still statistically significant at both grade levels, reductions in disciplinary incidents were found to be larger in Grades 1–5 as compared to students in Grades 6–8. More specifically, Grades 1–5 students participating in Texas ACE for 60 days or more over 1 year in centers with higher adoption of active forms of learning had a disciplinary rate that was 36% lower than that for similar nonparticipating youth (see Figure 4.6). Among students in Grades 6–8, the disciplinary rate was 17% lower than the rate for similar nonparticipating youth (see Figure 4.7). When students participated in Texas ACE programming for 60 days or more over 2 years, these rates were 70% (Grades 1–5) and 45% (Grades 6–8).

Figure 4.6. Effect of Texas ACE Participation on Disciplinary Incidents: Grades 1–5 in Centers with Greater Adoption of Active Forms of Learning



Source. Public Education Information Management System data, 2014–15 to 2018–19, Tx21st, 2015–16 to 2018–19
Note. ACE – Afterschool Centers on Education. Estimates represent the average percentage increase/decrease in the odds of a disciplinary incident occurring between students who participated in Texas ACE and similar students who did not participate in Texas ACE.
$^{**}p < .01$. $^{***}p < .001$.

Figure 4.7. Effect of Texas ACE Participation on Disciplinary Incidents: Grades 6–8 in Centers with Greater Adoption of Active Forms of Learning

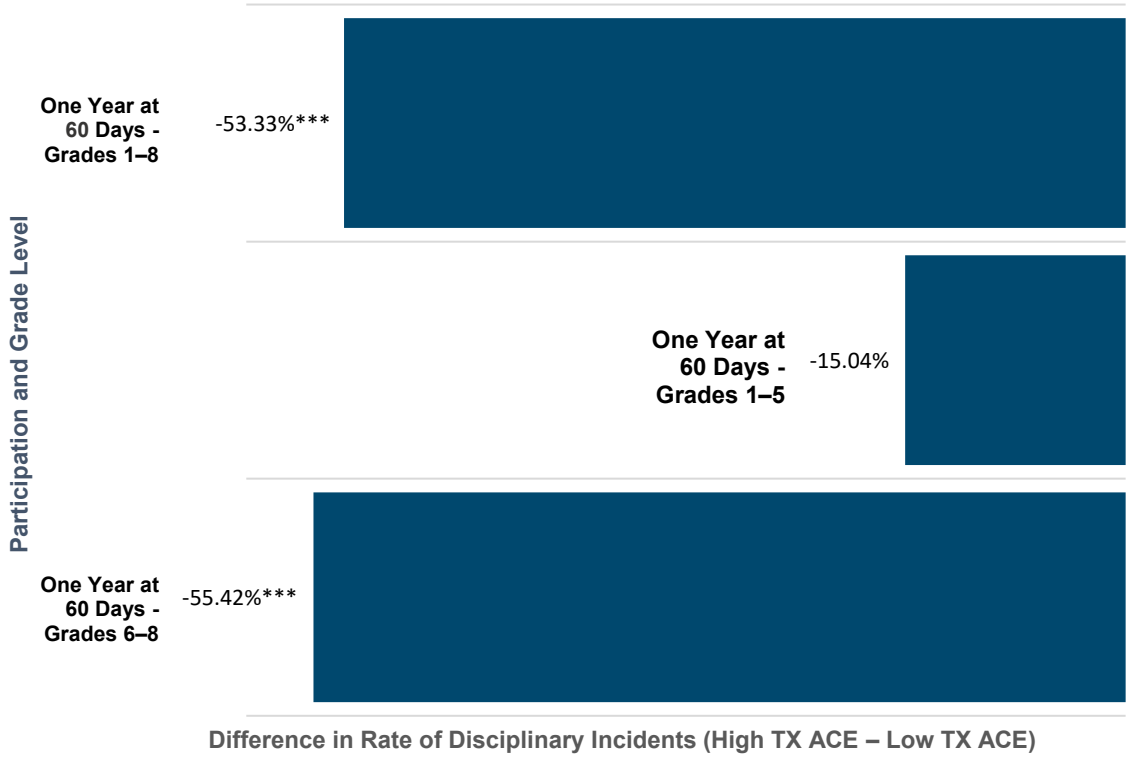


Source. Public Education Information Management System data, 2014–15 to 2018–19, Tx21st, 2015–16 to 2018–19
Note. ACE – Afterschool Centers on Education. Estimates represent the average percentage increase/decrease in the odds of a disciplinary incident occurring between students who participated in Texas ACE and similar students who did not participate in Texas ACE.
*p < .05. ***p < .001.

Similar results were found when the comparison group was made up of students who had participated in Texas ACE programming for less than 30 days as shown in Figure 4.8. When considering all students in Grades 1–8, youth participating in Texas ACE for 60 days or more over 1 year in centers with higher adoption of active forms of learning had a disciplinary rate that was 53% lower than that for similar youth attending Texas ACE programming for less than 30 days. This finding represents a ratio of 0.47 disciplinary incidents for every 1.0 incident among lower attending youth. This finding was statistically significant (see Figure 4.8).

This significant finding was largely driven by students in Grades 6–8. Among students in Grades 1–5, attending Texas ACE for 60 days or more in 1 year did not lead to a significant reduction in disciplinary incidents compared to similar students attending ACE programming for less than 30 days. However, among students in Grades 6–8, centers with higher adoption of active forms of learning had a disciplinary rate among students attending programming 60 days or more in 1 year that was 55% lower than that of similar youth attending Texas ACE programming for less than 30 days.

Figure 4.8. Effect of Texas ACE Participation on Disciplinary Incidents: Grades 1–8 in Centers with Greater Adoption of Active Forms of Learning



Source. Public Education Information Management System data, 2014–15 to 2018–19, Tx21st, 2015–16 to 2018–19
Note. ACE – Afterschool Centers on Education. Estimates represent the average percentage increase/decrease in the odds of a disciplinary incident occurring between students participating in Texas ACE for 60 days or more and similar students who participated in Texas ACE for less than 30 days.
***$p < .001$.

Chapter Summary

The purpose of this chapter was to explore how two types of center-level practices that were associated with a specific school-related outcome in Chapter 3 were found to be associated with positive program effects when adoption of that practice exceeded a specific threshold. There were two types of center-level practices examined in this chapter:

1. APT-O Mathematics Practices. The evaluation team hypothesized that greater adoption of these practices would be associated with positive program effects in STAAR-Mathematics specifically and potentially STAAR-Reading.

2. Activities That Represent Active Forms of Learning. Results from Chapter 3 also demonstrated that activities that offer more active forms of learning were associated with fewer disciplinary incidents. Three types of specific activities were found to be associated with fewer disciplinary incidents: activities during which (1) youth planned future activities or projects; (2) youth participated in whole-group discussions facilitated by staff; and (3) youth participated in an activity that was designed to make a contribution or be helpful to others or the community.

In terms of centers with higher adoption of APT-O mathematics practices, no significant program effects were found across any of the analyses conducted. However, most of the analyses related to higher adoption of practices reflective of active forms of learning were found to result in significant findings, indicating an association with fewer disciplinary incidents. These results may suggest that greater

adoption of these practices was associated with fewer disciplinary incidents among students participating in Texas ACE programming for 60 days or more; however, the analyses that were undertaken did not result in evidence that would support a direct link between adoption of practices that support active forms of learning and a reduction in disciplinary incidents among Texas ACE participants.

The results from analyses examining the effect of centers more aggressively adopting active forms of learning in relation to disciplinary incidents are among the most notable from the impact analyses undertaken by the evaluation team over the past 4 years. In the preceding two evaluation reports, analyses examined the effect of participating in Texas ACE programming for 60 days or more for 2 years across all centers active during a given programming. These results also demonstrated that participation in Texas ACE programming for 60 days or more for 2 years was associated with a significant reduction in disciplinary incidents relative to similar students not participating in programming. However, the results of these analyses demonstrated that sustained participation in Texas ACE programming at the 60 days or more level was associated with a disciplinary rate that was 6% to 36% lower than the rate for similar nonparticipating youth. When limiting the treatment group to include only students attending centers adopting more active forms of learning, participation in Texas ACE programming at the 60 days or more threshold was associated with a disciplinary rate that was 51% lower than the rate for similar nonparticipating students. For students in Grades 1–5 participating in Texas ACE for 60 days or more over 2 years, the disciplinary rate was 70% lower than the rate for similar nonparticipating students.

The evaluation team hypothesizes that each of the activities indicative of active forms of learning may respond to various developmental needs associated with students, including a need to experience a sense of agency and autonomy, belonging and mattering, and that what they are doing while participating in programming is relevant and important (Assor et al., 2002; Larson & Angus, 2011; Larson & Dawes, 2015; Larson et al., 2019). It is conceivable that addressing students' developmental needs may help promote prosocial behaviors.

In a similar fashion, other researchers have also studied the connection between engaging in altruistic behaviors and prosocial development (Damon et al., 2003; Eisenberg et al., 2006; Yates & Youniss, 1996). Because some of the activities related to active forms of learning involved making a contribution or being helpful to others or the community, they may have also contributed to prosocial development in ways that supported fewer disciplinary incidents among participating youth.

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Chapter 5: Local Evaluation Summary

Research Questions

- What is the status of supports provided to the local evaluation efforts of Texas ACE grantees?
- What has been learned through the development and deployment of local evaluation tools and processes?
- What steps are being taken to help codify local evaluation tools and processes?

Introduction

A distinct objective for the evaluation of the Texas 21st CCLC program is to develop and refine resources and guidelines to assist grantees in engaging in local evaluation efforts for continuous improvement. This chapter describes the approach taken to incorporate a local evaluation framework with a group of centers in the final year of the evaluation contract and in Year 3 of the LESI providing direct technical assistance support to a set of Texas ACE grantees and centers. The narrative describes the local evaluation concept, the process for updating a local evaluation toolkit that accompanies local evaluation guidelines. The chapter includes a description of the LESI activities, as well as insights and lessons learned from centers that participated in the initiative and efforts to sustain the local evaluation concepts past the evaluation contract to support a broader set of Texas ACE grantees to engage in continuous improvement efforts around evaluation.

Local Program Evaluation Concept

There are many important reasons for conducting rigorous local program evaluations. As outlined in the 21st CCLC request for applications (RFAs), all 21st CCLC grantees are required to work with an independent program evaluator to complete a local program evaluation of 21st CCLC implementation at the center level. As part of this process, TEA requires that grantees submit logic models for each center in the fall and an executive summary of program evaluation results in the summer, in addition to posting full evaluation reports online. The goals are to support continuous program improvement and sustainability of local Texas ACE programs beyond the grant period.[24] When done well, program evaluation can offer the ability to collect valuable, actionable data to drive ongoing program development. This evaluation increases the likelihood that centers will achieve Texas ACE goals, including desired student-level outcomes. Moreover, program evaluation can be critical for sustainability, giving districts a meaningful way to communicate with local stakeholders and tell their center's story. Sharing program evaluation results can improve opportunities for partners and resources, as well as support outreach and recruitment efforts.

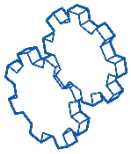
TEA asserted its belief in the importance of local program evaluation when it began developing the Texas ACE Independent Evaluation Guide with input from grantees and their local program evaluators. The guide was intended to help all 21st CCLC grantees understand the importance of local program evaluation and the role it plays in continuous program improvement.[25] In addition, by promoting common approaches across multiple grantees and centers, TEA is better positioned to work toward developing common program-specific measures that state systems can generate for local programs. Feedback and field experience informed TEA about the underuse of resources, and centers struggled to make improvements in how local evaluation was conducted and applied.[26] For this reason, TEA sought further refinement of local evaluation guidance to increase the tools available to local programs for practical application of evaluation findings across Texas ACE.

[24] See the Texas ACE Cycle 9 RFA (TEA, 2016) and Texas ACE Cycle 10 RFA (TEA, 2018).
[25] Texas ACE Independent Evaluation Guide, Cycle 9.
[26] Based on input from TEA and the Texas ACE blueprint, Cycle 9.

In 2017–18, a new Local Evaluation Guide and accompanying Local Evaluation Toolkit, which replaced the original Texas ACE Independent Evaluation Guide, were produced. The guide walks Texas ACE program staff step by step through how to plan and conduct an evaluation, while providing a toolkit of templates, tools, and measures to support implementation of the new guide. In Year 2 of the local evaluation work, an updated Local Evaluation Guide and Toolkit were produced to reflect additional input from centers and stakeholders after having had time to absorb and implement concepts and tools from both resources. The updates were aided with input from a Local Evaluation Advisory Group (LEAG) consisting of key Texas ACE stakeholders as well as input from the center and grantees who participated in LESI. In Year 3, the statewide evaluation team updated the Local Evaluation Toolkit with an additional resource. The added tool is a local evaluation capacity checklist that Texas ACE centers can use to reflect as a team on their center's capacity to engage in meaningful local evaluation in the following areas: developing an evaluation team, continuous improvement, theory of change, logic models, developing a process evaluation plan, developing an outcome evaluation plan, action planning, and overall reflection. The updated toolkit is included in Appendix H.

The purpose of this local evaluation effort is to support centers' capacity to engage in and conduct relevant, meaningful local evaluations that direct program improvement and support sustainability in a tangible way. A significant shift has been to move from a focus on independent evaluator-led activities to a more participatory and collaborative local evaluation process. The vision for this work was based on several key principles that drove the development and use of meaningful local evaluations (see Figure 5.1).

Figure 5.1. Overview of Local Evaluation Key Principles

	**Collaborative processes.** Collaboration among grant management, center-level staff, local independent evaluators, and other stakeholders helps ensure that relevant information is collected and used. A local evaluation team is recommended to facilitate this process. Membership may include key center staff, partners, and the independent evaluator.
	**Intentional program design.** Programs grounded in a sound theory of change and illustrated by a logic model facilitate shared understanding of intentional connections between needs, program components, processes, and outcomes.
	**Assessment of implementation.** Ongoing assessment of implementation practices guides improvement efforts and facilitates understanding of outcomes. Assessment includes measuring core aspects of fidelity (e.g., adherence, exposure, quality, and engagement).
	**Locally informed and accessible measures.** Measures are most effective for understanding progress on selected performance indicators when they are locally informed, focused, easily accessible, and limited in scope.
	**Focus on center capacity.** Evaluation capacity is achieved when center staff possess the knowledge and understanding to participate in evaluation planning and implementation (e.g., informing implementation and outcome measures, collecting data) and when they have access to resources and tools that support evaluation capacity.

Source: Texas ACE Local Evaluation Guide 2018–19.

Objectives for Supporting Local Evaluation Efforts

LESI was conceptualized as an opportunity to test out new local evaluation approaches that could support further development before rollout to grantees statewide. In the first year of the pilot, only Cycle 9 centers were invited to participate (a maximum of 32 centers) if they met the requirements related to their center's capacity to participate in the process and met all expectations. For the second year of implementation, LESI participation was open to a maximum of 32 centers that also met a similar set of criteria for Cycles 9 and 10 centers. Nineteen grantees and 31 centers agreed to participate and complete the entire process. The statewide evaluation team proposed a different approach to the Year 3 LESI for the 2019–20 academic year. The idea was to work with fewer centers but to do so more frequently, using a more intensive coaching approach to test whether such an approach can result in deeper understanding and implementation by centers. In addition to the written feedback at various points throughout the initiative, check-in calls and emails between the LESI participants and an assigned LESI liaison could troubleshoot areas of challenges. The Year 3 LESI technical assistance team had a goal of recruiting 10 Texas ACE centers from Cycles 9 and 10 to participants to the initiative. Nine Texas ACE centers from six grantees were initially recruited into the initiative in October 2019. By the end of the 2019–20 academic year, three centers from the same grantee withdrew their participation because they said they had too many other initiatives or responsibilities to meaningfully participate. The list of the participating centers is in Table H1 in Appendix H.

Another initiative during the 2019–20 academic year focused on producing a set of resources on local evaluation to sustain the initiative beyond the 21st CCLC evaluation grant and to reach the broader set of Texas ACE grantees. The resources include five short tutorial training videos related to key concepts from the Texas ACE Local Evaluation Guide and Toolkit, as well as a LESI technical assistance process guide. The 15- to 20-minute tutorials focus on the main takeaways from the guide and toolkit to appeal to all sorts of adult learners and engage centers in ways the written documents might not. The idea is that the evaluation tutorials be made available to centers statewide as a companion to the guide and toolkit; not just the LESI participants (currently only LESI participants can attend the video trainings). This approach allows for a broader set of Texas ACE grantees to engage in asynchronous professional development on local evaluation as part of their continuous improvement process. The LESI technical assistance process guide documents the approach to supporting local evaluation for Texas ACE grantees, the kinds of technical assistance delivered to Texas ACE grantees, the content covered and format of the technical assistance delivery, lessons learned and key takeaways, and artifacts of the technical assistance implementation. The audience for the guide is TEA to support future technical assistance implementation and replication activities around local evaluation for Texas ACE. The Texas ACE tutorial topics can be found in Table H2 in Appendix H along with their corresponding online links.

Local Evaluation Support Initiative Expectations and Feedback Opportunities

Although participation in LESI was voluntary and no elements were required, the participants had clear expectations. The process kicked off in October 2019 with an introductory webinar that was open to all centers potentially interested in learning more about participation in the initiative. This timeline was later than the previous 2 years of the initiative by at least a month so that after finalizing the recruitment of the nine centers, the trainings began in November. See Appendix H, Table H3 for a Local Evaluation Timeline. The state evaluation team recognized center challenges in doing this initiative, especially given its timing and other evaluation activities already under way. The team, therefore, worked with centers to support their needs and help them adapt the process to make it as useful as possible to them. Expectations for participating in the initiative were articulated as follows:

- Centers commit to implementing the evaluation approaches as outlined within the evaluation framework to the extent possible.
- Centers provide feedback to guide further development of the framework for other centers.

- Project directors identify team members who will receive training and appoint a team leader who will serve as the principal contact for the center. Suggested participants include the project director, the site coordinator, and the local evaluator, as appropriate for the grantee.
- Team members attend scheduled webinars (optional introductory webinar, plus training webinars).
- Centers complete homework assignments in-between webinars (including the selection of the PQA instrument, completion of the evaluation plan, completion of an action plan, and identification of local evaluation questions).

Centers worked to implement their own action plans this year, building on this plan in future years for continuous improvement of their program. More information about the LESI process is in Appendix H.

Feedback for LESI Participants for Continuous Improvement and Coaching Approach

A benefit of participating in LESI is that centers could receive feedback related to components of the Local Evaluation Guide and Toolkit from the statewide evaluation team. In this third iteration of LESI, the focus was on providing both the group training through webinars, as well as one-on-one individual support coaching from a LESI evaluation liaison throughout the process. Each Texas ACE program was assigned a LESI liaison who would reach out to them through emails and provide centers the opportunity to meet to discuss feedback received during the LESI process and/or to check-in on understanding. The purpose of coaching was to provide centers with additional support in implementing the content provided in LESI webinars and information included in the Texas ACE Evaluation Guide and Toolkit. Support was provided to all centers at varying levels beginning in November 2019 and continuing through July 2020.

As mentioned previously, nine centers (representing six grantees) participated in LESI and received coaching support. One grantee representing three centers chose not to fully participate in LESI. However, this grantee did receive initial coaching support related to their logic models and participated in LESI webinars during 2019–20. The other five grantees representing six centers received consistent coaching support throughout the year. Importantly, the onset of the COVID-19 pandemic occurred during the local evaluation support process, which affected engagement levels.

Overview of Coaching Support
From November 2019 to July 2020, a total of 64 coaching support contacts were made between LESI liaisons and participants. A contact included either an email or phone conversation to share information. The count of contacts did not include all email correspondence related to scheduling meetings or back-and-forth acknowledgements of emails. Of the 64 contacts, 57 were conducted through email, and seven included phone communication. Contacts ranged from eight to 12 email/calls across grantees.

Typically, coaching support included (a) reviewing submitted logic models and evaluation plans in December of 2019, action plans in March of 2020, and evaluation report materials and providing feedback as requested in June of 2020, and (b) providing consultation with centers through email and phone contacts to review progress, provide technical assistance, and review feedback from submitted information. A summary of the purpose of coaching support contacts across participants included the following:

- Providing information about expectations of LESI and the role of the liaison
- Sharing and explaining feedback related to logic models, evaluation plans, action plans, and evaluation report information
- Discussing point-of-service quality assessment as follow-up from the action planning webinar
- Sending reminders about upcoming webinars and due dates for submitting information for review
- Checking in with participants to see whether there were any follow-up questions from webinars, feedback from reviews, or other evaluation support topics

- Checking in with participants on the general state of their program during the pandemic
- Sharing information related to the KPI Reports (e.g., LESI Google site), recorded tutorials, and offering support in interpretation of findings
- Providing outreach to grantees encouraging completion of the self-reflection survey and inviting any additional feedback into their experiences with LESI

Coaching support contacts were used as a means of clarifying feedback from formal reviews of logic models, evaluation plans, action plans, and evaluation reports. LESI liaisons received and provided written feedback to eight participating LESI Texas ACE centers related to logic models/evaluation plans, and written feedback to two Texas ACE centers related to action plans. The feedback was to assist centers to improve the quality, detail, and relevance for each evaluation component. The statewide evaluation team submitted summary feedback reports to TEA for each activity. Each task provided the state evaluation team with the opportunity to understand where centers needed additional supports. By relaying this information to TEA's Texas ACE Program Office, all parties could collaborate in suggesting future areas for support by the statewide evaluation technical assistance provider.

Reflections from Local Evaluation Support Initiative Participants

Perspectives and feedback were gathered both formally and informally from LESI participants through a reflection survey and email communications. A formal reflection survey was sent to LESI participants at the end of the process in July of 2020. The survey asked participants to identify successes and challenges related to aspects of the LESI including working on local evaluation plans, implementing quality assessments, and creating action plans. Participants were also asked to reflect on the overall value of LESI and any suggestions. Surveys were sent to all nine centers enrolled in LESI at the beginning of the year, including the grantee (representing three centers) that decided not to officially participate. A total of two centers responded to the survey, which represented 30% of the six centers officially enrolled in LESI as of August 2020.

Given the low participant response rate, LESI liaisons were asked to review prior correspondence and feedback provided during coaching contacts to shed further insight on ideas expressed by survey respondents. Past emails, notes from phones calls and/or feedback provided on LESI artifacts, and webinar chats and interactions were reviewed to gather additional insights across all six to nine LESI participants. Main ideas are synthesized by key LESI focus areas as follows:

1. *Local Evaluation Plans*: Survey participants identified the evaluation process and discovered areas in which improvement could be made as key successes related to evaluation planning. Challenges included organizing the evaluation team around busy schedules and the overall experience. LESI liaisons provided a variety of feedback designed to strengthen logic models and evaluation plans. This feedback helped to identify some of the challenges faced by centers in completing the evaluation materials (e.g., understanding differences between outcomes and outputs, specifying outcomes using a SMART framework).

What were the biggest successes related to working on your local evaluation plan?

"Discovering areas in which we could improve our program."

What were the most challenging aspects related to working on your local evaluation plan (non-COVID-19 related)?

"Organizing[sic] our evaluation team had difficulties at times coordinating around everyone's busy schedules."

2. *Quality Assessments:* Survey participants reported that the biggest successes of their quality assessment process included the ideas gained from trainings and working toward goals. Challenges included conducting multiple observations with the high number of activities offered.

What were the biggest successes of the program quality assessment process?

"All trainings offered, both on-line and in-person, were extremely helpful and offered great ideas for our program."

What were the most challenging aspects of the program quality assessment process (non-COVID-19 related)?

"Conducting multiple observations of each activity can be difficult at times because of the high number of activities we offer throughout the year."

3. *Action Planning:* Survey participants identified collaboration with school-day staff and better ways to conduct planning as successes with action planning. Challenges included a lack of awareness among new school-day teachers' of the Texas ACE program and how students could be identified and connected to the program. This disconnect meant that the school-day to Texas ACE connections and communication around student needs and supports were not always as strong as project directors anticipated. LESI liaisons provided a variety of feedback designed to strengthen logic models and evaluation plans. This feedback helped to identify some of the challenges faced by centers in completing the action plans (e.g., need to provide further details for action steps, ensuring responsibilities for action steps are distributed and not solely the responsibility of the coordinator).

What were the most challenging aspects of the action planning process (non-COVID-19 related)?

"New teachers to the campus did not fully understand what ACE had to offer their students and didn't always encourage students and parents to attend ACE."

What were the biggest successes of the action planning process?

"Collaborating with the school-day staff helped us identify students most in need."

"Gave us an idea of how to better plan to meet the needs of the students."

4. *Impact of the COVID-19 Pandemic:* The COVID-19 pandemic in early spring 2020 led to school closures and a move toward virtual learning. When asked how this factor may have affected their work or progress toward LESI goals, survey participants reported general challenges with the transition to virtual learning and being disconnected from staff, which impacted communication.

How did the COVID-19 disruptions impact your work and any progress toward goals on LESI?

"Not being on campus caused small problems such as not being able to access paper records and not being able to communicate as effectively with staff."

"The transition into virtual was challenging."

"Gave us an idea of how to better plan to meet the needs of the students."

The challenges of transitioning to online learning were also identified in coaching contacts. As one participant noted, "It's been quite the experience transitioning from in person to online." However, this same participant also noted positives with the experience: "I am extremely excited to learn how to utilize new platforms and creating content."

The COVID-19 pandemic also had an impact on overall participant engagement in LESI. As noted by one participant following a check-in, “Thank you so much for reaching out and checking in. I was extremely overwhelmed these past couple of months.” That particular Texas ACE center clarified that they had not been communicating with their LESI evaluation liaison not for lack of interest in the topic, but due to competing urgent priorities that arose due to the pandemic.

5. *Overall Value and Suggestions*: Overall, survey participants reported value from their participation. Specifically, participants reported that LESI helped them gain a different perspective on data collection and how to use the information for planning and program improvement.

As with all aspects of LESI, participation in coaching was voluntary. As a result, levels of participation varied across grantees. There was some evidence that grantees saw the value of the work through follow-up correspondence and requests to review materials (e.g., “Thank you for the feedback. I agree with all of your suggestions and we [will] make corrections right away. Thanks again for all your help.”). However, as noted by LESI liaisons, there were some challenges with communication, such as unreturned emails. Given the voluntary nature of the experience, liaisons were careful not to appear too forceful with meeting requests. Instead, liaisons served to reassure centers that they were available if support was needed. Another aspect of the process that may have at times caused confusion with participants was the training and support activities provided through the 21st CCLC’s technical assistance team. There were a few questions that LESI liaisons fielded on some of the LESI activities about how and whether they aligned with the training activities.

Next Steps and Recommendations for Local Evaluation

The individual coaching aspects of LESI during the 2019–20 school year provided an additional layer of support to grantees participating in LESI that was different from the process from Years 1 and 2. Coaching contacts served to individualize information shared with participants, provide a consistent contact throughout the experience, and provide continuity for the review of submitted materials. Although there was some evidence of the overall value of a centers’ participation in the experience, LESI liaisons reported some challenges with communication, which contributed to variance in the level of support provided to specific centers. In addition, because there was not collaboration between the LESI evaluation team and the 21st CCLC technical assistance team, the activities across the two areas might not always have been clear in their distinction and intent to LESI participants. Future LESI efforts may consider closer collaboration between LESI and 21st technical assistance activities to clearly delineate and align roles, resources, and activities. The coaching approach taken in Year 3 of the initiative was more labor intensive as it was intended to provide individualized support, although the process was not fully implemented due to disruptions caused by the COVID-19 pandemic. Going forward, TEA may want to answer that level of support around local evaluation and what types of resources it would like to continue to make available to Texas ACE.

The Texas ACE Evaluation Guide and Toolkit should be treated as living documents and reexamined periodically to determine whether the resources and references need to be updated. In Years 1 and 2 of this initiative, this was done with the collaboration of a LEAG. In future years, it may be necessary to reconvene a LEAG to reexamine the guide and toolkit. To provide the opportunity for a broader group of centers to be exposed to some of the content covered in the trainings in the LESI webinars, TEA should consider making the short five-part Texas ACE tutorials available to programs statewide, and/or part of the on-boarding of new programs, in addition to promoting the key principles found in the Texas ACE Evaluation Guide and Toolkit.

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Chapter 6. Summary of Findings and Recommendations

This report is the culmination of a 4-year evaluation of the Texas 21st CCLC grant program, known as Texas ACE. The purpose of the evaluation was to examine both the implementation and effectiveness of the Texas ACE program in relation to the 2014–15 to 2018–19 programming periods. A substantive component of the evaluation was the completion of site visits at 60 centers funded by the Texas ACE program, with 20 centers visited in spring 2017, spring 2018, and spring 2019. The goal of these visits was to collect a variety of both qualitative and quantitative data related to both Texas ACE program design and delivery and the experiences of students participating in Texas ACE programming. These data were then used to construct variables representing center-level characteristics that were used in a series of analyses assessing how these characteristics were associated with both Texas ACE program attendance and school-related outcomes. The intent of these analyses was to identify those center-level characteristics that were found to be positively associated with greater levels of participation in Texas ACE programming and larger effects on school-related outcomes. The center-level characteristics examined fell within five primary categories:

1. **Observed Quality.** Center characteristics in this group represented measures of process quality and content-specific practices derived from the PQA and APT-O tools, respectively, that were scored by members of the evaluation team while observing Texas ACE programming.
2. **Organizational Processes.** Organizational processes included variables related to program goals, school community engagement, continuous quality improvement, and staffing and operational attributes. Variables in this category were constructed from interviews and focus groups conducted with a number of Texas ACE stakeholders and staff.
3. **Program Activities.** Variables related to program activities assessed the types of learning opportunities and attributes associated with Texas ACE offerings students attended during the site visit period. These data were obtained from a survey administered to activity leaders leading ACE programming.
4. **Youth Experiences.** Center characteristics in this group represented measures of the quality of interactions students participating in Texas ACE had with adult activity leaders and other youth in the program, opportunities to experience a sense of agency and autonomy, and key facets associated with motivation and engagement in learning environments. These data were obtained from surveys of students participating in Texas ACE programming.
5. **Intermediate Youth-Reported Outcomes.** Variables in this category represent those outcomes that are more likely to be directly impacted by Texas ACE program participation. That is, growth in these areas has a tendency to happen within the confines of the program and often can be observed directly by the staff leading afterschool activities. These data were also obtained from youth surveys.

Three types of analyses were performed to explore how center characteristics in each of the five preceding categories were related to Texas ACE program participation and school-related outcomes:

1. HLM analyses conducted in relation to Texas ACE attendance outcomes that were designed to answer the following question: *What center-level characteristics were found to be significantly related to levels of Texas ACE program attendance among centers represented in the site visit samples?*
2. To examine how center characteristics were related to school-related outcomes, a quasi-experimental design (PSM) was used to calculate center-level effects in relation to the following school-related outcomes: (1) performance on the STAAR-Mathematics assessment; (2) performance on the STAAR-Reading assessment; (3) percentage of school days attended; and (4) number of disciplinary incidents. Regression analyses were then conducted to answer the following question: *What center-level characteristics were found to be significantly related to positive center-level effects among centers represented in the site visit samples?*
3. Based on results from the analyses conducted in #2, two types of center-level characteristics were identified (a) those that were positively associated with a specific school-related outcome and (b)

those for which there appeared to be a potential threshold that, when exceeded, was associated with greater positive center-level effects on that outcome. The two types of center-level characteristics meeting these criteria were centers that were observed to have higher adoption of APT-O mathematics practices and centers that more frequently included activities that involved active forms of learning. The evaluation team employed another quasi-experimental design to assess the effect of Texas ACE participation specifically within those centers with high adoption of APT-O mathematics practices and those practices related to active forms of learning on school-related outcomes. These analyses allowed for the following two questions to be answered:

- What effect does the program have on students attending Texas ACE programming for 60 days or more at centers with high adoption of APT-O mathematics practices relative to similar students not participating in programming or participating for less than 30 days?
- What effect does the program have on students attending Texas ACE programming for 60 days or more at centers with high adoption of practices that employ active forms of learning relative to similar students not participating in programming or participating for less than 30 days?

The following section summarizes results from the correlational elements of Analyses #1 and #2. Then, results from Analysis #3 are summarized in terms of how high adoption of APT-O mathematics practices and centers that more frequently included activities that involved active forms of learning were found to be associated with school-related outcomes.

Results from Correlational Analyses

The regressions described in Analyses #1 and #2 are correlational in nature. As a result, the findings from these analyses should not be interpreted to mean that a given characteristic caused a program attendance-related outcome. Figure 6.1 outlines those practices, processes, and youth experiences and intermediate outcomes that were found to be positively associated with more than one Texas ACE attendance or school-related outcome. Again, the goal in conducting these analyses was to identify those variables that may warrant additional attention when considering the design and delivery of Texas ACE programming.

Almost all of the variables highlighted in Figure 6.1 have a basis in the youth development and afterschool literature as being associated with positive youth outcomes and/or have some representation in the Texas ACE Blueprint, particularly in sections related to strategic planning, community engagement, and internal quality assurance.

- Portions of both the PQA and APT-O were found to be positively associated with Texas ACE program attendance and school-related outcomes. Use of these types of observation-based instruments are representative of the internal QAP described in the Texas ACE Blueprint, as are processes used to conduct a periodic review of program data and obtain youth input on programming. Steps were also taken by the evaluation team to support grantees in engaging in these processes through the LESI described in Chapter 5.
- The focus on social and emotional learning and youth having positive perceptions of other youth attending Texas ACE programming were also found to be associated with several of the ACE attendance and school-related outcomes. There is meaningful evidence in the youth development and afterschool literature that programs like Texas ACE can have substantive impact on social and emotional outcomes and that the types of process quality-related practices described in the PQA can help support the achievement of these outcomes as well (Durlak & Weissberg, 2007; Durlak, Weissberg et al., 2010; Payton et al., 2008; Smith et al., 2016). Findings related to student perceptions of other youth attending programming suggested this was one area in which there was an opportunity for growth on the part of Texas ACE centers.
- Obtaining youth input on programming, providing youth with opportunities to plan future activities, and affording them the opportunity to participate in activities in which they can independently explore and discover on their own support youth in experiencing a sense of agency by allowing choice and autonomy in program offerings. As noted by Larson and Dawes (2015), 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 goals they are pursuing. Having a sense of agency 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. This may also be part of the reason why youth reporting that the program helped them with their confidence was found to be positively associated with some of the outcomes examined.

- Youth experiencing challenge, relevance, and a sense they were learning something or getting better at something while participating in Texas ACE programming were also associated with multiple Texas ACE and school-related outcomes. Each of these experiences are supported by the literature on student motivation and engagement (Assor et al., 2002; Csikszentmihalyi, 1990; Csikszentmihalyi & Schneider, 2000; Larson & Dawes, 2015; Shumow & Schmidt, 2014). Youth experiencing challenge in particular was one experience that was not commonly associated with student participation in Texas ACE programming. Further work could be done in this area to help programs provide additional levels of challenge in the programs they provide, although the evaluation team strongly recommends this be coupled with activities designed to provide youth with an opportunity to experience a sense of agency and autonomy. Larson and Angus (2011) provide especially helpful insights into connecting challenge in youth development programming with positive student outcomes.
- One center-level characteristic that was not hypothesized by the evaluation team to be associated with either Texas ACE attendance or school-related outcomes was related to students working alone on tasks associated with the ACE activity. It seems likely that this activity in particular is associated with student skill-building, particularly in academic content areas like STAAR-Reading and STAAR-Mathematics.
- Finally, high levels of Texas ACE summer programming (defined as offering 150 hours or more of programming) was found to be positively associated with outcomes related to Texas ACE program attendance during the following school year. This finding would seem to suggest that keeping students engaged in programming may help promote continued attendance in programming during the following school year.

Although these findings are correlational, there still may be some value in Texas ACE programs considering these practices, processes, youth experiences, and intermediate outcomes in the design and delivery of Texas ACE programming, particularly because almost all of them are reinforced as effective practices in both the Texas ACE Blueprint and the youth development and afterschool literature.

Figure 6.1. Variables Found to Be Significantly and Positively Associated with More Than One Texas ACE Program Attendance and/or School-Related Outcome

Point-of-Service Quality Area	Organizational Processes	Activity Practices	Youth Experiences	Intermediate Youth-Reported Outcomes
• PQA Interaction • PQA Supportive Environment • APT-O Reading Practices • APT-O Writing Practices • APT-O Writing Practices – Youth-based • APT-O Mathematics Practices	• Build social and emotional learning skills • Provide academic and creative enrichment opportunities • Obtain youth input on programming • Periodic review of program data • High summer programming hours	• Working alone on tasks • Planning future activities • Working in small groups • Exploration and discovery	• Positive perceptions of other youth • Challenge • Relevance • Learned something	• Increased confidence

Note. ACE – Afterschool Centers on Education. Exhibit includes both statistically significant and moderately significant findings.

Active Forms of Learning and Disciplinary Incidents

The final set of analyses described in this report explored how two types of center-level practices that were especially associated with a specific school-related outcome in the correlational analyses described in the preceding section were found to be associated with positive program effects when adoption of that practice exceeded a specific threshold.

1. **APT-O Mathematics practices.** Centers were classified as being high adopters of APT-O mathematics practices if they were observed implementing 15 or more APT-O mathematics practices across the Texas ACE activities observed during the site visits. The evaluation team hypothesized that greater adoption of these practices would be associated with positive program effects in STAAR-Mathematics specifically and potentially in STAAR-Reading.
2. **Activities that represent active forms of learning.** Active forms of learning were defined as greater center adoption of three types of activities when delivering Texas ACE offerings: (1) youth planned future activities or projects; (2) youth participated in whole-group discussions facilitated by staff; and (3) youth participated in an activity that was designed to make a contribution or be helpful to others or the community. Based on results from the initial correlational analyses, it was hypothesized that greater adoption of these activities would be associated with fewer disciplinary incidents among Texas ACE participants.

Although no significant program effects were found across any of the analyses conducted in relation to centers with higher adoption of APT-O mathematics practices, most of the analyses related to higher center adoption of practices reflective of active forms of learning were found to result in significant findings. Among students attending centers adopting more active forms of learning, participation in Texas ACE programming at the 60 days or more threshold for 2 years was associated with a disciplinary rate that was 51% lower than the rate for similar nonparticipating students in Grades 1–8 and 70% lower than the rate for similar students among students in Grades 1–5.

These results may suggest that greater adoption of these practices were associated with fewer disciplinary incidents among students participating in Texas ACE programming for 60 days or more; however, the manner in which these analyses were undertaken did not result in evidence that would support a direct link between adoption of practices that support active forms of learning and a reduction in disciplinary incidents among Texas ACE participants. Additional study would be needed to establish this link.

Recommendations

As previously noted, most of the center-level characteristics found to be related to Texas ACE program attendance and school-related outcomes are consistent with practices described both in the Texas ACE Blueprint and youth development and afterschool literature. In light of this, it seems that the primary way that TEA can capitalize on the results highlighted in this report is to engage in dialogue with the Texas ACE grantee community about whether some of the practices outlined in this report could be elevated to a greater degree when ACE programs are in the process of designing and delivering programming. For example, TEA may want to explore how existing program infrastructures can be leveraged to communicate about these types of practices:

- Are there ways to further elevate some of these practices in the professional development opportunities provided to Texas ACE grantees?
- Are there ways that the Texas ACE Blueprint, Quality Assurance Process, and Local Evaluation Guidelines can be modified to help Texas ACE grantees further reflect on their efforts to adopt practices found to be related to program attendance and school-related outcomes?

Given the evaluation findings, TEA may want to consider elevating active forms of learning given the strong association found between the presence of these activities and fewer disciplinary incidents in particular. In addition, it may also be appropriate to take further steps to study these types of activities as

part of future evaluation efforts with the goal of validating the efficacy of these approaches, while collecting additional contextual data on what constitutes effective practice when undertaking such offerings.

In addition, TEA may consider the ways in which it will continue to sustain local evaluation efforts on the part of Texas ACE grantees and centers that began under the LESI and as part of the development work to create the Texas ACE Local Evaluation Guide and Toolkit. There is a range of support options for TEA to consider, including less hands-on support by continuing to make the Local Evaluation Guide and Toolkit and associated learning tutorials available to grantees and centers statewide. Other options to consider for level of support for local evaluation could include a coaching model to support local evaluation efforts by an external provider based on elements and lessons learned from Year 3 of LESI implementation or bringing together a LEAG periodically to determine whether the Local Evaluation Guide and Toolkit need to be updated or resources added as programs continue to evolve in their programming and services. In addition, TEA might consider how to best align and also delineate local evaluation activities and technical assistance activities for grantees and centers.

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Appendix A. Chapter 2: Site Visit Sample Selection

Methodology for Identifying Centers for On-Site Data Collection Activities, Spring 2018 and 2019 Site Visit Samples

This appendix first provides information about the key performance indicators (KPIs) for Texas Afterschool Centers on Education (Texas ACE) programs and describes the data used to populate the indicators. Next, a description is provided relative to how the KPIs were used to select centers for inclusion in the 2018 and 2019 site visit samples.

Key Performance Indicators

The KPIs were constructed for centers using extant administrative data from the Texas 21st Student Tracking System (Tx21st) and Public Education Information Management System as well as data collected from a sample of centers that administered the youth experience survey. The KPIs had two primary purposes:

1. To support the identification of higher and lower implementing centers to be part of the site visit sample.
2. To populate a KPI report to be used by centers participating in the LESI to help inform quality improvement efforts (see Chapter 5 for additional details on this effort).

The KPIs were organized into three primary categories of indicators:

1. Texas ACE program participation
2. Student outcomes among Texas ACE
3. Student experiences in Texas ACE

Texas ACE attendance- and student outcome-related KPIs were calculated using data associated with the prior programming period, which included summer 2016 and the 2016–17 school year. A full description of the indicators in all three categories is in Table A2.1, including the primary question the KPIs in that category were designed to answer and the rationale for creating indicators in each.

Table A2.1. Summary of Key Performance Indicators by Category

	Primary question: *To what extent is Texas ACE retaining youth in Texas ACE?*
Texas Afterschool Centers on Education (Texas ACE) Attendance-Related Indicators	Ideally, students will benefit more from Texas ACE programming the more they participate. Keeping students enrolled in programming is thought to be linked both to the underlying quality of a center's activities and ensuring that students have access to developmentally appropriate activities across time that keep them interested and engaged. These indicators were designed to provide information about the extent to which students are attending programming across time. This set of indicators was based on data provided in the Texas 21st Student Tracking System for the 2015–16 and 2016–17 programming years. • Percentage of students participating in Texas ACE for a minimum of 10 days in both the fall and spring semesters of the 2016–17 school year • Percentage of students enrolled in Texas ACE for 120 hours or more in summer 2016 and the 2016–17 school year • Percentage of students who attended Texas ACE programming in the 2015–16 school year/summer 2016 for 120 hours or more that also attended 120 hours or more of programming in the 2016–17 school year/summer 2017

Table A2.1. (continued) Summary of Key Performance Indicators by Category

	Primary question: *To what extent are students participating in Texas ACE demonstrating improvement on school-related outcomes?*
Student Outcome-Related Indicators	The charge for Texas ACE programs is to develop and implement programming that will have a positive impact on a series of school-related outcomes. The goal of this set of indicators was to assess the extent to which students participating regularly in the program were *improving* on school-related outcomes. At the time the American Institutes for Research was undertaking the selection process for the 2018 site visit sample, only data pertaining to school-day absences, disciplinary incidents, and performance on end-of-course (EOC) assessments were available. For the 2019 sample, data related to STAAR-Reading, STAAR-Mathematics, and Career and Technical Education (CTE) course completion were also available. The indicators associated with this category were based on data from Public Education Information Management System and State of Texas Assessments of Academic Readiness obtained by the statewide evaluation team from the Texas Education Agency directly. • Percentage of youth attending Texas ACE programming for 120 hours or more in summer 2016 and the 2016–17 school year that demonstrated fewer school-day absences than in the 2015–16 school year • Difference in the mean percentage of days absent between the 2015–16 and the 2016–17 school years among youth attending 120 hours or more of Texas ACE programming during the summer of 2016 and the 2016–17 school year • Percentage of youth attending Texas ACE programming for 120 hours or more in summer 2016 and the 2016–17 school year with one or more disciplinary incidents after the first day of Texas ACE participation • Mean number of disciplinary incidents occurring after the first day of Texas ACE participation during the 2016–17 school year among youth attending 120 hours or more of Texas ACE programming in summer 2016 and the 2016–17 school year • Percentage of instances where youth participating in Texas ACE for 120 hours or more took an EOC examination and received a score where they met the standard for the course in question • Percentage of instances where youth attending 120 hours or more of Texas ACE programming in summer 2016 and the 2016–17 school year that took a CTE course and received a passing grade in the course for high school credit • Percentage of youth attending 120 hours or more of Texas ACE programming in summer 2016 and the 2016–17 school year that scored below standards in mathematics on STAAR in the 2015–16 school year that met or exceeded their growth target on STAAR for the 2016–17 school year in mathematics • Percentage of youth attending 120 hours or more of Texas ACE programming in summer 2016 and the 2016–17 school year that scored below standards in reading on STAAR in the 2015–16 school year that met or exceeded their growth target on STAAR for the 2016–17 school year in reading

Table A2.1. (continued) Summary of Key Performance Indicators by Category

Student Experience-Related Indicators	**Primary question: *To what extent are students reporting having positive experiences in Texas ACE?***
	Taking steps to understand the subjective experiences that youth have while participating in Texas ACE is key to determining whether the program has been successful in ensuring a "goodness of fit" between where students are and what learning supports and opportunities the program is providing. The indicators associated with this category were based on data collected from the youth experience survey administered in spring 2018 for the 2018 sample and in November 2018 for the 2019 sample. • Percentage of students completing the youth experience survey who reported they really look forward to attending the program • Mean scale score summarizing how frequently students could participate in activities that provide the opportunity to experience a sense of agency • Mean scale score summarizing how students feel about the adults working in the Texas ACE-funded program they attend • Mean scale score summarizing how students feel about other youth attending the Texas ACE-funded program they attend

Site Visit Sample Selection

Once the KPIs were defined, steps were taken to calculate Texas ACE attendance- and student outcome-related KPIs for the 251 centers funded as part of Cycle 9 based on programming provided during the 2016–17 school year as part of the process of selecting the 2018 site visit sample. These initial KPI results were used to select a sample of 40 centers that were asked to collect youth experience survey data in February 2018, along with those centers enrolled in the LESI. The selection process proceeded by taking the following steps:

1. Centers were first divided into two categories: (a) the grade levels served by the center (elementary school, middle school, high school, and other) and (b) whether the center could be classified as a smaller or larger center based on the total number of youth served during the 2016–17 programming period. Centers were then classified as falling within one of eight groups based on the following categories: (a) elementary school, smaller center; (b) elementary school, larger center; (c) middle school, smaller center; (d) middle school, larger center, and so on. This step was taken because the evaluation team hypothesized that indicator values could be influenced both by center size and the grade level of youth served in the program. The goal was to select 20 elementary school centers, 10 middle school centers, 8 high school centers, and 2 centers from the Other category, evenly split between higher and lower performing centers within a given grade-level category.
2. Centers were then ranked on the program attendance-related indicators and were assigned a mean ranking score within the group they had been assigned based on grade level served and center size. Steps were taken to ensure that centers were doing well on the program attendance-related indicators first before considering the outcome indicators because it would be expected that youth participation in programming would need to be near the 120-hour threshold to likely demonstrate potential outcomes.
3. Centers were then divided into quartiles based on their mean program attendance indicator ranking. Centers with the best performance on the program attendance indicators were candidates for the higher performing sample. Centers in the bottom quartile were candidates for the lower performing sample.
4. Centers were then ranked on indicators related to school-day absences and disciplinary incidents, and in the case of high school centers, on the EOC completion indicators.
5. Mean outcome rankings were then used to identify the highest performing centers in Quartile 1 and the lowest performing centers in Quartile 4.

6. Some centers performing at the highest and lowest levels were excluded from the initial sample to ensure that some grantees were not overrepresented in the higher and lower performing groups.
7. Completion of this process resulted in the selection of an initial sample of 20 higher implementing centers and 20 lower implementing centers. This sample of 40 centers, along with 14 centers enrolled in the LESI were asked to administer a youth experience survey in early spring 2018 to a sample of students attending Texas ACE in Grades 4–12 in Stage 2 of the process. A total of 2,205 surveys was completed, averaging 41 surveys per center.
8. When the youth experience survey data had been collected, each center was ranked on the KPIs derived from the survey and the mean ranking was calculated. Generally, centers were selected from the higher performing list that had the highest mean ranking on the youth experience survey scales and those centers on the lower performing list with the lowest mean ranking on the four youth experience survey scales making up this set of KPIs.

Selection of the 2019 sample followed a slightly different process. Changes were made to the selection process with the goal of selecting the sample earlier in the school year, allowing more time for the site visit team to schedule and conduct the visits. The 2019 site visit selection process was predicated on taking the following steps:

1. There were 195 Cycle 9 centers for which 2016–17 KPI data were calculated that were not involved in the spring 2018 administration of the youth experience survey.
2. 2016–17 KPI data related to Texas ACE attendance and student outcomes were used to classify Cycle 9 centers not involved in the spring 2018 administration of the youth experience survey into quartiles based on KPI performance. This step also included Cycle 10-funded centers that were previously operating under a Cycle 8 grant with 2016–17 KPI data available.
3. At this point in the process, Cycle 9 centers that opted-in to LESI for the first time for 2018–19 were excluded from Step 4 of the process. This was done because youth experience survey data were automatically going to be collected for centers participating in LESI.
4. For the remaining Cycle 9 and 10 centers, a stratified, random sample (considering grade level and center size) of 40 centers total from the bottom and top quartiles based on 2016–17 KPI data was selected.
5. Youth experience surveys were collected from 58 centers associated with the random sample and those centers enrolled in LESI in November 2018.
6. When the youth experience survey data had been collected, each center was ranked on the KPIs derived from the survey, and the mean ranking was calculated. Generally, centers were selected from the higher performing list that had the highest mean ranking on the youth experience survey scales and those centers on the lower performing list with the lowest mean ranking on the four youth experience survey scales making up this set of KPIs.

Appendix B. Chapter 2: Additional Tables

This appendix outlines additional tables related to the comparison of center characteristics over time and differences between the site visit samples and the full domain of Texas ACE centers active during a given programming period.

Table B2.1. Texas ACE Grantees by Grantee Organization Type: Grantees Visited Compared to Statewide Grantees 2017–2019, by Year

Grantee Organization Type	2017		2018		2019	
	Grantees Visited (*N* = 15)	All Grantees (*N* = 34)	Grantees Visited (*N* = 14)	All Grantees (*N* = 32)	Grantees Visited (*N* = 19)	All Grantees (*N* = 83)
Districts and regional educational entities	93%	88%	79%	88%	84%	81%
Nonprofit organizations	7%	9%	21%	13%	16%	18%
College or university	0%	3%	0%	0%	0%	1%

Source. Tx21st Student Tracking System data for 2017–2019.
Note. ACE – Afterschool Centers on Education. Districts and regional educational entities include districts, charter schools, regional education agencies, and other city or county government entities. Figures may not sum to 100% because of rounding. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

Table B2.2. Activities Offered in Texas ACE Centers by Activity Type during the Regular School Year, 2017–2019

Activity Type	2017		2018		2019	
	Centers Visited (*N* = 19)	All Centers (*N* = 209)	Centers Visited (*N* = 20)	All Centers (*N* = 251)	Centers Visited (*N* = 20)	All Centers (*N* = 605)
Academic enrichment learning program	100%	98%	90%	91%	90%	92%
Recreational activity	90%	97%	100%	95%	95%	91%
Homework help	84%	87%	75%	76%	75%	77%
Tutoring	63%	50%	40%	47%	80%	47%
Career training	47%	77%	60%	67%	75%	55%
Activity to promote youth leadership	47%	56%	45%	50%	65%	44%
Mentoring	32%	33%	50%	35%	25%	34%
Counseling or character education	26%	43%	45%	38%	55%	34%
Supplemental education services	26%	35%	20%	31%	30%	29%
Expanded library service hours	26%	15%	10%	14%	5%	11%
Community service	21%	36%	45%	30%	40%	27%
Violence prevention	11%	4%	0%	3%	0%	3%
Substance abuse prevention	5%	7%	10%	4%	10%	6%

Source. Tx21st Student Tracking System data for 2017–2019.
Note. ACE – Afterschool Centers on Education. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

Table B2.3. Activities Offered in Texas ACE Centers by Activity Type during Summer, 2017–2019

Activity Type	2017		2018		2019	
	Centers Visited (*N* = 19)	All Centers (*N* = 209)	Centers Visited (*N* = 20)	All Centers (*N* = 251)	Centers Visited (*N* = 11)	All Centers (*N* = 251)
Academic enrichment learning program	95%	92%	90%	83%	64%	81%
Recreational activity	84%	88%	85%	78%	82%	75%
Career training	42%	55%	50%	41%	64%	41%
Activity to promote youth leadership	26%	23%	5%	20%	55%	27%
Supplemental education services	21%	18%	35%	28%	18%	19%
Tutoring	21%	15%	5%	11%	27%	14%
Counseling or character education	11%	15%	20%	18%	0%	12%
Substance abuse prevention	5%	6%	5%	4%	9%	6%
Expanded library service hours	0%	4%	5%	2%	0%	3%
Mentoring	0%	9%	10%	13%	0%	14%
Community service	0%	10%	0%	7%	0%	5%
Homework help	0%	8%	10%	6%	0%	5%

Source. Tx21st Student Tracking System data for 2017–2019.
Note. ACE – Afterschool Centers on Education. Violence prevention combined to less than 1% of the time spent, so it was excluded from the table. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include summer data for grantees from Cycle 9 only. Data for 2019 reflect the grant year summer data (August 1, 2018–July 31, 2019) and represent information from the first reporting cycle of this federal grant year (summer 2018). Because Cycle 10 did not begin until August 1, 2018, this table only includes information for Cycle 9 centers.

Table B2.4. Content Area of Activities Offered in Texas ACE Centers during the Regular School Year, 2017–2019

Content Area	2017		2018		2019	
	Centers Visited (*N* = 19)	All Centers (*N* = 209)	Centers Visited (*N* = 20)	All Centers (*N* = 251)	Centers Visited (*N* = 20)	All Centers (*N* = 605)
Reading	100%	98%	100%	100%	100%	99%
Mathematics	100%	98%	100%	100%	100%	99%
Arts and music	100%	99%	100%	100%	95%	97%
Science	100%	98%	100%	100%	95%	98%
Telecom technology	100%	93%	100%	92%	90%	88%
Health and nutrition	95%	98%	100%	98%	100%	97%
STEM	95%	96%	95%	99%	95%	97%
Culture and social	95%	97%	95%	94%	90%	91%
Entrepreneurship	84%	77%	80%	75%	75%	70%
Other	68%	66%	70%	61%	75%	59%

Source. Tx21st Student Tracking System data for 2017–2019.
Note. ACE – Afterschool Centers on Education. STEM – science, technology, engineering, and mathematics. Centers could select more than one subject for activities. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

Table B2.5. Content Area of Activities Offered in Texas ACE Centers during Summer, 2017–2019

Content Area	2017		2018		2019	
	Centers Visited (*N* = 19)	All Centers (*N* = 209)	Centers Visited (*N* = 20)	All Centers (*N* = 251)	Centers Visited (*N* = 11)	All Centers (*N* = 251)
Reading	100%	92%	90%	93%	100%	94%
Mathematics	95%	94%	90%	90%	91%	89%
Arts and music	95%	90%	95%	89%	73%	88%
Health and nutrition	95%	94%	95%	89%	91%	90%
Science	84%	89%	95%	92%	91%	90%
Culture and social	84%	82%	90%	82%	82%	73%
STEM	79%	85%	85%	84%	82%	82%
Telecom technology	63%	68%	75%	70%	64%	75%
Entrepreneurship	47%	48%	55%	51%	46%	43%
Other	21%	39%	50%	39%	55%	40%

Source. Tx21st Student Tracking System data for 2017–2019.
Note. ACE – Afterschool Centers on Education. STEM – science, technology, engineering, and mathematics. Centers could offer more than one subject for each activity. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include summer data for grantees from Cycle 9 only. Data for 2019 reflect the grant year summer data (August 1, 2018–July 31, 2019) and represent information from the first reporting cycle of this federal grant year (summer 2018). Because Cycle 10 did not begin until August 1, 2018, this table only includes information for Cycle 9 centers in 2019.

Table B2.6. Grades Served at Texas ACE Centers during 2017–2019

Grade	2017		2018		2019	
	Centers Visited (*N* = 19)	All Centers (*N* = 209)	Centers Visited (*N* = 20)	All Centers (*N* = 250)	Centers Visited (*N* = 20)	All Centers *N* = 609)
EE	0%	1%	0%	0%	0%	1%
PK	5%	18%	10%	15%	30%	17%
KG	37%	43%	55%	55%	55%	49%
Grade 1	47%	48%	55%	56%	55%	53%
Grade 2	53%	52%	60%	60%	60%	57%
Grade 3	63%	53%	60%	62%	65%	58%
Grade 4	63%	54%	60%	62%	70%	58%
Grade 5	47%	50%	65%	60%	75%	56%
Grade 6	47%	48%	50%	59%	75%	52%
Grade 7	32%	41%	35%	34%	30%	35%
Grade 8	32%	39%	30%	31%	25%	32%
Grade 9	21%	32%	25%	20%	30%	29%
Grade 10	21%	28%	10%	12%	25%	19%
Grade 11	16%	26%	10%	10%	25%	17%
Grade 12	16%	23%	10%	9%	25%	17%

Source. Tx21st Student Tracking System data for 2017–2019.
Note. ACE – Afterschool Centers on Education. EE – early education. PK **–** prekindergarten. KG – kindergarten. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

Table B2.7. Texas ACE Students Achieving State of Texas Assessments of Academic Readiness (STAAR) Passing Standard in Reading, Mathematics, and End-of-Course (EOC) Examinations in 2017–2019

Students Achieving STAAR Passing Standard	2017		2018		2019	
	Centers Visited (*N* = 5,031)	All Centers (*N* = 58,006)	Centers Visited (*N* = 4,517)	All Centers (*N* = 50,224)	Centers Visited (*N* = 4,339)	All Centers (*N* = 127,876)
Approaches Grade Level Standard in Mathematics	70%	70%	72%	70%	72%	72%
Meets Grade-Level Standard in Mathematics	34%	36%	36%	34%	36%	37%
Approaches Grade-Level Standard in Reading	62%	64%	63%	61%	65%	65%
Meets Grade-Level Standard in Reading	31%	32%	30%	29%	34%	33%
Approaches Algebra I Standard	82%	84%	77%	85%	82%	86%
Meets Algebra I Standard	52%	52%	41%	56%	51%	64%
Approaches English I Standard	52%	56%	45%	57%	50%	57%
Meets English I Standard	35%	38%	25%	40%	38%	42%

Source. STAAR data for 2017–2019.
Note. ACE – Afterschool Centers on Education. Students may have attended more than one center. In these calculations, students are included in all of the centers they attended. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10.

Table B2.8. Texas ACE School Characteristics during 2017–2019

School Characteristic	2017		2018		2019	
	Centers Visited (*N* = 22)	All Centers (*N* = 234)	Centers Visited (*N* = 20)	All Centers (*N* = 274)	Centers Visited (*N* = 22)	All Centers (*N* = 665)
School Level						
Economically disadvantaged	74%	76%	84%	82%	80%	82%
At risk	53%	59%	70%	65%	59%	63%
English learner	22%	24%	28%	25%	23%	27%
Campus Rating						
Met standard	96%	90%	95%	90%	NA	NA
Met alternative standard	0%	3%	0%	1%	NA	NA
Improvement required	5%	5%	0%	7%	NA	NA
Not rated	0%	2%	5%	2%	0%	0%
A	NA	NA	NA	NA	0%	8%
B	NA	NA	NA	NA	64%	36%
C	NA	NA	NA	NA	18%	33%
D	NA	NA	NA	NA	14%	14%
F	NA	NA	NA	NA	5%	8%

Source. Tx21st Student Tracking System data for 2017–2019 and Texas Academic Performance Reports, 2017–2019.
Note. ACE – Afterschool Centers on Education. Figures may not sum to 100% because of rounding. Data for 2017 include Cycle 8 grantees, 2018 data include Cycle 9 grantees, and 2019 data include grantees from Cycles 9 and 10. Campus ratings reflect the change to an A–F rating system in 2019. The *N*s refer to the number of campuses with students served by Texas ACE centers.

Appendix C. Chapter 3: Summary of HLM and Regression Analyses

The purpose of this appendix is to describe how hierarchical linear and multiple regression models examining the relationship between center characteristics and Texas ACE attendance and school-related outcomes described in Chapter 3 were constructed.

HLM Models Related to Texas ACE Attendance Outcomes

HLM is a method of analysis for assessing the relationship between variables when variables represent different levels, in this case center-level characteristics and student-level Texas ACE program attendance outcomes. To assess whether there was evidence of a significant relationship between center characteristics and each of the aforementioned Texas ACE attendance metrics, a series of HLM models were constructed, with centers at Level 2 and students at Level 1. Separate models were run for each Texas ACE attendance outcome and center characteristic grouping. Center characteristic groupings were constructed based on two factors:

1. **There was a specific subset of centers with data for the topic addressed by the grouping.** Some center characteristics could not be determined for centers where data were not available. For example, data from the youth experience survey were only collected for centers associated with the 2018 and 2019 samples, so models examining center characteristics derived from the youth experience survey only included centers and students from these centers.
2. **The center characteristics addressed in each model were representative of a given topic.** Examples of the topics examined include point-of-service quality based on measures from the PQA or APT-O; student experiences in programming measured by the end-of-session survey; and organizational practices derived from interview and focus group data.

Each center characteristic grouping and the specific center characteristic examined in that grouping are outlined as follows:

Point-of-Service Quality (from the PQA and APT-O – 60 centers)

- Mean PQA total score
- Mean APT-O reading practices score
- Mean APT-O writing practices score
- Mean APT-O verbal communication practices score
- Mean APT-O mathematics practices score

Point-of-Service Quality by Subscale (from the PQA and APT-O – 60 centers)

- Mean PQA supportive environment score
- Mean PQA interaction score
- Mean PQA engagement score
- Mean PQA encouragement and feedback
- Mean PQA cooperative learning and belonging
- Mean APT-O staff-based reading practices score
- Mean APT-O youth-based reading practices score

- Mean APT-O staff-based writing practices score
- Mean APT-O youth-based writing practices score
- Mean APT-O staff-based verbal communication practices score
- Mean APT-O youth-based verbal communication practices score
- Mean APT-O staff-based mathematics practices score – communication and reasoning
- Mean APT-O youth-based mathematics practices score – communication and reasoning
- Mean APT-O staff-based mathematics practices score – problem-solving
- Mean APT-O youth-based mathematics practices score – problem-solving

Organizational Processes (from interviews and focus groups – 60 centers)

- Program goals – Provide academic and creative enrichment opportunities
- Program goals – Facilitate parental involvement
- Program goals – Build social and emotional learning skills
- Program goals – Provide a safe learning environment
- Program goals – Address behavioral issues
- Program goals – Improve grade promotion and graduation rates
- Target population definition – Target academically at-risk students
- Target population definition – Broader target population
- Parent programming – English as a second language classes
- Parent programming – High school equivalency classes
- Data use and evaluation – Practices Working with an external evaluator
- Data use and evaluation – Practices Periodic review of program data
- Data use and evaluation – Practices Obtaining youth input on programming
- Data use and evaluation – Practices Use of PQA/other observational rubrics
- Advisory board practices – General guidance and feedback
- Advisory board practices – Operational input
- Advisory board practices – Planning input
- Advisory board practices – Programming input

Activity Characteristics (from the activity leader survey – 59 centers)

- Percentage of activities – Working alone on tasks
- Percentage of activities – Working in small groups
- Percentage of activities – Direct instruction
- Percentage of activities – Making/building things
- Percentage of activities – Working on group projects
- Percentage of activities – Exploration and discovery
- Percentage of activities – Learning or practicing nonacademic skills

- Percentage of activities – Participating in competition
- Percentage of activities – Engaged in discussion
- Percentage of activities – Student presentations
- Percentage of activities – Students planning future activities
- Percentage of activities – Student participated in an activity that was designed to make a contribution

Youth Experiences in Programming (from the youth experience survey – 39 centers)

- Mean opportunities for agency score
- Mean interactions with activity leader's score
- Mean interactions with other youth score

Youth Experiences in Programming (from the end-of-session survey – 59 centers)

- Mean challenge score
- Mean learned something score
- Mean engagement score
- Mean relevance score
- Mean positive affect score

Intermediate Youth-Reported Outcomes [which helped them] (from the youth experience survey – 39 centers)

- Percentage of students – Feel good about myself
- Percentage of students – With my confidence
- Percentage of students – Support new interest development
- Percentage of students – Support school-related outcomes
- Percentage of students – Think about the future
- Percentage of students – Self-transcendent outcomes

Staffing and Summer Operations (from Tx 21st Student Tracking System – 60 centers)

- Mostly staffed by school-day teachers
- High summer programming hours

In addition, given that students constituted Level 1 in each model, a series of student-level characteristics based on data from the Public Education Information Management System (PEIMS) was also considered for inclusion:

- Student was identified as an English learner student.
- Student was identified as at risk.
- Student was the recipient of special education services.

- Student was identified as Hispanic.
- Student was identified as Asian.
- Student was identified as African American.
- Student was identified as Native American.
- Student was identified as Native Hawaiian or Pacific Islander.
- Student was identified as White.
- Student was identified as Other in terms of ethnicity.
- Student grade level
- Student was identified as economically disadvantaged.
- Student was identified as female.

Five student-level characteristics were found to be related to one or more of the Texas ACE program attendance outcomes examined. When running models for each outcome, only those student-level characteristics were included in the model that were found to be significantly related to the outcome being examined. As shown in Table C3.1, Hispanic, White, and English learner students were found to have significantly lower values on the Texas ACE attendance-related outcomes examined (i.e., hours attended, sustained attendance in programming, and the duration of ACE attendance). In contrast, female students were found to have significantly higher values in terms of the duration of time spent in Texas ACE programming and in the number of activities participated in during the school year. Finally, although students had a tendency to attend programming less as grade level increased in terms of hours attended, grade level was found to be positively related to sustained attendance in Texas ACE programming relative to the preceding summer or school year.

Table C3.1. Student Characteristics Included in Texas ACE Program Attendance Models by Outcome Examined

Student Characteristic	Hours			Duration			# of Activities			Sustained Attendance		
	Coef.	SE	*p*	Coef.	SE	*p*	Coef.	SE	*p*	Coef.	SE	*p*
Grade level	-0.03	0.01	< .01							0.13	0.03	< .001
Hispanic	-0.10	0.03	< .01	-0.03	0.02	< .05						
White	-0.09	0.04	< .01	-0.05	0.02	< .05						
English learner										-0.21	0.09	< .05
Female				0.01	0.01		0.02	0.01	< .01			

Source. Tx21st Student Tracking System and Public Education Information Management System data, 2016–17 to 2018–19.
Note. ACE – Afterschool Centers on Education.

Three types of models were constructed in relation to each center characteristic grouping and Texas ACE program attendance-related outcome:

- Models that included all centers with data associated with a given characteristic grouping
- Models that included only those centers serving only students in elementary grades (K–6)
- Models that included only those centers serving students in middle and high school grade levels (5–12)

In addition, for models that included center characteristics derived from the youth experience or end-of-session survey, only students in Grades 4–12 were selected for inclusion in these models because each

of these surveys was only completed by students in each of these grade levels. Results are reported separately for each model type in Chapter 3.

Finally, each model was constructed with fixed effects with no centering of predictors included in the model. For Texas ACE attendance hours, duration, and number of activities, a Poisson distribution was used when constructing each model given the emphasis on count data and substantive deviations from normality. For sustained attendance in Texas ACE programming relative to the preceding summer or prior school year, a Bernoulli distribution was employed.

Detailed HLM results for center characteristic groupings referenced in Chapter 3 can be found in Tables C3.2 to C3.12. Additional tables containing findings related to Chapter 3 but not explicitly referenced in the main narrative are housed in a separate technical appendix.

Table C3.2. Center-Level Relationships between Point-of-Service Quality Areas and Texas ACE Program Attendance Outcomes – All Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Point-of-Service Quality Area	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Program Process Quality (as measured by PQA)								
Total Score	0.122	> .10	0.043	> .10	0.309	> .10	0.327	> .10
Supportive Environment	-1.167	<0.001	-0.243	< .05	1.346	< .01	-0.204	> .10
Interaction	0.983	<0.001	0.171	< .10	-0.568	> .10	-0.206	> .10
Engagement	0.207	> .10	0.083	> .10	-0.452	> .10	0.228	> .10
Program Content-Specific Practices (as measured by APT-O)								
Reading Practices	0.003	> .10	0.003	> .10	0.042	< .10	0.049	< .10
Reading Practices – Staff-based	-0.001	> .10	0.002	> .10	0.040	> .10	0.127	> .10
Reading Practices – Youth-based	-0.006	> .10	0.002	> .10	0.050	> .10	0.084	> .10
Writing Practices	0.014	> .10	0.010	> .10	-0.046	> .10	-0.028	> .10
Writing Practices – Staff-based	0.028	> .10	-0.009	> .10	0.030	> .10	0.152	> .10
Writing Practices – Youth-based	-0.029	> .10	0.022	> .10	-0.107	> .10	-0.531	> .10
Verbal Communication Practices	0.000	> .10	0.003	> .10	-0.024	> .10	0.015	> .10
Verbal Communication Practices – Staff-based	-0.009	> .10	0.009	> .10	-0.047	> .10	-0.048	> .10
Verbal Communication Practices – Youth-based	0.009	> .10	-0.001	> .10	-0.006	> .10	-0.016	> .10
Mathematics Practices	0.001	> .10	0.001	> .10	-0.000	> .10	0.008	> .10

Table C3.2. (Continued): Center-Level Relationships between Point-of-Service Quality Areas and Texas ACE Program Attendance Outcomes – All Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Point-of-Service Quality Area	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Math Communication and Reasoning Practices – Staff-based	-0.051	> .10	-0.015	> .10	0.009	> .10	-0.167	> .10
Math Communication and Reasoning Practices – Youth-based	-0.027	> .10	0.005	> .10	0.043	> .10	0.163	> .10
Mathematics – Problem Solving – Staff-based	0.017	> .10	-0.006	> .10	-0.002	> .10	-0.156	> .10
Mathematics – Problem Solving – Youth-based	0.123	< .05	0.036	< .10	-0.098	> .10	0.405	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 238 scored PQA and APT-O assessments, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.3. Center-Level Relationships between Point-of-Service Quality Areas and Texas ACE Program Attendance Outcomes – Elementary Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Point-of-Service Quality Area	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Program Process Quality (as measured by PQA)								
Total Score	0.036	> .10	0.067	> .10	0.489	> .10	0.715	> .10
Supportive Environment	-0.878	< .10	-0.161	> .10	1.559	> .10	0.701	> .10
Interaction	0.082	> .10	-0.217	< .05	-0.413	> .10	-0.912	> .10
Engagement	0.668	> .10	0.376	< .01	-0.500	> .10	1.322	> .10
Program Content-Specific Practices (as measured by APT-O)								
Reading Practices	-0.011	> .10	0.002	> .10	0.051	> .10	0.042	> .10
Reading Practices – Staff-based	-0.002	> .10	0.010	> .10	0.101	> .10	0.045	> .10
Reading Practices – Youth-based	-0.002	> .10	0.008	> .10	-0.035	> .10	0.041	> .10
Writing Practices	0.057	< .05	0.029	< .01	-0.108	< .05	0.029	> .10
Writing Practices – Staff-based	0.042	> .10	0.015	> .10	0.051	> .10	0.014	> .10
Writing Practices – Youth-based	0.001	> .10	0.033	> .10	-0.232	> .10	0.092	> .10
Verbal Communication Practices	0.001	> .10	0.005	> .10	-0.015	> .10	0.022	> .10
Verbal Communication Practices – Staff-based	0.038	> .10	0.041	< .01	-0.083	> .10	-0.045	> .10
Verbal Communication Practices – Youth-based	-0.009	> .10	-0.016	> .10	0.019	> .10	0.031	> .10
Mathematics Practices	-0.006	> .10	0.000	> .10	0.005	> .10	0.003	> .10

Table C3.3. (Continued): Center-Level Relationships between Point-of-Service Quality Areas and Texas ACE Program Attendance Outcomes – Elementary Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Point-of-Service Quality Area	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Math Communication and Reasoning Practices – Staff-based	-0.019	> .10	-0.004	> .10	0.078	> .10	0.082	> .10
Math Communication and Reasoning Practices – Youth-based	-0.035	> .10	0.006	> .10	-0.028	> .10	-0.078	> .10
Mathematics – Problem Solving – Staff-based	-0.013	> .10	-0.004	> .10	-0.031	> .10	0.025	> .10
Mathematics – Problem Solving – Youth-based	0.104	> .10	0.020	> .10	0.023	> .10	-0.029	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 238 scored PQA and APT-O assessments, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.4. Center-Level Relationships between Organizational Processes and Texas ACE Program Attendance Outcomes – All Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Organizational Process	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Program Goals								
Provide academic and creative enrichment opportunities	0.179	> .10	0.142	< .05	-0.602	< .01	0.654	< .05
Facilitate parental involvement	-0.020	> .10	-0.063	> .10	0.043	> .10	-0.253	> .10
Build social and emotional learning skills	0.250	< .10	0.137	< .05	-0.233	> .10	-0.120	> .10
Provide a safe learning environment	-0.241	> .10	-0.022	> .10	0.089	> .10	0.005	> .10
Address behavioral issues	0.087	> .10	0.069	> .10	0.205	> .10	-0.034	> .10
Improve grade promotion and graduation rates	-0.289	> .10	-0.016	> .10	0.130	> .10	-0.223	> .10
Target Population								
Target academically at-risk students	0.080	> .10	0.066	> .10	-0.027	> .10	0.241	> .10
Broader target population	0.131	> .10	0.070	> .10	-0.310	> .10	0.202	> .10
Advisory Board Practices								
General guidance and feedback	-0.068	> .10	-0.037	> .10	0.541	< .05	-0.124	> .10
Operational input	-0.381	< .05	-0.130	< .10	0.307	> .10	-0.064	> .10
Planning input	-0.064	> .10	-0.037	> .10	0.023	> .10	-0.006	> .10
Programming input	0.209	> .10	0.092	> .10	-0.141	> .10	-0.388	> .10
Programming for Parents and Adult Family Members								
ESL Classes	-0.085	> .10	-0.054	> .10	-0.025	> .10	-0.186	> .10
GED Classes	-0.048	> .10	-0.017	> .10	0.268	> .10	0.278	> .10

Table C3.4. (Continued): Center-Level Relationships between Organizational Processes and Texas ACE Program Attendance Outcomes – All Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Organizational Process	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Data Use and Evaluation								
Working with an external evaluator	-0.036	> .10	-0.097	< .10	-0.199	> .10	-0.285	> .10
Periodic review of program data	0.012	> .10	-0.055	> .10	0.132	> .10	0.084	> .10
Obtaining youth input on programming	-0.241	> .10	0.005	> .10	-0.044	< .01	-0.094	> .10
Use of PQA/other observational rubrics	-0.167	< .10	-0.121	< .10	0.514	> .10	0.116	> .10
Staffing or Operational Practice								
Mostly staffed by school-day teachers	-0.060	> .10	0.011	> .10	0.203	> .10	0.247	> .10
High summer programming hours	0.239	< .10	0.095	< .05	0.183	> .10	0.263	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 320 interviews, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.5. Center-Level Relationships between Organizational Processes and Texas ACE Program Attendance Outcomes – Elementary School Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Organizational Process	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Program Goals								
Provide academic and creative enrichment opportunities	0.412	< .10	0.065	> .10	-0.990	< .10	-0.322	< .05
Facilitate parental involvement	-0.479	< .05	-0.182	< .05	0.551	> .10	0.145	> .10
Build social and emotional learning skills	0.251	> .10	0.195	< .01	-0.368	> .10	0.111	> .10
Provide a safe learning environment	-0.248	> .10	0.027	> .10	-0.352	> .10	0.323	> .10
Address behavioral issues	0.767	< .05	0.064	> .10	-0.196	> .10	-0.402	> .10
Improve grade promotion and graduation rates	-0.467	> .10	0.125	> .10	-0.167	> .10	0.475	> .10
Target Population								
Target academically at-risk students	-0.527	< .10	-0.065	> .10	0.746	> .10	0.115	> .10
Broader target population	0.034	> .10	0.071	> .10	-0.046	> .10	0.657	> .10
Advisory Board Practices								
General guidance and feedback	-0.124	> .10	-0.083	> .10	0.775	< .10	-0.849	> .10
Operational input	-0.330	> .10	-0.093	> .10	0.231	> .10	0.437	> .10
Planning input	-0.134	> .10	-0.092	> .10	0.007	> .10	0.046	> .10
Programming input	0.380	> .10	0.242	< .05	-0.234	> .10	-0.095	> .10
Programming for Parents and Adult Family Members								
ESL Classes	-0.060	> .10	0.063	> .10	-0.336	> .10	-0.065	> .10
GED Classes	-0.208	> .10	-0.101	> .10	0.457	> .10	0.273	> .10

Table C3.5. (Continued): Center-Level Relationships between Organizational Processes and Texas ACE Program Attendance Outcomes – Elementary School Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Organizational Process	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Data Use and Evaluation								
Working with an external evaluator	0.098	> .10	-0.025	> .10	-0.282	> .10	-0.224	> .10
Periodic review of program data	0.492	< .05	0.181	< .05	-0.533	> .10	0.105	> .10
Obtaining youth input on programming	0.699	> .10	0.272	> .10	-0.042	> .10	0.273	> .10
Use of PQA/other observational rubrics	-0.301	> .10	0.001	> .10	-0.078	> .10	0.759	> .10
Staffing or Operational Practice								
Mostly staffed by school-day teachers	-0.090	> .10	0.002	> .10	0.314	> .10	0.241	> .10
High summer programming hours	0.318	< .05	0.091	> .10	0.022	> .10	0.403	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 320 interviews, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.6. Center-Level Relationships between Program Activities and Texas ACE Program Attendance Outcomes – All Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Activity	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Working alone on tasks	0.157	> .10	0.271	< .05	1.019	< .05	1.112	< .05
Working in small groups	-0.398	> .10	-0.081	> .10	0.578	> .10	0.635	> .10
Direct instruction	0.517	> .10	-0.107	> .10	-1.446	< .05	-0.803	> .10
Making/building things	0.280	> .10	0.177	> .10	-0.035	> .10	0.276	> .10
Working on group projects	0.019	> .10	-0.050	> .10	-0.517	> .10	1.042	> .10
Exploration and discovery	-0.413	> .10	-0.053	> .10	0.812	< .10	-1.089	< .05
Learning or practicing nonacademic skills	-0.334	> .10	-0.163	> .10	0.297	> .10	-0.579	> .10
Participating in competition	0.001	> .10	0.010	> .10	-0.031	> .10	-0.061	> .10
Engaged in discussion	-0.078	> .10	-0.033	> .10	-0.476	> .10	0.200	> .10
Student presentations	0.538	> .10	0.339	> .10	0.526	> .10	1.403	> .10
Planning future activities	-0.253	> .10	-0.029	> .10	-0.336	> .10	-0.277	> .10
Designed to make a contribution	0.224	> .10	-0.339	> .10	-0.592	> .10	-1.203	< .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 577 activity leader surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.7. Center-Level Relationships between Program Activities and Texas ACE Program Attendance Outcomes – Elementary School Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Activity	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Working alone on tasks	-0.514	> .10	0.236	> .10	1.596	< .01	0.535	> .10
Working in small groups	-0.318	> .10	-0.087	> .10	1.135	< .10	0.109	> .10
Direct instruction	0.355	> .10	-0.181	> .10	-1.998	< .05	-0.422	> .10
Making/building things	0.033	> .10	0.001	> .10	0.983	> .10	-0.466	> .10
Working on group projects	0.307	> .10	0.256	> .10	-1.724	< .05	1.331	> .10
Exploration and discovery	0.350	> .10	0.029	> .10	-0.490	> .10	-0.565	> .10
Learning or practicing nonacademic skills	-0.112	> .10	-0.295	> .10	0.576	> .10	-0.489	> .10
Participating in competition	0.197	> .10	0.070	> .10	-0.355	> .10	-0.549	> .10
Engaged in discussion	-0.569	> .10	-0.233	> .10	0.663	> .10	0.773	> .10
Student presentations	-0.124	> .10	0.102	> .10	-0.749	> .10	1.019	> .10
Planning future activities	0.977	> .10	0.313	> .10	-2.287	< .01	0.919	< .10
Designed to make a contribution	0.420	> .10	-0.191	> .10	1.051	> .10	-1.658	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 577 activity leader surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.8. Center-Level Relationships between Program Activities and Texas ACE Program Attendance Outcomes – Middle and High School Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Activity	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Working alone on tasks	0.222	> .10	0.085	> .10	1.019	> .10	0.838	> .10
Working in small groups	-0.970	> .10	-0.016	> .10	1.063	> .10	0.895	> .10
Direct instruction	0.318	> .10	0.020	> .10	-0.558	> .10	-1.489	> .10
Making/building things	-0.347	> .10	0.221	> .10	0.874	> .10	0.446	> .10
Working on group projects	-0.723	> .10	-0.119	> .10	-0.090	> .10	1.773	> .10
Exploration and discovery	-0.937	> .10	-0.111	> .10	1.908	< .05	-1.959	< .10
Learning or practicing nonacademic skills	-0.006	> .10	-0.108	> .10	-0.633	> .10	-0.619	> .10
Participating in competition	0.245	> .10	-0.044	> .10	-0.241	> .10	0.665	> .10
Engaged in discussion	0.326	> .10	0.069	> .10	-0.839	> .10	-0.240	> .10
Student presentations	0.407	> .10	0.238	> .10	0.082	> .10	1.032	> .10
Planning future activities	-0.453	> .10	-0.015	> .10	0.795	> .10	-0.556	> .10
Designed to make a contribution	0.628	> .10	-0.484	> .10	-1.924	< .10	-0.935	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 577 activity leader surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.9. Center-Level Relationships between Youth Experiences and Texas ACE Program Attendance Outcomes – All Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Youth Experience	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Youth Experience Survey								
Opportunities for agency	-0.267	> .10	0.049	> .10	0.987	> .10	-0.681	> .10
interactions with activity leaders	0.150	> .10	-0.149	> .10	-0.829	> .10	-1.119	> .10
interactions with other youth	-0.039	> .10	-0.214	< .10	-0.314	> .10	1.935	> .10
End-of-Session Survey								
Challenge	0.570	< .01	0.109	> .10	-0.808	< .05	1.032	< .01
Learned something	-0.217	> .10	-0.132	> .10	1.061	< .10	-0.048	> .10
Engagement	-0.633	> .10	-0.101	> .10	-0.805	> .10	0.692	> .10
Relevance	-0.385	> .10	-0.164	> .10	-0.011	> .10	-2.052	< .01
Positive affects	0.006	> .10	-0.088	> .10	0.304	> .10	0.365	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 1,737 youth experience surveys, 2018–2019 and 2,459 end-of-session surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.10. Center-Level Relationships between Youth Experiences and Texas ACE Program Attendance Outcomes – Elementary Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Youth Experience	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Youth Experience Survey								
Opportunities for agency	-0.391	> .10	0.072	> .10	2.119	< .10	-2.034	> .10
interactions with activity leaders	-0.017	> .10	-0.274	> .10	-0.328	> .10	0.801	> .10
interactions with other youth	0.479	> .10	-0.037	> .10	-1.575	< .10	2.113	< .10
End-of-Session Survey								
Challenge	0.391	> .10	0.047	> .10	-0.780	< .10	0.980	< .05
Learned something	0.417	> .10	0.093	> .10	-0.051	> .10	0.495	> .10
Engagement	-0.962	> .10	-0.455	< .10	-0.677	> .10	-0.211	> .10
Relevance	-0.708	> .10	-0.202	> .10	1.606	> .10	-2.205	> .10
Positive affects	0.081	> .10	0.032	> .10	0.704	> .10	0.531	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 1,737 youth experience surveys, 2018–2019 and 2,459 end-of-session surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.11. Center-Level Relationships between Youth Experiences and Texas ACE Program Attendance Outcomes – Middle and High School Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Youth Experience	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Youth Experience Survey								
Opportunities for agency	0.220	> .10	0.198	> .10	-2.334	> .10	-0.795	> .10
interactions with activity leaders	0.830	> .10	0.091	> .10	-1.448	> .10	0.135	> .10
interactions with other youth	-1.343	< .10	-0.647	< .05	2.567	< .05	0.154	> .10
End-of-Session Survey								
Challenge	0.419	> .10	0.092	> .10	-0.437	> .10	1.312	< .05
Learned something	-0.830	< .10	-0.353	< .10	1.718	< .05	-2.093	> .10
Engagement	-0.064	> .10	0.338	< .10	-0.630	> .10	2.894	< .05
Relevance	0.194	> .10	-0.079	> .10	-1.525	< .05	-1.729	< .10
Positive affects	-0.342	> .10	-0.291	< .01	0.260	> .10	0.485	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 1,737 youth experience surveys, 2018–2019 and 2,459 end-of-session surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.12. Center-Level Relationships between Intermediate Youth-Reported Outcomes and Texas ACE Program Attendance Outcomes – Elementary School Centers

	Hours		Duration		# of Activities		Sustained Attendance	
Youth-Reported Outcome	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**	**Coefficient**	***p*-value**
Feel good about myself	-1.067	> .10	-0.612	> .10	-0.628	> .10	-5.029	< .10
With my confidence	2.334	< .10	0.107	> .10	-1.676	> .10	2.223	> .10
Support new interest development	1.817	< .10	0.634	> .10	-1.884	> .10	-0.375	> .10
Support school-related outcomes	-1.287	> .10	-0.982	< .10	1.152	> .10	-0.679	> .10
Think about the future	0.563	> .10	-0.107	> .10	-0.525	> .10	-3.042	> .10
Self-transcendent outcomes	2.206	> .10	0.175	> .10	-4.352	> .10	-0.514	> .10

Source. Tx21st Student Tracking System and Public Education Information Management System, 2016–17 to 2018–19. 1,737 youth experience surveys, 2018–2019. Youth experience survey administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, N = 1,643 responses.
Note. ACE – Afterschool Centers on Education.

Regression Models Related to School-Related Outcomes

Unlike the models described in the preceding section where HLM was used to examine the relationship between center-level characteristics and student-level Texas ACE attendance outcomes, efforts to assess the association between center-level characteristics and center-level effects associated with a series of school-related outcomes involved variables that were only measured at the center level. As a result, multiple regression was used to determine whether a significant association was found between a particular center-level characteristic and center-level effect for a given school-related outcome. Separate analyses were conducted across the same center characteristic groups employed in the previously described HLM analyses (see pages 121 to 125).

Detailed regression results for center characteristic groupings referenced in Chapter 3 can be found in Tables C3.13 to C3.15. Additional tables containing findings related to Chapter 3 but not explicitly referenced in the main narrative are housed in a separate technical appendix.

Table C3.13. Center-Level Relationships between Organizational Processes and Center-Level Effects – 60 Hours or More of Texas ACE Participation over 1 Year

	60 Hours or More – 1 Year							
	Reading		Mathematics		Attendance		Disciplinary	
Organizational Process	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Program Goals								
Provide academic and creative enrichment opportunities	12.230	> .10	13.729	> .10	-.006	< .05	.118	< .01
Facilitate parental involvement	-7.829	> .10	-8.740	> .10	.002	> .10	.011	> .10
Build social and emotional learning skills	13.125	< .10	11.065	> .10	.000	> .10	.005	> .10
Provide a safe learning environment	-2.388	> .10	-11.171	> .10	.004	> .10	.028	> .10
Address behavioral issues	-7.132	> .10	-12.172	> .10	-.005	< .10	.081	< .05
Improve grade promotion and graduation rates	.619	> .10	1.528	> .10	.002	> .10	.006	> .10
Target Population								
Target academically at-risk students	-9.006	> .10	-10.612	> .10	-.004	< .10	.042	> .10
Broader target population	-9.132	> .10	-14.304	< .05	.003	> .10	.039	> .10
Advisory Board Practices								
General guidance and feedback	6.108	> .10	3.607	> .10	-.002	> .10	.010	> .10
Operational input	-4.318	> .10	-10.496	> .10	.001	> .10	.010	> .10
Planning input	-5.508	> .10	-3.886	> .10	-.001	> .10	.039	> .10
Programming input	.300	> .10	8.428	> .10	.000	> .10	-.004	> .10
Programming for Parents and Adult Family Members								
ESL Classes	-10.965	> .10	1.057	> .10	.002	> .10	.062	> .10
GED Classes	4.361	> .10	-5.929	> .10	-.001	> .10	.045	> .10

Table C3.13. (Continued): Center-Level Relationships between Organizational Processes and Center-Level Effects – 60 Hours or More of Texas ACE Participation over 1 Year

	60 Hours or More – 1 Year							
	Reading		Mathematics		Attendance		Disciplinary	
Organizational Process	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Data Use and Evaluation								
Working with an external evaluator	4.831	> .10	5.179	> .10	.001	> .10	.004	> .10
Periodic review of program data	-9.467	> .10	-3.455	> .10	.002	> .10	.043	> .10
Obtaining youth input on programming	-2.628	> .10	-4.093	> .10	.001	> .10	-.027	> .10
Use of PQA/other observational rubrics	25.348	< .10	26.218	< .10	-.007	> .10	.042	> .10
Staffing or Operational Practice								
Mostly staffed by school-day teachers	4.173	> .10	2.880	> .10	.001	> .10	-.030	> .10
High summer programming hours	3.229	> .10	9.581	> .10	.000	> .10	-.033	> .10

Source. Tx21st Student Tracking System, Public Education Information Management System, and STAAR, 2015–16 to 2018–19. Source. 320 interviews, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.14. Center-Level Relationships between Organizational Processes and Center-Level Effects – 60 Hours or More of Texas ACE Participation over 2 Years

	60 Hours or More – 1 Year							
	Reading		Mathematics		Attendance		Disciplinary	
Organizational Process	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Program Goals								
Provide academic and creative enrichment opportunities	8.216	> .10	-8.267	> .10	-.002	> .10	-.067	> .10
Facilitate parental involvement	-2.419	> .10	-.683	> .10	.001	> .10	.071	> .10
Build social and emotional learning skills	29.702	< .10	11.420	> .10	.001	> .10	.045	> .10
Provide a safe learning environment	2.219	> .10	.250	> .10	.003	> .10	.008	> .10
Address behavioral issues	-8.919	> .10	-28.857	> .10	-.007	> .10	-.028	> .10
Improve grade promotion and graduation rates	-6.783	> .10	35.947	> .10	.004	> .10	.085	> .10
Target Population								
Target academically at-risk students	-24.256	< .10	-24.632	< .10	-.007	> .10	.077	> .10
Broader target population	22.761	< .10	6.204	> .10	-.002	> .10	-.011	> .10
Advisory Board Practices								
General guidance and feedback	5.952	> .10	-2.558	> .10	.006	> .10	.032	> .10
Operational input	-42.792	< .10	-25.912	> .10	-.009	< .05	.069	> .10
Planning input	27.630	< .10	9.522	> .10	.005	> .10	-.050	> .10
Programming input	13.777	> .10	26.898	> .10	.004	> .10	.065	> .10
Programming for Parents and Adult Family Members								
ESL Classes	.793	> .10	3.005	> .10	.003	> .10	-.135	> .10
GED Classes	10.863	> .10	23.782	> .10	-.001	> .10	.095	> .10

Table C3.14. (Continued): Center-Level Relationships between Organizational Processes and Center-Level Effects – 60 Hours or More of Texas ACE Participation over 2 Years

	60 Hours or More – 1 Year							
	Reading		Mathematics		Attendance		Disciplinary	
Organizational Process	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Data Use and Evaluation								
Working with an external evaluator	12.257	> .10	-2.436	> .10	-.003	> .10	.011	> .10
Use of PQA/other observational rubrics	-11.179	> .10	-8.021	> .10	.000	> .10	-.082	> .10
Periodic review of program data	24.692	< .10	17.303	> .10	.000	> .10	-.073	> .10
Obtaining youth input on programming	-2.297	> .10	-49.558	< .10	-.006	> .10	-.436	< .05
Staffing or Operational Practice								
Mostly staffed by school-day teachers	20.740	> .10	4.618	> .10	.005	> .10	-.015	> .10
High summer programming hours	-3.057	> .10	.556	> .10	.001	> .10	-.109	> .10

Source. Tx21st Student Tracking System, Public Education Information Management System, and STAAR, 2015–16 to 2018–19. Source. 320 interviews, 2017–2019.
Note. ACE – Afterschool Centers on Education.

Table C3.15. Center-Level Relationships between Program Activities and Center-Level Effects – 60 Hours or More of Texas ACE Participation over 1 Year

	60 Hours or More – 1 Year							
	Reading		Mathematics		Attendance		Disciplinary	
Activity	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Working alone on tasks	7.400	> .10	35.836	< .10	-.006	> .10	-.056	> .10
Working in small groups	28.322	< .10	-5.959	> .10	-.005	> .10	.006	> .10
Direct instruction	1.485	> .10	15.485	> .10	-.001	> .10	.249	< .05
Making/building things	-26.413	> .10	-8.400	> .10	-.014	< .05	-.012	> .10
Working on group projects	-13.298	> .10	6.532	> .10	.010	> .10	-.062	> .10
Exploration and discovery	3.137	> .10	10.193	> .10	.010	< .05	-.077	> .10
Learning or practicing nonacademic skills	-.209	> .10	-17.200	> .10	-.005	> .10	.164	< .05
Participating in competition	-.681	> .10	-2.048	> .10	.004	> .10	.035	> .10
Engaged in discussion	1.312	> .10	11.793	> .10	.001	> .10	.057	> .10
Student presentations	-10.269	> .10	-6.850	> .10	-.014	> .10	-.172	> .10
Planning future activities	29.721	> .10	32.076	> .10	.011	> .10	-.342	< .01
Designed to make a contribution	-23.446	> .10	-42.014	> .10	.008	> .10	.081	> .10

Source. Tx21st Student Tracking System, Public Education Information Management System, and STAAR, 2015–16 to 2018–19. 577 activity leader surveys, 2017–2019.
Note. ACE – Afterschool Centers on Education.

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Appendix D. Description of Propensity Score Matching, Hierarchical Linear Modeling and Rasch Analysis

Propensity score matching (PSM) and hierarchical linear modeling (HLM) approaches were used in the advanced statistical analyses described in this report. PSM is a statistical technique designed to mitigate any selection bias that may occur because the programs and activities in question were not randomly assigned. HLM is a process used to account for the nested structure of data. This appendix describes both methods, as well as the use of Rasch analysis approaches.

In any evaluation of a program where participants are not randomly assigned to participate, the problem of selection is paramount. It is likely that students who participate in Texas Afterschool Centers on Education (Texas ACE) programming are different from those who do not attend. These differences can bias estimates of program effectiveness because they make it difficult to disentangle preexisting differences between students who attended Texas ACE programming and those who did not from the effect of attending the program. In general, students who attended Texas ACE programming tended to be students who were lower achievers than those who did not, prior to the start of the current academic year. The quasi-experimental approach outlined here 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 that addresses this problem. In the first stage, the probability that each student participates was modeled on available observable characteristics. By modeling selection into the program, this approach allowed us to compare participating and nonparticipating students who would have had a similar propensity to select into the program based on observable characteristics that were available in the data received from the Texas Education Agency (TEA). In the second stage, the predicted probability of participation was used to model student outcomes while accounting for selection bias using an HLM approach. Steps were taken to balance pretreatment group differences in observed covariates using a propensity score stratification and marginal mean weighting approach (Hong & Hong, 2009).

Stage 1: Creation of the Comparison Group. The outcome of interest in modeling propensity scores is treatment status (1 for students in the treatment group, 0 for the comparison group). To account for this binary outcome, logistic regression was used to model the logit (or log-odds) of student group assignment status. Examples of student-level variables used to fit the propensity score models are as follows:

- Prior achievement in reading and mathematics
- Prior measures for other outcomes (grade-level promotion, behavior, and attendance)
- Student demographic information
  - Gender
  - Ethnicity
  - Socioeconomic status
  - At-risk status
  - English language proficiency
  - Special education status

In addition to the student-level variables, the propensity score model also included school-level variables, such as the following:[27]

- School type
- Total enrollment
- Student race/ethnicity composition
- School locale
- Campus rating
- Number of students identified as economically disadvantaged
- Number of English learners
- Number of students receiving special education services

The propensity score model considered a total of 39 variables. Data were not available for each covariate for all students. To account for this, indicator variables were used to model the relationship between the pattern of missing data and the propensity to participate in the program (Rosenbaum & Rubin, 1984). The propensity score model was fit separately for each grade (Grades K–12) and separately for each definition of treatment (e.g., less than 45 days, 45–59 days). 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 that were balanced with the treatment across all the covariates examined for balance.

Stage 2: Statistical Modeling of Student Outcomes. Outcomes for students in the treatment group were then compared with the outcomes for comparison group students. Steps were taken to balance the pretreatment group differences in observed covariates by using a propensity score stratification and marginal mean weighting approach (Hong & Hong, 2009). Various strata were used, based on the spread and the overlap of the data. The propensity score logit, along with the pretreatment measure of the outcome, were included in the outcome model to control for within-strata differences and residual bias (Schafer & Kang, 2008). Student outcomes were then modeled using two-level HLMs to account for the nested nature of the data (students within schools) as follows:

Level 1—Students

$$y_{ij} = \beta_{0j} + \beta_{1j}\, Participation_{ij} + \sum_{S=2}^{15} \beta_s L_{sij} + \beta_{16j} LP_{ij} + \beta_{17j} Pretest_{ij} + r_{ij}$$

where

- y_{ij} is a student-level outcome (e.g., student mathematics achievement).
- $\text{Participation}_{ij}$ is an indicator of whether the student participated in the Texas ACE program.
- $L_{ijs}$is an indicator variable for each logit propensity score strata.
- $LP_{ij}$is the logit propensity score.

[27] For school-level variables, the evaluation team used the school that the majority of Texas ACE participants at a given program attended. In most cases, a center that was based at a specific school drew the majority of its participants from that school, and the evaluation team used the demographics and other characteristics of that school in the PSM model.

- $Pretest_{ij}$ is the pretreatment measure of the outcome.
- The subscripts i, j, and s correspond to student, school, and strata, respectively.

Level 2—Center

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

The Level 2 equation includes only β_{0j} because the chosen HLM is a random intercept model; all other coefficients (i.e., participation indicator, logit propensity score stratum, logit propensity score, and pretreatment indicator) at Level 1 are fixed and, therefore, not listed at Level 2. Because the treatment and comparison groups were matched using all the covariates described previously, it is not necessary to include these variables in the final outcome model.

The two-level model of correlation between program participation and student performance (written in mixed-model format) is as follows:

$$Y_{ij} = \beta_0 + \beta_1 Participation_{ij} + \beta_2 Pretest_{ij} + \beta_3 LP_{ij} + \boldsymbol{L}_{ijs} + \boldsymbol{X}_{ij} + u_{0j} + r_{ij}$$

where

- Y_{ij} is the performance of student i in school j.
- β_0 is a constant term showing the average student performance in the comparison group.
- $Participation_{ij}$ is an indicator of whether the student participated in the Texas ACE program, where β_1 shows the average difference in performance between the treatment and comparison groups.
- $Pretest_{ij}$ is the pretreatment measure of the outcome, where β_2 is the average difference in performance from the prior school year to the current school year.
- $LP_{ij}$is the logit propensity score, where β_3 is the contribution of the propensity score.
- L_{ijs} is a vector of variables specifying the matching strata.
- $\mathbf{X_{ij}}$ is a vector of student-level covariates for which the standardized mean difference between the treatment and comparison group was greater than 0.1 after matching.
- u_j is a school-level random error term, with an assumed normal distribution, with mean zero and variance τ.
- r_{ij} is a student-level error term, also assumed to have a normal distribution, with mean zero and variance σ^2.

Table D1 provides additional detail on the models run for each outcome and the operationalization of each outcome.

Table D1. Outcomes and Operationalizations

Outcome	Outcome Type	Model Run	Metric Transformation *After* Running the Model	Interpretation
State of Texas Assessment of Academic Readiness scores	Test score	Regression assuming a normal distribution (ran using raw scores)	Transformed into the standardized mean difference effect size metric	Raw metric estimate represents the increase/decrease in points on the examination for the treatment group
School-day attendance	Proportion	Data transformed into the arcsine metric and then run using regression assuming a normal distribution	Back transformed from the arcsine metric to the original proportion metric [sin(asin(sqrt(.95)) + estimate)^2 – .95]	Estimate transformed back into the original metric represents the proportion of increase/decrease for the treatment group
Grade-level promotion	Binary	Logistic regression	Transformed into the odds ratio [exp(estimate)] and then odds ratio percent metrics [100*(exp(estimate-1)]	Odds ratio percent metric represents the percentage of increase/decrease for the treatment group
Disciplinary incidents	Count	Poisson distribution regression	Transformed into the odds ratio [exp(estimate)] and then odds ratio percent metrics [100*(exp(estimate-1)]	Odds ratio percent metric represents the percentage of increase/decrease for the treatment group
Career and technical education credits	Proportion	Data transformed into the arcsine metric and then run using regression assuming a normal distribution	Back transformed from the arcsine metric to the original proportion metric [sin(asin(sqrt(.9)) + estimate)^2 – .9]	Estimate transformed back into the original metric represents the proportion of increase/decrease for the treatment group

Rasch Analysis of Survey and Observation Data

At its most basic level, Rasch modeling techniques yield estimates of an individual respondent's ability and the relative difficulty of a given item on the instrument in question (Bond & Fox, 2007). Working from the proposition that persons with greater ability will have a greater likelihood of successfully completing a given bank of test items (or find it easier to endorse survey items that demonstrate greater ability) than will less skilled persons, Rasch modeling techniques take person and item difficulty estimates yielded from an instrument, transform them by using a log function, and display them on a logit scale that allows person and item difficulties to be compared directly.[28]

One benefit of using Rasch approaches is that they result in true interval-level scores that can be used when conducting analyses. To create true interval measures that could be employed effectively in supporting the domain of analyses needed for the report, the research team employed Rasch analysis techniques, specifically the Rasch Rating Scale model (Linacre, 2005) and Many-Facet Rasch Measurement (Linacre & Wright, 2004), to create scale scores for scales associated with the youth experience and end-of-session surveys and the PQA observation data, respectively. The use of Many-Facet Rasch Measurement approaches also corrected for empirically derived estimates of rater bias. Each approach is described in greater detail as follows.

[28] Item difficulty reflects how positively an item is endorsed. Items with low item difficulty will be frequently and positively endorsed (e.g., a high frequency of *strongly agree*).

Rasch Rating Scale Model

This model was used to calibrate scales appearing on the youth experience and end-of-session surveys and took the following form:

$$Log\left(P_{nix}/P_{ni(x-1)}\right) = B_n - (D_i + R_x)$$

where

- P_{nix} is the probability of person n of ability B_n being observed in category x of item i with difficulty D_i
- $P_{ni(x-1)}$ is the probability of person n of ability B_n being observed in category x – 1 of item i with difficulty D_i
- B_n is the ability of respondent n.
- D_i is the difficulty of item i.
- R_x is rating scale structure parameter for category x (indicates how much of the latent construction is covered by a given response category of the rating scale).

Many-Facet Rasch Measurement

This model was employed in calibrating measures related to the PQA observation measures:

$$\text{Log}(P_{nijk}/P_{nij(k-1)} = B_n - D_i - C_j - F_k$$

where

- P_{nijk} is the probability of activity n being given a rating of k on item i by rater j.
- $P_{nij(k-1)}$ is the probability of activity n being given a rating of k – 1 on item i by rater j.
- B_n is the ability of activity n.
- D_i is the difficulty of item i.
- C_j is the severity of rater j.
- F_K is the difficulty of category k relative to category k – 1.

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Appendix E. Chapter 3 Youth Experiences in Programming

The purpose of this appendix is to present item-level findings from the scales included on the youth experience survey.

Table E3.1. Percentage of Responses by Response Category: Perceptions of Activity Leaders Scale

In this program, there is an adult here . . .	Not at all true	Somewhat true	Mostly true	Completely true
Who is interested in what I think about things.	16.6%	34.2%	25.5%	23.7%
Who I can talk to if I am upset.	14.7%	19.8%	21.9%	44.7%
Who helps me when I have a problem.	8.6%	18.2%	25.4%	47.7%
Who I enjoy being around.	7.2%	18.6%	26.0%	48.2%
Who has helped me find a special interest or talent (something I'm good at).	17.4%	24.0%	23.7%	34.9%
Who asks me about my life and goals.	21.3%	25.5%	24.2%	29.0%
Who helps me do better in school.	10.1%	18.7%	25.3%	45.9%
Who I will miss when the program is over.	14.0%	17.6%	19.9%	48.5%

Source. Youth experience surveys administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, *N* = 1,737 responses to eight questions asked on the perceptions of activity leaders scale.

Table E3.2. Percentage of Responses by Response Category: Perceptions of Other Youth Scale

How true are these statements for you?	Not at all true	Somewhat true	Mostly true	Completely true
Kids here are friendly with each other.	9.9%	35.7%	33.4%	21.0%
Kids here treat each other with respect.	13.9%	37.1%	29.7%	19.3%
Kids here listen to what the teachers tell them to do.	11.9%	37.3%	29.8%	21.0%
Kids here don't tease or bully others.	21.0%	30.6%	25.0%	23.5%
Kids here support and help one another.	10.3%	33.2%	28.6%	27.9%

Source. Youth experience surveys administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, *N* = 1,715 responses to five questions asked on the perceptions of other youth scale.

Table E3.3. Percentage of Responses by Response Category: Opportunities for Agency Scale

When you are at this program, how often . . .	Never	Rarely	Sometimes	Often
Do you get to choose how you spend your time?	13.7%	17.3%	38.3%	30.7%
Do you get to suggest your own ideas for new activities?	26.8%	20.4%	32.3%	20.5%
Do you get to choose which activities you do?	19.4%	13.6%	31.7%	35.3%
Do you get to help plan activities for the program?	40.4%	17.2%	26.4%	15.9%
Do you get the chance to lead an activity?	39.5%	17.5%	28.2%	14.8%
Do you get to be in charge of doing something to help the program?	40.7%	18.2%	26.8%	14.3%
Do you get to help make decisions or rules for the program?	53.7%	16.5%	18.6%	11.2%

Source. Youth experience surveys administered in spring 2018 and 2019 in 39 Texas Afterschool Centers on Education, *N* = 1,733 responses to seven questions asked on the opportunities for agency scale.

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Appendix F. Data Sources

Table F1. Analytic Approach by Data Source

Data	Source/Data	Analytic Approach
Tx21st Student Tracking System	Texas Education Agency (TEA) • Program characteristics	The American Institutes for Research (AIR) conducted a descriptive analysis of Texas 21st Century Community Learning Centers (21st CCLC) grantee and center program characteristics.
Texas Afterschool Centers on Education (Texas ACE) Staff and Youth Surveys	Data collection AIR and Gibson Consulting Group • Youth activity leader surveys • Youth experience survey • End-of-session survey	AIR conducted descriptive analyses of the responses from the Texas ACE staff survey, youth experience survey, and end-of-session survey. For each survey, scaled responses were developed from rating scales (e.g., Likert-type scales) to analyze staff-reported programming activities and youth experiences and outcomes in programming. Items on the youth experience and end-of-session surveys were then combined to reduce a large set of items to a small number of summary scores for each construct. Thus, one or two scale scores, rather than (for example) five or 10 individual survey items, summarize a construct. After combining the items, Rasch scale scores were created for each construct using Winsteps (Linacre, 2015), a Rasch analysis software program. The scales were examined for item fit and internal consistency. Additional information about the Rasch analysis approaches employed can be found in Appendix D.
Public Education Information Management System (PEIMS) **State of Texas Assessments of Academic Readiness (STAAR)** **Texas Academic Performance Report (TAPR)**	TEA PEIMS • Students served by the program • Schools that students attend • School-related outcomes, like attendance and disciplinary incidents STAAR • Reading and mathematics assessment outcomes • End-of-course assessments TAPR • School and district information	Analyses of these data involved the use of hierarchical linear modeling (HLM), multiple regression, and propensity score matching (PSM) analyses. These analyses were oriented at assessing the relationship between Texas ACE characteristics and a variety of Texas ACE program attendance and school-related outcomes and exploring if select characteristics were associated with targeted school-related outcomes when using a quasi-experimental design.

Data	Source/Data	Analytic Approach
Locale Codes	U.S. Department of Education, National Center for Education Statistics (NCES) • 2014 Education Demographic Geographic Estimates for Texas	Locale codes were used in the descriptive analysis in Chapter 2 to understand the distribution of Texas ACE across four locale types categorized by NCES. "The NCES locale framework classifies all territory in the U.S. into four types of areas—City, Suburban, Town, and Rural. Each area is divided into three subtypes based on population size (in the case of City and Suburban assignments) and proximity to urban areas (in the case of Town and Rural assignments)" (NCES, n.d.).
Stakeholder Interview and Focus Group Data	Data collection by AIR and Gibson Consulting Group • Interviews with Texas ACE project directors, center coordinators, family engagement specialists, school principals, advisory board members • Focus groups with Texas ACE staff	Both interviews and focus groups were audio recorded with participant consent. The audio files were then transcribed. The transcripts were coded and analyzed using the qualitative data analysis software NVivo. Gibson Consulting Group staff looked for primary themes that emerged across the varied areas of implementation, including local goals and objectives. Summary percentages presented in the report are based on respondents from a given center who explicitly mentioned a particular theme.

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Appendix G. Site Visit Methodology

Spring 2017 Site Visit Sample

A statewide sample of 21st Century Community Learning Centers (CCLC) centers was drawn. A total of 40 centers were initially selected for possible inclusion in the spring 2017 site visit sample. The centers were then organized by geographic region of the state (i.e., Central Texas, Houston/Gulf Coast, North Texas/Dallas Metroplex, South Texas, and West Texas) and 20 centers were selected for inclusion in the final sample. The final site visit sample included four centers in north Texas/Dallas Metroplex, six centers in central Texas, six centers in the Houston/Gulf Coast region, two centers in south Texas, and two centers in west Texas. Logistical considerations, such as the ending date of the spring program were also taken into account when selecting centers for late April/May 2017 site visits. The evaluation team scheduled and conducted a total of 20 two-day site visits between April 24, 2017, and May 26, 2017.

Spring 2018 Site Visit Sample

A statewide sample of 21st CCLC was initially drawn and 30 Texas Afterschool Centers on Education (Texas ACE) were initially selected for possible inclusion in the site visit sample. The centers were then organized into higher and lower implementing categories based on administrative and student survey data collected and analyzed in January and February 2018. After organizing the sample by location, 20 centers in geographically diverse areas of the state were selected for site visits, including six centers in north Texas/Dallas Metroplex, five centers in central Texas, five centers in the Houston/Gulf Coast region, two centers in south Texas, and two centers in the San Antonio area. The evaluation team conducted 2-day site visits to each center to collect qualitative data related to center operational practices. Site visits occurred from February 20, 2018, to April 16, 2018.

Spring 2019 Site Visit Sample

Similar to the 2018 sampling process, a statewide sample of 21st CCLC centers was drawn and 30 centers were initially selected for possible inclusion in the site visit sample. The centers were then organized into higher and lower performance categories based on administrative data and student survey data collected and analyzed in early spring 2019. After organizing the sample by location, 20 centers in geographically diverse areas of the state were selected for site visits: six centers in north Texas/Dallas Metroplex, five centers in central Texas, five centers in the Houston/Gulf Coast region, two centers in south Texas, and two centers in the San Antonio area.

On-Site Data Collection Activities: Spring 2017, 2018, and 2019

While on site during spring 2017, 2018, and 2019, members of the evaluation team conducted four observations of afterschool offerings with an attempt to focus on sessions that involved English language arts, mathematics, or science content. The evaluation teams also conducted in-person interviews with the project director, the site coordinator, the family engagement specialist, and campus leadership (i.e., campus principal or assistant principal). They also facilitated group interviews with afterschool activity leaders. In addition, telephone interviews were conducted with an advisory board member when possible.[29,30]

Afterschool program offerings were observed by members of the evaluation team using the Youth Program Quality Assessment (YPQA) for Grades 6–12 or the School-Age Youth Program Quality Assessment (SAPQA) for Grades K–5. Table G1 highlights the three domains and related dimensions for each on the YPQA and the SAPQA observation tools.

[29] The research team visited some centers that shared a Texas ACE program project director and family engagement specialist. In such cases, both people were interviewed only once at one of the sites.
[30] Not all sites had an advisory board, and it was not possible to reach board members for a small number of centers.

Table G1. Youth and School-Age Observation Tool, Domains and Dimensions

YPQA and SAPQA Domains	Related Dimensions
Supportive Environment	Warm Welcome Session Flow Active Engagement Skill building Encouragement
Interaction	Belonging Collaboration Leadership Adult Partnership
Engagement	Planning Choice Responsibility[31] Reflection

Source. David P. Weikart Center For Youth Program Quality

In addition to the YPQA and SAPQA observation tools, the site team also used the Assessment of Afterschool Practices Observation Tool (APT-O), which provides customized ratings of targeted academic skill-building. In each of the afterschool offerings observed, evaluation team members determined whether a series of activities related to reading, written communications, verbal communications, and mathematics was present in the activity. The APT-O also included seven additional PQA items (scored for activities involving students in Grades 6–12) related to Academic Climate.[32]

In addition to the interview- and observation-related activities, the evaluation team administered pencil-and-paper surveys to all youth activity leaders and 21st CCLC students. Survey packets were provided to site coordinators at the beginning of each site visit, and the surveys were administered to all youth activity leaders and students on either the first or second day of the visit. Detailed instructions were provided to the site coordinators regarding the protocol for administering the two surveys.[33] Table G2 provides an overview of the data collected during spring 2017, 2018, and 2019 site visits.

Table G2. Overview of Data Collected During 2017, 2018, and 2019 Texas Afterschool Center (Texas ACE) Site Visits

Data Collection Period	Number of Interviews Conducted	Number of Observations Conducted	Number of Youth Surveys Completed	Number of Youth Activity Leader Surveys Completed
Spring 2017	103	79	845	202
Spring 2018	103	78	967	159
Spring 2019	114	80	616	217

Source. Site Visit After-Collection Reports, 2017, 2018, and 2019, American Institutes for Research and Gibson Consulting Group.

[31] The School-Age PQA contains the Responsibility dimension; the Youth PQA does not. All other dimensions listed are present in both the School-Age and Youth PQA.
[32] The APT-O protocol also included seven additional Program Quality Assessment items (scored for activities involving students in Grades 6–12) related to academic climate.
[33] In spring 2017, surveys were mailed to Texas ACE centers for administration by site coordinators. In 2018 and 2019, surveys were provided by the site visitor and administered by the site coordinator at each center.

Analysis of Qualitative Data Collected During Site Visits

Data from the interviews were imported into NVivo, a computer-assisted qualitative data analysis software program. The research team then engaged in a process of iterative coding and analysis. Site visit interviews were coded for primary themes emerging across a variety of areas of center implementation, operations, and programmatic activities. Summary percentages presented in the report are based on respondents from a given center who explicitly mentioned a particular theme. Interview procedures included avoiding frequent prompts to probe for a variety of possible responses. Therefore, the lack of an explicit response does not mean the practice was not occurring at a center, given the possibility of an omission from the respondent.

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Appendix H. Chapter 5 Local Evaluation Artifacts

Table H1. Participating Grantees and Centers in the Local Evaluation Support Initiative, 2019–20

Grantee	Center 1	Center 2
Snyder Independent School District	Snyder Primary School	
East Chambers Independent School District (ISD)	East Chambers Primary	
Socorro Independent School District	HD Hilley	Robert Rojas Elementary
Harris County Department of Education	SWS Discovery Middle	
New Summerfield	New Summerfield ISD	
Hooks Independent School District*	Hooks High School	Hooks Junior High
Hooks Independent School District*	Hooks Elementary School	

**Note.* Grantee withdrew early from the initiative due to competing obligations.

Table H2. Texas ACE Local Evaluation Tutorials 2019–20

Topic	Content
Tutorial 1 – Logic Models	Review resources to support logic model development. Discuss best practices to support logic model development.
Tutorial 2 – Process and Outcome Evaluation	Review resources to support evaluation plan development. Discuss best practices for developing process and outcome evaluations.
Tutorial 3 – Program Quality Assessment	Review resources to support Texas ACE programs in implementing program quality assessment. Discuss best practices for developing program quality assessment and identification of measures that address unique program needs.
Tutorial 4 – Action Planning	Recap the importance of evaluation. Walk through the three main steps of a collaborative action planning process.
Tutorial 5 – Evaluation Reporting	Review required reporting elements for Texas ACE evaluation reporting. Review evaluation reporting best practices. Review reporting resources including data visualization and communicating your results tips.

Table H3. Local Evaluation Timeline for 2019–20

When	What
October 10, 2019	Introductory Webinar. Overview of the Local Evaluation Guide, Evaluation Toolkit, and Support Initiative
November 14, 2019	Webinar 1. Evaluation Planning + Youth Experience Survey Overview
November 18, 2019	Deadline for centers to nominate a center to participate in the initiative using by submitting the capacity checklist.
November 21, 2019	Acceptance notification into the initiative.
December 6, 2019	LESI Consultation: Centers may submit logic model and evaluation plan for feedback.
December 10, 2019	Webinar 2. Selecting and Conducting Program Quality
December 2019	Notification emails sent to grantee program managers with information about youth experience survey. Parent notification opt out forms mailed.
January 2020	Webinar 3. Action Planning and Evaluation Technical Assistance
January 2020	Youth Experience Survey administration
March 2020	LESI Action Plan Consultation (required): LESI centers submit action plans to American Institutes for Research (AIR) for review and feedback.
April 2020	Webinar 4. Evaluation Report Overview of Reporting Requirements, Best Practices for Developing the Report and Presenting Data
June 2020	LESI Consultation: Centers may submit draft evaluation reports for Review.
July 2020	All centers submit evaluation reports as required.

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