Texas 21st Century Community Learning Centers

Interim Evaluation Report

Prepared for: Texas Education Agency

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AMERICAN INSTITUTES FOR RESEARCH®

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AMERICAN INSTITUTES FOR RESEARCH®
1120 East Diehl Road, Suite 200
Naperville, IL 60563-1486
800-356-2735 • 630-649-6500
www.air.org

CREDITS

American Institutes for Research
1120 East Diehl Road, Suite 200
Naperville, IL 60563-1486
Phone: 630-649-6500
www.air.org

Gibson Consulting Group, Inc.
1221 South MOPAC Expressway, Suite 355
Austin, TX 78746
Phone: 512-328-0884
www.gibsonconsult.com

David P. Weikart Center for Youth Program Quality
124 Pearl St., Suite 601
Ypsilanti, MI 48197
Phone: 734-714-2507
www.cypq.org

Contributing Authors

American Institutes for Research
Neil Naftzger
David Manzeske, Ph.D.
Mary Nistler
Andrew Swanlund

Gibson Consulting Group, Inc.
Amie Rapaport, Ph.D.
Joseph Shields

David P. Weikart Center for Youth Program Quality
Charles Smith, Ph.D.
Samantha Hallman
Anna Gersh

Submitted to

Texas Education Agency
1701 North Congress Avenue
Austin, Texas 78701-1494
Phone: 512-463-9734

Contents

List of Tables

List of Figures

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List of Acronyms

21st CCLC	21st Century Community Learning Center
ACE	Afterschool Centers on Education
AIR	American Institutes for Research
AEIS	Academic Excellence Indicator System
APT-O	Assessment of Afterschool Practices Observation Tool
CSF	Critical Success Factor
CSM	Critical Success Model
ESEA	Elementary and Secondary Education Act
HLM	Hierarchical Linear Modeling
MRFM	Multi Facet Rasch Measurement
NCLB	No Child Left Behind
OCE	Observation of Child Engagement
PAMS	Profile Analysis via Multi-dimensional Scaling
PEIMS	Public Education Information Management System
PPICS	Profile and Performance Information Collection System
PQA	Program Quality Assessment
SEA	State Education Agency
TAKS	Texas Assessment of Knowledge and Skills
TEA	Texas Education Agency
TX21st	TX21st CCLC Student Tracking System

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Executive Summary

For the past eight years, Texas afterschool and summer learning programs funded by the 21st Century Community Learning Centers (21st CCLCs) / Afterschool Centers on Education (ACE) program have provided students in high-poverty communities the opportunity to participate in academic enrichment programs and other youth development and support activities which aim to enhance their academic well-being.[1] The federal government awards grants to state education agencies, which in turn, make competitive awards to eligible grantees to establish and operate afterschool and summer learning programs. (Eligible grantees include local education agencies, non-profits, for-profit organizations, institutions of higher education, and city or county government agencies.) In July 2002, the federal government awarded the Texas Education Agency (TEA) $24.5 million to fund TEA's first cohort of grantees for the 2003–04 school year. As of 2009–10, initial and subsequent federal funds have resulted in 241 grants, awarded over six funding cycles.

With 21st CCLC funds, the ACE grantees deliver programs and services designed to meet five primary objectives where students participating in the program demonstrate improvement in their academic performance, school attendance, school behavior, promotion rates, and graduation rates.[2]

To ensure that grantees funded by the 21st CCLC program are positioned to achieve each of these objectives, TEA has developed a research-based Critical Success Model (CSM).This model includes four Critical Success Factors (CSFs) which represent behavioral changes that must be demonstrated by students and families enrolled in the program, or by the adults working on their behalf, to ensure success in meeting the programmatic goals and objectives. The CSFs and corresponding milestones (key strategies that establish the foundation on which critical success factors are built) are as follows:[3]

- CSF1 emphasizes both student and family engagement. Student engagement and family engagement are not necessarily achieved together, because they require different

[1] In Texas, the 21st CCLC program has its own brand, which articulates the characteristics of the Texas program and creates awareness that individual programs are part of a larger statewide system of programs. While 21st CCLC is the federal funding source, the programs in Texas are referred to as Afterschool Centers on Education, or Texas ACE. The term ACE will be used throughout the report to refer to the programs in Texas unless reference is made to the federal funding source, in which case the term 21st CCLC will be used.

[2] For more information review the authorizing legislation as part of Elementary and Secondary Education Act (2001), Title IV, Part B at http://www2.ed.gov/policy/elsec/leg/esea02/pg55.html

[3] Beginning in 2009–10, with the sixth funding cycle, program guidelines were revised to require grantees to develop and implement programs in alignment with TEA's research-based CSM. Cycle 6 grantees were required to use this model to establish program goals and implement their programs. In addition, Cycle 6 grantees must collect and report performance measure data to TEA based on milestones and CSFs. Cycle 5 grantees are not subject to these requirements, although they were made aware of the CSM when Cycle 6 was first implemented and are encouraged to use the model as a guide for improving programs.

strategies and activities. The milestone for this CSF is for the program to use research-based, innovative instructional techniques and include opportunities that encourage student and family engagement.

- CSF2 addresses student involvement in school, exemplified through more participation in extracurricular activities, and more students becoming mentors. The milestone for this CSF emphasizes the role of adults as advocates for students.
- CSF3 addresses the use of assessment data to re-evaluate and revise student services. A milestone program strategy is for program staff to conduct ongoing and continuous assessments to identify student needs and ways program activities and services might be improved.
- CSF4 addresses staff professional development. The milestone program strategy is for programs to provide all staff the "required training opportunities," which are then implemented in the afterschool program.

To gain a better understanding of how well ACE grantees are implementing programs that are consistent with the CSM, TEA contracted with American Institutes for Research (AIR) and its partners, Gibson Consulting Group, Inc. (Gibson Consulting) and the David P. Weikart Center for Youth Program Quality (the Weikart Center), to conduct a comprehensive evaluation of the ACE programs, beginning with programs that were awarded grants during funding Cycles 5 and 6.[4] The evaluation began in January 2011 and will continue through August 2012, with the possibility of additional funding through August 2015.[5]

The overarching goal of the evaluation is to determine which program strategies and approaches (milestones) are most effective within particular contexts in encouraging student and adult behaviors (CSFs) that lead to improvement in student performance. The evaluation is designed to address two primary research objectives:

- **Research Objective 1.** To conduct a statewide assessment of ACE programs, operations, participation, and student achievement;
- **Research Objective 2.** To identify and describe innovative strategies and approaches implemented by successful Cycle 5 and Cycle 6 grant-funded programs.[6]

With respect to the first objective, the findings in this interim report indicate student participation in ACE programs is associated with higher scores on the Texas Assessment of Knowledge and

[4] A cycle represents a cohort of grantees that receive funding for five years. Cycle 5, for example, represents the fifth such cohort to receive funding since TEA has began funding for this grant. Cycle 5 and Cycle 6 programs are the focus of the evaluation because they have been introduced to and/or required to consider (Cycle 5) or implement (Cycle 6) the CSM.

[5] TEA has conducted several statewide evaluations of the Texas 21st CCLC programs with the assistance of contractors. Statewide evaluation began one year after the federal government awarded funding to TEA in July 2002 for the first cohort of the grant, Cycle 1, which began implementation in July 2003. Statewide evaluations have been conducted annually; reports have been made available to the public on the TEA website http://www.tea.state.tx.us/index4.aspx?id=2908&menu_id=949

[6] These research objectives may be expanded to include new grantees in later years of the evaluation.

Skills (TAKS) in reading and mathematics. All students who participated in the 2009–10 program year (no matter by which cycle the ACE program attended was funded) were included in the impact analyses.[7] When compared with non-participating students, ACE student participants had fewer assigned disciplinary days during the regular school day, fewer disciplinary incidences in Grades 9–12, and fewer absences during the regular school day. It is important to note that while the findings are statistically significant,[8] the effect sizes are quite small.[9] However, they are still consistent with what would be expected for afterschool programs of this type (Kane, 2004).

Initial efforts to identify and describe innovative strategies and practices related to the second research objective focused on the variation in program quality among the ACE programs funded in Cycles 5 and 6. The two cycles were provided the CSM, with the Cycle 5 programs asked to consider the CSM in their implementation, and the Cycle 6 programs required to implement the CSM. Analyses of programs operating in 2010–11 showed that across the state, the spectrum of program quality was quite broad, although some trends and relationships between program quality and program characteristics were identified:

- Centers staffed mostly by school-day teachers were more apt to engage in practices supportive of academic skill-building, including relying on externally-developed curriculum to guide activities, developing linkages to the school day, and using student data to inform programming. However, there has been a trend in recent years for ACE programs to rely less on school-day teachers and more on other types of non-certified staff to provide program services. This has implications for the orientation, induction, training, professional development, and scaffolding site coordinators will need, particularly as it concerns linking the after school program to the school day classes. TEA may want to consider this when assessing how best to support grantees with training and technical assistance.
- Programs serving high school students exclusively demonstrated a lower degree of intentionality in program design and weaker linkages to the school-day classes than other programs, even when staff consisted of mostly school-day teachers. However, high school program activities had higher levels of academic content and climate than activities of programs serving other grade levels. This indicates that activities were focused on academic objectives, but not necessarily as a result of efforts to align sessions with specific class objectives.

[7] While programming year in this report includes any programs offered during the summer following the school year, such extended programming has no relevance for this report. Summer programs were not observed, and student data are associated with the school year.

[8] Throughout this report, statistical significance refers to the probability that a result or relationship is random is 5% or less (p-value<0.05).

[9] Effect size refers to the magnitude of the relationship between two variables, in this case program participation and outcome. A small effect size indicates a somewhat weak relationship. Participation in the program, for students in Grades 4 through 12, had an effect size of .027 on TAKS-ELA/Reading and of .032 on TAKS-Mathematics effect sizes are presented in standard deviation units. This is a small effect size, which indicates that on mathematics, for example, students participating in ACE programs scored higher than non-ACE students by half of one question. In general, effect sizes in educational research do not exceed 1.0.

- Youth ownership—that is, youth having a role in selecting and shaping program activities—was more evident in the high school programs than other programs, and student-reported engagement in program activities was higher. There is particular interest among the evaluation team in further understanding the relationship between youth ownership and student engagement.
- Academic content and academic climate were found to be higher in academic enrichment and tutoring activities than in non-academic enrichment and homework help activities. Non-academic activities were not necessarily designed to build academic knowledge and skills (though they may). Homework help was an activity that was responsive to students' daily assignments and needs; therefore, academic content was not planned. The finding in relation to homework help suggests that more could be done to enhance the supportive and interactive elements of homework help activities.
- Practices likely to foster youth development were more frequently embedded in academic enrichment activities than other program activities, including non-academic enrichment, homework help, and tutoring. This is important because the provision of these types of activities is seen as the primary service delivery mechanism for 21st CCLC. There was evidence to suggest that the more staff adopted practices to support youth development, the higher the engagement reported by students on post-activity student surveys. TEA may want to consider how training and technical assistance provided to ACE programs might enhance the capacity of staff to engage in practices and create opportunities that support positive youth development (CSF4).
- Low staff-to-student ratios were shown to be important for facilitating meaningful and substantive interactions between students and adults during an activity. (This is related to CSF1.) On the other hand, low staff-to-student ratio may be less of a factor relative to these interactions if center staff have made a substantial investment in planning the activity.
- Among 15 high-quality programs, which were identified for further analysis based on observation data and ratings on the Program Quality Assessment (PQA) tool,[10] teacher knowledge of individual student needs, interests, and personal lives, and teachers' instructional responsiveness were effective in engaging students. (Note that determining student need is addressed in CSF3.)The presence of shared norms guiding the casual interactions among staff and students, typically made activities more enjoyable and helped students focus on tasks. These characteristics were present across many of the activities, even homework help, in the programs assessed as high quality.
- Among the high-quality activities for elementary students, structured, whole-group instruction, in which all students were focused on the same task, facilitated active student engagement (addressed in the CSF 1 milestone). The activities were fun and engaging, the climate was positive, and leadership opportunities were provided.

[10] The Youth PQA is a validated instrument for observing program activities that serve youth in Grades 4–12, and the School-Age PQA is used to observe activities that serve youth in Grades K–6. The tools were developed by the High/Scope Educational Research Foundation and currently are supported by the Weikart Center, a partner on this project.

- In the observed high-quality activities serving secondary students, active engagement (aligned to CSF1) was facilitated by providing students with choices, responsibilities, and relatively sophisticated tools and materials.

The information in this report serves as a starting point from which to identify and describe innovative and effective practices that might be adapted by ACE programs. In 2011–12, the evaluation team will conduct site visits to 40 centers to collect information that will enable the evaluators and TEA to better understand the strategies and procedures employed by ACE programs to deliver quality afterschool programming. From this sample of 40, as well as a sample of centers visited in 2010–11, 15 of the highest quality programs will be identified. These programs will be the focus of an in-depth study which will examine research-based innovative, effective practices. The selection of programs in the sample of 15 will be based on a re-analysis of outcomes using assessment and other outcome data as well as student and center characteristics data tracked in the 21st CCLC Tracking and Reporting System for Texas (TX21st) for the 2010–11 school year. Additionally, the analysis of site coordinator survey data and program data collected in the spring and fall of 2011 and center attendance data from TX21st will be included in the selection criteria for these 15 sites. A report summarizing findings from the site visits will be presented to TEA in August 2012.

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Chapter 1: Introduction

The 21st Century Community Learning Centers (21st CCLC) program, authorized under Title IV, Part B, of the Elementary and Secondary Education Act (ESEA), as amended by the No Child Left Behind Act of 2001 (NCLB), supports the creation of community learning centers that provide academic enrichment opportunities during non-school hours for children, particularly students who attend high-poverty and/or low-performing schools.[11] The federal grants are awarded to state education agencies (SEAs), which in turn, make competitive awards to eligible grantees to support afterschool and summer learning programs.[12] In July 2002, the federal government awarded the Texas Education Agency (TEA) $24.5 million to fund TEA's first cohort of 21st CCLC grantees for the 2003–04 school year. As of 2009–10, this and subsequent federal funding has resulted in 241 grants being awarded in Texas over six funding cycles.[13]

All centers funded by the Texas 21st CCLC program (also known as Afterschool Centers on Education or ACE) [14] are expected to provide programs and services designed to support student performance in the following areas: academic performance, school attendance, school behavior, promotion rates, and graduation rates.[15].

To ensure that grantees funded by the 21st CCLC program are positioned to achieve objectives, TEA has developed a research-based Critical Success Model (CSM). This model includes four Critical Success Factors (CSFs) which represent behavioral changes that must be demonstrated by students and families enrolled in the program, or by the adults working on their behalf to ensure success in meeting programmatic goals and objectives. The CSFs and corresponding milestones (key strategies that establish the foundation on which critical success factors are built) follow.[16]

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[11] For more information see http://www2.ed.gov/policy/elsec/leg/esea02/pg55.html

[12] Grantees include local education agencies, non-profits, for-profit organizations, institutions of higher education, and city or county government agencies.

[13] A cycle represents a cohort of grantees that receive funding for five years. Cycle 5, for example, then represents the fifth such cohort to receive funding since TEA has began funding for this grant.

[14] In Texas, the 21st CCLC program has its own unique brand that communicates the characteristics of the program and creates statewide awareness so that all Texas centers can identify themselves as part of a bigger picture. While 21st CCLC is the federal funding source, the programs in Texas are referred to as Afterschool Centers on Education, or Texas ACE. The term ACE will be used throughout the report to refer to the programs in Texas unless reference is made to the federal funding source, in which case the term 21st CCLC will be used.

[15] For more information review the authorizing legislation as part of Elementary and Secondary Education Act (2001), Title IV, Part B at http://www2.ed.gov/policy/elsec/leg/esea02/pg55.html

[16] Beginning in 2009–10, with the sixth funding cycle, program guidelines were revised to require grantees to develop and implement programs in alignment with TEA's research-based CSM. Cycle 6 grantees were required to use this model to establish program goals and implement their programs. In addition, Cycle 6 grantees must collect and report performance measure data to TEA based on milestones and CSFs. Cycle 5 grantees are not subject to these requirements, although they were made aware of the CSM when Cycle 6 was first implemented and are encouraged to use the model as a guide for improving programs.

- CSF1 emphasizes both student and family engagement. Student engagement and family engagement are not necessarily achieved together, because they require different strategies and activities. The milestone for this CSF the implementation of research-based, innovative instructional techniques and opportunities that encourage student and family engagement.
- CSF2 addresses student involvement in school, exemplified through more participation in extracurricular activities, and more students becoming mentors. The milestone for this CSF emphasizes the role of adults as advocates for students.
- CSF3 addresses the use of assessment data to evaluate and revise student activities and services. A milestone strategy is for program staff to conduct ongoing and continuous assessments to identify student needs and how to revise program services.
- CSF4 addresses staff professional development. The milestone strategy is for programs to provide all staff the "required training opportunities," which are then implemented in the afterschool program.

Table 1 presents the CSFs, including their links to outcomes, and related behaviors, performance indicators, milestones, and performance measures within the overarching Texas ACE CSM.

Table 1. Texas ACE Critical Success Model

Outcomes	Critical Success Factors (behaviors)	Critical Success Factors Performance Indicators	Milestones (grantees)	Milestone Performance Indicators (measure
• Improve Academic Performance • Improve Attendance • Improve Behavior • Increase Promotion Rates • Increase Graduation Rates	**Critical Success Factor #1: Student and Family Engagement**			
	• Students and families actively participating and engaged in learning • Students and families displaying leadership roles, volunteering to participate and lead activities	• Increased student and family attendance in afterschool programs • Students mentoring other students • Students and families facilitating activities Measurement Tool • Instructor surveys/self-assessment • Principal/Project Director survey • Observation/on-site visit	• Utilize innovative instructional techniques for academic and enrichment activities based on research and best practices	• Activity Tracking – TX21st (Three times per year – Summer, Fall, & Spring) • Curriculum/Lesson Plans
	Critical Success Factor #2: School Involvement			
	• Students increased sense of involvement in school	• Number of students participating in extracurricular activities • Increased number of mentors Measurement Tool • Student/Family surveys • Teacher Surveys	• Provide adult advocates, based on student need and in accordance with best practices	• Number of meetings with students • Number of contacts made with families, teachers, school day staff
	Critical Success Factor #3: Assessment Data			
	• Use of assessment data to revise/reevaluate student services	• Changes in student activities following reassessment Measurement Tool • Document analysis of program files • Observation/on-site visits	• Conduct ongoing/continuous assessment to determine need and improve targeted services	• Methods of assessment: pre/post tests, needs assessments, case plans, etc. • Use of PRIME Assessment
	Critical Success Factor #4: Professional Development Impact			
	• Implementation of strategies learned through training • Noticeable difference in educational instruction (teaching methods)	• Changes in methods of instruction based on training Measurement Tool • Self assessments • Supervisor assessments	• Provide all required training opportunities for staff development	• Number of trainings • Schedule of trainings • Staff sign-in sheets • Participant surveys • MyTexasACE Training Report

Evaluation Overview

To gain a better understanding of how well 21st CCLC grantees are implementing programs that are consistent with the research-based CSM, TEA contracted with American Institutes for Research (AIR) and its partners, Gibson Consulting Group, Inc. (Gibson Consulting) and the David P. Weikart Center for Youth Program Quality (the Weikart Center), to conduct a comprehensive evaluation of the Texas 21st CCLC program, beginning with programs that were awarded grants during Cycle 5 and Cycle 6.[17] The evaluation began in January 2011 and will continue through August 2012, with the possibility of additional funding through August 2015.[18]

The overarching goal of the evaluation is to determine which program strategies and approaches (milestones) are most effective within particular contexts in encouraging student behaviors (CSFs) that lead to improved student outcomes. The evaluation is designed to address two primary research objectives:

- **Research Objective 1:** To conduct a statewide assessment of ACE programs, operations, participation, and student achievement;
- **Research Objective 2:** To identify and describe innovative strategies and approaches implemented by successful Cycle 5 and Cycle 6 grant-funded programs.[19]

Each of these objectives is especially relevant given the state of research in the field of afterschool programs. As noted by Granger (2008), much of the research shows afterschool programs have a mixed impact on students' academic and behavioral outcomes. For example, three noteworthy meta-analyses of studies, which explored the impact of afterschool programs on student achievement and behavioral outcomes, found that for the *majority* of the studies in each review, students in the afterschool programs did not have better outcomes than the comparison group students who did not participate in afterschool programs. (Durlak & Weissberg, 2007; Lauer et al., 2006; Zief, Lauver & Maynard, 2006). On the other hand, both Durlak and Weissberg (2007) and Lauer et al. (2006) found average positive effects in both academic and non-academic outcomes, suggesting that some of the higher quality programs had driven the positive effects across all programs. That is, positive outcomes across multiple programs may be due to the effectiveness of a small number of individual programs.

Efforts to identify the characteristics, practices, and approaches associated with positive youth outcomes also met with mixed results. Lauer et al. (2006), for example, concluded that various

[17] At the beginning of the 2010–11 school year, Cycle 5 programs began their third year of implementation, and Cycle 6 programs began their second year of implementation. Programs funded by the Texas 21st CCLC program are funded for five years. Applicants that received funding in previous 21st CCLC cycles are eligible to apply for funding to serve new or existing programs; however, the pre-existing grant must expire before project start date of the new grant cycle.

[18] TEA has conducted several statewide evaluations of the Texas 21st CCLC programs with the assistance of contractors. Statewide evaluation began one year after the federal government awarded $24.5 million to TEA in July 2002 for the first cohort of funding (Cycle 1) which began in July 2003. Statewide evaluations have been conducted annually, reports of which are made available to the public on the TEA website http://www.tea.state.tx.us/index4.aspx?id=2908&menu_id=949

[19] These research objectives may be expanded to include new grantees in later years of the evaluation.

program features appear to matter at different times, but they did not detect a consistent pattern linking program features to outcomes. In contrast, Durlak and Weissberg (2007) found that programs using evidence-based training approaches aimed at promoting students' social and personal skills had significantly positive effects on all behavioral, attitudinal, and academic outcomes examined, with the exception of school attendance. They also concluded that programs follow a model they referred to as *SAFE* (sequenced, active, focused, and explicit) if they hope to be effective in meeting multiple outcomes.

Some of the current research suggests that academic and behavioral outcomes can be met by simply paying attention to how programming is delivered (Birmingham, Pechman, Russell, & Mielke, 2005; Durlak & Weissberg, 2007), and that programs are more likely to accomplish outcomes if instructional methods are appropriate to the afterschool setting. For example, Black, Doolittle, Zhu, Unterman & Grossman. (2008) demonstrated that activities based on explicit, research-based curricular models and on teaching practices specific to the afterschool setting resulted in statistically significant impacts on student achievement in mathematics. A similar impact was not found in relation to reading.

Approach to Addressing the Research Objectives – Year 1 of the Evaluation

As noted earlier, two research objectives guide the evaluation of the ACE programs that were funded in Cycle 5 and Cycle 6. The first objective is to assess the programs, including their operations, student participation and student outcomes. The second research objective is to identify the innovative and effective practices that drive program quality and may be adopted by other ACE programs and supported through professional development.

Research Objective 1. Achieving Research Objective 1 in Year 1 of the evaluation requires answering each of the following research questions:

- To what extent is there evidence that students who participated in activities funded by the ACE program demonstrated better performance on the outcomes of interest than students who attended schools served by the centers but did not participate in these activities?
- To what extent is there evidence of a relationship between center and student characteristics?
- To what extent is there evidence that students participating in services and activities funded by the ACE program demonstrated better performance on the outcomes of interest than similar students not participating in the program?

In conducting the statewide assessment of ACE programs, student participation and attendance profiles were created using data from the 21st CCLC Tracking and Reporting System for Texas (TX21st).[20] TX21st provided information on the grantees and centers that were operating from

[20] TX21st is a web-based data collection system developed and maintained by TEA to use for reporting required data into the federal Profile and Performance Information Collection System (PPICS) database. TX21st collects a broad array of information from grantees throughout the program year on program

2006–07 to 2010–11.[21] The purpose of the profiles was to determine how stable program attributes (or variables) were over time. Variables represented in the profiles were included in analyses that explored the relationship between program characteristics and the achievement of desired student outcomes.

Research Objective 2. Achieving Research Objective 2 in Year 1 of the evaluation requires answering each of the following research questions:

- What strategies have been demonstrated to be effective in student recruitment, engagement, and participation in ACE services and activities?
- What constitutes *typical* afterschool instruction, lesson planning, and curricula, and how does *typical* compare to the instruction, planning, and curricula used by centers that have achieved a high level of functioning and innovation in these areas?
- What methods and tools are being effectively used by grantees to assess students and determine needed revisions to services and activities?
- What strategies have been demonstrated to be effective in supporting student leadership opportunities in programs?
- What do programs do to develop effective and meaningful partnerships and collaborative efforts, connecting grantees, schools, students, their families, service providers, and the local community?
- What strategies support and cultivate effective program leadership?
- How have grantees utilized the supports provided by Edvance Research, Inc., which TEA selected as a contractor for the Program Enhancement and Quality Assurance efforts to improve afterschool programming, to develop their programs and take steps to further enhance the quality of their activities?

Research Objective 2 focuses on innovative strategies and approaches implemented by Cycle 5 and Cycle 6 ACE programs. This set of programs was the first to be extensively exposed to the CSM framework: Cycle 5 programs were asked to consider the CSM, and Cycle 6 programs were required to explicitly implement the CSM when designing and delivering the program and activities. Several sources of data supported the identification of innovative strategies and approaches, including surveys, interviews, focus groups, and observations of program activities, with the majority of these data collected on site visits. The data were analyzed to describe the spectrum of quality across the programs and to highlight practices, approaches, and procedures that are associated with high-quality programs.

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characteristics as well as student attendance, outcomes, and demographic characteristics. It is updated on a regular basis.

[21] A program period is the summer and following school year.

Ultimately, the goal of the evaluation is to identify the best practices that can be replicated statewide to improve program quality and student outcomes and supported through targeted training and technical assistance.

Approach to Addressing the Research Objectives – Year 2 of the Evaluation

Moving forward, the primary focus of the statewide evaluation will be identifying effective and innovative program practices (Research Objective 2). The information presented in this report will serve as a starting point from which to proceed in the second project year.

In 2011–12, the evaluation team will conduct site visits to 40 centers to collect information that will enable the evaluators and TEA to better understand the strategies and procedures employed by ACE programs to deliver quality afterschool programming. From this sample of 40, as well as a sample of centers visited in 2010–11, 15 of the highest quality programs will be identified. These programs will be the focus of an in-depth study which will examine research-based innovative, effective practices. The selection of programs in the sample of 15 will be based on a re-analysis of outcomes using assessment and other outcome data as well as student and center characteristics data tracked in the 21st CCLC Tracking and Reporting System for Texas (TX21st) for the 2010–11 school year. Additionally, the analysis of site coordinator survey data and program data collected in the spring and fall of 2011 and center attendance data from TX21st will be included in the selection criteria for these 15 sites.

During the second year of the evaluation (2011–12), the research questions related to Research Objective 1 will be also be readdressed through replication of analyses conducted in Year 1 to assess the short- and long-term impacts of ACE program participation on student outcomes of interest. Two types of replication analysis will be performed.

- Longitudinal outcome data and program data obtained from TX21st will be re-analyzed to assess both program impact and explore the relationship between program and student characteristics, attendance, and program outcomes. These analyses will be updated to include data from the 2010–11 school year. Data from site coordinator surveys completed in spring and summer of 2011 will be included in analyses.
- Analyses will be conducted using data from the Cycle 5 and Cycle 6 programs where site visits were conducted in spring 2011 to explore the relationship between point of service quality, levels of student engagement, and program outcomes

Findings for Year 2 of the evaluation will be presented in a report submitted to TEA in August of 2012.

Organization of the Report

The current interim evaluation report presents findings from data collected in the spring of 2011 on Cycles 5 and Cycle 6 grantees and programs. The next section of the report describes the methods used in collecting these data. Following this, evaluation findings are presented. The findings are organized as follows: key grantee and center characteristics; within-program characteristics and outcomes; program quality related to recruitment and enrollment; support for academic skill-building; support for youth development; connecting with partners, families, and the community; staff development; and program activities. Conclusions and next steps in the evaluation are presented in the final chapter.

Chapter 2:
Data Sources and Methods

Data collected during the spring of 2011 were obtained from seven primary sources, which included surveys, interviews, observations, and focus groups. Each source and how it contributes to the broader evaluation effort is described below.

Site Coordinator Survey

An online survey of the site coordinators of the Cycle 5 and Cycle 6 ACE programs was administered between March and June 2011.[22] The site coordinator was defined as the individual at a given center who is responsible for the day-to-day operations of the program and is the initial point of contact for parents when questions or issues arise.

A total of 589 site coordinator surveys were administered.[23] Completed surveys were received from 519 site coordinators, for a response rate of 88%. The survey addressed the extent to which centers engaged in practices that the research indicates are supportive of effective afterschool programming, and perceptions of innovative strategies that facilitate the CSFs, which in turn can lead to student success. A number of the survey items were organized around the following subscales:

- Program objectives
- Activity enrollment policies and recruitment approaches
- Access to and use of student data
- Linkages to the school day
- Staffing approach and challenges
- Other operational challenges
- Intentionality in activity and session design
- Opportunities for youth ownership
- Internal communication designed to support program development and improvement
- Practices supportive of cultivating effective partnerships
- Practices supportive of parent involvement and engagement
- Reflections on the efficacy of technical assistance and professional development offerings provided by TEA and its contractor, Edvance Research, Inc.

[22] There were a total of 602 programs associated with Cycle 5 and Cycle 6 grants active during the 2010-11 programming period.
[23] Some site coordinators did not receive the request to complete the survey because of staffing changes or incorrect contact information.

Site Visits

During the spring of 2011, data were collected from 40 ACE programs funded in Cycle 5 and Cycle 6. In April and May 2011, the evaluation team from Gibson Consulting conducted two-day site visits to each of the 40 programs. The site visit sample was selected randomly based on the following criteria:

- *Grade Level Served.* ACE programs serving elementary, middle, and high school students were represented in the sample.
- *Feeder School Performance on State Assessments in Reading and Mathematics.* Given that the focus of the 21st CCLC initiative is on improving student proficiency in reading and mathematics, selected programs spanned the achievement spectrum in these subject areas. In cases where programs served multiple schools, a weighted average was calculated to account for the proportion of ACE program participants who attended a particular feeder school during the school day.[24]
- *Rural/Non-Rural Status.* Rural afterschool programs face a different set of issues around afterschool programming than urban programs, including access to partnerships, staffing, recruitment strategies, and even program goals and objectives (Naftzger, Margolin, Kaufman, & Ali, 2006). Because of these differences, both rural and non-rural programs were adequately represented in the site visit sample.

The primary purpose of the site visits was to learn how program quality varied among the Cycle 5 and Cycle 6 ACE programs. The spring site visits allowed the evaluation team to explore program quality and the program operations and activities that differentiated "good" and "poor" programs. By observing a range of programs, it was possible to identify the practices that drove quality in some programs, but were absent in others programs. This enabled the evaluation team to put innovative practices in context and articulate how programs function when characteristics related to quality are absent. This exploration was anticipated to be useful for Year 2 of the evaluation for which the focus is on practices and characteristics of programs whose operations and activities are determined to be of high quality.

The types of data collected in the spring of 2011 from the 40 centers are described in greater detail in the sections that follow.

[24] The success of 21st CCLC programming is contingent upon both identifying the academic needs of participating students and crafting programming in intentional ways to specifically address these needs and employing a service delivery approach that is developmentally appropriate and engaging for participating youth. As a consequence, the nature of programming is expected to be different from one program to another, significantly informed by the academic needs of participating students. In this regard, it was important to consider feeder school performance when constructing the site visit sample.

Staff Survey

The purpose of the online staff survey was to obtain information from frontline staff in the 40 site visit centers who work directly with youth. A particular focus of the survey was on practices that support both positive academic outcomes and youth development outcomes.[25] Like the site coordinator survey, the staff survey included items associated with a given scale, as well as open-ended questions. Scales appearing on the survey included the following:

- Program objectives
- Creation of interactive and engaging settings for youth
- Intentionality in activity and session design
- Practices supportive of academic skill-building, including linkages to the school day and using data on student academic achievement to inform programming
- Practices supportive of positive youth development
- Opportunities for youth ownership
- Internal communication designed to support program development and improvement
- Training participation.

A total of 576 staff surveys were administered between April and June 2011. Completed surveys were received from 465 center staff, for a response rate of 81%. The number of completed staff surveys received per center ranged from one to 26, with an average of 12 completed surveys per center.

Site Coordinator Interviews

During the April and May 2011 site visits, at each of the 40 centers, the site coordinator was interviewed on the first day of the two-day site visits. The interview protocol contained a series of questions designed to assess the extent to which the site coordinator and center staff had adopted policies and practices that the afterschool research literature (e.g., Durlak & Weissberg, 2007) suggests are associated with the achievement of desired youth outcomes; and are components of the CSM framework adopted by TEA. Topics addressed included:

- Program goals and objectives
- Intentionality in program design
- Linkages to the school day
- Youth-centered policies and procedures
- Staff development
- Leadership support
- Data use
- Partnerships

[25] These practices were identified through a review of the research literature on afterschool programming.

Staff Focus Group

Similar to the staff survey, the staff focus group protocol focused on program policies and practices that the afterschool research literature suggested are associated with the achievement of desired youth outcomes and are components of the CSM framework adopted by TEA. The focus group provided opportunities for staff to describe the ways in which the following were addressed in the program:

- Academic skill-building
- Youth engagement and leadership
- Staff involvement in decision making
- Staff development
- Partnerships
- Youth outcomes
- Innovative, effective ways to engage youth.

Staff focus group data were collected from 38 of the 40 centers, with one site ending programming before the staff focus group could be conducted and one focus group not occurring as scheduled. Between two and six staff members participated in each of the focus groups (also conducted in April and May 2011).

Observations

Program activities were observed on each day of the two-day site visits. Two discrete activities were observed each day: one with an intentional focus on academic content (e.g., homework help, tutoring, reading or mathematics enrichment, etc.) and one with a less overt focus on academic content (e.g., art classes, service learning, theater, etc.). A total of 157 activities were observed.

Three observation instruments guided each observation: the Youth Program Quality Assessment / the School-Age Program Quality Assessment (PQA); portions of the Assessment of Afterschool Practices Observation Tool (APT-O) that address academic content; and the Observation of Child Engagement (OCE).

The Youth PQA is a validated instrument for observing program activities that serve youth in Grades 4–12, and the School-Age PQA is used to observe activities that serve youth in Grades K–6. The tools were developed by the High/Scope Educational Research Foundation and currently are supported by the Weikart Center, a partner on this project. Both versions of the PQA measure afterschool programming at the point of service, where youth and program staff intersect for instruction and learning. Constructs represented on the tool pertain to how supportive, interactive, and engaging the activity is for participating youth; the extent to which desired pedagogical methods are demonstrated by staff; and the extent to which developmentally appropriate opportunities are afforded to participating youth. The Youth PQA served as the foundation of a large-scale afterschool program improvement intervention tested

in four states with funding from the William T. Grant Foundation that was found to significantly improve the quality of afterschool activities on the constructs measured by the Youth PQA (Smith et al, in review). It is currently the official quality assessment tool for 21st CCLC for several states. Some Texas grantees use the PQA as a self-assessment tool to guide program improvement efforts. [26]

The APT-O (http://www.niost.org/apt) is a comprehensive observation tool developed by the National Institute on Out-of-School Time for the Massachusetts Department of Elementary and Secondary Education. The tool was designed to support state efforts to improve 21st CCLCs. The APT-O was selected to supplement the PQA because it includes measures of skill-building in reading and mathematics. Although the APT-O addresses a number of afterschool quality constructs, only those scales related reading and mathematics skill-building were used for the spring 2011 observations.

The degree to which children are engaged in observed activities was assessed by trained raters using a modified version of the OCE (Rimm-Kaufman & Pianta, 2005), an adaptation of the NICHD Early Child Care Research Network Classroom Observation Scale. The measure consists of five items, *engagement, attention, self-reliance, compliance,* and *disruptive behavior.* Each was rated on a four-point Likert-type scale. The OCE was selected because it provides a behavioral measure of student engagement that is more context-specific and emergent than the other two instruments. The OCE was used to identify episodes during the observed activities in which students were actively engaged in program activities, and then document corresponding instructional practices, grouping strategies, and interactions, and learning opportunities. Observers rated student engagement, and also completed an observation narrative, in which they recorded instructor and student activities, and quotations which illustrated the interactions among students and between the students and instructor.

Twenty of the 40 site visits conducted during the spring of 2011 employed two observers on the first day of the site visit. This allowed the evaluation team to use statistical techniques to quantify individual observer bias (i.e., is an observer systematically more lenient or severe when completing ratings?) and adjust observation scores on the PQA to account for that bias, resulting in a better measure of the quality of the activity observed. This approach was only used with the PQA dataset given that the PQA served as the foundation protocol for conducting activity observations, and the APT-O and OCE were considered as supplemental tools. Also, the resources available to conduct the evaluation were not sufficient to have multiple raters jointly score the APT-O and OCE.

Student Surveys

Observations of activities serving students in Grades 4 and above included an end-of-session student survey addressing student engagement during the observed session. The survey is similar to one employed by Shernoff and Vandell (2007), and includes eight questions on students' concentration, enjoyment, and interest during the session. Students report on the

[26] See http://etools.highscope.org/pdf/YouthPQA.pdf for information regarding the Youth PQA. See http://www.arbetterbeginnings.com/downloads/SAToolkit/EA7.pdf for sample items from the School-Age PQA. .

extent to which they had concentrated on the tasks associated with the activity, how much they enjoyed participating, and their degree of interest in the activity. The survey assesses a cognitive, as opposed to a behavioral, definition of engagement, and relies on self-report rather than an observer (using the OCE) scanning for and recording engagement levels of participating youth. In total, 1,224 student surveys were collected on 128 activities provided at 34 centers in April and May 2011. An average of 10 student surveys per activity were collected.

Administrative Data Maintained by TEA

In addition to new data collection activities undertaken by the evaluation, a substantial amount of information housed in TEA's administrative data systems was obtained to support the evaluation. Each of the systems and how they were used are described in greater detail.

TX21st CCLC Student Tracking System (TX21st)

TX21st is a web-based data collection system developed and maintained by TEA to report required data into the federal 21st CCLC Profile and Performance Information Collection System (PPICS) database. TX21st collects data on a broad array of program characteristics, student demographics, program and activity attendance, and student outcome data (including information on student grades) directly from grantees throughout the program year. Data extracted from the tracking system were used to construct variables summarizing the activity and staffing models employed by centers, program maturity and organization type, the demographic make-up of the student population served, and levels of program attendance. Many of the variables used in analyses that assess the relationship between program and student characteristics and student outcomes were derived from TX21st.

Additional TEA Data

Both the within-program and impact analyses described in this report used Texas Assessment of Knowledge and Skills (TAKS) scale scores in reading and mathematics as outcomes. These analyses also included variables on student demographics, discipline incidents, school-day attendance, advanced course/dual enrollment completion, and grade promotion from the Public Education Information Management System (PEIMS). Campus-level performance data from the Academic Excellence Indicator System (AEIS) was needed to support the sampling of centers for the spring 2011 site visits.

21st CCLC Profile and Performance Information Collection System (PPICS)

PPICS is a web-based data collection system developed and maintained by AIR on behalf of the United States Department of Education. Data on the full domain of 21st CCLC programs funded nationally, including those in Texas, are collected through this system. To meet federal reporting requirements, TEA extracts data from the TX21st and uploads it to PPICS annually.

Data on ACE program partners were extracted from the PPICS system to support various evaluation analyses.[27]

Summary

As noted in the introduction to this section, numerous and varied data sources and methods were used to gain general knowledge about the ACE programs. More specific information on center operations, policies, and practices were collected from 40 centers through site visits (which included interviews, focus groups and observations) and staff surveys. The next section of the report describes the characteristics of grantees and centers funded in Cycle 5 and Cycle 6. The next chapter is informed by the data sources and methods targeting all of these programs, the site coordinator surveys and TEA administrative data.

[27] AIR maintains the PPICS data collection system through a contract with the U.S. Department of Education. In some instances, it was more cost efficient to extract and use data from PPICS as opposed to asking TEA to extract essentially the same data fromTX21st.

Chapter 3:
Characteristics of Grantees, Centers, and Students

Related to Research Objective 1, a primary objective of the evaluation is to examine the relationship between key grantee and center characteristics and the programs' impact on student achievement and behavioral outcomes. In this report, the term *grantee* refers to the organization that serves as the fiscal agent on the 21st CCLC grant while the term *center* refers to the physical location where grant-funded services and activities take place. Centers are characterized by defined hours of operation; they have a dedicated staff, and are required to have a position akin to a site coordinator. Each ACE grantee in Texas must have at least one center and may have up to 20 centers.

The center characteristics can be classified into two categories: a category related to and indicative of research-supported best practices, and a category related to the innate attributes of the center and independent of (or loosely connected to) the afterschool quality practice literature, such as grade level served, program maturity, or organizational type. For example, being a program that only serves elementary students says nothing about the quality of the program, although in this report differences on quality among programs serving elementary, middle, and high school students are described.

From a quality standpoint, certain characteristics like the activity type (e.g., mostly tutoring, mostly academic enrichment) and program staffing model are somewhat ambiguous because the literature is unclear on their effectiveness. Preliminary results of some studies show there may be advantages to certain types of activities (i.e., tutoring) and staffing models (i.e., a program staffed mostly by school-day teachers), but the manner in which the studies collected and processed data does not support robust casual inferences about the viability of one approach over another (Naftzger, Vinson, & Swanlund, 2011; Naftzger, Vinson, Manzeske, & Gibbs, 2011). Some SEAs prefer that certified teachers staff academic activities offered by afterschool programs. The analyses conducted for this report aim to contribute to a shared understanding as to whether or not certain center characteristics are associated with positive youth outcomes and warrant consideration as a practice or condition worthy of emulation and replication.

In the sections that follow, information on the characteristics of 21st CCLC grantees and centers is based on data from the TX21st, PPICS and PEIMS. The characteristics that were examined include:

- The type of organization managing the ACE program
- The maturity of the program (i.e., how long they have been operating as an afterschool program)
- The staffing model employed by the grantee (e.g., mostly school-day teachers, mostly college students, and mostly youth development workers)

- The goals and objectives being pursued by the ACE program
- The program model employed by the grantee (e.g., mostly tutoring and homework help as opposed to an emphasis on offering arts enrichment activities)
- The manner in which programs seek out and structure collaborative relationships with families, school, community-based organization, and the broader local community
- The target population served by the program, including student grade level, ethnicity, Limited English Proficiency status, lunch subsidy status, and attendance levels.

Data were examined over a series of program years, 2006–07 to 2010–11, to document the relative stability of certain program characteristics. Data obtained from new data collection activities were integrated wherever appropriate to triangulate findings. In addition, the new data were summarized to explore how adoption of certain practices varies by subgroup (grantee type, staffing model, grade level served, and program maturity), and, from the site visit data, to identify examples of best and promising practices.

Grantee and Center Characteristics

A total of 239 ACE grantees administered ACE programs in Texas during the 2006–07 to 2010–11 period, with the number per cycle ranging from 27 (Cycle 5) to 61 (Cycle 6).[28] As reported in TX21st, 33 programs were funded in Cycle 1, 36 in Cycle 2, 51 in Cycle 3, 31 in Cycle 4, 27 in Cycle 5, and 61 in Cycle 6. Grantees were funded for five years.

Grantee Organization Type

ACE programs may be administered by several types of grantee agencies. The most relevant distinction is whether or not the grantee organization is a school-based entity. Among the 239 grantees with active centers during 2006–07 to 2010–11, 80% were awarded to a school-based entity, either a school district or charter school. Only 11% of grants were awarded to community-based organizations or non-profit organizations, such as Boys & Girls Club or YMCA/YWCA, and 6% were awarded to other education agencies, e.g. regional or intermediate agencies. Very few, 3%, were awarded to grantees that were not in one of these categories.

Number of Centers

The number of centers in operation across Texas has ranged from a low of 587 (2006–07) to a high of 727 (2010–11). In 2007–08, 617 centers were operating; in 2008–09, 695 centers were operating; and in 2009–10, 642 centers were operating.

Center Locale

Almost all Texas ACE programs are on a school campus despite many of the funded grantees are other types of organizations (such as non-profit and community-based organizations). From

[28] Although TEA has awarded 241 grants since 2003–04, this count only reflects the number of grantees with active centers between 2006–07 and 2010–11.

2006–07 through 2010–11, 98% to 100% of the program services and activities occurred on a school campus.

Center Maturity

Center maturity is examined in the evaluation because of the likelihood that the more mature centers may provide higher quality services, adapt more readily to budget reductions, and have planned to sustain the programs after the grant funding ends. In any program year, new as well as mature centers provide services. As Table 2 shows, 40% of the centers operating in 2010–11 are in their second year of operation and 31% are in their third year of operation. Only in 2007–08 were the majority of programs in their fourth or fifth year of operation.

Table 2. Percentage of ACE Programs Operating in Years 2006–07 to 2010–11

Year of Operations	2006–07	2007–08	2008–09	2009–10	2010–11
First Year	16%	5%	33%	45%	12%
Second Year	0	15%	5%	35%	40%
Third Year	60%	0	13%	5%	31%
Fourth Year	24%	57%	0	14%	5%
Fifth Year	0	23%	49%	0	13%
Total	587	617	695	642	727

Source: TX21st

Centers by Grade Levels Served

A topic garnering increasing attention at the national level relates to the role that grade level plays both in terms of how ACE programs should structure their operations and program activities, and the outcomes for which they should be accountable through performance indicator systems. Using student-level data about the grade level of students attending a program, ACE programs were classified as follows:

- *Elementary only*, centers serving students up to Grade 6
- *Elementary/middle school,* centers serving students up to Grade 8
- *Middle school only*, centers serving students in Grades 5–8
- *High school only*, centers serving students in Grades 9–12
- *Other*, centers that did not fit one of the other five categories.

The *high school only* category is especially important to examine because afterschool programs for older children often look considerably different from elementary or middle school programs

(Naftzger et al., 2007). High school students have different needs from younger students, and they often have other afternoon obligations, such as jobs or extracurricular activities.

Over the 2006–07 to 2010–11 period, there were many more centers serving elementary and middle school students (approximately 80% in any given year), than there were programs serving high school students. The majority of ACE programs served students within a particular grade range, for instance only elementary grades (36% to 41% from 2006–07 to 2010–11), only middle school grades (39% to 44%), or only high school grades (14% to 19%). Only a small proportion of programs served students across multiple grade ranges, such as elementary and middle school grades, or across all grade ranges, as shown in Table 3.

Table 3. Grade Levels Served by ACE Programs, 2006–07 to 2010–11

	2006−07	2007−08	2008−09	2009−10	2010−11
Elementary	32%	35%	33%	34%	35%
Middle School	14%	13%	21%	23%	22%
High school	7%	6%	10%	14%	13%
Elementary and Middle School	31%	30%	23%	16%	16%
Elementary and High School	1%	1%	1%	1%	1%
Middle and High School	8%	9%	7%	7%	8%
All Grades	8%	7%	6%	5%	5%
Total Number of Programs	587	617	695	642	727

Source: TX21st

Staffing

The quality of center staffing is crucial to the success of afterschool programming (Vandell et al., 2005), and many of the program improvement approaches being used in the field emphasize the importance of staff for creating positive developmental settings for youth. The success of afterschool programs is critically dependent on students forming personal connections with the staff—especially for programs serving older students, where a much wide spectrum of activities and options is available to youth (Eccles & Gootman, 2002).

Like their counterparts nationally, ACE programs employ a variety of staff, including academic teachers, non-academic teachers, college and high school students, counselors, paraprofessionals from the school day, and other program staff with a wide spectrum of backgrounds and training. To summarize the different staffing models used by programs during the 2006–07 to 2010–11 program years, centers were classified into groups or clusters based

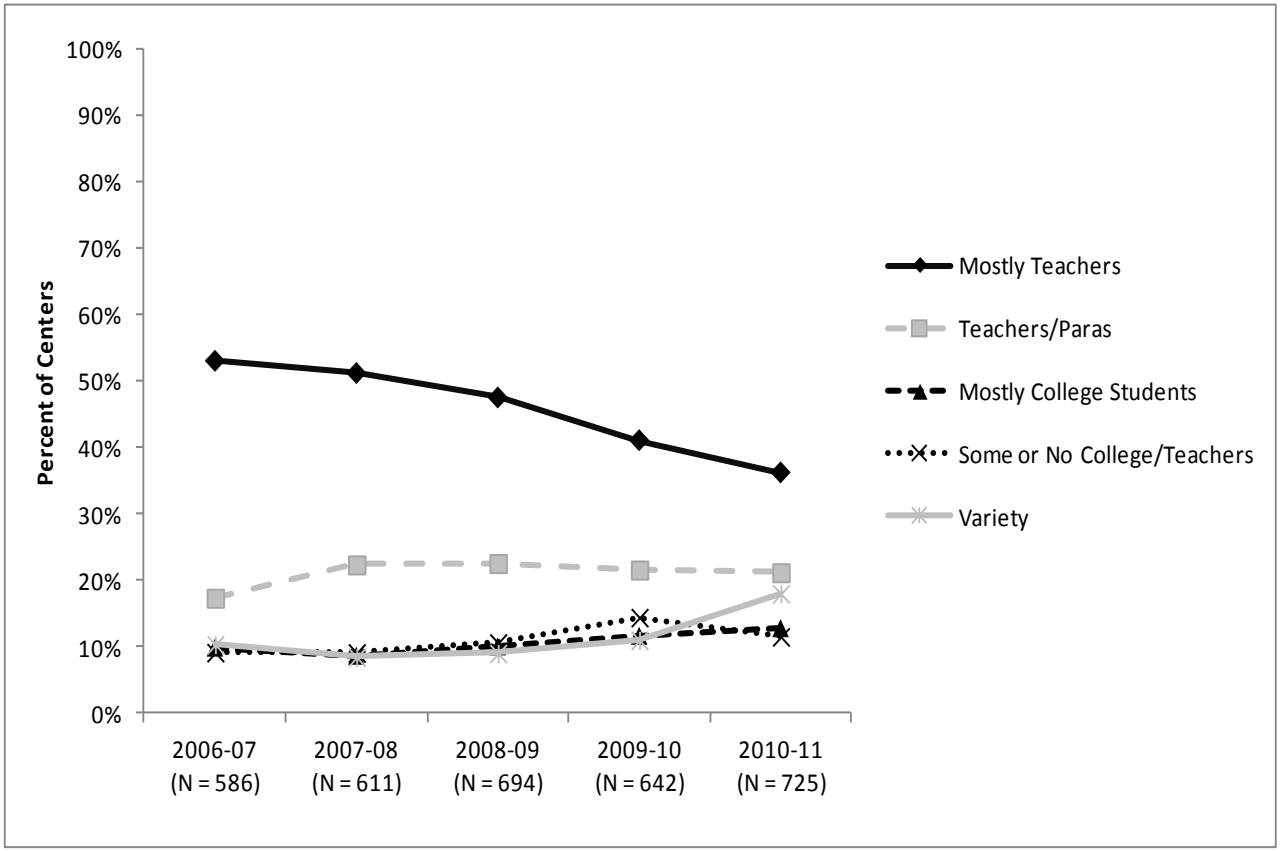
on the extent to which they relied on different types of staff to deliver activities, using cluster analysis techniques.[29] Data used to construct these clusters were obtained from TX21st. Figure 1 presents the five primary staffing models that were identified in the programs:

- *Centers staffed mostly by teachers*. On average, 67% of the staff associated with centers in this cluster were academic teachers.
- *Centers staffed mostly by teachers and paraprofessionals*. On average, 37% of the staff associated with centers in this cluster were academic teachers and 31% were paraprofessionals.
- *Centers staffed mostly by college students*. On average, 64% of the staff associated with centers in this cluster were college students.
- *Centers staffed mostly by program staff with some or no college and teachers.* On average, 38% of the staff associated with programs in this cluster were program staff with some or no college and 25% were teachers.
- *Centers staffed by a variety of staff types*. On average, academic teachers represented the staffing category with the highest percentage of staff among centers in this cluster at 20%.

As shown in Figure 1, ACE programs operating between 2006–07 to 2010–11 were most apt to be classified in the *mostly teachers* or the *variety* clusters. The percentage of centers employing a *mostly teachers* staffing model has been on a consistent decline since 2007, falling from 53% of centers in 2007 to 36% of centers in 2011. Between 2010 and 2011, the percentage of centers falling in the *variety* cluster, where teachers are significantly less represented, increased from 11% to 18%. This may be due to the fact that the percentage of grants won by school districts in a given cycle declined between Cycles 1–3 and Cycles 4–6, and suggests that nonschool-based grantees are less likely to heavily rely on school-day teachers to staff programs. This trend may have implications for the orientation, induction, training, professional development, and scaffolding provided to non-certified staff, particularly with respect to designing and providing programming that is linked to the school day.

[29] Cluster analysis is typically employed to combine cases into groups using a series of variables as criteria to determine the degree of similarity between individual cases. Cluster analysis is particularly well-suited when there is a desire to classify a large number of cases into a smaller domain of discrete groupings.

Figure 1. Percentage of ACE Programs by Staffing Cluster Type, 2006–07 to 2010–11



Source: TX21st

Themes and Concerns Related to Staffing

Open-ended survey responses of site coordinators at ACE programs were analyzed to identify the themes and concerns related to staffing. The majority of site coordinators reported no or few problems related to staffing. The most prevalent concerns written by site coordinators are presented below.

Having Little Time for Staff to Meet and Plan

On the site coordinator survey, coordinator responses show that for some of the ACE programs, staff, school, and program schedules make it difficult for staff members to meet and plan. Sixty-four site coordinators wrote comments on these issues. The main issues cited were:

- When teachers are from the campus, they go directly from their regular school day responsibilities to the after school program, and have no time to meet in-between. A site coordinator wrote, “The only staffing challenges include holding an all-staff meeting. Teachers are teaching during the day and holding programs in the afternoon.”
- Because of schedules, it is difficult to have non-campus and campus staff meet. A site coordinator wrote, “It is a challenge to get the youth development leaders and regular

teachers at a weekly and/or monthly meeting at the same time. Thus, it is hard for everyone to be on the same page and/or have their voice heard by everyone."

- Non-campus staff members may come to the campus on different days of the week, and are not available on the campus at the same time.
- Local grant guidelines or policies affect staff meeting for some programs. A site coordinator wrote, "Sometimes our grant only allows us to pay for staff when they are face to face with students and not for staff meetings. Therefore staff meetings are voluntary."
- For some of the teachers, there is little time is available for after school teachers to develop lesson plans. A site coordinator wrote, "The major staffing challenge we have had is staff not having enough time to do their lesson plans - especially our certified teachers who have to plan their work day and then get ready for the afterschool day." Another site coordinator wrote, "A particular challenge for our staff is that they would like to have more planning time in order to facilitate more ambitious activities."

Activity Sessions Not Fully Staffed

Fully staffing the program sessions was addressed in the open-ended responses of 60 site coordinators. A typical result of not being fully staffed is having too high a student to teacher ratio (mentioned by 35 site coordinators) during sessions. As a site coordinator wrote, "The student ratio to teacher sometimes exceeds the ratio set by the grant. We are trying to hire other staff members to better spread the student ratio."

Finding and retaining qualified staff was reported as challenging for three primary reasons. First, some centers have not been able to hire staff or the right staff for the program design, mentioned in 16 written responses. Second, the centers have experienced staff turnover, mentioned in responses of 37 site coordinators. Third, the staff that are hired are not able to attend all of the afterschool program sessions, mentioned in 46 responses.

A site coordinator wrote that hiring is particularly difficult for rural programs: "I think because we are a rural community, it is hard to find interested and qualified people." Another site coordinator said when a program offers numerous enrichment opportunities, then the program has "an abundance of staff in one area and not enough staff in another."

A number of site coordinators (16) addressed staff turnover in their written comments. The comments suggest that staff turnover is mainly due to low wages and too few hours, and to campus teachers becoming busy and/or worn down as the school year progresses. A site coordinator wrote, "We have lost staff to full time positions or other positions that pay more money. With the turnover, it is hard to find qualified people to fill the position and then to find the time to train them since we seem to always be short staffed." Another site coordinator wrote, "One challenge is hiring staff for a part time professional position. It is tough to find individuals to survive on this pay." One site coordinator stated that teachers burn out when working both during the regular school day and after school, adding, "Burnout is high as TAKS time approaches and passes." Another site coordinator wrote, "A problem we have is that with our core subject teachers, TAKS plays an important role in losing teachers. They also have a lot of

work such as grades, lesson plans, etc. also - this plays a huge role in losing or not being able to hire enough staff."

Even when fully staffed, site coordinators wrote that staff may not be able to cover afterschool sessions. The after school position is typically a second job or non-primary responsibility for day school teachers, college students and volunteers. A site coordinator wrote, "I run into problems when teachers are attending staff meetings or department meetings after school." Another site coordinator wrote, "This is a second job for most of the staff and at times it is hard to get them to take it as seriously as their normal school day job." Site coordinators pointed out similar problems with non-campus staff members. A site coordinator wrote, "The major staffing challenges arise because some of our staff currently attend college. Sometimes their class schedule conflicts with our program schedule. Another challenge is when our volunteers have commitments with their jobs and are not able to provide their services."

Program Objectives

From a legislative standpoint, the overarching goal of the national 21st CCLC program is to support student growth and skill development in English Language Arts (ELA)/reading, mathematics, and other academic-related behaviors. It is common, however, for 21st CCLC grantees and program staff to consider their programs in a more holistic, comprehensive light; and pursue a wider domain of objectives, including enhancing the social-emotional development of youth and keeping youth in a safe environment afterschool. One of the primary sources of how ACE program staff perceived the goals and objectives of the programs they worked in during the 2010–11 program year were site coordinator and staff surveys, which included a series of questions on program objectives.

On the site coordinator survey, respondents were asked to choose their top three priorities from a list of nine possible program objectives.[30] The objective most frequently selected as a program's top priority was *raise the academic performance levels of any students who have an interest in participating* (endorsed by 35% of respondents) followed by *enable the lowest-performing students to achieve grade-level proficiency* (endorsed by 25% of respondents). The least endorsed option was *prepare students for college and work* (endorsed by only 1% of respondents as their top priority).

Similar results were found on the staff survey, indicating agreement on program goals and objectives during 2010–11. Afterschool program staff were presented with all nine objectives and were asked to specify if a given objective was *not an objective*, a *secondary objective*, or a *primary objective.* Here, 83% of respondents indicated that efforts to *raise the academic performance levels of any students who have an interest in participating* was a primary objective

[30] Objectives listed on the site coordinator survey included the following: (1) Enable the *lowest-performing* students to achieve grade-level proficiency; (2) Raise the academic performance levels of *any* students who have an interest in participating; (3) Provide supervised space for students to complete homework; (4) Provide opportunities for students to participate in activities not offered during the school day; (5) Provide students with access to academic enrichment opportunities; (6) Enhance the social or civic development of students; (7) Enhance the artistic development of students (e.g., visual and performing arts, etc.); (8) Provide students with the opportunity to participate in sports and recreation activities; and (9) Prepare students for college and work.

of their program, and 75% indicated that efforts to *enable the lowest-performing students to achieve grade-level proficiency* was a primary objective.

Activities Offered

Nationally, the goal of the 21st CCLC program is to provide academic and non-academic enrichment programs that reinforce and complement the regular academic program of participating students. This overarching charge is broad and encompasses a host of different types of activities, including the following types that are tracked in TX21st by category (note that per the PPICS system, these are required data collection categories):

- Academic enrichment learning program
- Recreational activity
- Homework help
- Supplemental Education Services tutoring
- Activity to promote youth leadership
- Expanded library service hours
- Drug/violence prevention, counseling, or character education
- Career/job training
- Promotion of family literacy
- Mentoring
- Community service/service learning
- Promotion of parent involvement
- Other (e.g., activities involving computers and technology, life skills, nutrition, etc.)

Data from each center were used to compute the total number of hours each type of activity was offered during the program year. (The data fields were only available from 2006–07 to 2009–10 at the time this report was written.) The proportion of hours dedicated to each type of activity were consistent across all program years. Table 1 shows that approximately 40% of program hours were spent on academic enrichment programs, 25% on recreational activities, 15% on homework help, and 14% on tutoring. These were the 4 types of activities where over 10% of program time was focused.

Table 4. Percentage of Hours by Activity Category Offered at ACE Programs, 2007–08 to 2010–11

Activity Category	Avg.	2007–08	2008–09	2009–10	2010–11
Academic Enrichment Learning Program	**39%**	40%	40%	38%	38%
Recreational Activity	**25%**	24%	26%	26%	23%
Homework Help	**15%**	14%	15%	16%	17%
Supplemental Education Services Tutoring	**12%**	13%	14%	12%	10%
Other	**10%**	10%	12%	10%	7%
Activity to Promote Youth Leadership	**9%**	9%	10%	9%	8%
Expanded Library Service Hours	**9%**	8%	9%	10%	9%
Drug/Violence Prevention, Counseling, or Character Education	**8%**	7%	8%	8%	7%
Career/Job Training	**7%**	7%	7%	8%	6%
Promotion of Family Literacy	**7%**	7%	7%	5%	7%
Mentoring	**6%**	6%	8%	6%	5%
Community Service/Service Learning	**3%**	4%	3%	4%	3%
Promotion of Parental Involvement	**3%**	3%	3%	3%	4%

Source: TX21st

Center Activity Profiles

To better understand the activity categories offered by centers from 2006–07 through 2009–10, the center activity categories were analyzed using cluster analysis techniques (similar to techniques employed with the staffing data) in order to define activity profiles. Student-level attendance data (collected in TX21st) were used to calculate the percentage of total program hours allocated to each of the 13 activity categories (the percentage of a center's total activity hours dedicated to academic enrichment, tutoring/homework help, and other activities). Cluster analysis techniques identified five program activity profiles.

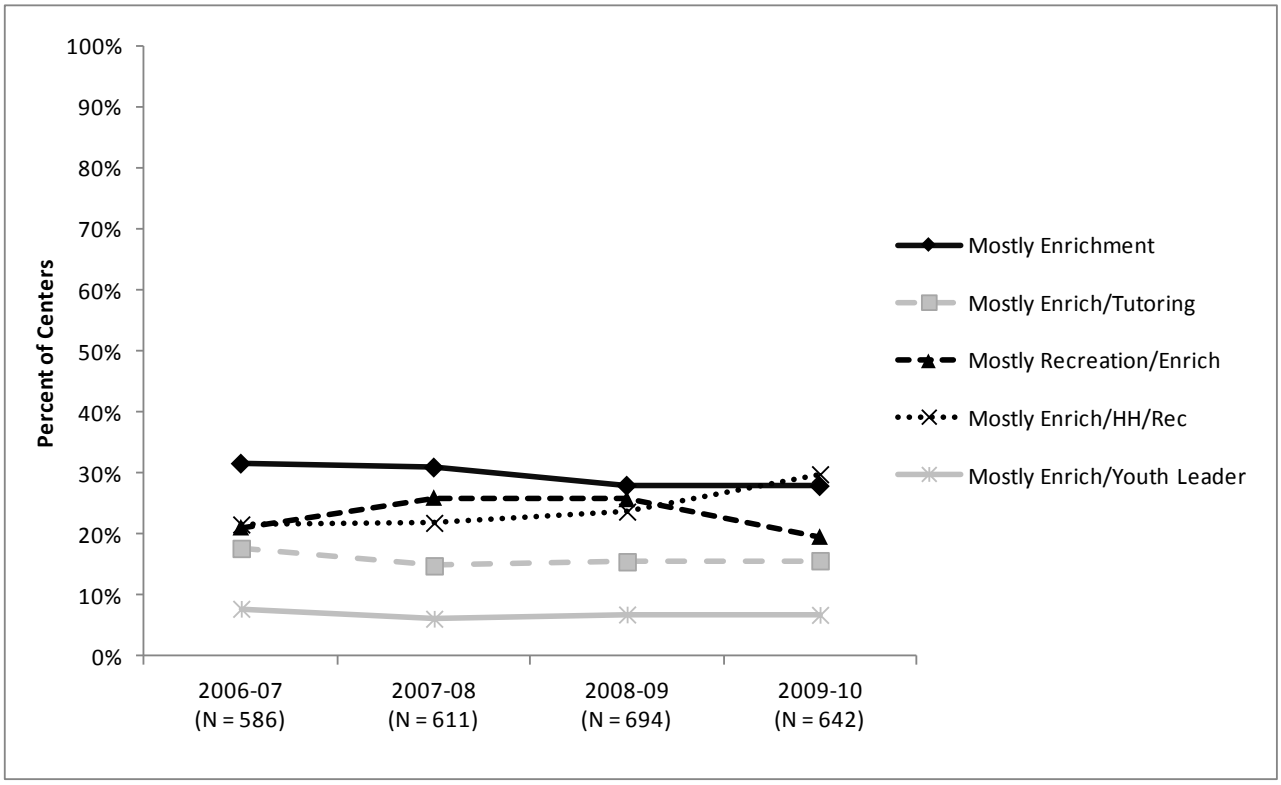
- *Centers providing mostly academic enrichment activities.* [31] On average, centers in this cluster allocated 62% of their time to academic enrichment.

[31] It is important to note that enrichment is not an activity category found in either the TX21st or PPICS. Enrichment activities like Arts Classes, Drama, or Music will get classified as either academic enrichment or recreation typically in these systems. Later in this report we will refer to non-academic enrichment activities, which distinguish arts, drama, and music activities from recreation activities.

- *Centers providing mostly tutoring and academic enrichment activities.* On average, centers in this cluster allocated 32% of their time to tutoring activities and 24% on academic enrichment.
- *Centers providing mostly recreation and academic enrichment activities.* On average, centers in this cluster allocated 47% of their time to recreation activities and 25% on academic enrichment.
- *Centers providing mostly academic enrichment, homework help, and recreation activities.* On average, centers in this cluster allocated 35% of their time to academic enrichment activities, 17% on homework help, and 17% on recreation.
- *Centers providing mostly academic enrichment and youth leadership activities.* On average, centers in this cluster allocated 22% of their time to academic enrichment and 23% on youth leadership.

As shown in Figure 2, the percentage of centers in each activity cluster type was quite consistent from one year to the next. Some shifts were witnessed during the 2009–10 program period when the percentage of programs in the *mostly recreation and academic enrichment* cluster declined from previous years, and the percentage of programs in the *mostly academic enrichment, homework help, and recreation activities* cluster increased. With the exception of 2009–10, in most years, more centers were in the *mostly academic enrichment* cluster than other clusters. In 2009-10, there were slightly more centers in the cluster providing mostly academic enrichment, homework help, and recreation activities. In each cluster, academic enrichment and support are primary components of the program.

Figure 2. Percentage of ACE Programs per Year by Center Activity Profile Cluster, 2006–07 to 2009–10



Source: TX21st

Partnerships

Encouraging partnerships between schools and other organizations is an important component of the national 21st CCLC program. Partners are defined as any organization other than the grantee that actively contributes to a 21st CCLC-funded program by providing staff, activities and programming, facilities, or other types of services that help the program meet its goals and objectives related to student growth and development. Many states require their grantees to have a letter of commitment from at least one partner in order to submit a proposal for funding.

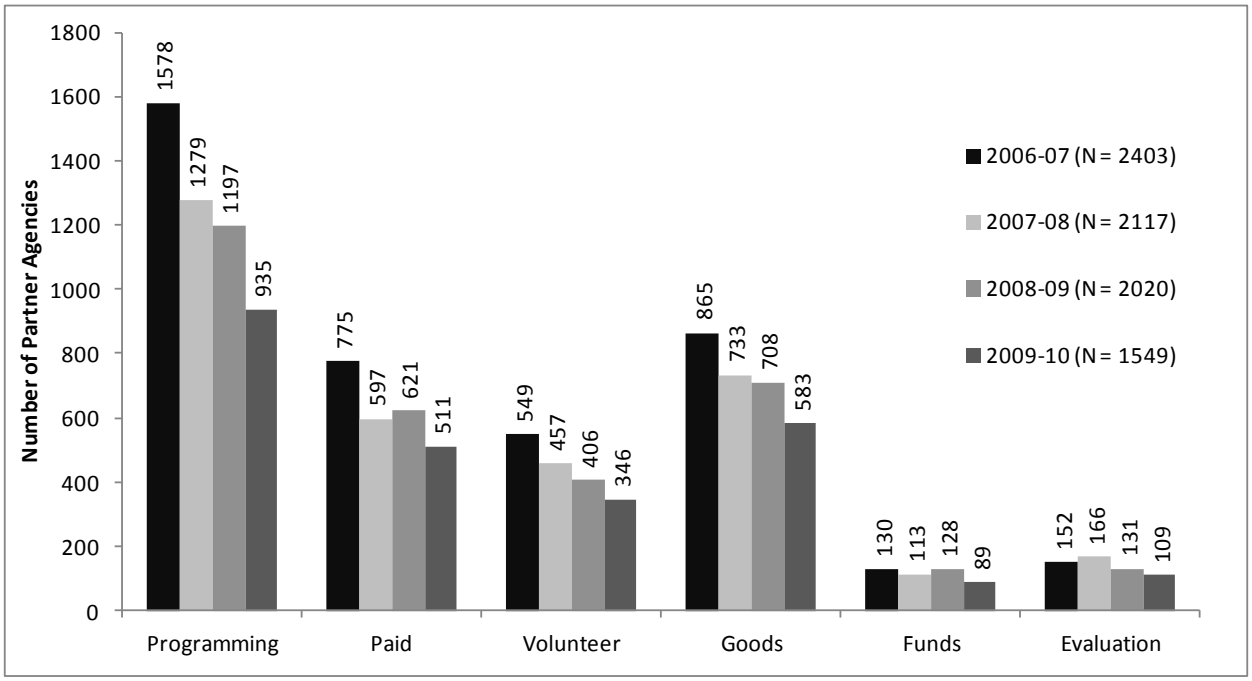
Partnerships provide grantees connections to the community and additional resources that may not otherwise be available. Partners may play a variety of roles in supporting a 21st CCLC-funded program, such as providing programming and staff, providing physical space and facilities, and fundraising. In many instances, partners can play a critical role in providing activities and services that the grantee lacks expertise or training in, thereby enhancing the variety of learning opportunities available to participating youth. Using data obtained from PPICS, Figure 3 shows the number of collaborators providing various types of services and activities for ACE programs during the 2006–07 to 2009–10 reporting periods, including the following, system-defined service types:

- Programming/activity-related services
- Paid staffing

- Volunteer staffing
- Goods/materials
- Funding/raise funds
- Evaluation services

As shown in Figure 3, across each of the programming periods, the services provided by the greatest number of partners was programming, followed by provision of goods and materials. Of some interest is that the number of partners associated with ACE programs has been declining steadily in each category of support since 2006–07.

Figure 3. Number of Partners by Services and Activities Provided in ACE Programs, 2006–07 to 2009–10

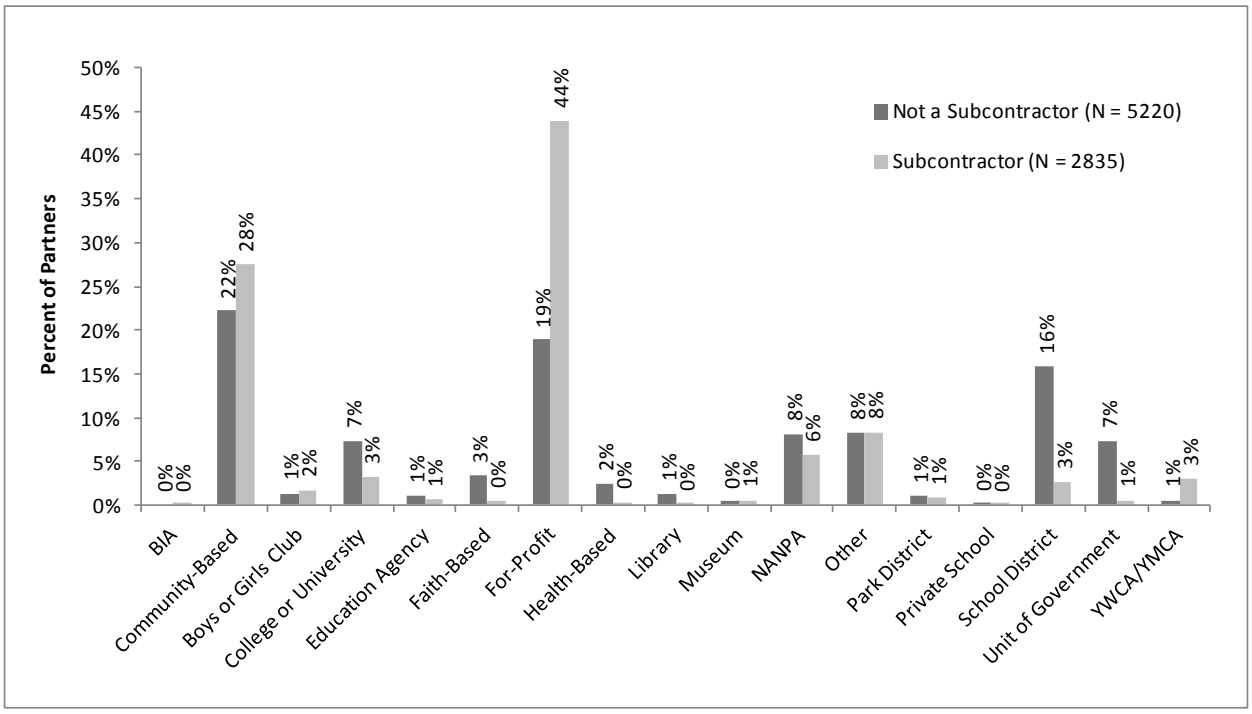


Source: PPICS

Like grantees, partners include a wide range of organization types, from community-based and faith-based organizations to units of local government and for-profit businesses and corporations. In PPICS (the source of data on partners), entities serving as subcontractors are also considered to be partners (i.e., entities that are being compensated from the 21st CCLC grant funds to provide programming or a service).

Figure 4 shows the types of partner organizations contributing to the ACE programs, and distinguishes subcontractors from non-subcontractors. Community-based organizations (CBOs) have played a prominent role in supporting ACE programs, accounting for 22% of total non-subcontractor partners and 28% of subcontractor partners. For-profit entities have also played a significant role in supporting the ACE programs, accounting for 19% of total non-subcontractor partners and 44% of partners with a subcontract.

Figure 4. Percentage of Partner Organization Types for ACE Programs, 2006–07 to 2009–10



Source: TX21st

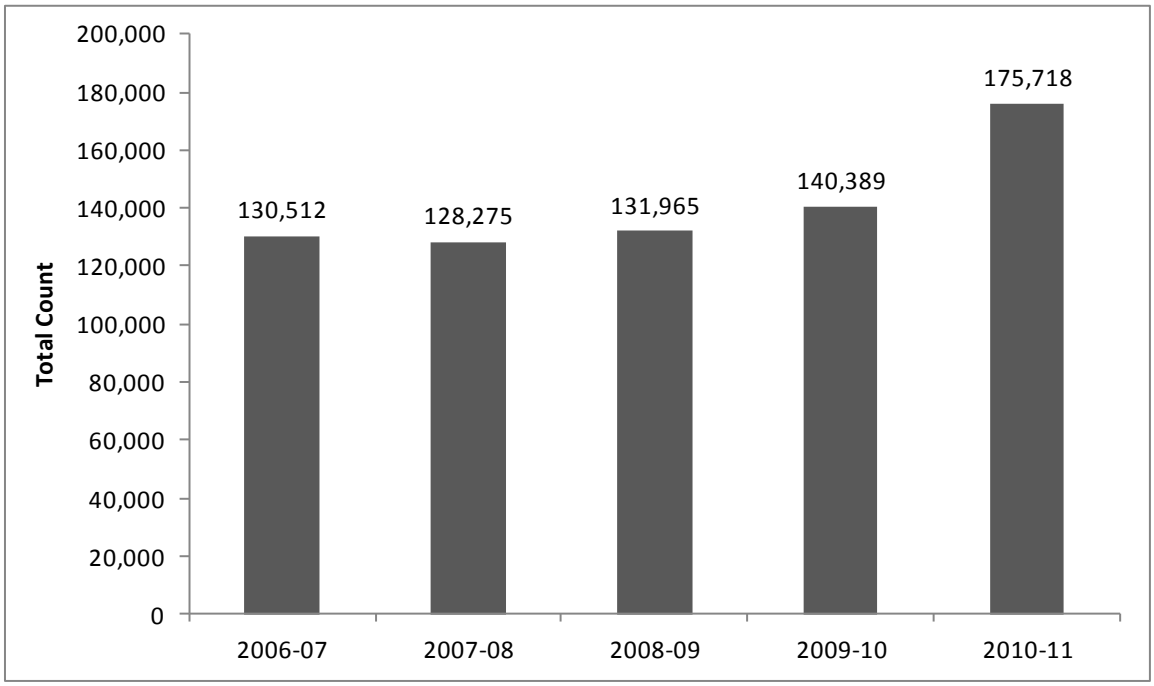
Student Characteristics

One way of assessing the reach of the ACE program is to examine the participation of students who have different needs and backgrounds. The following section describes demographic characteristics of students.

Total Number of Students Served by ACE Programs

The total number of students served by ACE programs remained mostly consistent from 2006–07 to 2009–10 when approximately 128,000 and 140,000 students were served each year. In 2010–11, the number of students served in ACE programs increased to over 175,000 as shown in Figure 5. This increase was likely due to policy changes adopted by TEA which clearly articulated the number of students that should be served by a program based on the funding received. The policy change raised the bar for programs receiving the highest level of funding.

Figure 5. Total Number of Students Served by ACE Programs, 2006–07 to 2010–11



Source: TX21st

Average Number of Students Served per Center

Overall, the average number of students served per program ranged from 193 per program in 2008–09 to 243 in 2010–11. (As noted earlier, there were more centers, 727, in 2010–11 than other years.)

Participant Race and Ethnicity

The race and ethnicity of students served by the ACE programs was very consistent from 2006–07 through 2010–11. Data from TX21st show that:

- Between 65% and 68% of student participants were Hispanic/Latino in each of the program years.
- Between 20% and 22% of students were Black/African American.
- Between 10% and 13% of participants were White.
- All other race and ethnicity categories (Native American, American Indian/Alaska Native, and two or more race/ethnicities) combined accounted for less than 1% of the total program student population in each year.

Limited English Proficiency

Given the very high proportion of students attending ACE programs who were Hispanic/ Latino, it is not surprising to find that almost 25% of participating students were identified as Limited English Proficient (LEP). The percentage ranged from 20% in 2009–10 to 27% in 2008,

according to TX21st. These percentages are based on students for whom this information was known, but it is important to note that data on LEP status for about 7% of the ACE students were missing in the TX21st system due to various factors including timing differences between the TX21st system and PEIMS data collections.

Lunch Subsidy Status

The vast majority of students participating in the ACE programs between 2006–07 and 2010–11 qualified for free or reduced price lunches based on family economic status. These percentages varied little over time, with approximately 82% to 85% of participating students qualifying for some lunch subsidies based on economic indicators (per TX21st).

Student Attendance Patterns

Attendance is an intermediate outcome indicator that reflects the potential breadth and depth of exposure of students to the afterschool programming. Three aspects of attendance are addressed: students' consecutive enrollment in the ACE programs from one year to the next, student activity attendance levels, and student activity profiles, which show the types of activities students participate in.

Consecutive Enrollment. A continuous enrollment variable was computed to determine how many years individual students were consecutively enrolled in an ACE program. Because student enrollment records were only available between 2007–08 and 2010–11 for Cycle 5 and Cycle 6 programs, consecutive enrollment could range from one to four years. As shown in Table 5, 71% of the students attended ACE programs for one year and 20% attended for two consecutive years. Few attended for a longer period of time.

Table 5. Students' Consecutive Years of Enrollment in ACE Programs, 2008–09 to 2010–11

	2008–09	2009–10	2010–11
Students in First Enrollment Year	56.3%	65.6%	71.4%
Students Enrolled 2 Consecutive Years	43.7%	17.6%	19.8%
Students Enrolled 3 Consecutive Years		16.8%	4.7%
Students Enrolled 4 Consecutive Years			4.2%

Source: TX21st

Note: It is important to note that years prior to 2007 were not examined, so the table does not take into consideration attendance in 21st CCLC prior to 2007.

Student Attendance Levels. Student-level participation data from TX21st (available for 2006–07 to 2010–11) were used to calculate the number of days students participated in two types of activities: those with an ELA/reading focus and those with a mathematics focus.[32] The total days

[32]It is important to note that data on student-level participation in activities obtained from the TX21st CCLC tracking system provided information about participation in the following domain of activity categories: (1) reading, (2) mathematics; (3) science; (4) social studies; (5) fine arts; (6) youth

per each activity type was summed across fall and spring semesters (summer session activity was computed separately), and then the days attending activities with an ELA/reading or mathematics focus calculated. Four attendance categories were then created: fewer than 30 days, between 30 and 59 days, between 60 and 89 days, and 90 days or more.

The percentage of students in each attendance category was very steady over the program years that were examined.

- *Fewer than 30 Days*. Between 70% and 72% of the students attended math activities 30 or fewer days. Between 66% and 70% attended ELA/reading activities fewer than 30 days.
- *Between 30 and 59 Days.* Twelve to 14% of students attended math activities between 30 and 59 days; 13% to 15% attended ELA/reading activities between 30 and 59 days.
- *Between 60 and 89 Days*. Seven percent of students attended math activities and 7% to 8% attended ELA/reading activities between 60 and 89 days.
- *90 Days or More.* Seven to 10% of students attended math activities 90 or more days; and 8% to 11% attended ELA/reading activities 90 days or more.

Across all program years examined, the majority of students attended 30 days or fewer of ELA/reading and/or math activities. It is important to note that the average total program days attended across all activities was 60 days per year. This suggests that for the majority of ACE students, fewer than half the days of attendance included participation in activities with an ELA/reading or mathematics focus. (Note that TEA staff indicated that activities reported in TX21st may be occasionally misclassified, possibly resulting in underreporting the program activities with an academic focus.)

Student Activity Attendance Profiles. Earlier sections of this report described various activity profiles of the ACE programs. For example, some of the programs had adopted a *mostly tutoring and academic enrichment* model and others a *mostly academic enrichment model.* Similar profiles were developed for students based on the extent to which students participated in different types of activities.

It is important to note that activity profiles do not represent actual students served by the ACE program, but serve as markers which can be used to determine if a student more closely resembles one type of student than another. Thus, in addition to identifying the two primary student activity profiles, the analysis allows students to be identified by the profile they most resemble. The activity profiles are useful because they help determine whether students within each profile type are associated with positive student achievement and behavioral outcomes, allowing a comparison of outcomes by profile.[33]

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development; (7) mentoring; (8) community service; and (9) service learning. Student participation in activities by category (i.e., academic enrichment, tutoring, homework help, etc.) was not available at the student-level for the period 2006-07 to 2009-10.

[33] To achieve this outcome, we employed a method called profile analysis via multidimensional scaling (PAMS) to identify the two most dominant, latent student activity profile types within the population of

The activity profiles were developed from attendance data showing the subject areas or focus of the activities students attended. These include activities with an academic focus (ELA/reading, mathematics, science, social studies, and fine arts) and a non-academic focus (youth development, mentoring, community service, and service learning). Two student activity profiles were created, with each profile being as different from one another as possible.

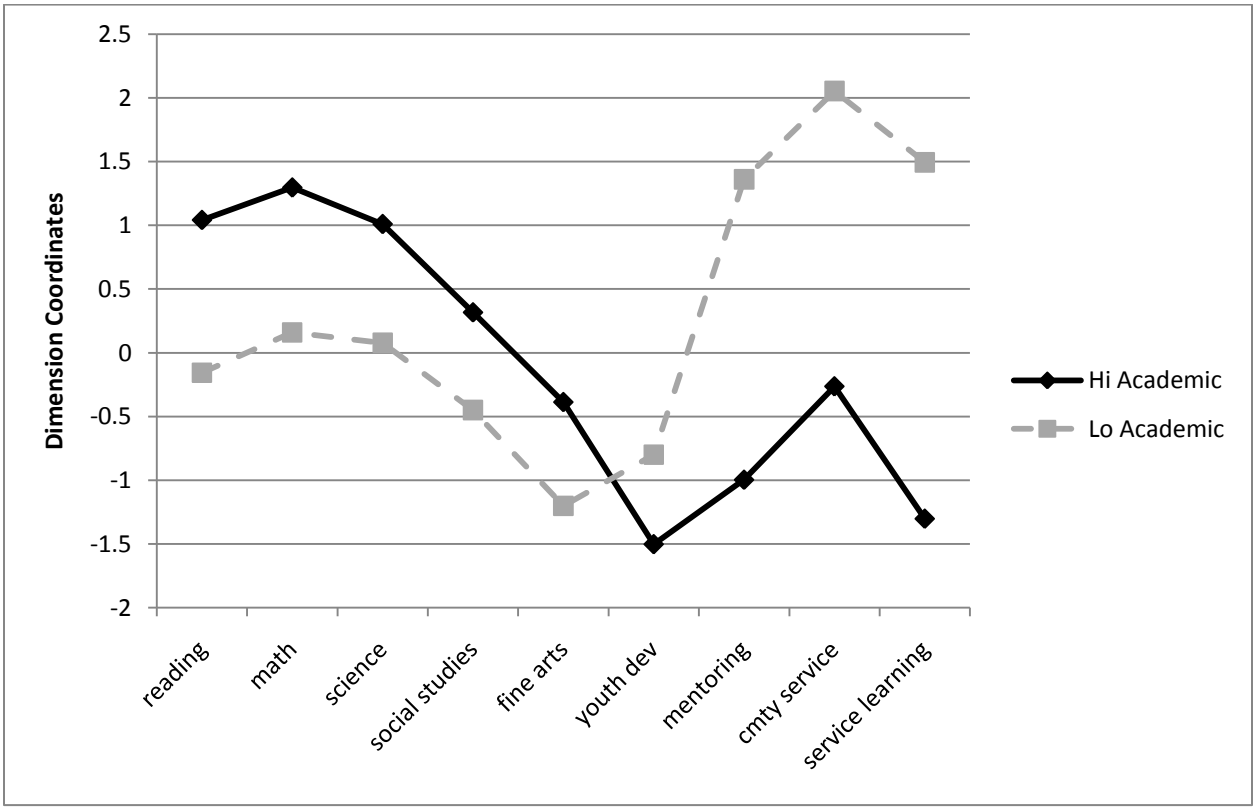
- *High Academic (Hi academic* in Figure 6*)*. One student activity profile was characterized by a high level of attendance at academic activities. Students in this category were more apt to have participated in activities where there was an intentional effort to support skill-building in ELA/reading, mathematics, science, social studies, and fine arts.

- *Low Academic (lo academic* in Figure 6*).* In contrast, the other student activity profile was characterized by students who attended activities that focused on youth development, mentoring, community service, and service learning rather than on academic skills.

Figure 6 shows the student activity profiles and dimension coordinates - the subject areas or focus of the activities which were used to develop the profiles. Figure 6 presents the differences among students in each profile and shows that the *High Academic* students were more apt to participate in activities where there was an intentional effort to support skill-building in ELA/reading, mathematics, science, social studies, and fine arts; and the *Low Academic* students participated in activities that emphasized community and service learning, and, to a lesser extent, youth development and mentoring. (Note that this figure reflects the profiles and not the number of students within each profile.)

students served during the program year in question. PAMS is an exploratory statistical technique that allows for the identification, in this instance, of the most typical (or latent) but different student activity profile types present in the population of students attending ACE programs during the 2006–07 to 2010–11 program years.

Figure 6. Primary Student Activity Profiles for Students Attending ACE Programs, 2006–07 to 2010–11



Source: TX21st

Summary

The summary describes a typical 2010–11 ACE program across characteristics associated with the grantee organization and setting, the program, and the students served in the program. The description is based on the ACE program features which have been identified as most prevalent.

Based on these prevalent characteristics, a typical ACE program was operated by a school-based grantee organization, and afterschool activities and services were provided on a school campus. The program had been operating for either two or three years. The program served a single age group, consistent with school levels: either all elementary students, all middle school students, or all high school students. The typical ACE program served 243 students (the average number of students per program in 2010–11). The majority of the students were Hispanic, some of whom were not proficient in English. The majority of the students (71%) in the program had enrolled in the program for the first time in the 2010–11 year; there were relatively few students enrolled in the ACE program for a second consecutive year.

The program had some teachers from the day school on its staff, although the teachers struggled somewhat to balance their school and afterschool responsibilities, and sometimes missed facilitating scheduled activity sessions because of other commitments. More program time was dedicated to academic activities - particularly academic enrichment activities - than

recreation activities, reflecting the program's primary objective of improving student academic performance.

Participation among students in activities addressing mathematics or ELA/reading was somewhat inconsistent. Approximately 70% of the students attended 30 or fewer math activities and 30 or fewer ELA/reading activities. Participating students reflected two general activity profiles: a high-academic profile, descriptive of students who had a preference for skills-building activities (such as academic enrichment and arts activities) and a low-academic profile, descriptive of students whose attendance patterns showed a preference for non-academic activities, particularly activities focusing on youth development, community service, and service learning activities.

The center, program, and student characteristics examined in this chapter have been included in the analysis and findings reported in the following chapter, Chapter 4, with results of the within-program analysis showing the association between center and student characteristics and student outcomes. It is this analysis that pays particularly close attention to student and center characteristics. Chapter 4 also includes findings from an outcome analysis, which examined student academic performance outcomes, based on results of the spring 2010 TAKS assessments of ACE program and non-ACE program student participants.

Chapter 4:
Within-Program and Impact Analyses

One of the primary objectives of the ACE evaluation, as described in Research Objective 1, is to understand the relationship between participation in ACE programs and student improvement relative to the five outcomes toward which ACE programs are expected to direct their programs and services: academic performance, attendance, disciplinary incidents, promotion rates, and graduation rates. In the first year of the evaluation, three of these outcomes were examined for all students who participated in an ACE program in 2009–10 regardless of the grant funding cycle of the center: academic performance, attendance, and disciplinary incidents. Findings on these outcomes are reported in this chapter.

To meet Research Objective 1, two analytic approaches were applied:

- **Within-Program Analyses**. The within-program analyses examined the relationship between student outcomes and student and program characteristics. The analyses were correlational in nature, meaning that it cannot be assumed that the program and student characteristics included in these analyses caused or explained differences in student outcomes. Other factors that were not included in the analyses may explain these differences.
- **Student Outcome Analyses.** The outcome analyses were based on a rigorous quasi-experimental design which compared academic and behavioral outcomes of ACE program student participants with non-participating students. The analysis used a propensity score matching approach. Meaningful conclusions may be drawn from the outcome analysis about the impact of the ACE program on student outcomes.

All student outcomes examined related to student performance and behaviors during the 2009–10 school year only. In year two of the evaluation, additional years of student performance and attendance will be examined.

Within-Program Analyses

Multilevel models were used to explore the association between student outcomes among students participating in ACE programs and the student and program characteristics described in Chapter 3. In these analyses, the outcomes of interest included student-level TAKS assessment results in ELA/reading and mathematics, and student discipline and attendance during the regular school day, for the 2009–10 school year.[34] Because the TAKS assessments and the grade levels of the students vary, assessment scores were standardized within the sample of TX 21st student data being analyzed.[35] See Appendix A for a more detailed description of this approach.

[34] In the interest of time and data availability, only student outcome data associated with the 2009–10 school year were examined during year one of the evaluation. Data from 2010–11 and potentially prior years will be examined during year two of the project.

[35] Any individual student's standardized score is simply the difference between their score and the mean performance (within the sample) on the particular test divided by the standard deviation of the test.

Table 6 presents means and standard deviations (reported in parentheses) of TAKS scores, and the average number of disciplinary incidents, assigned disciplinary days, and days absent from school of students attending ACE programs for whom outcome measures were available. The mean reading standardized score was -0.001 and the mean math score was 0.004. The average number of disciplinary incidents was 0.7 and the average assigned disciplinary days 2.0. The average number of days absent was 7.5.

Table 6. Within-Program Analysis: Mean Level of Standardized Student Performance on Student Outcomes, 2009–10

	Mean for 2009–10 ACE Participants
TAKS State Assessments	
Reading standardized score (*n* = 105,209)	-0.0001 (1.019)
Mathematics standardized score (*n* = 104,950)	0.004 (1.024)
Discipline (*n* = 140,402)	
Number of incidences	0.71 (2.14)
Number of disciplinary days assigned based on incidences	2.06 (9.70)
School-Day Attendance (*n* = 135,864)	
Number of days absent	7.48 (8.29)

Source: TEA PEIMS and TAKS data, 2009–10

To determine which student- and program-level characteristics were related to the student outcomes, the evaluation team employed a series of hierarchical linear models (HLMs) to test for the presence of statistically significant relationships between student and program characteristics, and the student outcomes described in Table 6. (This approach is described in Appendix A.)[36]

[36] Throughout this report, statistical significance refers to the probability that a result or relationship is random is 5% or less (*p*-value <0.05).

Table 7 presents the characteristics of the 2009–10 participant sample, modeled at the student level in the HLMs. As displayed in Table 7, most students in the sample were in Grades 3, 4, 5, 6, 7, and 8 (60%). The majority (87%) were minority students. Students were equally divided between males and females. More than four-fifths (81%) were characterized as being economically disadvantaged. One-fifth (20%) were designated as LEP, and a majority of students (71%) had attended ACE programs for only one year.

Table 7. Within-Program Analysis: Student Characteristics, 2009–10

	Percentage of 2009–10 ACE Participants
Grade Level (*n* = 140,389)	
Pre-K	0.1%
K	4.3%
Grade 1	6.1%
Grade 2	6.6%
Grade 3	8.6%
Grade 4	8.2%
Grade 5	8.5%
Grade 6	13.3%
Grade 7	12.1%
Grade 8	11.1%
Grade 9	6.6%
Grade 10	5.4%
Grade 11	5.2%
Grade 12	4.0%
Ethnicity/Race (*n* = 140,389)	
African American	20.7%
Hispanic/Latino	64.6%

	Percentage of 2009–10 ACE Participants
White	12.6%
Other	2.1%
Gender (*n* = 140,389)	
Female	49.6%
Male	50.4%
Economically Disadvantaged (*n* = 134,553)	
Yes	77.9%
Limited English Proficiency (*n* = 134,553)	
Yes	19.7%
Number of Continuous Years in the ACE Program (*n* = 140,389)	
1	71.4%
2	19.8%
3	4.7%
4	4.2%

Source: Due to high levels of missing data corresponding to economically disadvantaged status and LEP designation in TX21st, data presented are from PEIMS; all other student characteristics are based on TX21st data 2009–10.

Table 8 presents the characteristics of the 2009–10 participant sample with respect to ACE program participation and level of academic enrichment, modeled at the student level in the HLMs. (Standard deviations are in parentheses.) Students participated in the ACE programming an average of 59 days during the school year. They spent an average of 24 days in mathematics programming and 26 days in reading programming.

Table 8. Within-Program Analysis: Student Participation and Academic Profile, 2009–10

	Mean for 2009–10 ACE Participants
Participation (*n* = 129,985)	
Total number of days the student participated in ACE programming during the school year	59.09 (46.64)
Total number of days the student participated in ACE mathematics programming during the school year	24.21 (33.88)
Total number of days the student participated in ACE reading programming during the school year	26.18 (36.67)
***High Academic* Profile (*n* = 83,752)**	
High correspondence with the *Hi Academic* activity profile (high level of participation in academic programming)[37]	0.05 (0.11)

Source: TX21st, 2009-10

Table 9 shows the characteristics of the ACE programs that are included in the within-program analyses and were presented in Chapter 3. ACE programs predominantly served the elementary and middle school grades (80%), were associated with grantees that were school-based (80%), and were in either their first or second year of ACE funding (81%). The majority of programs, 64%, were not staffed primarily by teachers. Membership in activity clusters varied, with the highest percentage of programs placed in the *variety* cluster (30%) and the *mostly academic enrichment* cluster (28%). Approximately 20% of the programs were in the *mostly recreation* cluster and 16% in the *mostly tutoring* cluster.

[37] This variable indicates the extent to which an individual student was found to have activity profile in which there was a high degree of participation in academically-oriented activities (see Figure 14 in Chapter 3).

Table 9. Within-Program Analysis: ACE Program Characteristics, 2009–10

	Percentage of 2009–10 ACE Programs
Grade Levels Served (*n* = 642)	
Elementary only	43.6%
Elementary/middle	3.3%
Middle only	26.2%
Middle/high	7.2%
High only	13.9%
Other	5.9%
Grantee Type (*n* = 642)	
School-based	80.4%
Non-school-based	19.6%
Program Maturity (*n* = 642)	
New (first or second year of grant)	80.5%
Mature (fourth or fifth year of grant)	19.5%
Staffing Cluster (*n* = 642)	
Mostly teachers	36.4%
All other staffing clusters	63.6%
Activity Cluster (*n* = 642)	
Mostly tutoring	15.7%
Mostly academic enrichment	27.9%
Mostly recreation	19.6%
Variety	29.9%
Mostly youth leadership and academic enrichment	6.9%

Source: TX21st

It should be noted that not all students represented in the summary statistics were included in the within-program analyses. For any specific model, students and programs with complete (i.e., non-missing) data on the included covariates and outcome measure contributed to the estimation of effects, whereas those records with missing data were subject to list-wise deletion.[38]

Student Outcomes on TAKS (Within-Program Analysis)

The analyses that follow examined the association between student- and center-level characteristics and academic outcome measures: student TAKS assessments in ELA/reading and student TAKS assessments in mathematics. The analytic models include center-level variables, student demographics, measures of program dosage (i.e., participation), and both high and low academic activity profile weights (*high academic and low academic*), which were first presented in Chapter 3. Tables summarizing the findings from these models can be found in Appendix A.

Several student- and center-level characteristics were associated with the TAKS outcomes. At the student-level, many of the effect sizes of the statistically significant findings are rather small, with magnitudes of less than 0.10.[39] However, the following notable findings were identified:

- African American and Hispanic/Latino students scored lower than White students on both TAKS outcomes.
- Males scored higher than females on both TAKS outcomes.
- Students with LEP designation scored lower than non-LEP students on both TAKS outcomes.
- Students who had been attending ACE programs for more consecutive years scored lower on the TAKS-Math outcome than students who had been attending for fewer years.
- Students with higher levels of the *low academic* profile weight scored lower on both TAKS outcomes than students with lower levels of the *low* academic profile weight.

At the center level, the only significant finding was that students attending programs that served both elementary and middle school grade levels scored lower on both TAKS outcomes than students attending programs that served only elementary grade levels.

Similar analyses were conducted with different student outcome variables, including the number of school day disciplinary incidences, the number of school days of a disciplinary assignment, and the number of school days absent. Several center and student-level predictors were either

[38] List-wise deletion is a term used to explain a method for the deletion of data. In this case, if a particular case (or, student) was missing just one of many other variables, none this student's data would be incorporated into the analysis.

[39] The effect size associated with TAKS standardized scores can be interpreted as a difference in scores in standard deviation units. Therefore, an effect size of .10 is 10% of a standard deviation unit. Effect size refers to the magnitude of the relationship between two variables, in this case program participation and outcome. A small effect size indicates a somewhat weak relationship. In general, effect sizes in educational research do not exceed 1.0.

positively or negatively associated with the student outcomes. A summary of the findings is presented in Appendix A.

Discussion of Within-Program Analysis Findings

The previous analyses explored the correlational associations[40] between domains of program- and center-characteristics and a variety of academically-oriented achievement and behavioral outcomes. Predictors in each model (both program and student characteristics) were included based on hypotheses related to a number of student academic and behavioral outcomes. As noted earlier, the findings resulting from the analyses are correlational and descriptive in nature and causal inferences cannot be drawn, even in the case of the number of days students attended the program. For example, the within-program findings cannot answer the question on whether more days of program participation caused students to score higher on achievement tests. A correlational finding between more days of program attendance and higher student achievement may instead explain the characteristics of participating students. A correlation may exist because students who enjoy school may be more likely to achieve higher assessment scores, and students who enjoy school may be more likely to participate in programming that is similar to their school-day activities – that is, they may have levels of attendance in the ACE programs.

Taken together, the above findings are useful for identifying particular program or student characteristics that are associated with lower (or higher) levels on a variety of outcomes. Such findings can be used to better understand the population that is being served, and to augment services and specific programming to meet the needs of unique populations.

The reader should keep in mind that these findings are purely descriptive in nature and do not in any way imply that a given program or student characteristic was found to be *causally* related to a given outcome. In Year 2 of the evaluation, analyses will be more robust, potentially using matching techniques to more meaningfully compare participants with high program attendance with those with lower attendance levels. In the analyses summarized above, no effort was made to define a threshold of program participation where positive program outcomes would be expected (i.e., perhaps 30 or 70 days of participation). Employing matching techniques which link a high attending student with a similar student who attended the program less frequently will allow for the relationship between higher levels of participation in the program and program outcomes to be more meaningfully addressed.

Program Impact on Student Outcomes

A propensity score stratification approach was used to assess the impact of the ACE program on student performance on the spring 2010 TAKS-ELA/Reading and TAKS-Math assessments and on behavioral outcomes (i.e., campus discipline, absences). This approach facilitated a comparison of ACE program participants with students who were similar in all observable ways except program attendance.

[40] A "correlational association" simply refers to a relationship between two variables. If two variables are correlated, one cannot assume that one variable caused another variable.

This section presents a brief overview of the analytic approach used to assess the impact of the ACE program on student outcomes and is followed by a summary of the effect of the program on student outcomes.

Methods

In any evaluation of a program where participants are not randomly assigned to participate or not participate in the program, the problem of selection is paramount. The assumption is that students who participate in the ACE program were different from those who did not attend. One difference was the students' decision to participate in the ACE program. Also, ACE programs targeted certain types of students (primarily at-risk students) and certain types of students were more likely to accept the offer to participate (e.g., students who, for one reason or another, determined that they likely to benefit from the program). These differences among students can bias estimates of program effectiveness because they make it difficult to disentangle preexisting differences between participating and non-participating students from the effect of attending the program.

Propensity score matching (described in more detail in Appendix B) was used to address this problem. Propensity score stratification is a statistical technique that allows a comparison of the outcomes among students who are similar on all available baseline characteristics, including past academic performance. With data on all of the students' characteristics related to their decision to participate in the program and their outcomes, this quasi-experimental design allows for an estimation of the causal effect of participating in the ACE program during the 2009–10 school year.

Separate HLM techniques were conducted for each grade to examine the effect of the ACE program on student outcomes.[41] Impact estimates for each grade level were then pooled to create a single, weighted average for each outcome. This approach is detailed in Appendix B. Table 10 shows the number of cases analyzed by grade level. As the table shows, in grades 4–8, there were between 10,636 and 16,830 student cases in the ACE programs. In the high school grades, there were between 5,312 (in grade 12) and 8,486 (in grade 9) students participating. The comparison groups were approximately five or six times larger than the treatment groups.

[41] Both TAKS outcomes were analyzed using hierarchical linear regression models. Just as with the within-program analyses, the additional academically-related outcomes were analyzed using hierarchical generalized liner models. That is, the variables for the number of disciplinary incidences, number of days of a disciplinary assignment, and the number of days absent were modeled assuming a Poisson distribution. The variables for whether a student was enrolled in either an advanced or dual credit course or promoted to the next grade were modeled assuming a Bernoulli distribution.

Table 10. Number of ACE Student Cases Analyzed, by Grade Level, 2009–10

	Treatment	Comparison	Total
Grade 4	10,636	51,239	61,875
Grade 5	10,929	50,504	61,433
Grade 6	16,830	58,095	74,925
Grade 7	15,559	65,011	80,570
Grade 8	14,740	64,306	79,046
Grade 9	8,486	49,486	57,972
Grade 10	6,903	38,847	45,750
Grade 11	6,918	35,357	42,275
Grade 12	5,312	33,351	38,663

In the following sections, findings on the effect of participating in the ACE program on 2009–10 outcomes are presented. Findings corresponding to TAKS outcomes are discussed in terms of standard deviation units; findings associated with the other outcomes are discussed in terms of the decreased rate of occurrence for the particular outcome.

Program Effect on TAKS Scores

The analysis found that participating in the ACE program had a positive and significant effect on both TAKS-ELA/Reading and TAKS-Math scores. Students who participated in the program scored higher on the TAKS assessment outcomes than similar students who did not participate. Participation in the program, for students in Grades 4–12, had an effect size of .027 on TAKS-ELA/Reading and of .032 on TAKS-Math (see Table 11). (Effect sizes are presented in standard deviation units.) This is a mid-score range for an effect size. To interpret the meaningfulness of such an effect size, it is important to know that generally at the mid score range of the scale score distribution, the difference between one correct score is 7 scale score points[42]; therefore, the effect size for TAKS-Math translates to ACE participants scoring higher than similar but non-participating students by half of one question, or 3.5 scale score points at the mid-score range.[43]

It is important to note that while significant findings were observed for both TAKS-ELA/Reading and TAKS-Math in Grades 4–12, significant findings were not observed in Grades 4–8 for ELA/Reading or Grades 4–5 for mathematics. Therefore, the significant findings are related to program effects on the upper grade levels. It is also important to note the sample size associated with these analyses was very large, resulting in significant findings even though the overall effect sizes were quite low. Results are shown in Table 11.

[42] The score intervals become substantially larger at lower and higher ends of the distribution.
[43] Stated differently, the standard deviation for Grade 4 TAKS-math assessment is 96 scale score points. Given the effect size of .036, 3.6 percent of the standard deviation is 3.5 scale score points.

Table 11. Effect of ACE Program Participation on 2009–10 TAKS Outcomes Relative to Non-Participants

Group	TAKS-ELA/Reading				TAKS-Math			
	Effect Size	Std. Err.	t	p-value	Effect Size	Std. Err.	T	p-value
Grades 4–12	0.027	0.004	7.479	<.001**	0.032	0.004	9.026	<.001**
Grades 4–5	-0.016	0.009	-1.891	0.059	-0.014	0.009	-1.657	0.098
Grades 6–8	0.009	0.005	1.703	0.089	0.020	0.005	3.625	<.001**
Grade 9	0.128	0.010	12.959	<.001**	0.113	0.010	11.793	<.001**
Grades 9–10	0.063	0.008	8.382	<.001**	0.057	0.007	7.750	<.001**

Source: TEA TAKS data
Note: **statistically significant at 0.01

Program Effect on Discipline

The analysis found that participating in the ACE program had a significant effect on reducing both the number of assigned discipline days and the number of discipline incidents (see Table 12) associated with regular school-day attendance. For students in Grades 6–8, participating in the ACE program decreased the rate of being assigned discipline days by 13%. For students in Grades 9–12, participation decreased the rate of being assigned discipline days and disciplinary incidents by 16% and 5%, respectively. The proportion of students between Grades 4–12 without any disciplinary incidences ranged from a high of 89% in Grade 4 to a low of 58% in Grade 9.

Table 12. Effect of ACE Program Participation on 2009–10 School-Day Discipline Outcomes Relative to Non-Participants

Group	Assigned Discipline Days				Number of Discipline Incidences			
	Rate Ratio	Effect Size	Std. Err.	p-value	Rate Ratio	Effect Size	Std. Err.	p-value
Grades 4–12	-12%	-0.131	0.019	<.001**	-1%	-0.006	0.015	0.702
Grades 4–5	12%	0.114	0.074	0.127	12%	0.109	0.062	0.079
Grades 6–8	-13%	-0.136	0.024	<.001**	2%	0.015	0.021	0.461
Grades 9–12	-16%	-0.171	0.033	<.001**	-5%	-0.048	0.023	0.039*

Source: TEA PEIMS data, 2009–10
Note: **statistically significant at 0.01

Program Effect on Absences

Analysis results showed that participating in the ACE program had a significant effect on reducing the number of school day absences (see Table 13). For students in Grades 4–12, participating in an ACE program decreased the rate of being absent an additional day by 8%. Results are shown in Table 13.

Table 13. Effect of ACE Program Participation on 2009–10 School Day Absences

Group	Absences			
	Event Ratio	Effect Size	Std. Err.	p-value
Grades 4–12	-8%	-0.089	0.006	<.001**
Grades 4–5	-5%	-0.051	0.010	<.001**
Grades 6–8	-9%	-0.102	0.009	<.001**
Grades 9–12	-11%	-0.114	0.011	<.001**

Source: TEA PEIMS data, 2009–10
Note: **statistically significant at 0.01

Discussion of Impact Analysis Findings

Program impact on TAKS scores, discipline, and absences were in the hypothesized direction and statistically significant. That is, ACE program participation was associated with higher TAKS scores in ELA/reading and mathematics. Relative to non-participating students, ACE program participants had fewer assigned disciplinary days during the school day, fewer disciplinary incidents (in Grades 9–12 only), and fewer absences. Although the above findings were statistically significant, the effect sizes were relatively small. Nearly all findings were statistically significant given the large sample sizes, and thus, small standard errors resulted. Generally, it is expected that the magnitude of program effects likely varied from one program to another, depending upon the quality of the program in question, a facet that will be given substantive attention in the sections that follow.

A consideration is that the findings described in this chapter were predicated on defining participation in ACE as one or more day of program attendance, a rather low threshold when considering the impact of the program on student outcomes. In the second evaluation year, these analyses will be replicated, but participation will be held to a higher threshold: 30 days or more, and 70 days or more.

Chapter 5:
Estimates of Program Quality: Enrollment and Recruitment

A major focus of the evaluation (Research Objective 2) is to identify the program and staff practices that drive program quality and that are effective in achieving program purposes. The spring 2011 data collection activities were designed to examine program quality and understand the range of program quality among representative ACE programs. Collecting data in representative programs, which vary with respect to program quality, allowed several questions to be explored, including: How wide is the quality continuum associated with Cycle 5 and Cycle 6 programs? How good are the really good programs? How different are the really poor programs?

An overall exploration of quality puts innovative practices in context and helps articulate how programs look when innovative practices are present and when such practices are absent. This approach is particularly helpful for establishing a normative understanding of the ACE programs – first, through an awareness of the range in quality among a random sample of programs; and second, through alerting the evaluation team to specific practices and approaches that might be indicative of high or low quality programs.

Program quality will be examined in a more focus way in the second year of the evaluation. Based on an analysis of data available from TEA's administrative databases, including TAKS data and ACE Prime Assessment data, 40 programs will be selected for further data collection, including site visits in the fall of 2011. From analyses of these 40 programs and the programs visited in the spring of 2011, 15 of the highest quality programs will be selected for in-depth site visits which will focus on high quality activities and the program components that support their development and delivery.

Data Type and Methods

Chapter 5 and the following chapters summarize results from the spring 2011 data collection activities, including the surveys of site coordinators and teachers, interviews of site coordinators and focus groups of afterschool program instructors, and observations of program activities. The approaches used to summarize site visit data can be classified into three primary categories related to data type and analytic methods:

- **Scaled Items**. Many of the items appearing on the site coordinator, staff, and student surveys as well as the observation protocols were designed to be part of a larger scale that is assigned a single score summarizing performance for a given construct or domain (e.g., practices supportive of positive youth engagement). For scales of this type, Rasch analysis techniques were employed to create single scale scores for each construct. Some of the findings described in this report will are based on the Rasch analysis of

surveys. In the case of observation data, Rasch techniques were used to quantify observer bias (i.e., some observers are inherently more lenient or severe when conducting activity observations) and adjust scale scores to account for the level of rater bias. Additional technical information regarding the creation of scale scores using Rasch analysis techniques can be found in Appendix C.

- **Descriptive Items**. Other items appearing on the site coordinator and staff surveys in particular are not amenable to the same sort of scale construction just described, and will be presented descriptively. An example here would be *program objectives*, a topic that appears on both the staff and site coordinator survey where the intent is to understand which objectives from a variety of available options are targeted by a particular program.
- **Qualitative Data.** Some of the findings in this report are based on qualitative analyses of data collected from interviews, surveys, and focus groups. These analyses were essential to understanding the likely drivers of program quality in programs characterized by a higher level of performance. Identification of these approaches, policies, and procedures ultimately will prove useful to TEA as it crafts a training and technical assistance framework for ACE programs that supports the replication and further implementation of program quality drivers.

Two potential limitations associated with the site coordinator and staff survey data are important to note. The first is the potential for some respondents to complete the survey so responses reflect socially desirable responses, rather than actual practices and policies adopted by their program. The second limitation is that there is a fair degree of variation within programs in relation to staff practice, which complicates the process of using staff-level data to derive a measure of program-level functioning. While the limitations are worth pointing out, they have not rendered the data unusable for the purposes set forth in this report. Additional information about the potential limitations of these data can be found in Appendix C.

The analysis of the site coordinator interview and focus group focused on ordering and streamlining data so that quality ratings could be applied. The information from the site coordinator interviews and focus group participants was synthesized to develop program summaries for 38 of the 40 programs in which both focus groups and interviews were conducted. (Note that for two of the programs, the focus group did not take place.) The program summaries provided a concise and organized synthesis of responses by topic. After the summaries were completed, a rubric-based rating system was developed. The rating system included program dimensions which reflect typical operational functions of afterschool programs (such as recruitment strategies, enrollment, and professional development) as well as the CSMs and CSFs identified by TEA. These are listed in Appendix D.

Using the program summaries and referring back to interview and focus group transcripts as necessary, each program was rated on each dimension for which there was sufficient information from interviews and focus groups. (The number of rated programs varies across dimensions because for some programs, information was not sufficient to assign a rating.) Most of the rubric-based ratings were on a three-point scale (high, moderate, low). Several were on a two-point scale (mostly high or mostly low) because the data on which ratings were based was

not highly detailed. In this chapter and the following four chapters, the rating criteria and distribution of ratings are presented in the appropriate section.

The ratings were used to identify program exemplars for the dimensions discussed. Exemplars were drawn from among the high-rated dimensions. They are presented to illustrate high-quality practices and approaches associated with the dimensions. As such, they reflect effective practice at the program level. Exemplars were selected from programs serving both secondary and elementary schools, and they feature different design and implementation approaches.

Enrollment and Recruitment

Enrollment policies and recruitment practices may have a substantial bearing on program design and delivery. For example, a program that targets a relatively small number of students with high academic needs and proposes to provide them with intensive support in one-on-one and small group settings will have different strategies for recruitment and enrollment than a program which aims to serve as many students as possible and provide those students with a rich array of academic and non-academic enrichment activities. In this chapter, findings from the survey of the 519 site coordinators address enrollment policies and recruitment methods which reflect and influence program design. Open-ended responses from site coordinators describe issues that may impede enrollment, even though, as the site visit information shows, only a small number of site visit schools have major concerns about enrollment.

Enrollment Policies and Recruitment Strategies – Survey Findings

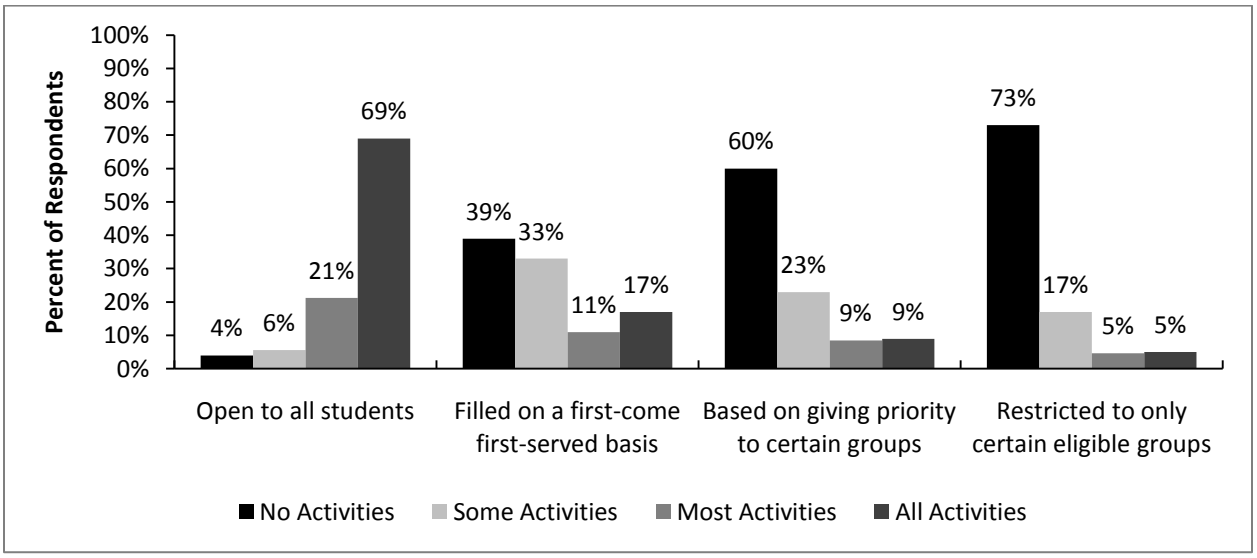
The site coordinator surveys asked how many of the activities provided at their site were open to all students who wanted to participate, were available to a limited number of students who were served on a first-come first served basis, gave enrollment priority to certain groups of students, and were restricted to students meeting certain eligibility requirements.

As shown in Figure 7, 90% of the centers had adopted enrollment policies where *all* or *most* activities were open to any student who wanted to participate. As a result, ACE programs serve relatively large numbers of students. According to PPICS, during the 2009–10 reporting period, centers in Texas served approximately 40 more students on average than programs nationwide.

Only 40% of centers reported giving enrollment priority for at least some of its activities to certain groups of students. This enrollment policy was somewhat more common in centers staffed mainly by school-day teachers (p <0 .10, Chi-Square = 6.82, df = 3).

Restrictive eligibility requirements were not common: only 27% of the programs imposed restrictive eligibility requirements for at least some of the activities offered during the 2010–11 school year, and only 5% for all. Centers serving high school students only were *less* inclined than other centers to adopt enrollment policies restricting eligibility to certain student groups (p <0.01, Chi-Square = 19.62, df = 6). (Appendices C, E, and F provide more detail and results of the survey analysis.)

Figure 7. Enrollment Policies: ACE Site Coordinator Survey Results, 2010–11

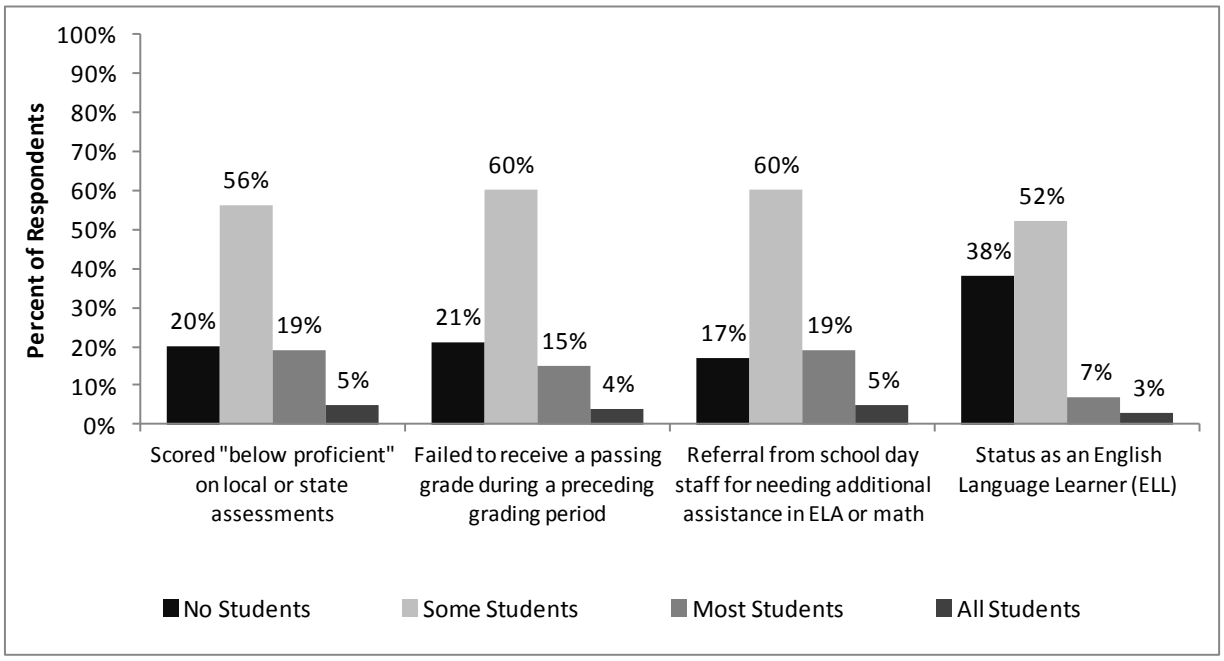


Source: Site Coordinator Surveys (*n*=519 respondents)

Site coordinators were asked to identify the extent to which recruitment strategies targeted particular students. The types of students listed on the survey included students who scored below proficient on state or local assessments; students who failed to receive a passing grade during the preceding grading period; students referred to the program by a school-day teacher for assistance in ELA/reading or mathematics; and students classified as English language learners (ELL).

The open nature of center enrollment policies – a program being open to all students who are interested in participating – is reflected in Figure 8. Figure 8 shows that only a small percentage of respondents (3 to 5%) reported their program only serves students based on academic need and ELL status. Between 15 and 19% reported recruitment strategies target students who are below proficient on local or state assessments, have failed a course, and have been referred for additional academic assistance. The majority of respondents reported that only *some students* are recruited based on academic need or ELL status.

Figure 8. Recruitment Strategies: ACE Site Coordinator Survey Results 2010–11



Source: Site Coordinator Surveys (*n*=519 respondents)

Programs having closer ties to the host school (because the program was associated with a school-based grantee and/or because the program was primarily staffed by school-day teachers) and programs serving elementary students were more likely than other programs to target students based on academic need.

- School-based centers were more likely than other centers to adopt recruitment strategies that targeted students scoring below proficiency ($p < .10$, Chi-Square = 7.32, df = 3), students who failed to receive a passing grade during the preceding grading period ($p < 0.01$, Chi-Square = 11.62, df = 3), and students with a status of ELL ($p < 0.10$, Chi-Square = 7.61, df = 3).
- The centers staffed mostly by school-day teachers were more likely than other centers to target students in three groups: students scoring below proficiency ($p < 0.01$, Chi-Square = 13.06, df = 3); students who failed to receive a passing grade during the preceding grading period ($p < 0.05$, Chi-Square = 8.10, df = 3); and students who were classified as ELL ($p < 0.10$, Chi-Square = 6.42, df = 3).
- Centers serving only elementary students were more likely to adopt recruitment strategies that targeted students who were referred to the program by school day staff ($p < 0.01$, Chi-Square = 22.43, df = 6).

Issues Related to Student Enrollment and Participation – Survey Findings

Open-ended responses on the site coordinator survey identified factors that affected enrollment and participation. The most cited problems were with transportation and competing activities.

Transportation

Transportation was found to impact both enrollment and attendance, with 52 site coordinators who answered the survey question stating that transportation is a challenge. One site coordinator wrote, “We lost transportation this year. That caused a decline in the enrollment of lower socio-economic students.” Several coordinators stated that students live a long distance from the school, and since most parents work, when busing is limited, enrollment and attendance drop. A site coordinator wrote:

> My major challenges are around transportation and low attendance. This is very much due to the location of my school. The majority of my students need transportation because they live anywhere from 10-20 miles away. To increase attendance my program requires two buses, however I do not have the funds to provide two buses all year.

Competing Programs and Activities

Competing programs and activities reduce both enrollment and participation in the afterschool program, according to site coordinators; 34 of the survey respondents described competing programs as a challenge. A site coordinator wrote:

> Student attendance has been an issue because of all of the programs that were already established prior to the ACE grant, such as football, cheerleading, volleyball, basketball, track, and dance team. These programs absorbed many of the students who were able to stay after school for activities. That, coupled with not providing buses for students, made it hard to pull students in.

A number of site coordinators stated that participation drops when sports teams become active. A site coordinator wrote, “In our district, being as small as it is, students are divided between sports and staying for the program. When there is no practice, or it's not their particular [sports] season, the attendance will grow.”

Other Factors

Other factors mentioned include not having diverse and appealing program activities, student “burnout,” the program not being able to accommodate all students in the activities that are popular, and extended school days, which result in program activities beginning late – too late for some students and their families.

Recruitment, Retention, and Participation – Site Visit Findings

This section summarizes program performance relative to the flow of students in and out of the program and is based on an analysis of site coordinator interviews and staff focus groups. Three dimensions are considered: enrollment, recruitment strategies, and student participation. The section presents the ratings for site visit programs along each of these three dimensions, as well as examples of programs that addressed recruitment and retention effectively. Table 14 presents the criteria for rating the three dimensions: enrollment, recruitment strategies and participation.

- For *enrollment*, a high rating was given the programs that were at, near, or had exceeded capacity, and a low rating when enrollment was expressed as a concern by interview respondents. A moderate rating indicated that enrollment was not a concern, though there was still room for growth.

- *Recruitment strategies* were rated high for programs where respondents used innovative, targeted and active methods to recruit students, and involved other students in recruiting. A low rating on recruitment was assigned when only passive strategies were used. A moderate rating indicated the program used fairly typical recruitment strategies and students also recruited students.
- *Participation* was assigned a high rating when interview respondents indicated participation was consistent throughout the school year, and when they identified effective ways to encourage consistent participation. Participation was rated low for programs where respondents expressed concern about participating fluctuating throughout the year and about retention of students in program activities. A moderate rating was assigned for programs which had fairly good retention but this was in part due to the program's emphasis on providing "fun" activities.

Table 14. Criteria for Rating Enrollment, Recruitment Strategies, and Participation

Dimension	Criteria for a High Rating	Criteria for a Moderate Rating	Criteria for a Low Rating
Enrollment	Program was at, near, or had exceeded capacity.	Enrollment was sufficient and not a concern, though there was still room for growth.	Low enrollment was a concern.
Recruitment Strategies	Innovative, targeted, planned, active methods used, and students were involved in recruiting.	Common strategies were used, with some student effort, though this was mainly unplanned.	Passive recruitment strategies were used.
Participation	Participation was consistent. Program used effective approaches to encourage consistent participation.	Retention was good. Methods to keep students coming were used, but mainly focused on students having fun.	Participation fluctuated and retention was a concern.

The ratings assigned to programs along each of the dimensions are presented in Table 15. Note that a number of programs were not rated because the interview and focus group participants did not sufficiently address the dimension in their responses: 25 programs were rated on enrollment, 35 on recruitment strategies, and 28 on participation. A discussion of findings follows Table 15.

Table 15. Ratings on Enrollment, Recruitment Strategies, and Participation

Dimension	High Rating	Moderate Rating	Low Rating
Enrollment (*n*=25)	9	11	5
Recruitment Strategies (*n*=35)	12	18	5
Participation (*n*=28)	9	6	13

Source: Program Summaries

- Among the 25 programs that were rated on enrollment, 9 were assigned a high rating and 11 a moderate rating. Thus, 20 had met their enrollment targets or were not concerned about enrollment, even though they had room for growth. Five were assigned a low rating, indicating that enrollment was a concern.
- Twelve of 35 programs were assigned a high rating on recruitment strategies, indicating the programs used a range of recruitment methods and involved students in recruiting. Eighteen programs, those assigned a moderate rating, used fairly common strategies for recruitment (presentations, letters, meeting with teachers), and engaged students but not in a planned way. Only 5 of the 35 programs relied on passive recruitment strategies – typically print-based strategies (e.g., flyers, e-mails, letters to parents) or did not have a recruitment plan. For example, staff members of a middle school program said recruitment plans have been developed but "there is never follow-through."
- Participation was rated for 28 programs. Nine programs were rated high, indicating that student participation was consistent and effectively encouraged. In 6 programs, assigned a moderate rating, fluctuation in participation was moderate, and the program encouraged participation by offering "fun" activities, sometimes at the expense of academically oriented activities. Participation was rated low in 13 of 28 rated programs, largely due to fluctuations in the number of students attending activities during the school year. For example, in a large middle school, the site coordinator said participation dropped drastically at the end of the year, from 250 participants to 100. Nine of the 13 schools receiving a low rating served secondary students.
- Of the 24 site visit programs for which there was information on *both* recruitment and enrollment, 9 programs implemented multiple and/or innovative recruitment strategies, and 5 of the 9 met enrollment targets. Of the remaining15 programs, which used common and/or passive recruitment strategies (rated moderate or low), only 3 met or exceeded enrollment targets.

Exemplars – Recruitment Strategies

Because the recruitment strategies and even the context for recruitment varied from school to school, four examples of successful efforts are presented. In the two elementary schools, the program's location within the school building has been a major recruitment advantage. The two secondary schools provide examples of active recruitment strategies, which effectively engage teachers and students in recruitment efforts.

Elementary Program 1. One of the ACE programs was in a charter school with 400 students. Cited as an "exemplary school" by TEA, the school has a strong music program, and students

learn to play musical instruments and read music from a young age. Parents, many of whom are disadvantaged, choose to send their children to the school. Three-fourths of the students, approximately 300, were enrolled in the afterschool program. This was twice the projected enrollment. The site coordinator indicated enrollment was high, in part, because parents wanted their children to have help with their homework. Additional music classes were offered in the afterschool program as well as the summer program, which aligned the afterschool program with the orientation of the day school.

Elementary Program 2. An elementary program, which was operated by a community-based organization, was located in a housing complex. Active recruitment was not necessary because of the convenience of the location. Most of the student residents (65 to 75 students) participated. "We fill up so quickly we don't need to do a lot of recruiting," the site coordinator said. The site coordinator informed the schools the ACE students attend, as well as the community, about the services the program offers.

Secondary Program 1. An ACE program in an urban high school was aided by a school policy which stated that students had to pass their high school courses in order to participate in any extracurricular activities. The site coordinator targeted a group of students that remained on campus after the school day ended: "Obviously, these kids didn't want to go home, and most were already a part of other clubs that meet afterschool." The site coordinator also targeted students who were involved in extracurricular activities the previous year, and asked teachers who led the activities to recruit their students for the ACE program. The site coordinator also targeted student leaders (athletes, cheer leaders, dance team members) and personally recruited them for the afterschool program, explaining that they could bring their friends. "They kept coming, and the groups started getting bigger because of word of mouth."

Secondary Program 2. In an urban middle school, the site coordinator said that everyone in the school, including the students, recruited students into the afterschool program. Teachers targeted students based on their grades and academic needs, and seventh and eighth grade students targeted incoming sixth grade students. With many people on board, recruitment worked primarily by word-of-mouth. One of the staff members who participated in the focus group said, because of the efforts of the seventh and eighth grade students, 90% of the students participating in the program were in the sixth grade.

Summary

Nearly all of the ACE programs whose site coordinators completed the survey were open to any student who wanted to participate, which is one reason the ACE programs serve a large number of students when compared to the national average. Among some programs, certain student groups were prioritized or eligibility restricted, but only for some of the program activities. Only a small percentage of the programs had restricted eligibility or gave priority to certain groups of students for all program activities.

The interviews and focus groups indicate that the great majority of ACE programs in the site visit group had met enrollment targets, or were close to doing so. The exemplar programs illustrated several practices which were effectively used by the programs to recruit students. These include:

- Skillfully using students to encourage other students to participate in the program, for example, by asking students to recruit, or recruiting students who are linked to other students through sports, clubs, and other activities
- Including numerous people—teachers and students—to inform students about the program and encourage participation
- Directly inviting students who might benefit from and enjoy participating in the ACE program.

A concern among some of the centers was participation fluctuating throughout the school year. Open-ended survey responses indicated two factors might be particularly responsible for participation dropping off: transportation issues and competing afterschool opportunities.

The next chapter, Chapter 6, continues to address program quality by examining how the programs aimed to build the academic skills of participating students.

Chapter 6:
Estimates of Program Quality: Support for Academic Skill-Building

Each of the programs funded by the 21st CCLC program is expected to design and deliver programs that will improve student academic outcomes. Several factors anticipated to support accomplishing this goal were examined in the evaluation, including intentionality in program design, linkages to the school day, and use of student data. Each are described below:

- Intentionality refers to embedding academic content in afterschool activities in a deliberate way. In the survey analysis, an *intentionality* scale score was developed to synthesize several items on both the site coordinator and staff surveys. The program summaries explore this concept from the perspective of program design−specifically, the variety of academic and non-academic activities.
- Linkages to the school day refers to communication about curriculum, instruction, and student needs between the afterschool and school day staff (addressed in the survey and the program summaries) and administrative support for the afterschool program (addressed in the program summaries).
- Data use, CSF3, refers to both access to data as well as its use by afterschool staff. Data use is addressed in both the survey and the program summaries.

Intentionality in Program Design

There is a growing body of research that suggests that student academic achievement outcomes can be realized by afterschool programs by simply paying attention to *how* programming is delivered - specifically whether or not programming is delivered in developmentally appropriate settings which reflect core youth development principles (Birmingham et al., 2005; Durlak & Weissberg, 2007). The evaluation team also hypothesizes that in addition to youth development principles, afterschool programs are more likely to meet academic goals if staff who plan the content of sessions consciously incorporate certain practices into their planning efforts.

Intentionality in Program Design – Survey Findings

On the site coordinator surveys, the prompt, "*How often do your staff leading activities that are especially meant to support student growth and development in reading and/or mathematics provide program activities that are…"* was followed by eight items:

- Based on written plans for the session, assignments, and projects?
- Well planned in advance?
- Tied to specific learning goals?
- Meant to build upon skills cultivated in a prior activity or session?

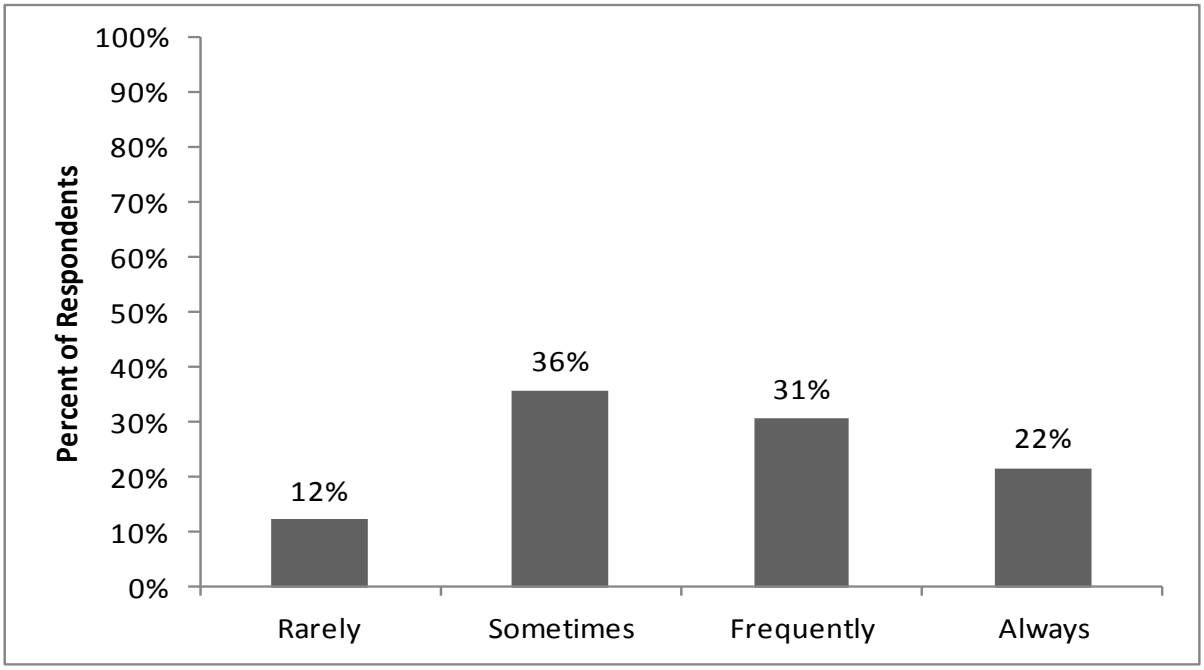
- Explicitly meant to promote skill-building and mastery in relation to one or more state standard?
- Explicitly meant to address a specific developmental domain (e.g., cognitive, social, emotional, civic, physical, etc.)?
- Structured to respond to youth feedback on what the content or format of the activity should be?
- Informed by the expressed interests, preferences, and/or satisfaction of participating youth?

Response options were *rarely (once or twice a semester)*; *sometimes (once or twice a month)*; *frequently (once or twice a week)*; and *always (daily for every session)*. As noted earlier and further described in Appendix C, one scale score based on responses to all of the items was created.[44]

The majority of site coordinator respondents received a scale score that was either in the *sometimes* (36%) or *frequently* (31%) range for staff adoption of the practices listed in the items making up this scale, as shown in Figure 9, and 22% received a scale score of *always*. These results suggest that a high proportion of program staff exhibit intentionality as they plan and deliver activities purposefully target student skill-building and youth development.

[44] As described further in Appendix C, one scale score for each center was created; the scale score was based on responses to all of the items listed above. Scale scores ranged from 0 to 100, with a higher score indicating more frequent adoption of the practices by a given center and therefore more intentionality in the design and delivery of programming. The analysis allowed the evaluation team to identify the range of scores associated with a given response category. For example, scores between Y and Z were found to fall in the *Rarely* portion of the scale, meaning staff working in these centers were apt to engage in practices measured on the intentionality scale only once or twice a semester on average.

Figure 9. Intentionality in Program Design Scale: ACE Site Coordinator Survey Results 2010–11



Source: Site Coordinator Surveys (*n*=519 respondents)

Differences in the programs' *intentionality* scale score were explored based on several program characteristics: association with a school-based grantee, reliance on mostly school-day teachers to staff the program, grade level served, and years of operation. No significant differences were found across any of the center characteristics when ANOVA-based approaches were used to explore subgroup differences. (See Appendix F for more details.)

The same items addressing intentionality and response options were included on the staff surveys, which were administered at programs included in the site visit sample. The main difference was that the prompt on the staff survey read *How often do you lead or participate in program activities that are….*

Results of the analysis of staff responses closely mirrored results from the site coordinator responses, presented in Figure 9. Such consistency across measures is preferred and has provided the evaluation team with confidence in the veracity of the results.

Given that staff survey respondents were nested within individual centers, HLM was employed to explore the relationship between center-level characteristics and the staff adoption of practices related to intentionality. Results indicated significant and negative relationship between a staff person's scale score on the *intentionality* construct and programs that only serve high school students (p <0.05), suggesting that staff in centers serving high school students were less inclined than staff serving younger students to engage in practices associated with intentionality. Reasons for this were not explored, although it is possible that high school students more than other students have more choice in determining how they spend their time in the afterschool program. As a result, high school staff may plan and prepare activities differently than elementary school or middle school staff.

Use of Established Curriculum

Another approach of afterschool programs to intentionally cultivate student academic growth is to use third party curriculum resources, including those designed to be delivered in an afterschool setting. To explore the extent to which programs have relied on externally-developed curriculum, the following question was asked on the site coordinator survey: *Are you using any published or externally developed curriculum selected specifically to support activities delivered in the afterschool program?*

Among the site coordinators who responded, 43% reported using an externally-developed curriculum to support activities provided during the course of the ACE programming period. In addition to the curriculum adopted by the district for the school day, examples of curriculum used included: MindWorks (a tutoring curriculum), Texas ACE Lesson Plans, web-based programs (e.g., Brainchild, www.brainchild.com, and Bridges, www.bridges.com), and Junior Achievement (which emphasizes work-readiness, entrepreneurship and financial literacy). Particularly noteworthy is the mention of *Texas ACE Lesson Plans, a* web portal designed by Edvance Research, Inc. through a contract with TEA to support training, technical assistance, and the provision of helpful resources to support the work carried out by Texas programs funded by the 21st CCLC program.

There were few differences among program subgroups, with one exception: programs employing mostly certified teachers were more inclined than others to use externally-developed curriculum in the afterschool program (p <0.05, Chi-square = 5.20, df = 1). It is not evident from the survey responses whether the curriculum teachers referred to is the school-day curriculum, or a curriculum designed for afterschool programs.

Intentionality in Program Design – Site Visit Findings

Typically, the ACE site visit programs attempted to balance activities with an explicit academic focus (whether academic enrichment, tutoring, and/or homework help) with non-academic enrichment and recreational activities. Using site coordinator interview and staff focus group data, the evaluation team rated programs based on the diversity of their academic and non-academic sessions and the extent to which these activities incorporated learning approaches appropriate to the afterschool setting. Rating criteria used by the evaluation team are presented in Table 16.

- Programs were assigned a high rating on *academic sessions* if they provided numerous academic sessions, which were aligned with school objectives, and offered homework help or tutoring programs. A low rating indicates the programs only offered homework help and the sessions were unstructured. A moderate rating was assigned programs which had structured homework help and other academic sessions, although alignment to school objectives was not consistent.
- For non-academic enrichment sessions, a high rating was assigned to programs which had numerous and diverse activities, with qualified providers; and sessions provided students with opportunities to explore interests and learn new skills. A low rating was assigned when there were few such opportunities and they typically did not build skills or allow students to explore interests. A moderate rating was assigned to programs which

had diverse non-academic enrichment activities, but did not or could not provide all students opportunities to explore interests and learn new skills.

Table 16. Criteria for Rating Academic Sessions and Enrichment Sessions

Dimension	Criteria for a High Rating	Criteria for a Moderate Rating	Criteria for a Low Rating
Academic Sessions	The program had numerous academic sessions aligned with school objectives plus structured homework or tutoring activities.	The program had structured homework time plus limited other academic sessions. Alignment to school objectives not consistent.	Homework times was unstructured and the program offered no other academic sessions offered.
Non-academic Enrichment Sessions	The program had numerous and diverse activities, with qualified providers. Students explored interests and learned new skills.	There was some diversity among activities, with some, but not all allowing students opportunities to explore interests, learn new skills.	There were limited types of enrichment activities, and they were not designed to build skills or explore interests.

The ratings for site visit programs on each of the dimensions identified in Table 16 are presented in Table 17. Ratings were assigned to 35 programs on academic sessions and to 37 programs on non-academic enrichment sessions. Discussion follows the table.

Table 17. Ratings for Site Visit Programs on Academic and Enrichment Sessions

Dimension	High Rating	Moderate Rating	Low Rating
Academic Sessions (*n*=35)	16	9	10
Non-academic Enrichment Sessions (*n*=37)	19	13	5

Source: Program Summaries

- Nearly half of the programs (46%) were rated high on academic sessions. These include 10 elementary programs and 6 programs serving middle school youth. In these programs, academic sessions were aligned with school objectives and structured in a way to meet academic objectives. No high schools were rated high on academic activities.
- Slightly more than half (51%) of the rated programs were rated high on non-academic enrichment sessions. Those programs offered numerous enrichment sessions, which were facilitated by qualified providers and allowed students to explore interests and learn new skills. Eleven of the programs served elementary youth, 6 served middle school youth, and 2 served high school youth.

- Thirteen of the 35 programs which were rated on both academic and non-academic enrichment activities were rated high on each. These include 8 elementary programs and 5 middle school programs.

The site visit programs were also rated on whether or not project-based learning, arts education, and community or service learning had a strong presence. The criterion was whether there was an intentional, and not accidental or individually-driven, focus on these three program features.

- Project-based learning was intentional in 16 of the 38 programs, indicating that project-based learning was infused throughout the program activities and not just driven by individual teachers.
- Arts education was intentional in 24 of the 38 programs, indicating that diverse arts-related sessions, facilitated by qualified providers, were offered to students.
- Community-based learning was intentional in 12 of the 38 programs, indicating there were multiple opportunities for students to engage in community-based learning and that the program had provided the connections and resources to provide students with these learning opportunities.

Exemplars – Academic and Enrichment Sessions

Three programs in particular were identified as demonstrating exemplary practice in relation to the design and delivery of activities meant to support academic skill-building. The exemplars include two elementary programs and one middle school program.

Elementary Program 1. One of the elementary afterschool programs served at-risk students who were in Grades K–2. Children were mainly from indigent families and many were from homes where Spanish is spoken. Approximately 100 students were enrolled in the ACE program.

The site coordinator worked closely with the school principal and teachers to plan the academic programs. A key source of information for planning was student results on standardized assessments, which principals and teachers reviewed together. Academic programs were designed to meet student academic needs and address the standards and subject areas where students needed additional support.

The site coordinator said only certified teachers taught the academic programs. The teachers were selected carefully and in consultation with the school principal. All teachers were required to follow a lesson plan for each session. The lesson plans were aligned with the teaching objectives associated with school day instruction, and included more hands-on and interactive activities than students generally experienced in their regular classes. Teachers in the academic programs used specific curricula, programs and instructional models in the afterschool program. These included the *Compass Learning Odyssey* curricula; online courses of study in different subject areas, which allowed students to work at their own level, focus on specific skills, and allowed teachers and students to assess progress; a leveled reading curriculum; and the Readers' Theater model.

Even in enrichment classes, teachers mentioned using resources that guided the learning process. For example, a chess class was taught using the book, *Teaching Chess in the 21st*

Century. For technology classes, the teacher followed Texas learning standards when designing and delivering the program. The site coordinator had also been trained in Kagan cooperative learning (a set of strategies designed by Dr. Spencer Kagan which promote collaborative learning, communication, and critical thinking). Kagan strategies were used across all classes.

Elementary Program 2. The second elementary program was managed by a non-profit organization and was located in a housing complex where afterschool participants resided. The non-profit organization had worked with the principal of the school to conduct an academic needs assessment, and frequently conferred with residents and key staff at the housing complex on non-academic needs. Students and parents were surveyed on the activities they wanted the center to offer. In addition to this planning, the focus group participants said they considered student needs on any given day (for example, if students needed active outdoor activities or more calming activities).

Program activities were based on what students were doing in school, but instructional methods and the environment were intentionally structured to be different from the school day. The teachers felt free to take topics in directions that followed the students' lead. An afterschool teacher said, "We provide opportunities for kids to get turned onto science and build on some skills that all kids should have, rather than link it straight to a science teacher's classroom."

The organization maintained a curriculum database, from which teachers selected lessons that were connected to the categories of activities offered, such as science, math, open drawing, writing, and fitness. Numerous titles of academic and enrichment curricula were named, including Character Counts, Mathletes, Open Draw, Tech Tribe, and Get Fit. Teachers adapted the lessons to the children's age group, learning styles, and interests.

At the end of each day, teachers filled out a lesson evaluation, noting what worked and what they would change. When lessons were "recycled," teachers reviewed the lesson evaluations to learn what other teachers said about the lesson. Lessons that were reviewed most favorably were often used repeatedly. The teachers in the focus group said they had the freedom to adapt lessons "on the fly," based on student interests and preferences. Particularly in a fitness program, teachers said students have a choice in what they would like to do each day.

Secondary Program 1. Planning at the middle school program was based on an initial site survey and needs assessment, which the site coordinator was given when she was first hired. The site coordinator reviewed the survey results with the principals, administrative staff and teachers to learn what classes they wanted to offer in the afterschool program.

One of the goals of the site coordinator was to offer classes that support academic skills while providing students with more opportunities for hands-on and project-based learning. The site coordinator said, "As long as they don't think they're working, if it's hands on, if there's not paper in front of them, they're all about it. If they can get their hands dirty they really will, and that's the classes they want to get into."

The first part of the day was dedicated to homework help. Following this session, the program offered three or four academic classes and two to three non-academic enrichment classes. The last session of the day was oriented toward providing sports and recreation activities and included softball practice and league games and classes like tumbling.

The site coordinator provided several examples of classes that were based on a project-based learning model and engaged students in hands-on activities. One of the classes was a Claymation class, a project that was developed over the course of a semester. Claymation used artist's clay, a digital camera, computer, and video software to make movies. Students developed a storyboard and then posed clay objects and figures in frames which represent the story. Another class was on storytelling, delivered over a three or six week period, which first emphasized general reading skills, and then progressed to having the middle school students read stories to elementary students. A third class was a green house remodeling project, implemented on the school campus. In the green house project, students took on the role of contractors – assessing damages, estimating the cost of materials, and revising costs and plans following feedback from the teacher. A fourth class was a robotics class, which was facilitated by former middle school students who are now studying robotics in college. The program also offered a softball program, which included practice and weekly league games against teams from other district afterschool programs.

Summary – Intentionality in Program Design

Several features support and/or reflect intentionality in the design of the afterschool programs.

- The key feature of the program exemplars was structure. Programming was planned, and planning resulted in activities that were guided by curricula, schedules, resources, and methods. In the first program described, plans were reflected by the use of curricula, expert books, and, importantly, Kagan cooperative learning strategies. In the second program, a body of lesson plans and curricula had been developed, which were used, continually evaluated, and modified. In the third program, activities were described that have a scheduled start and end time (three to six weeks), and a flow of events (e.g., from learning to helping other students).
- Another feature of the programs was using non-didactic, hands-on and interactive learning opportunities to support academic skills-building. While other site visit programs offered these types of learning opportunities – at least to some extent – they were not represented as exemplars because there was less evidence that the learning opportunities were guided by a strong structure.

Linkages to the School Day

Linkages to the school day, which is closely aligned to the concept of intentionality, refers to the extent to which center staff connect the afterschool program to learning strategies, approaches, and curriculum employed during the school-day. Linkages to the school day is a concept embedded in CSF2, for which a milestone is the number of contacts a program has with teachers and school day staff. Linkages to the school day were explored in both the analysis of the survey data and the analysis of site visit interview and focus group data.

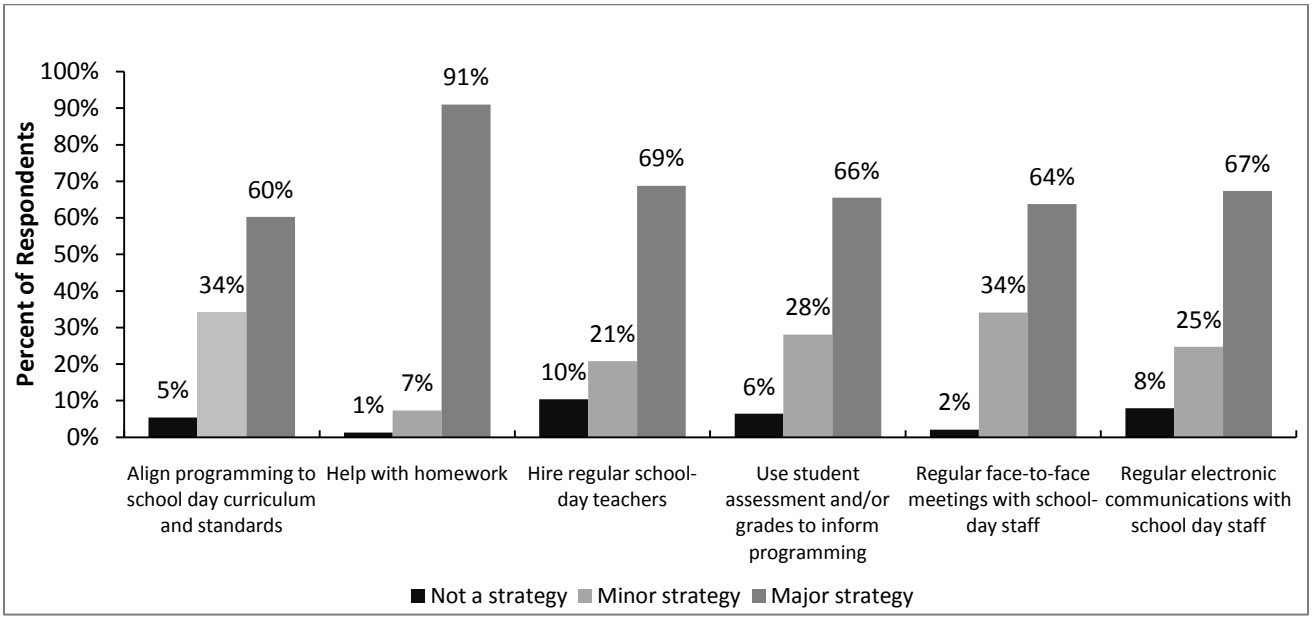
Linkages to the School Day – Survey Findings

Items addressing linkages to the school day were included on both the site coordinator and staff surveys, although the items on each survey were somewhat different. The site coordinator survey respondents were asked to specify approaches employed in the afterschool program to

link to the school day and note if each approach was a major or minor one. (A scale score was not developed in this case because the approaches listed were seen as more nominal in nature as opposed to following an item hierarchy that would better supporting efforts to develop a scale.)

As shown in Figure 10, the most common approach reported was providing *help with homework* (endorsed by 91% of site coordinators) followed by efforts to *hire regular school-day teachers* (69%) and *regular electronic communications with school day staff* (67%).

Figure 10. Linkages to the School Day: ACE Site Coordinator Survey Results 2010–11



Source: Site Coordinator Surveys (*n*=519 respondents)

A single scale score was developed for the staff survey responses related to *linkages to the school day*. On the staff survey, respondents were asked to indicate their level of agreement (based on a response scale of *strongly disagree, disagree, agree,* and *strongly agree).* Responses to the following survey items were used to generate the scale*:*

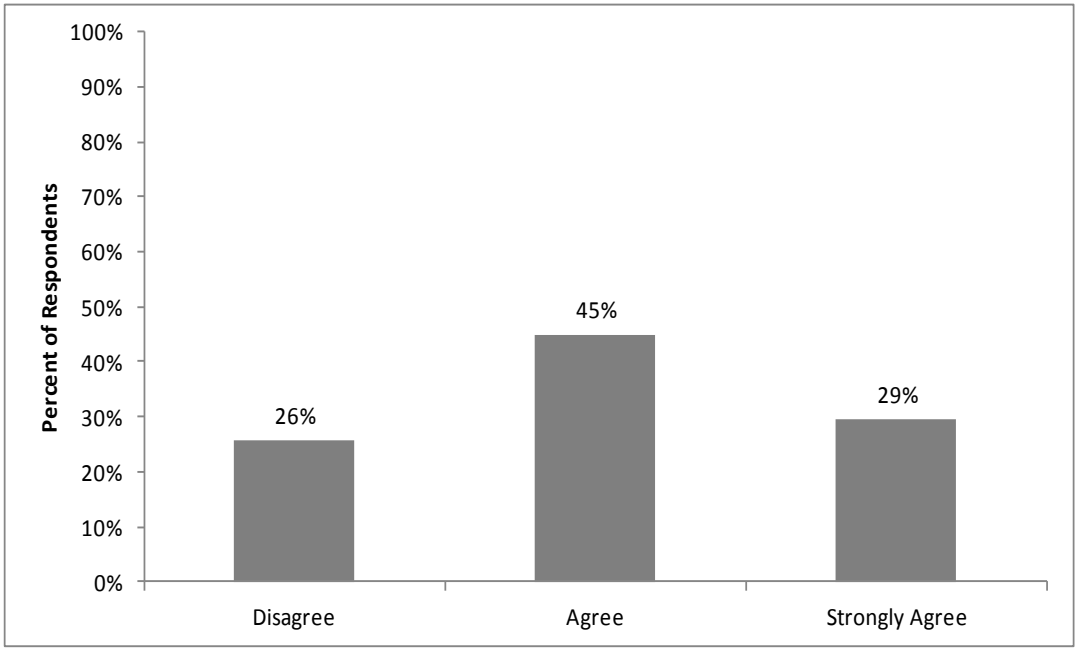
- On a week-to-week basis, I know what academic content will be covered during the school day with the students I work with in the afterschool program.
- I coordinate the content of the afterschool activities I provide with my students' school-day homework.
- I know whom to contact at my students' day school if I have a question about their progress or status.
- The activities I provide in the afterschool program are tied to specific learning goals that are related to the school-day curriculum.
- I use student assessment data to provide different types of instruction to students attending my afterschool activities based on their ability level.

- I help manage a formal three-way communication system that links parents, program, and day-school information.
- I participate in regular, joint staff meetings for afterschool and regular school day staff where steps to further establish linkages between the school day and afterschool are discussed.
- I meet regularly with school day staff not working in the afterschool program to review the academic progress of individual students.
- I participate in parent-teacher conferences to provide information about how individual students are faring in the afterschool program.

As shown in Figure 11, scale scores calibrated from staff responses were classified as falling in either the *disagree*; *agree*; and *strongly agree* portions of the scale. (The psychometric results used to create this scale indicated that the *disagree* and *strongly disagree* options should be collapsed into one category).

Among staff respondents, 45% of those completing the survey responded such that their scale score fell in the *agree* range of the scale, while 29% fell in the *strongly agree* range. These results indicate that the vast majority of staff working in centers represented in the site visit sample had fairly well-developed linkages with the school day. For 26% of the respondents, the scale score was in the *disagree* range, suggesting that these staff used few if any strategies to connect the afterschool program activities to the school day.

Figure 11. Linkages to the School Day: ACE Programs Staff Survey Results, 2010–11



Source: Staff Survey *N*=463 respondents

The analysis explored variation among staff in the *linkages to the school day* scale scores based on several program characteristics. HLM was employed to explore the possible

relationship between these program-level characteristics and the adoption of practices related to establishing linkages to the school day.

- Results from this analysis showed a significant and positive relationship between centers that were staffed mostly by school-day teachers and the school linkages scale, a result that was expected given the natural connection a school-day teacher brings to the ACE program given their role in each system (p <0.05).
- A significant and negative cross-level interaction was found between respondents who were certified teachers and centers classified as serving students only in high school (p <0.001). Teachers working in high school ACE programs indicated having weaker linkages to the school day than elementary teachers working in ACE programs. This is not unexpected because teachers at the secondary level are subject area specialists, and may not have developed communication with teachers in content areas other than their own.
- A positive and marginally significant relationship was found between respondents who were certified teachers and centers staffed mostly by school-day teachers (p <0.10), suggesting linkages to the school day are stronger for teachers working in programs staffed mostly by school-day teachers.
- Other center characteristics included in the model were not found to be significantly associated with *linkages to the school day* scale scores.

Linkages to the School Day – Site Visit Findings

Site coordinators and staff members were asked to describe how they connect with the schools whose students they serve. The connection with schools was assessed on two dimensions: the perceived support from school administrators, and staff communication with teachers in the school. The criteria for administrative support are presented in Table 18.The dimension was rated on a two-point scale because data did not reflect a “moderate” rating: support was acknowledged to be present or lacking.

- *Administrative support* was rated high when staff acknowledged the school principal supported the program and the site coordinator and principal met regularly. A low rating was assigned when interviewed staff spoke of the lack of administrative support.

Table 18. Criteria for Rating Administrative Support

Dimension	Criteria for High Rating	Criteria for Low Rating
Administrative Support	Administrative support was acknowledged. The site coordinator and principal met regularly.	Lack of support was articulated and evident in the school not supporting outreach and programming.

The criteria for rating the dimension, communication with teachers, are presented in Table 19. This dimension was rated on a three-point scale.

- *Communication with teachers* was rated high in programs where program and school-day teachers communicated and shared academic and behavioral information. It was rated low in programs when there was very little communication between the afterschool staff and school-day teachers. A moderate rating was assigned when afterschool instructors had only informal opportunities to communicate with school staff and the site coordinator serve as an intermediary between afterschool instructors and school-day staff.

Table 19. Criteria for Rating Communication with Teachers

Dimension	Criteria for a High Rating	Criteria for a Moderate Rating	Criteria for a Low Rating
Communication with Teachers	Staff communicated with school-day teachers and shared academic and behavioral information.	Teacher to teacher communication was informal, and the site coordinator was the main intermediary between afterschool and school day staff.	There was very little communication between the school day staff and any of the afterschool staff, including the site coordinator.

Table 20 presents the distribution of ratings made by the evaluation team on the communication with teachers dimension, with 37 of the 38 programs rated on this dimension. The discussion follows the table.

Table 20. Ratings for Site Visit Programs on Administrative Support

Dimension	High Rating	Low Rating
Administrative Support (*n*=37)	29	8

Source: Program Summaries

- A great majority of the programs, 29, were rated high on the dimension of administrative support. This indicates that school administrators facilitated program operations and worked with program personnel, particularly the site coordinator, to identify student needs and/or program needs and to then provide needed support. The 29 programs included 15 programs serving elementary students and 14 programs serving secondary students.
- Among the few programs where such support was not provided, numerous problems were mentioned, such as blocking of purchase orders, school administrators perceiving that the afterschool program was responsible for students “loitering” in the building, and schools not providing the space needed for program activities.

The ratings on the dimension, communication with teachers (referring to program staff having regular opportunities to discuss student and program needs) are presented in Table 21. All 38 programs were rated on this dimension.

Table 21. Ratings for Site Visit Programs on Communication with Teachers

Dimension	High Rating	Moderate Rating	Low Rating
Communication with Teachers (*n*=38)	18	16	4

Source: Program Summaries

- Communication with school-day teachers was rated high or moderate in 34 of 38 schools, and rated low in only four schools. This indicates that for nearly all of the site visit programs, program staff and school-day teachers shared information about students.
- Eleven of 18 programs rated high on communication with the teachers were staffed primarily by certified teachers, suggesting that teachers who staffed the afterschool program had more opportunities to directly meet with other teachers than afterschool staff who were not teachers on the campus they served.
- In many programs not staffed primarily by teachers, the site coordinator was often the only staff member who was on-site during the school day and had opportunities to confer with teachers and administrators. These programs were assigned a moderate rating.

Exemplars – Administrative Support and Communication with Teachers

Three program exemplars are represented as exemplars: two were located in elementary schools and one in a secondary school. In two programs, all or most of the program staff were not teachers from the school. In one program, the staff consisted of teachers from the school.

Elementary Program 1. The elementary program was operated by an external non-profit organization, and staff were primarily youth development workers. The afterschool program had established strong linkages to the school, as evidenced by the program staff having copies of the school curricula and knowing what topics were addressed each week during the course of the school year. The topics were incorporated into the academic activities. The afterschool staff had a half-hour preparation period on the school campus. Teachers and staff communicated during that time. “We see school staff every day,” the site coordinator said. “We try to find out what is going on, and frequently teachers will come talk to us about a student.” The afterschool program sent a monthly memo to the school administrators and teachers, describing program activities. Program staff said they could approach the principal to discuss any problems preventing them from establishing meaningful connections to the school day.

Elementary Program 2. The great majority of staff in this elementary school program were not teachers from the campus. The site coordinator rated support from the administration as a “5 out of 5” and said administrators were “overall very supportive.” The site coordinator had been proactive in building relationships between the program and the school. She sent school-day teachers a weekly schedule of program activities, and asked teachers whether the activities

were aligned to the regular classes, saying that “it doesn’t make sense” to have program activities that are not aligned to the school day.” The site coordinator referred to a district website she used to learn the objectives school-day teachers were emphasizing. The afterschool program then aligned enrichment activities to those objectives. The site coordinator invited requests and ideas from the day teachers. Providing an example, she said the physical education teacher had asked the afterschool program to address health and wellness.

Secondary Program. The site coordinator characterized the campus administration at this site as “very supportive” of the afterschool program, saying, “I’ve asked for stuff and they’ve delivered. I think that’s what makes a difference for my campus.” All program staff members were school-day teachers, and they communicated with the other teachers on campus about the students in the afterschool program during their departmental meetings. The site coordinator communicated with the campus staff to provide updates on what was occurring within the program and to let them know she was available to discuss concerns or ideas school day staff may have about the program activities.

Summary−Linkages to the School Day

The survey results indicate that the vast majority of staff working in centers represented in the site visit sample had fairly well-developed linkages with the school day. The program exemplars illustrate two effective strategies for linking the afterschool program with the school.

- The site coordinators were proactive in communicating with the school about the program and in building relationships between the afterschool and school day programs.
- The program staff, whether they are campus teachers or not, were physically available to the day school teachers.

Use of Student Data

The use of student assessment data is directly aligned with CSF3 defined by TEA for the ACE program: conducting ongoing and continuous student assessment to determine need. Assessment data may be used diagnostically to identify academic needs and skill levels, and used to monitor student progress.

Use of Student Data – Survey Findings

The use of student data was assessed through the site coordinator survey and the staff survey. For the site coordinator survey, a scale score was developed based on five survey items which were preceded by the prompt, *Please indicate whether your program has access to each of the following, and to what extent this information is used by program staff in planning for the activities provided***.** The following items appeared on this scale.

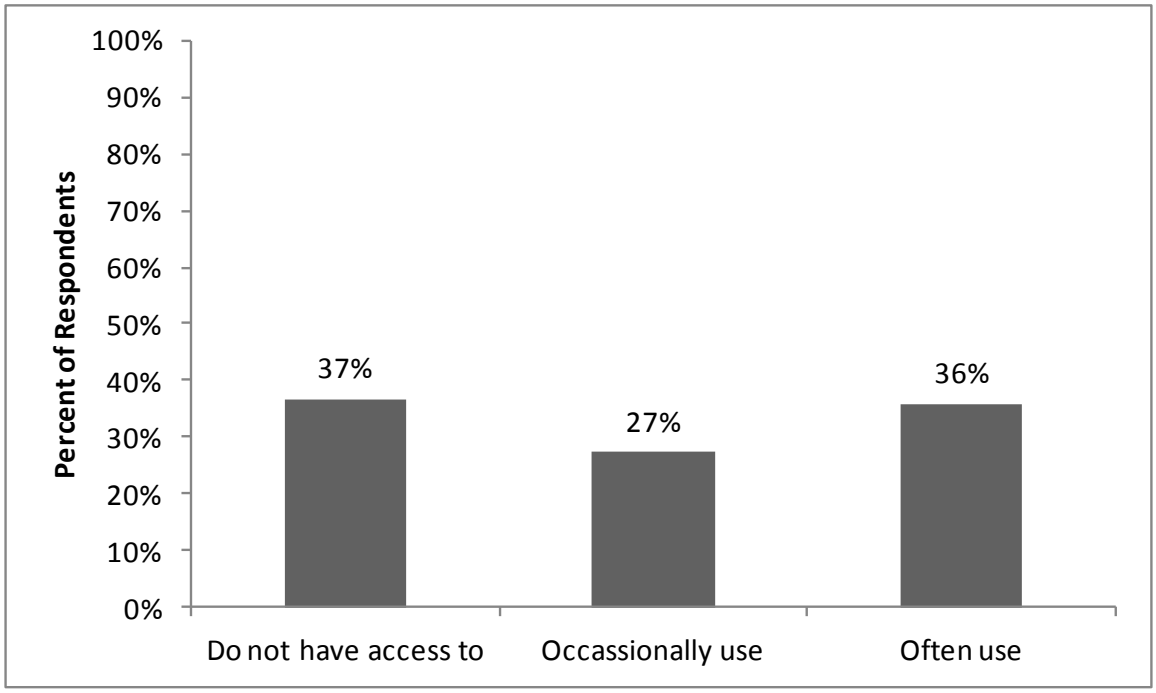
- Individualized education plans
- Students’ state assessment test scores
- Students’ scores on local assessments
- Students’ grades

- Teacher-provided student progress reports

Response options were *do not have access to*, *occasionally use,* and *often use.*

As shown in Figure 12, 37% of the site coordinators responded to these questions in a way which put their scale score in the *do not have access to* (data]) range of the scale, while 27% were in the *occasionally use* (data) range and 36% in the *often use* (data) range. These results indicate Cycle 5 and Cycle 6 centers vary considerably with respect to the availability and use of student data.

Figure 12. Access to and Use of Student Data: ACE Site Coordinator Survey Results, 2010–11



Source: Site Coordinator Surveys *(n=519 respondents)*

ANOVA-based analytic approaches explored how a center's score on receipt and use of student data scale varied by key program characteristics.

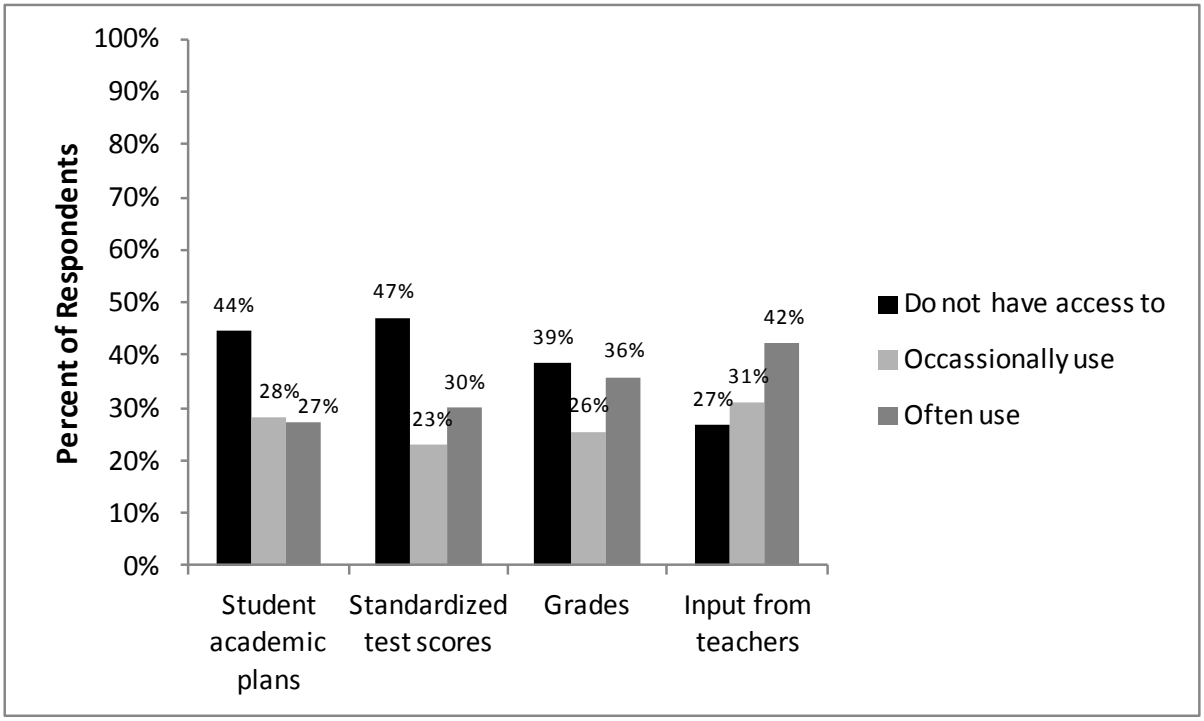
- The centers staffed mainly by certified teachers had more access to data and used it more than other centers (p <0.001, F = 13.59, df = 1) and the centers associated with a school-based grantee (p <0.10, F = 3.74, df = 1). The results were expected given the greater degree of access school-day teachers and programs associated with school-based grantees have to various forms of student data.
- In addition, respondents in centers serving only high school students indicated more access to and use of student data scale compared to respondents working in centers that only served elementary students (p <0.05, F = 3.43, df = 2).This result was not expected and may warrant future exploration in year two of the evaluation.

Similar questions on access to and use of data were asked on the staff survey, but reliability estimates were not sufficiently high to aggregate this information into a scale similar to the one presented in Figure 12. Staff survey results are therefore presented descriptively in Figure 13.

As shown in Figure 13, afterschool staff reported that when designing and delivering program activities, they rely more on input from school-day teachers than more formal sources of student achievement data, such as grades, standardized test scores, and student academic plans. This may be due to not having access to data, as between 39% and 47% of the respondents reported they have no access to grades, standardized test scores and/or student academic plans. Only 27% of the respondents indicated that they do not have access to school-day teachers.

Subgroup differences were explored using Chi-square based approaches. As anticipated, staff survey respondents who were certified teachers reported frequently using each of the four sources of data represented in the scale: student academic plans (p <0.05, Chi-square = 8.75, df = 2); standardized test scores (p < .001, Chi-square = 19.29, df = 2); grades (p <0.001, Chi-square = 15.68, df = 2); and input from teachers (p <0.05, Chi-square = 9.03, df = 2).

Figure 13. Receipt and Use of Student Data: ACE Programs
Staff Survey Results, 2010–11



Source: Staff Survey (*n*=458 respondents)

Use of Student Data - Site Visit Findings

Two dimensions related to student data were rated for the site visit programs: access to data and use of data. As the criteria for rating the dimensions (Table 22) shows, access referred to staff access to data that would be helpful in planning instruction and activities. In some cases, the site coordinator has access to data but staff do not. However, as noted in the earlier

discussion on communication with school-day teachers, the site coordinator may be the intermediary: obtaining and/or reviewing data and sharing information with teachers. Use of data ratings considered whether data use was a shared program practice, or an individual teacher practice.

- A high rating on *access to data* was assigned for programs when all or nearly all of the staff had some level of access to student data that informs programming. A low rating was assigned when the staff did not have access. A moderate rating was assigned when the site coordinator had access to student data, but the staff did not.
- Use of data was rated high when the program had procedures for reviewing data and using it to inform programming. A low rating was assigned for programs where did not use data to inform programming. A moderate rating was assigned when some data use was evident, but it was not systematic across the program.

Table 22. Criteria for Rating Access to Data and Use of Data

Dimension	Criteria for a High Rating	Criteria for a Moderate Rating	Criteria for a Low Rating
Access to Data	All or nearly all staff had some level of access to student data that informs planning	The site coordinator had to student data, but staff access was limited.	Program staff were not able to obtain data to inform programming and instruction.
Use of Data	The program had procedures for reviewing data and using it to inform programming.	Some data use was evident, but it was not systematic and mainly the result of individual decisions.	Staff did not use data to inform activities. They mainly observed students in their activities.

Table 23 presents the ratings for the site visit programs on access to data and the use of data based on the evaluation team's application of the aforementioned criteria, with 37 programs rated on access to data and 36 rated on data use. (There was not sufficient information to rate one program on access and two programs on data use.)

Table 23. Ratings for Site Visit Programs on Access to and Use of Data

Dimension	High Rating	Moderate Rating	Low Rating
Access to Data (*n*=37)	16	11	10
Use of Data (*n*=36)	5	21	10

Source: Program Summaries

- Sixteen of 37 programs were rated high on access to data, indicating that the site coordinator and afterschool staff members had access to student academic and behavioral data.

- Only 5 of 36 programs were rated high on data use−using data systematically to plan programs and inform instruction.
- Twenty-one programs were assigned a moderate rating, which indicates that in these programs, individual teachers used student data to plan activities and their delivery, but the use of data was not a shared practice. For example, the programs did not schedule regular meetings where program staff reviewed student data and planned strategies.
- The low rating, assigned to 10 programs, indicates that for these programs data use was minimal and that watching the students (to see if they learn, behave, are engaged) was the primary approach to gathering information about students.
- Of 16 programs rated high on data access, only one was rated low on data use. Thus, access to data suggests that data will be used, at least somewhat, by afterschool teachers.
- Of the 9 programs rated low on data access, more than half (5 programs) were rated low on data use.
- Among the 16 programs rated high on access to data, 11 were staffed by certified teachers. (Only 33 of the programs were coded on staffing models; for 4 of the programs, interview and focus group information did not include information on staffing models.) However, only 3 of the 19 programs primarily staffed by certified teachers were rated high on data use.

Exemplars – Use of Student Data

Three programs in the site visit sample which were rated high on data use are presented as exemplars. Two programs were not staffed by teachers from the school. The exemplars show that schedules, procedures, and direction from the site coordinator established consistent use of data by afterschool staff.

Elementary Program. In this elementary program, the program staff, who were not campus teachers, obtained report cards from the school for each student for each marking period. Staff also maintained an anecdotal log on each student, which included notes on attendance and written comments on student progress. Staff rated each student on behavior, participation, and academic performance. Each quarter, staff documented safety and hygiene issues that were a concern. The information was used in staff meetings where staff discussed each student's progress and planned how to address student needs. The records were also used in parent conferences and meetings with staff from the campus which students attended. Afterschool teachers found the anecdotal logs particularly helpful for making certain students' needs were met and for developing relationships with students.

Secondary Program 1. In a program serving middle school students, the site coordinator and the program staff (who were not certified teachers) reviewed grades and TAKS data to monitor student progress. The information was used to identify students who needed individual tutoring during homework time, and to determine which subject areas should be emphasized in the program sessions. The site coordinator said staff members "flag every [grade] below a 70 to identify which students are borderline or failing." Staff members also called parents of students

to let them know their students were making progress, based on data that showed a student was improving.

Secondary Program 2. The second middle school program was staffed by campus teachers as well as community members. The site coordinator was the primary collector and interpreter of data. Teachers at the school had access to student data because of their position in the school. The site coordinator monitored students' grades, referral records, and attendance and conducted regular walk-throughs of program sessions. The coordinator identified a group of lower achieving students each term and used a form to track them more carefully. Data from the focused tracking were used when the site coordinator met with students to discuss progress and develop a contract-type agreement with students. The site coordinator determined which students must forgo their enrichment activities in favor of tutoring or another academic activity, as well as the areas in which each student required more help.

Summary−Use of Student Data

The Cycle 5 and Cycle 6 programs varied with respect to the availability and use of data, with a nearly equal percentage of site coordinators indicating on the survey that they either do not have access to student data or that they often use student data to plan programming. Among the site visit programs that were noted as exemplars on use of student data, several structures were in place to support the review of student academic and, in some cases, behavioral data, and its use.

- The programs had a schedule for reviewing data, usually the school's marking period. In two of the programs, the reviews were conducted by program staff as a group and in a staff meeting.
- The programs had identified procedures to follow-up on issues (or non-issues, such as a student making progress) that emerged in their review of data. These include conferences with students, modifying tutoring or homework support, developing contract-like agreements with students, and calling parents.

Summary of Findings on Support for Academic Skill-Building

Overall, analysis showed five primary themes that characterize the extent to which ACE programs are adopting practices that were likely to be supportive of academic skill-building.

- Across each of the practices examined, there was a fair degree of variation across ACE programs and staff members on the adoption of practices likely to support academic skill-building.
- Centers staffed mostly by school-day teachers were more likely to rely on externally-developed curricula to guide activities, have established strong linkages to the school day, and use student data to inform the planning and delivery of activities.
- Programs serving high schools students exclusively were apt to demonstrate a lower degree of intentionality in program design, and weaker linkages to the school day even when staffing consisted of mostly teachers in the afterschool program. Among the site visit programs, none of the high school programs were rated high on academic programs

– indicating that they did not offer numerous academic sessions aligned with school objectives plus structured homework or tutoring activities.

- The site visit data suggested that slightly more programs warranted a high rating on the provision of non-academic activities than activities with an academic focus. This may be due to no high school programs being assigned a high rating on academic programs.
- A review of the site visit data indicated few programs warranted a high rating on the use of student data to inform and drive the design programming, even in programs where the data was accessible to the program staff.

The next chapter examines another important component of the ACE programs, youth development. Similar to this chapter, Chapter 7 summarizes findings from survey data and on the interviews and focus groups.

Chapter 7:
Estimates of Program Quality: Practices That Support Youth Development

As noted in the introduction to the previous chapter, researchers have suggested that programming which is delivered in a way that reflects core youth development principles may achieve student academic outcomes (Birmingham et al., 2005; Durlak & Weissberg, 2007). In addition, youth development opportunities are addressed in CSF1, particularly as it reflects students taking on leadership roles. This chapter examines several components of youth development in the following three sections.

- **Youth Ownership.** Youth ownership refers to providing youth with authentic choices in structuring the program and a voice in how the program should run. The site coordinator and staff surveys provide the information for the findings in this section.
- **Collective Support for Youth Development.** This concept refers to shared practices among the afterschool staff in supporting youth development. The staff surveys provide the information for the findings in this section.
- **Youth Leadership.** Youth leadership is addressed in this section based on information for interviews and focus groups and refers to program activities intended to support youth leadership skills.

Youth Ownership – Survey Findings

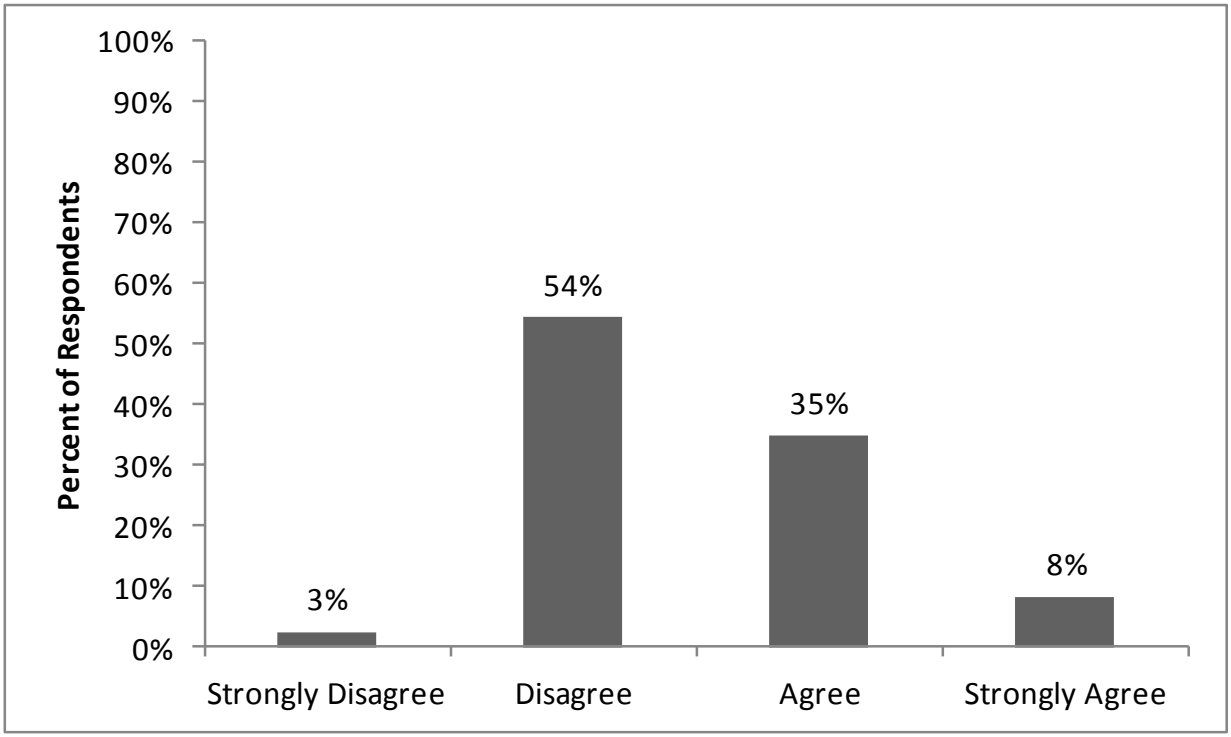
As noted earlier, youth ownership refers to youth having opportunities to shape the after school program. Scales were developed to measure *youth ownership* for both the site coordinator and staff surveys. Both surveys used the following list of items and an agreement scale where respondents could endorse *strongly disagree*, *disagree*, *agree*, and *strongly agree*. Respondents were asked to respond to the following prompt when answering questions related to the youth ownership items: *Please indicate your level of agreement with the following statements about how your students build ownership of the program.*

- Youth are afforded opportunities to take responsibility for their own program.
- Youth have the opportunity to set goals for what they want to accomplish in the program.
- Youth help make plans for what activities are offered at the program.
- Youth make choices about *what* content is covered in program activities.

- Youth make choices about *how* content is covered in program activities.
- Youth help create rules and guidelines for the program.

On the site coordinator survey, as shown in Figure 14, the majority of respondents fell in the *disagree* range of the youth ownership scale, reporting that these types of opportunities are not provided to participating students in approximately half of ACE programs. Forty-three percent of the respondents fell in the *agree* or *strongly agree* range of the scale.

Figure 14. Youth Ownership: ACE Site Coordinator Survey Results, 2010–11



Source: Site Coordinator Surveys (*n*=519 respondents)

ANOVA analytic techniques were used to explore how scores on the youth ownership scale vary by center characteristics, including association with a school-based grantee, the maturity of the center in years, the grade level served by the center, and whether or not the center was staffed mostly by school-day teachers.

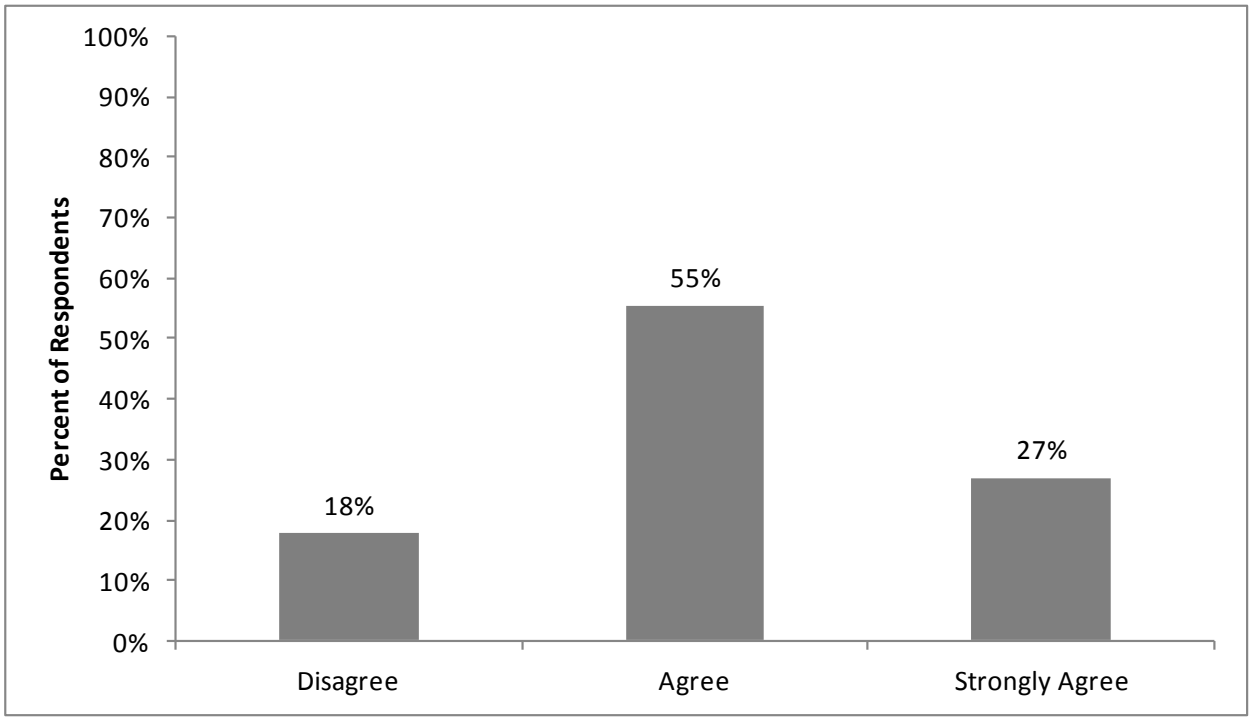
The only significant relationship found was between the scale score and grade level served by the center. Centers serving both high and middle school students had a higher than average scale score on the *youth ownership* scale than centers serving elementary students (p <0.000, F = 10.58, df = 3). This result was expected since many of the practices associated with fostering youth ownership involve ceding some degree of control to youth, a practice which is more appropriate the older students become.

On the staff survey, responses indicated that respondents had difficulty distinguishing between the *strongly disagree* and *disagree* option, so these two categories were merged into one category called *disagree.* Results are shown in Figure 15. More than site coordinators, staff

survey respondents agreed that youth ownership-related opportunities were provided to participating youth: 82% of respondents were in the *agree* or *strongly agree* range of the scale.

It is possible that centers represented in the sample are different from the full domain of Cycle 5 and 6 programs in the provision of youth ownership opportunities. To explore this possibility, a bivariate correlation was performed between the scale score on the *youth ownership* scale from the site coordinator survey and the mean scale score on derived from the staff survey. The result was a moderately strong, positive correlation (r = .495, p <0.01). This result suggests there are some differences between how site coordinators and staff respond to items composing the scale. It is likely that site coordinators were more inclined to generalize about their programs and staff were more likely to consider their own practice.

Figure 15. Youth Ownership: ACE Program Staff Survey Results, 2010–11



Source: Staff Survey (*n*=445 respondents)

Analysis was conducted to determine how staff survey scale scores on the youth ownership scale varied based on the center characteristics. HLM was employed to explore the possible relationship between these center-level characteristics and the adoption of practices related to fostering youth ownership in the program. (See Appendix D for additional detail about the model used to perform this analysis).

A positive and significant relationship was found between respondents' scores on the *youth ownership* scale and centers serving only middle or high school students (p <0.05 for both). This further reinforces the hypothesis that the provision of opportunities for youth ownership in the program is more feasible in centers serving middle and high school students than elementary students.

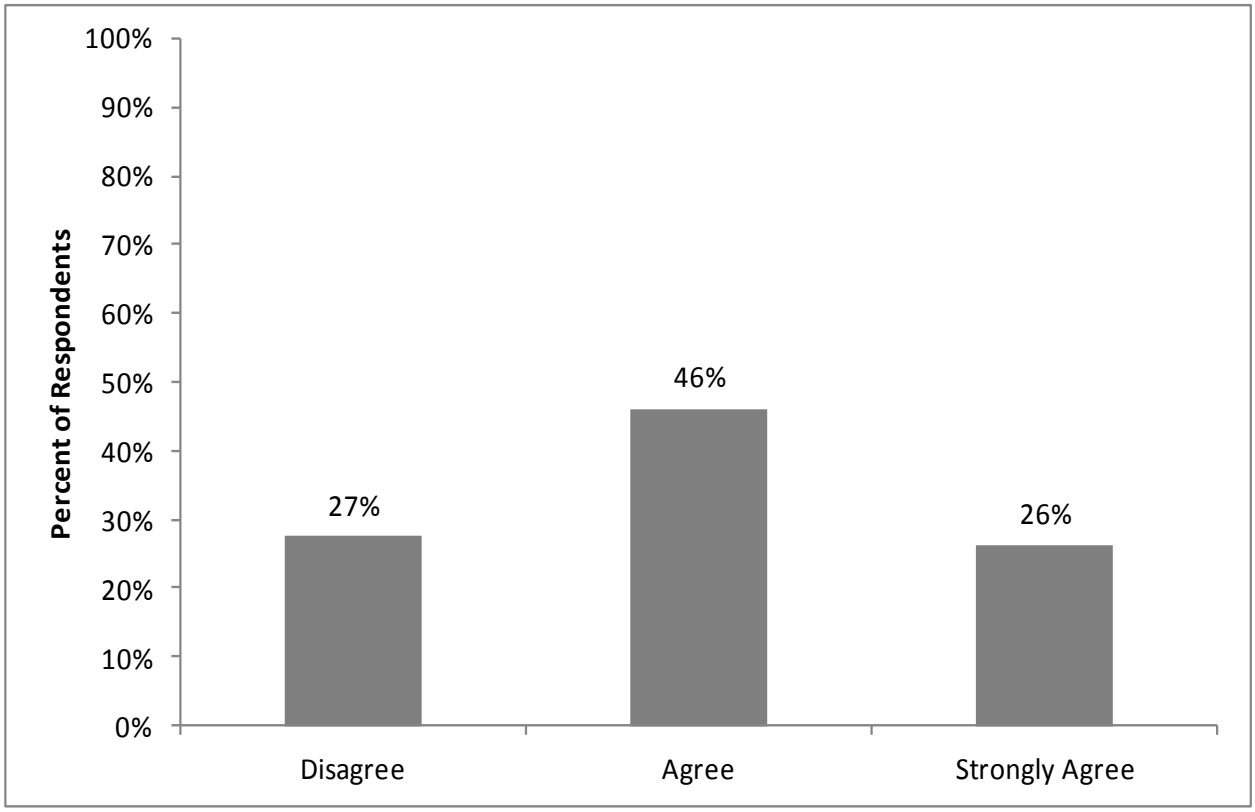
Collective Support for Youth Development – Survey Findings

Another scale derived from the staff survey is *collective support for youth development*, which measures the extent to which the ACE programs provided developmentally appropriate activities, characterized by a high level of interaction and engagement. Many of the concepts articulated in the items associated with the *collective support for youth development* scale are similar to the items found on the *interaction* and *engagement* scales of the PQA, which will be presented in Chapter 10. Unlike other items appearing on the staff survey, those that made up the *collective support for youth development* scale asked respondents to think about the practices of all staff working at the program, not just their own practices. Employing the same four category agreement scale as the *youth ownership* scale, the staff responded to the following items about program staff who work directly with youth:

- Provide youth the opportunity to engage in group discussion and dialogue more than placing youth in the role of passive listeners to a lesson or lecture delivered by staff.
- Actively and continuously consult and involve youth.
- Provide structured and planned activities explicitly designed to help youth get to know one another.
- Provide opportunities for youth to lead activities.
- Provide opportunities for youth to help or mentor other youth in completing a project or task.
- Provide opportunities for the work, achievements, or accomplishments of youth to be publicly recognized.
- Provide ongoing opportunities for youth to reflect on their experiences (e.g., formal journal writing, informal conversational feedback).
- Are effective at finding ways to provide youth with meaningful choices when delivering activities.
- Are effective at providing youth with opportunities to set goals and make plans within the confines of the program.
- Ask for and listen to student opinions about the way things should work in the program.

As shown in Figure 16, 72% of the staff survey respondents received a scale score in the *agree* or *strongly agree* range, indicating staff provide such opportunities to youth; and 27% categorized in the *disagree* range of the scale.

Figure 16. Collective Support for Youth Development Scale: ACE Program Staff Survey Results, 2010–11



Source: Staff Survey (*n*=455 respondents)

Analysis using HLM was conducted to determine if the *collective support for youth development* scale varied across center characteristics. The following relationships were found to be significant:

- A positive and significant relationship was found between centers staffed mostly by teachers and staff-level scale scores on the collective support for youth development scale ($p < 0.05$). Staff working in centers that hired mostly teachers were more likely to report that colleagues implemented practices associated with interactive and engaging settings for participating youth.
- A negative and marginally significant relationship was found between the respondent's status as a school-day teacher and center-level scale scores on the collective support for youth development scale ($p < 0.10$), meaning respondents who were school-day teachers reported lower levels of *collective support for youth development* than staff who were not certified teachers.

At first glance, these findings seem to be contradictory. This is an area that will warrant additional exploration in the future. Possibly, centers staffed mostly by school-day teachers use a staffing model in which teachers provide the academic components of the program and non-teachers focus on non-academic enrichment activities. In the latter case, there may be more opportunities for staff to employ practices that lead to interactive and engaging settings.

Youth Leadership – Site Visit Findings

Using site coordinator interview and staff focus group data, the evaluation team rated the ACE site visit programs on their provision of programming that was intended to develop leadership in students. This dimension is rated on a two-point scale – mostly high and mostly low – since it was difficult to clearly distinguish a moderate rating, given the information provided by some respondents and the differences among respondents on their understanding youth leadership.

Rating criteria used by the evaluation team in each of these areas are presented in Table 24. All 38 programs (noting that two were excluded because either interviews or focus groups did not occur as scheduled) were assigned a rating.

- Only high and low ratings were assigned to the *youth leadership* dimension. A mostly high rating was assigned to *youth leadership* for sites in which programming was designed to develop leadership and when numerous examples of such programming were described. A low rating was assigned when leadership opportunities were scarce and not systematic.

Table 24. Criteria for Rating Youth Leadership

Dimension	Criteria Mostly High Rating	Criteria for a Mostly Low Rating
Youth Leadership	Programming was designed to develop leadership in students. Many examples were provided.	Leadership opportunities were scarce or not systematic/intentional. Natural youth leaders may have emerged as a result of programming.

The ratings for site visit programs on the dimension identified in Table 24 are presented in Table 25.

Table 25. Ratings for Site Visit Programs on Youth Leadership

Dimension	Mostly High Rating	Mostly Low Rating
Youth Leadership *n*=38)	15	23

Source: Program Summaries

Key results outlined in Table 25 include the following:

- Fifteen of the 38 centers were rated *mostly high* on youth leadership, indicating that youth leadership opportunities are part of the program design, and are incorporated into numerous program activities. Eleven programs served elementary students and 4 served secondary students.

Exemplars – Youth Leadership

Four programs in particular were designated as demonstrating exemplary practice in relation to provision of opportunities for youth leadership in the program, two elementary programs and two middle school programs. In most of the programs highlighted below, specific approaches were driven by the teachers of the sessions, but were widespread enough to suggest a programmatic emphasis on youth leadership.

Elementary Program 1. The program surveyed students each cycle to learn what they liked and didn't like about the activities, and what they would like offered in the future. The program also developed a "junior staff" component, consisting of fourth and fifth grade students. Students applied to be junior staff, stating why they would be good in the position and what they would do if someone needed their help. If chosen (there were 22 junior staff), they worked one day a week helping other students, cleaning up after the sessions, "collecting a kid and bringing the kid back to us," at times leading a class, and for some (through a points system) doing the announcements. The program had a monthly awards ceremony, honoring the junior and senior staff of the month. Awards were given based on student participation, responsibility, respect, and being a role model. Monthly awards were also given for art, game room, Power Hour, reading, sportsmanship, and citizenship. Students who received awards had their pictures taken and posted in the building.

Elementary Program 2. Staff participating in the focus group described several leadership opportunities. The program paired older children with younger children (older students reading to younger ones and helping with art, for example). University students tutored older elementary students about college readiness skills, and fifth grade students then taught fourth-grade students about these same college-related skills. The site coordinator and teachers provided students with the opportunity to be "little helpers or leaders," helping with tasks such as getting snacks, class dismissal, and greeting parents. The program also had an end of the year program, attended by parents, during which students displayed their work in music, arts and science.

Secondary Program 1. The site coordinator and site staff did not describe specific plans or goals for incorporating youth development principles in program activities, but provided numerous examples. In Spanish theater, students struggled with the language. In response, the teacher provided opportunities for participating students to practice, speak in front of groups, and take turns with the lead role in a play. In sports, the focus was on learning to work as a team. Team members were provided with leadership roles, such as equipment manager, and more skilled players were asked to help less skilled players. In a college readiness session, students had the opportunity to participate in many group projects, which provided leadership opportunities. In addition, students' achievements were recognized through regular performances, such as at parent conferences and open houses.

Secondary Program 2. Youth development occurred primarily within the enrichment activities and varied between them. Staff in the focus group described a strong focus on discipline and leadership. Students were provided the opportunity to teach and mentor elementary students and their peers, select the music to be sung in glee choir, or choose and design their own projects.

The programs in this group of exemplars showed strong sensitivity toward youth needs and responsiveness to student perspectives. In these programs, the students had very active roles, completing projects, tutoring other students, taking on administrative tasks, engaged in team efforts with multiple roles (theater, sports), and so forth. Students were also given responsibilities, particularly with respect to their own learning: what they learned they taught either their peers or younger students.

Summary of Findings Related to Practices Supportive of Youth Development

The findings in this chapter, which are somewhat contradictory from one another, suggest differences based on whether the perspective is the program level or the individual practice level. On youth ownership, the majority of the site coordinators (presumably the program perspective) were in the *disagree* category on the *youth ownership* scale, while the great majority of the surveyed staff (the practice perspective) were in the *agree* and *strongly agree* categories.

The different perspectives may explain why findings differ between the survey analysis results and the site visit analysis. The survey analysis showed more secondary programs fostered youth development, and the site visits found more elementary programs fostered youth development (based on the youth leadership dimension). One reason for this might be that the focus of the survey was on individual practice (what staff do to promote youth development) and the focus of the site visits was the program (the prevalence of practices across the program).

Another possibility is that the interview and focus group respondents (who provided the information for the site visit analysis) may not have had a clear understanding of the concepts. A review of interview and focus group data showed that within and across programs, answers were frequently not based on a shared understanding of what youth leadership means or how practices might support youth leadership. In the survey, coordinators and staff responded to items about specific behaviors, rather than to open-ended questions that incorporated conceptual language.

One thing that stands out among the program exemplars were the different ways in which the four programs supported youth leadership. The approaches differed considerably from one another. Common ground was in the sensitivity to youth, regard for their perspectives, and the active roles assigned or provided youth in the programs.

The next chapter moves away from actual programming and into the area of program operations. Chapter 8 addresses the relationships of the programs with partners, families, and the community. Like Chapters 5, 6, and 7, Chapter 8 summarizes findings from the surveys and the site visit interviews and focus groups.

Chapter 8:
Estimates of Program Quality: Connecting with Partners, Families, and the Community

Partners, families and the community play an important role in the ACE programs – expanding the number and types of activities available to participating youth and their families, and potentially facilitating sustainability efforts for the program once grant funding has ended. A milestone for CSF2 is the number of contacts a program has made with the families of participating students. The chapter examines three ways the ACE programs might achieve connections other than those with the school and students.

- **Partner Collaboration**. The section examines the relationship to and roles of partners. Findings are based on analyses of site coordinator surveys.
- **Family Communication and Engagement**. Family communication and engagement is associated with CSF1, which includes behaviors that provide families opportunities to learn and engage with the afterschool program. The section examines the extent to which the ACE programs communicate with and engage families in the afterschool programs. The findings are based on analyses of site coordinator surveys.
- **Family and Community Connections**. The site visit interviews and focus groups provide information for this section, which examines the extent to which and ways the site visit programs have established connections with families and communities. Exemplars are presented.

Partner Collaboration – Survey Findings

Partners are defined as any organization other than the grantee that actively contributes to a 21st CCLC-funded program by providing staff, activities and programming, facilities, or other types of services that facilitate the ability of the program to meet its goals and objectives related to student growth and development. Many states require their grantees to have a letter of commitment from at least one partner in order to submit a proposal for funding. Ideally, partners and the grantee administering the afterschool program have developed a synergistic relationship and commitment to a shared vision of what is to be accomplished by the program, and collaborate on various facets of program operation and delivery (Zander, Burnside, & Poff, 2010).

To measure the extent to which the ACE programs have such a relationship, a *partner collaboration* scale was developed, which aggregates responses to several items on the site coordinator survey. The items were preceded by the prompt: below: *Do you and representatives from partner agencies involved in afterschool programming work together to do the following, and if you do, are these things done informally or formally?* Response categories associated with this scale were *do not do*; *do informally*; and *do formally*. Items include:

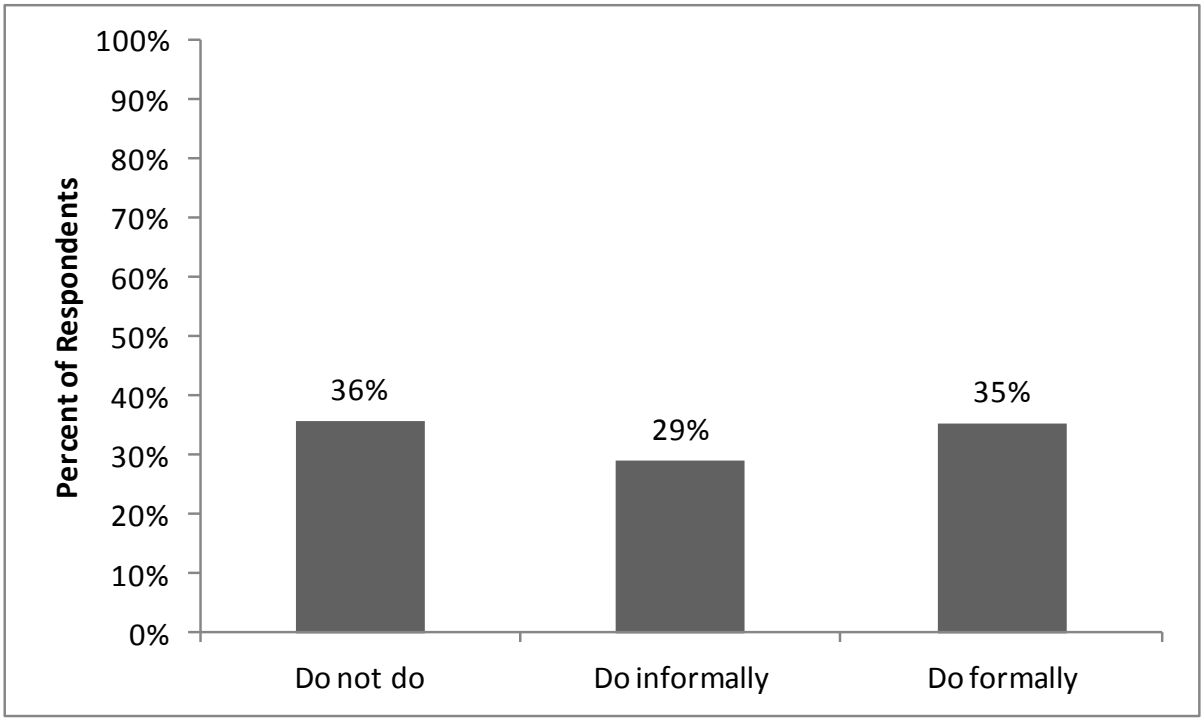
- Establish goals and objectives for the program

- Orient new staff to the program
- Provide professional development opportunities to program staff
- Review evaluation results and target areas for improvement
- Develop and evaluate the effectiveness of operational procedures (e.g., recruitment, scheduling, activity transitions, etc.)
- Plan for program sustainability and/or expansion.

Site coordinators were only asked to respond to these items when they indicated they were working with partners during the 2010–11 program year. Only 60% of site coordinators indicated they were working with partners and subcontractors.

On the *partner collaboration* scale, 36% of respondents fell in the *do not do* range of the scale, 29% in the *do informally* range, and 35% in the *do formally* range (see Figure 17). This shows considerable variation in how ACE programs structure and manage the relationship with partners who provide programming and services. In our experience, the extent to which a project director or site coordinator develops a synergistic relationship with partners depends on the extent to which the center relies on partners provide services, the importance they attach to ensuring consistent service delivery across activities, and the philosophical premium they place on working collaboratively with others to meet desired goals and objectives. However, the reasons why some centers more than others developed collaborative relationships with their partners are not directly addressed in this report.

Figure 17. Partner Collaboration: ACE Site Coordinator Survey Results, 2010–11



Source: Site Coordinator Survey (*n*=311)

The analysis on the relationship between partner collaboration and center characteristics yielded one significant finding. Centers in their second year of operation received a higher score on the *partner collaboration* scale than centers in their third year of operation (p <0.01, F = 5.94, df = 2). It is not clear why this was the case or what significance, if any, should be attached to this finding.

Family Communication and Engagement – Survey Findings

Engaging families and providing them with learning opportunities is associated with CSF1. One way to engage families is to communicate with them about the center and their child; another is to provide opportunities for family members to participate in center events that or educational and/or social in nature.

A *family communication and engagement* scale was developed from items on the site coordinator survey, which asked how frequently center staff communicated with parents and other adult family members of participating students. In this case, site coordinators were asked to respond to the following prompt: *How often do you:*

- Send materials about program activities home to parents/adult family members.
- Send information home about how the student is progressing in the program.
- Hold events or meetings to which parents/adult family members are invited.
- Have conversations with parents/adult family members over the phone.
- Meet with one or more parents/adult family members.
- Ask for input from parents/adult family members on what and how activities should be provided.
- Encourage parents/adult family members to participate in center-provided programming meant to support their acquisition of knowledge or skills.
- Encourage parents/adult family members to participate in center-provided programming with their children.

Responses options were on a three-point scale: *never*; *sometimes (once or twice a semester)*, and *frequently (monthly to weekly)*. As shown in Figure 18, the majority of respondents fell within the *sometimes* range of the scale meaning they typically communicated with parents and adult family members about the program once or twice a semester, and 26% of respondents indicated communicating with such individuals on a *monthly* to *weekly* basis. Twenty percent of respondents fell within the *never* range, suggesting minimal or no efforts to communicate with parents and families during the year.

Of those respondents who indicated that they *sometimes* or *frequently* communicated with parents and adult family members about the program, the approaches that were used by programs to communicate with parents most frequently included:

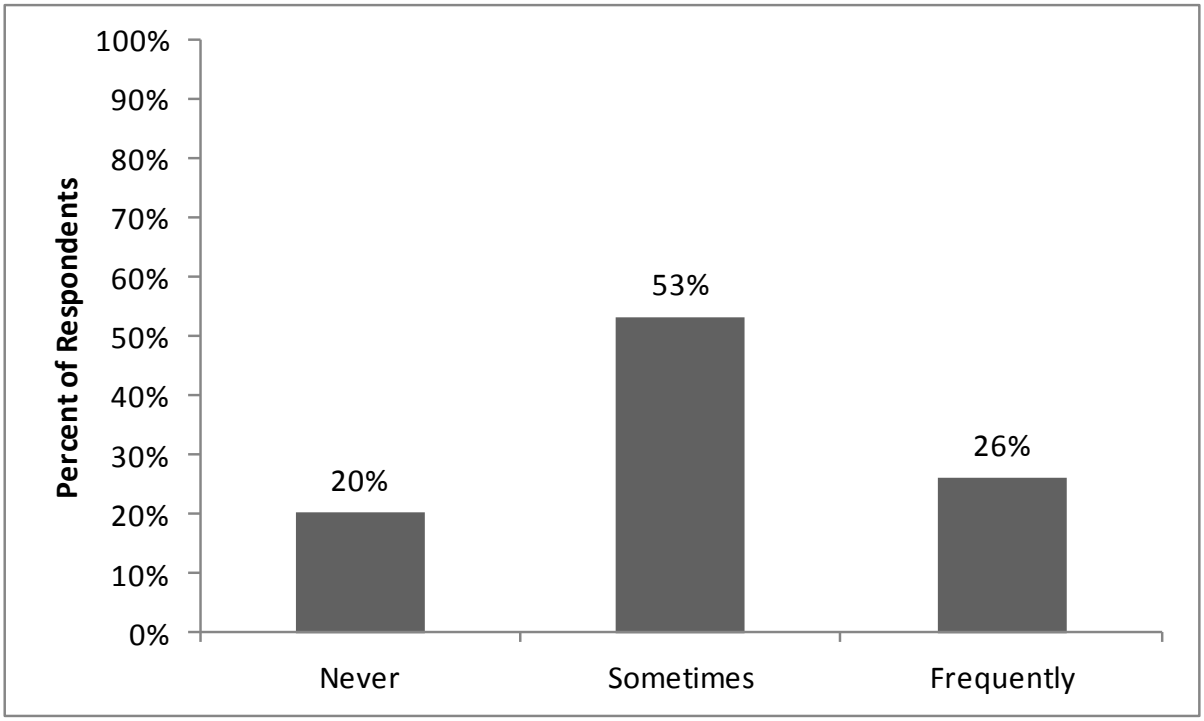
- Having conversations with parents/adult family members over the phone (80% of respondents indicate doing this frequently)

- Meeting with one or more parents/adult family members (75% of respondents indicate doing this frequently)
- Holding events or meetings to which parents/adult family members are invited (75% of respondents indicate doing this frequently).

Approaches used least frequently were:

- Sending information home about how the student is progressing in the program (24% of respondents indicate doing this frequently)
- Asking for input from parents/adult family members on what and how activities should be provided (38% of respondents indicate doing this frequently).

Figure 18. Family Communication and Engagement Scale: ACE Site Coordinator Survey Results, 2010–11



Source: Site Coordinator Surveys (*n*=519 respondents)

Analyses using ANOVA-based approaches showed only one significant finding related to center characteristics: centers serving high school students received a lower mean scale score than centers serving elementary students (p <0.01, F = 3.18, df = 2). This finding is what would be expected given the greater autonomy and responsibility for learning of students once they enter high school.

Family and Community Connections – Site Visit Findings

The evaluation team rated site visit programs based on the extent to which they connected with families of students and had established relationships with community partners. In this sample

of programs, the differences between rural and non-rural programs in establishing community connections were not examined. (It is probable that rural programs do not have as many community organizations with which to establish partnerships and that this limits program options. The year 2 analyses will examine this issue.) Two rating categories rather than three were developed because of the somewhat limited detail provided by a number of interview and focus group respondents. Rating criteria used by the evaluation team in each of these areas are presented in Table 26.

- A high rating was assigned on *family connections* for programs where teachers had developed relationships with parents, programming for parents provided, and there was good participation by parents. A low rating indicated the program had few opportunities to develop relationships with parents, and/or parent participation at such opportunities was low.

Table 26. Criteria for Rating Family Connections and Community Connections

Dimension	Criteria for a Mostly High Rating	Criteria for a Mostly Low Rating
Family Connections	Teachers developed relationships with parents. Programming was directed at parents, and there was good participation among parents at events.	The program had few if any opportunities to develop relationships with parents, or parent participation was low, even when opportunities are provided.
Community Connections	Numerous relationships with community partners had been developed, and there were strong examples of community-service projects, with good participation by students.	Few, if any partnerships with community organizations had been established, and there were few, if any, examples of community-service projects.

The ratings for site visit programs on each of the dimensions identified in Table 26 are presented in Table 27 below. All 38 programs were rated for both family and communication connections.

Table 27. Ratings for Site Visit Programs on Family Connections and Community Connections

Dimension	Mostly High Rating	Mostly Low Rating
Family Connections (*n*=38)	18	20
Community Connections (*n*=38)	16	22

Source: Program Summaries

- Nearly half of the programs, 18, had established ways to connect with the families of program participants through developing relationships with parents, and scheduling events and activities for parents. These programs saw relatively high participation by

parents. In many of the high rated elementary programs, staff mentioned talking with parents when they picked up their child from the program.

- Twenty of the 38 programs were less successful in establishing ways to connect with parents. Typically, the programs provided activities and events for parents, but participation by parents was low. For example, one program in an elementary school had surveyed parents on programming, offered GED and financial planning courses for parents, and extended invitations for conferences and award assemblies. Despite this, parents had little involvement with the program.
- Sixteen schools were assigned a *mostly high* rating on community connections. In these programs, numerous relationships with community organizations had been established, as evidenced by program activities and opportunities for students to participate in community-based learning.
- There were no differences between elementary and secondary programs on either dimension. Half of the programs assigned high ratings on both family and community connections were elementary programs and half secondary.

Exemplars – Connecting with the Community and Families

Two of the site visit programs appeared to be particularly successful in communicating with families and working with community partners. Each program had strong connections to community organizations, which they leveraged to serve not only students, but provide information and services to parents.

Elementary Program. The program, through the site coordinator, worked with a major regional service organization to organize service-learning projects. The program had also developed partnerships with the Rotary Club to organize a dental health information program for parents, and a parks and recreation group, which provided service work and transportation during the summer. The program also worked with a local college to recruit education students to staff the program through a work-study program. The program partnered with other ACE programs in the area which served middle and high school students to establish a mentor program, with the secondary students mentoring the elementary students.

The program was effective in connecting with parents and adult family members. The coordinator wanted to avoid making parents feel like they were being “taught how to parent,” so parent night events usually emphasized crafts, games, and fun competitions. The program hosted a few information nights for family members, such as a dental health event, a fire safety presentation by the fire department, and a technology and Internet safety tutorial. The site coordinator said parents were more likely to come to events when their children performed, so student performances were planned for parent nights. One teacher who participated in the focus group said the turnout at the events was not as high as they would like, possibly because a large proportion of the parents were Spanish-speaking and the program did not have any bilingual staff members.

Middle Program. Staff members perceived that the program’s connection to the community was strong. With the Communities in Schools, the afterschool program organized an information night at the campus for the surrounding community. Different agencies presented information

about their services, such as child care, housing, and health services. A staff member said people in the community could "just come and hear about opportunities they never knew were there, that they never realized could help them. And this is an area where there might be a lot of parents with a lot of need for help…they were in the cafeteria learning about how to make their families better."

Parent nights for the afterschool program were described as successful. The site coordinator said all the afterschool programs in the district co-host family events twice a month, once on a weeknight and once on a Saturday. Family nights were promoted through flyers, calls to the home, and the school's electronic marquee. The coordinator said the highest turnout was 85 to 95 people. Staff members said they frequently called parents of afterschool students to maintain a connection, not only to report student failures or problems, but to comment on positive behavior and progress. One staff member said, "It is great when parents get called and hear that the kids are not in trouble - instead, they hear they are doing excellent in school. It just makes the home environment so much better."

Summary of Findings on Connecting to Partners, Families, and the Community

Among the ACE programs that had partnerships, there was wide variation on the extent to which they and their partners collaborated. Only 35% of the programs with partnerships indicated that most of their interactions were accomplished formally, that is, with an agreed understanding of roles and procedures. The remaining had either established informal practices for collaboration (29%) or did not have any practices in place to collaborate with partners. This finding suggests that ACE program partnerships with other agencies may be strengthened by more formal and standardized guidelines and procedures than are currently used by many of the programs.

Communication with families was a common practice among the staff of the ACE programs, with many staff members calling families, sending written communication to families, and meeting with family members when they picked up their child from the program. More formal, group approaches - classes and events - were successfully implemented by nearly half of the site visit programs, despite the commonly stated concern about low participation. The site visit programs that had established connections to community organizations were able to link families to community services and/or students to community-learning opportunities.

In the following chapter, Chapter 9, another aspect of program operations is addressed: staff development, including staff development for the site coordinator and for the staff who conduct program activities.

Chapter 9:
Estimates of Program Quality: Staff Development

This chapter examines the professional development opportunities available to the ACE coordinators and staff, and the reported impact of professional development on their practice. Staff development is addressed in CSF4. The chapter has three sections.

- **Edvance.** The first section examines the reach and impact of the resources provided by Edvance Research, Inc., which TEA contracted with to design and deliver tools, resources and training for staff associated with the ACE programs. The findings are based on information from the site coordinator surveys.
- **Internal Communication and Collaboration.** The chapter also examines internal communication and collaboration among the program staff. As noted by Smith (2007), Glisson (2007), and Birmingham et al. (2005), climate, organizational norms, and supports that encourage and reinforce staff efforts to continually improve program quality are important components of an effective youth-serving program. The hypothesis is that programs characterized by a supportive climate, are self-reflective, and empower staff to improve their practice and overall program quality. The programs are then more likely to design and implement program sessions that provide youth with positive and meaningful experiences. The section is based on findings from the site coordinator and staff surveys.
- **Staff Development.** The third section of the chapter examines the staff development opportunities available to staff and site coordinators reported by the site visit interview and focus group respondents. Exemplars of programs that provide comprehensive opportunities for staff development are included in this section.

Edvance – Survey Findings

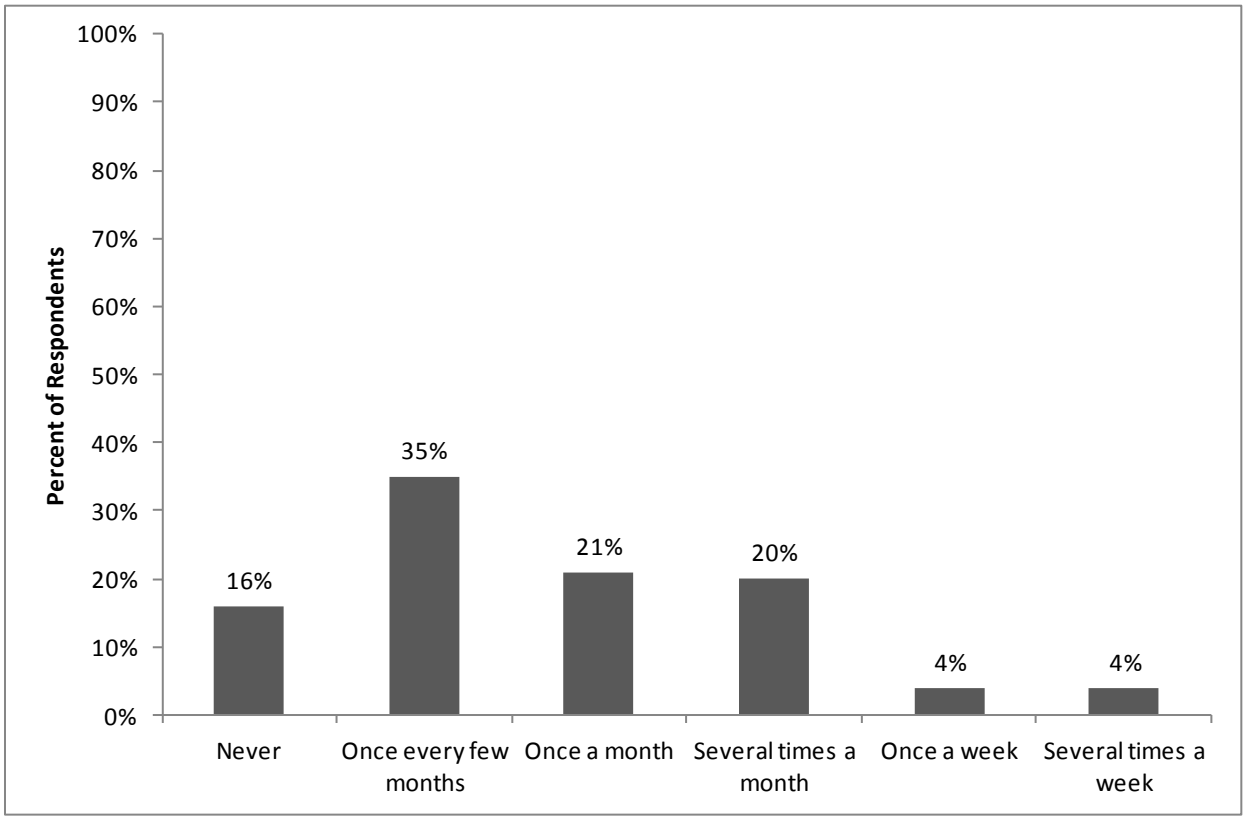
Edvance has provided ACE grantees a variety of support, including a comprehensive web portal which provides grantees with access to recorded webinars on relevant topics, examples of lesson plans, and forums to share ideas with peers about how to deliver effective programming. In addition, Edvance employs a cadre of technical assistance consultants who work directly with grantees around issues of quality, particularly in relation to areas which may be in need of improvement based on the ACE Prime Assessment, a tool developed by Edvance, in conjunction with TEA program staff, which shows programs how they meet program requirements and certain program design and delivery criteria. The tool is used both as a self-assessment and external assessment tool and provides information to TEA on which grantees need additional training or technical assistance.

The section reports survey results on the use and reported value of Edvance resources. Edvance uses an approach which targets project directors who are responsible for the implementation of the ACE program grant at the local level and oversee the work of each site coordinator associated with their grant. The site coordinators who were surveyed as part of this evaluation were not the target audience for Edvance. The survey findings indicated that site

coordinators were less likely to use the Edvance resources than the project directors, a factor to consider when interpreting survey results.

As shown in Figure 19, the initial question asked on the site coordinator survey addressed the frequency with which site coordinators accessed http://mytexasace.org/, the web portal developed by Edvance, to inform their work. The most commonly endorsed option was *once every few months* (35% of respondent selected this option),although 41% of respondents indicated accessing the site either *once a month* or *several times a month*, and 8% indicated using the site *once a week* to *several times a week*. Only 16% of site coordinators indicated never having accessed the site.

Figure 19. Frequency in Accessing Edvance Web Portal: ACE Site Coordinator Survey Results, 2010–11



Source: Site Coordinator Surveys (*n*=519 respondents)

The site coordinator survey questions also asked how useful the Edvance web portal was for different purposes, such as accessing lesson and activity plans and preparing for a site visit by TEA. As shown in Table 28, across each of the items appearing on the site coordinator survey, the most frequent response was *extremely useful*, with the majority of respondents endorsing this option in relation to *activity and lesson planning* (item b); *review examples of programming provided by other programs* (item c); and *when additional information is sought about how TEA defines quality* (item g).

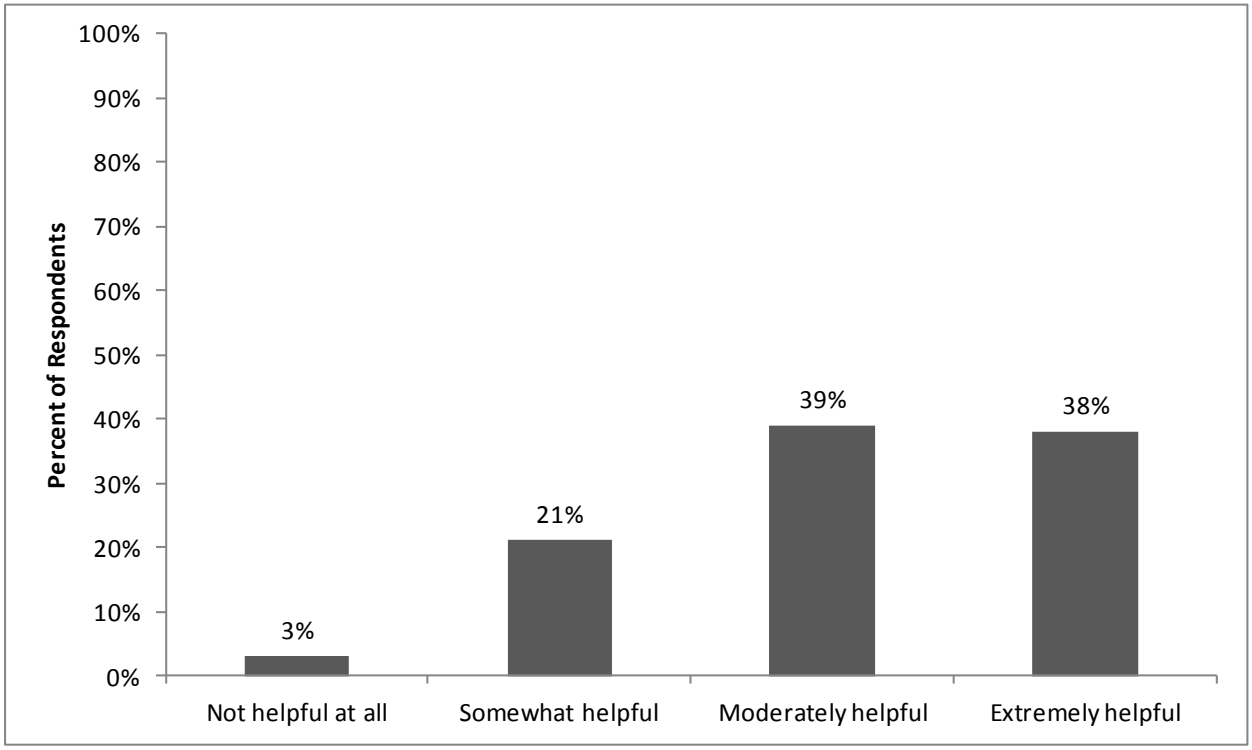
Table 28. Usefulness of Edvance Web Portal: ACE Site Coordinator Survey Results, 2010–11

How useful is the information contained at http://mytexasace.org/ to you when you want to…	Not at All Useful	Somewhat Useful	Moderately Useful	Extremely Useful	Unsure
a. Get updates on upcoming trainings and other key events related to the ACE program	1%	16%	30%	47%	7%
b. Access resources related to activity and lesson planning	1%	12%	29%	52%	6%
c. Review examples of programming provided by other programs	1%	15%	26%	50%	9%
d. Participate in program-related discussions with other grantee and site coordinators	5%	20%	27%	31%	17%
e. Prepare for a visit by a Technical Assistance Consultant (TAC)	5%	15%	20%	40%	21%
f. Obtain additional information on innovative and effective programming	1%	14%	29%	49%	8%
g. Obtain additional information on how TEA defines program quality	1%	12%	27%	52%	9%

Source: Site Coordinator Surveys (*n*=434)

The survey also asked respondents if they had participated in training or technical assistance events provided by Edvance, including any meetings or trainings held at their site with a Technical Assistance Consultant (TAC). Of 234 respondents, 54% indicated they had done so during the 2010–11 program year. These respondents were asked to rate the helpfulness of these events as shown in Figure 20. In this case, 39% of respondents found training and technical assistance events to be *moderately helpful* and 38% found them to be *extremely helpful*.

Figure 20. Helpfulness of Edvance Training and Technical Assistance: ACE Site Coordinator Survey Results, 2010–11



Source: Site Coordinator Surveys (*n*=232)

Analyses examined whether site coordinator characteristics were related to the use of Edvance and its perceived utility. Characteristics considered were number of years in their position, whether or not they were a certified teacher, or whether or not they had a connection to the school day. Findings associated with these analyses are as follows:

- First year site coordinators were more likely than other site coordinators to report that Edvance support was useful for providing opportunities to participate in program-related discussions with other grantee and site coordinators (p <0.01, Chi-Square = 17.28, df = 4).
- Coordinators who were in their position for two or more years were more likely than less veteran coordinators to attend a training or technical assistance event during the course of the 2010–11 school (p <0.05, Chi-Square = 4.21, df = 1).
- Coordinators who had teaching certificates were more likely to attend a training or technical assistance event than coordinators without this certification (p <0.10, Chi-Square = 3.82, df = 1), as were coordinators that did not have a formal connection to the school-day (p <0.05, Chi-Square = 3.86, df = 1).

Internal Communication and Collaboration

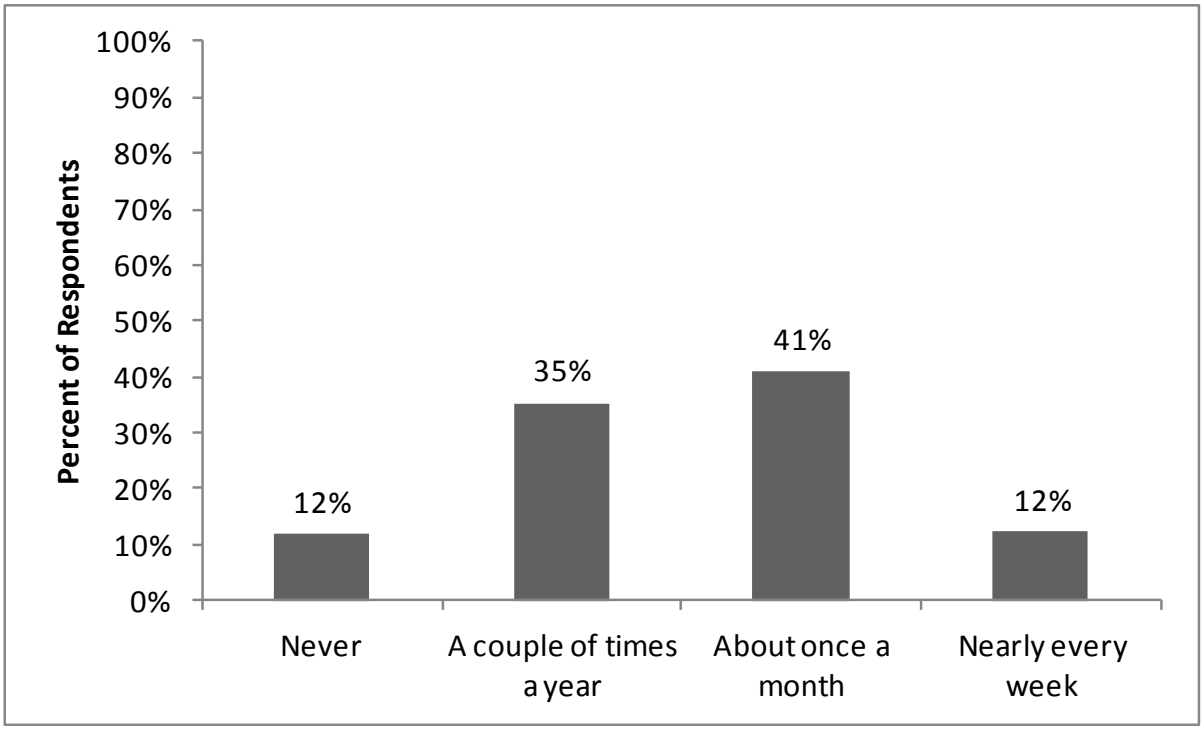
The other aspect of staff development addressed in the surveys was internal communication and collaboration. The topic was addressed on both the site coordinator and the staff surveys.

The *internal communication and collaboration* scale (on both the site coordinator and staff surveys) measured how frequently center staff engaged in activities aimed at program improvement with other staff members. Respondents on both surveys were asked to respond to several items which followed the prompt: *How frequently do you engage in the following tasks with other staff working in the afterschool program to***:**

- Conduct program planning based on a review of program data with other staff.
- Use evaluation data to set program improvement goals with other staff.
- Discuss progress on meeting program improvement goals with other staff.
- Observe other afterschool staff delivering programming in order to provide feedback on their practice.
- Conduct program planning with other staff in order to meet specific learning goals in coordinated ways across multiple activities.
- Share ideas with other staff on how to make programming more engaging for participating students.
- Share experiences and follow up about individual youth with other staff.
- Engage in discussions with other staff and school-day teachers and/or administrators on how the program could better support student learning needs.
- Participate in training and professional development with other staff on how to better serve youth.
- Discuss current research-based instructional practices with other staff.

As shown in Figure 21, the vast majority of site coordinators fell in the *a couple times a year* (35%*)* to *about once a month* range (41%). approximately three-fourths of site coordinators were in this range.

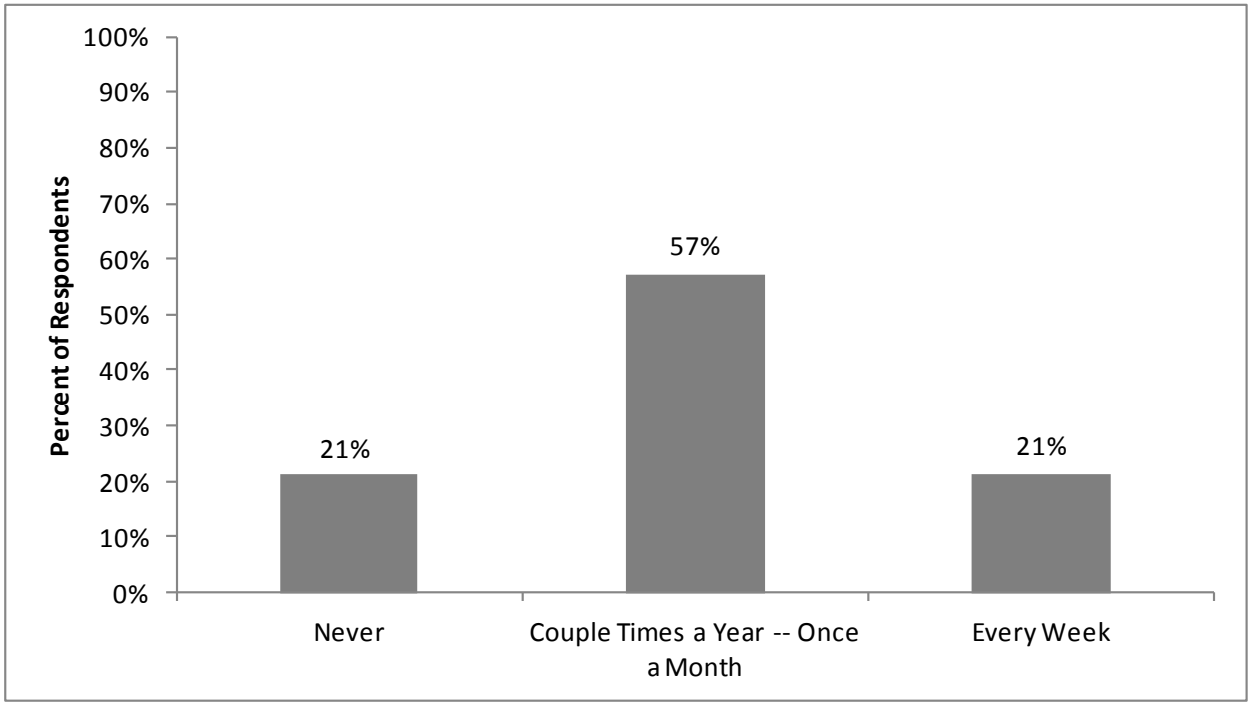
Figure 21. Internal Communication and Collaboration: ACE Site Coordinator Survey Results, 2010–11



Source: Site Coordinator Surveys (*n*=519)

As shown in Figure 22, 57% of responding program staff fell in the *couple times a year to once a month* range (these categories needed to be combined for the staff survey given an inability of staff to effectively distinguish between the two categories). A smaller percentage of staff than site coordinators were in this range. However, a larger percentage of staff than site coordinators were in the *every week* range (21% for staff and 12% for site coordinators) and in the *never* range (21% of staff and 12% of site coordinators).

Figure 22. Internal Communication and Collaboration – ACE Programs Staff Survey Results, 2010–11



Source: Staff Survey (*n*=463)

Analyses explored how scale scores varied by program characteristics, including association with a school-based grantee, hiring of mostly school-day teachers, program maturity, and the grade level served by the program. ANOVA-based approaches showed the following among site coordinators.

- Centers in their first year of operation had a higher mean score on the *internal communication and collaboration* scale than centers in their third year of operation ($p < .05$, $F = 3.88$, df = 2).
- Centers which were not staffed mostly by school-day teacher had a higher mean score on the *internal communication and collaboration* scale than programs staffed mostly by school-day teachers ($p < .10$, $F = 3.04$, df = 2). One reason for this might be that school-day teachers often do not have time to attend program staff meetings, as reported by the site coordinators in the survey.

Staff Development and Training – Site Visit Findings

Among the site visit programs, staff development and site coordinator professional development were assessed based on interviews and focus groups. Table 29 describes the criteria for rating site visit programs on staff development, and site coordinator professional development.

- A high rating was assigned *staff development* when interview respondents indicated most staff attended multiple formal professional development sessions. A low rating was assigned when staff indicated they did not participate in professional development. A

moderate rating indicates staff mainly attend learning sessions during staff meetings or only some staff participated in professional development.

- A high rating was assigned to *site coordinator professional development* when the site coordinator indicated he or she participated in sessions provided by multiple sources and more than once a year. A low rating was assigned when the site coordinators did not attend any professional development sessions. A moderate rating was assigned when the site visitor participated in professional development in a limited way.

Table 29. Criteria for Ratings on Staff and Site Coordinator Professional Development

Dimension	Criteria for a High Rating	Criteria for a Moderate Rating	Criteria for a Low Rating
Staff Development	Most staff attended multiple formal professional development sessions.	Staff mainly attended informal learning sessions, mainly during staff meetings OR only some staff participated in professional development sessions.	Staff did not participate in professional development.
Site Coordinator Professional Development	The site coordinator participated in professional development provided by multiple sources and more than once a year.	The site coordinator participated in limited professional development, e.g. the 21st CCLC conference in Austin.	The site coordinator did not participate in professional development.

Table 30 presents the ratings of site visit programs on the two dimensions highlighted above by members of the evaluation team. All 38 programs were rated.

Table 30. Ratings for Site Visit Programs on Staff Development and Site Coordinator Professional Development

Dimension	High Rating	Moderate Rating	Low Rating
Staff Development (*n*=38)	6	16	16
Site Coordinator Professional Development (*n*=38)	9	24	5

Source: Program Summaries

- Staff development was rated high in only 6 of the 38 programs. In 16 programs, the interview and focus group respondents indicated there was mainly informal professional development primarily provided during the staff meetings. In 16 programs, interview and focus group respondents indicated that they did not attend professional development sessions at all.

- Site coordinator professional development was rated high in 9 of the 38 programs, indicating the site coordinators participated in multiple professional development opportunities from multiple sources. For the majority of site coordinators, professional development participation was limited, generally to the annual Texas 21st CCLC conference. Only five of the site coordinators indicated that they had not participated in professional development.
- There were no differences among the programs serving secondary students and those serving elementary students. There were also no or minimal differences among programs staffed primarily by teachers and those staffed by non-teachers.
- Three of the six programs rated high on staff development were operated by non-profit organizations, and staff members participated in the sessions provided by the operating agencies. One of the programs was one of four ACE programs in the district, and professional development for the programs was provided at regular intervals. For the other two programs, staff development was mainly on-site and driven by the site coordinator. One site coordinator, for example, said participation at staff development sessions is mandatory, and the site coordinator had a systematic approach for evaluating staff and providing them feedback.

Low levels of staff development have different implications depending on the staffing. Certified teachers generally have staff development opportunities associated with their regular responsibilities. This is not always the case for programs that are not operated by a community-based organization and not staffed by certified teachers. For example, in a middle school where the afterschool teachers were college students, the program offered few opportunities for staff development – just an orientation about rules. Focus group participants said they would have liked more training on how to work with and engage students.

Exemplars – Staff Development

Two programs rated high on professional development had adopted a fairly rigorous hiring process and provided a high level of professional development, which was reflected in orientation and in opportunities provided throughout the year.

Elementary Program. In an elementary program operated by a community-based organization, the staff were selected based on their experience working with youth and their knowledge about the field of extended learning. Orientation of new staff was rigorous, and included completion of a workbook that required the new staff person to work with more veteran staff. Orientation topics included how to work with volunteers and how to engage students in critical thinking. New employees shadowed more experienced teachers for 20 hours. Staff were evaluated every 90 days and were expected to draw up a performance plan.

Each staff member was required to participate in four hours of professional development through an outside provider each quarter. Outside providers included the Central Texas Afterschool Network University and The Ready by 21 Initiative.

Internal professional development was scheduled whenever staff evaluations indicated a need. Topics included classroom management and behavior support, summer planning, scaffolding

for success, child development, age-appropriate curriculum, reading strategies, and bullying prevention. The operating agency's director of education was certified to teach YPQA workshops, which all staff were required to attend.

Secondary Program. The middle school ACE program hired certified teachers as well as non-teachers who have knowledge and skills in specific areas (such as art and archery). The program had a pre-service orientation, monthly staff meetings, and ongoing onsite development available throughout the year. Attendance for on-site training sessions was high, because, for most sessions, participation was mandatory. Topics for training, particularly those delivered onsite, were often based on the site coordinator's assessment of what teachers needed to learn. The site coordinator said, "We have an evaluation format that we use. We grade instructors on how well they delivered the lesson. I do walk-through's and I have a form for that. I use that also as a guide for their evaluation." The walk-throughs determined the topics that were to be addressed in professional development sessions. The site coordinator said, "We'll let our director know, this staff needs a little more improvement in this area or that area. That is how the director and all the coordinators decide what to address."

Summary of Findings on Staff Development

The site coordinators reported considerable variation on the frequency with which they accessed the Edvance web portal. As noted earlier, site coordinators were not the target audience for Edvance. However, the great majority of site coordinators (77%) reported that the Edvance training and technical assistance was moderately or extremely helpful.

The site visit interview and focus group data suggest that staff development opportunities are limited for many of the site visit programs – with staff and site coordinators reporting that either staff development is provided informally in the context of staff meetings or there is minimal or no staff development available.

Staff collaboration and communication varies. On the surveys, the site coordinators' scaled responses were somewhat evenly distributed in the *once a month* or more ranges and the *couple of times a year* or *never* ranges.

As noted in an earlier section, one of the concerns of site coordinators was the difficulty in getting staff together because of their schedules and/or because staff may only be paid for the time they actually deliver program activities.

The next chapter, Chapter 10, considers the activities provided by the ACE programs that were included in the site visit sample. An assessment of activities presents a different program perspective because the concern is not so much on what programs do but on what afterschool teachers do to support learning and youth development.

Chapter 10:
Quality at the Point of Service: Program Activities

In Chapters 5 through 9, the ACE programs were examined primarily at the program level, and survey findings and findings from the interviews and focus groups described programs characteristics and their variation across programs. The chapters presented program exemplars: descriptions of program level practices, which appeared to be effective, given statements by site coordinators and program staff. Chapter 10 extends the previous discussion by examining quality at the point-of-service: the program activities that bring program staff and students together. The chapter focuses on Research Objective 2, which is to identify and describe innovative and effective practices in Cycle 5 and Cycle 6 ACE programs, and it includes findings from the observations of program activities which were conducted on each day of the 20-day site visits to 40 ACE programs. The chapter has two sections.

- **Quality of Activities**. The first section summarizes analyses of observation data, collected across four instruments which assess different aspects of quality. The School-Age and/or Youth PQA, the APT-O, the OCE, and the student engagement survey. (These will be described in more detail as the findings are presented.) Among these instruments, the PQA was the core protocol for the site visit observations because of its focus on developmentally appropriate settings that are congruent with established quality frameworks, and because it also consists of a narrative component. The other observation instruments, the OCE and the APT-O, were supplementary measures to the PQA. There are fewer APT-O and OCE scores than PQA scores, because the observations were conducted using two packages: package A included the PQA and the APT-O, and package B used the PQA and the OCE. (If one rater went to a site, that rater used package A on day one and package B on day two. If two observers went to a site, one rater used package A and the other rater used package B. Thus, there are fewer APT-O and OCE scores than PQA scores.)
- **Innovative Practice High-Quality Activities**. The second section describes high-quality activities, focusing on innovative practice. The section summarizes characteristics of 15 activities identified as high quality, based on the analyses of the observation data – specifically the PQA scores and the scores of a student engagement survey administered to students following the observations.

Quality of Activities

This section examines four dimensions of program activities: youth development, academic climate, academic content, and student engagement. Each of these dimensions was informed by one or more of the observation protocols. Youth development and academic climate discussions and findings are primarily, though not solely, the result of analyses of PQA data. Academic content was examined through the APT-O, which measures the extent to which staff promote and students practice content-specific skills. Student engagement was measured primarily through the OCE instrument and student surveys.

Youth Development Practices Identified Through the PQA

As noted previously, the School-Age PQA was used in elementary programs, and the Youth PQA was used when conducting observations at middle and high school programs. Both versions of the tool have three primary subscales: *supportive environment* (SE, with 21 items); *interaction* (INT, with 18 items), and *engagement* (ENG, with 19 items). Program quality is measured by rating each of the items on a three-point scale.. (A rating of 1 is low, 3 is medium, and 5 is high.)

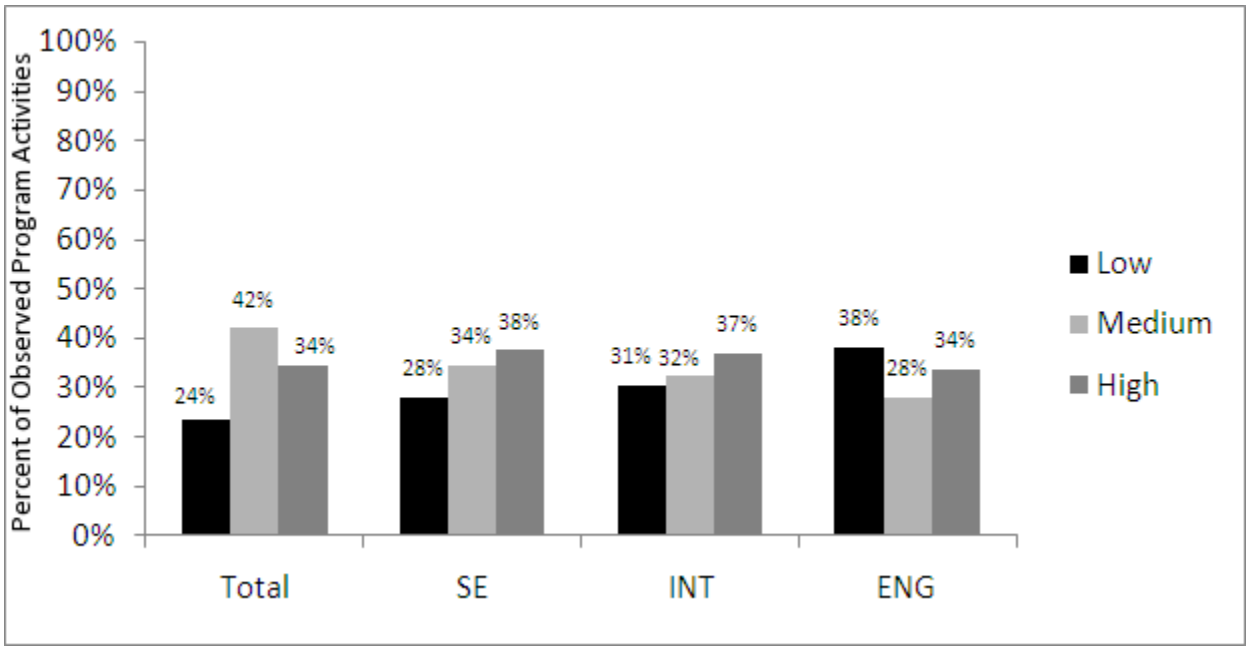
The subscales follow a developmental hierarchy, in which a *supportive environment* should be in place so that *interaction* can take root. In turn, *supportive environment* and *interaction* should be established so that *engagement* can take root. Scores are expected to be lower as one moves from one scale to the next because it is more challenging to design and implement opportunities associated with *interaction* than *supportive environment*, and it is more challenging to design and implement opportunities associated with *engagement* than *interaction.*

PQA measures were calibrated using Many Facet Rasch Measurement (MFRM) techniques in order to quantify and adjust for rater bias. This was possible since a partially-crossed design was employed, in which, for 20 programs, two observers rated the same activities on day one of the visit. This allowed the evaluation team to determine if certain raters were systematically more lenient or harsh in their rating and to correct scores to account for these systematic biases. A total PQA score was calculated for each activity, and scores were calculated for each of the three primary subscales. Additional information about the application of MFRM techniques can be found in Appendix C.

Figure 23 shows the percentage of activities assessed as high, medium, and low quality for the total PQA scoring categories and the three subscales*: supportive environment, interaction*, and *engagement*.

On the total PQA, 34% of the 157 activities were in the high-quality range; 42% in the medium quality range, and 24% in the low quality range. For both the *supportive environment* and *interaction* subscales, the largest percentage of activities, 38% and 37% respectively, were in the *high quality* category, and 28% and 31% in the *low quality* category, respectively. For the *engagement* subscale, 34% of activities were in *the high quality* category, and 38% in the *low quality* category. This is consistent with the PQA hierarchical model, which shows that it is more difficult to reach a high level of functioning on the *engagement* subscale than on the *supportive environment* and *interaction* scales.

Figure 23. Percentage of Activities Observed within PQA Quality Categories, 2010–11



Source : *n*=157 activities observed at 40 programs

Additional analysis explored how PQA scores varied depending on characteristics of the center and the activity. The activities were nested within centers, so HLM techniques were used to explore the relationship between center and activity characteristics and the PQA scores for the activity. (See Appendix E.) Models were run for the total PQA score and for each subscale score (i.e., *supportive environment*, *interaction*, and *engagement*). Two types of models were run.

- The first included several center characteristics: whether or not the center was associated with a school-based grantee, the maturity of the center in terms of years of operation, whether or not the center was staffed mostly by teachers, and the grade level served by the center.
- The second model included scale scores from the site coordinator survey from the following subscales*: intentionality in program design; youth ownership; internal communication and collaboration*; and *staff challenges*. Applying Rasch analysis (see Appendix C), each of these scale scores were placed on a 0 to 100 scale with higher scores indicating a higher level of functioning by the center.

Each model included two other characteristics not measured through the PQA: the staff- to-student ratio for the activity, and whether or not the activity was classified as an academic enrichment activity.

For the first model, which explored the relationship between center characteristics and PQA scores, the following relationships were found:

- There was a significant and positive relationship between academic enrichment activities and the *total PQA* score ($p < 0.05$) and the *supportive environment* score ($p < 0.05$). In other words, academic enrichment activities were more likely than other types of

activities (non-academic enrichment, tutoring, and homework help) to receive higher PQA scores. This finding suggests that academic enrichment activities, more than other activities, were characterized by staff support and the youth development quality criteria embedded in the PQA.

- There was a significant and positive relationship between academic enrichment activities and the *total PQA* score ($p < 0.001$), the *supportive environment* score ($p < 0.01$), the *interaction* score ($p < 0.05$) and the *engagement* score ($p < 0.05$). Academic enrichment activities were more likely to receive higher PQA scores in each of these areas than other types of activities, including non-academic enrichment, tutoring, and homework help.
- There was not a significant relationship between the *total PQA* score and the *interaction* and *engagement* subscales.
- Negative and significant cross-level interactions were found between academic enrichment activities and centers primarily serving middle school grade levels ($p < 0.001$) and centers primarily serving high school grade levels ($p < 0.05$) on the *interaction* subscale of the PQA. The finding suggests that academic enrichment activities for secondary students were less interactive than academic enrichment activities for elementary students. It is not clear why this may be the case. The differences may be due to middle and high school students working more independently than younger students.
- A positive and significant cross level interaction was found between academic enrichment activities and school-based programs ($p < 0.001$). This suggests that academic enrichment activities offered in programs with school-based grantees are more interactive than those offered in other centers. A positive and significant relationship was found between a center's connection to school-based grantee and the *interaction* ($p < 0.10$) and *engagement* ($p < 0.05$) scores of the PQA, with school-based programs achieving higher scores on the two subscales than nonschool-based programs.
- A positive and significant relationship was found between lower staff-to-student ratios and the *interaction* score of the PQA ($p < 0.01$). This finding makes intuitive sense since the *interaction* scale includes a number of items measuring the extent to which the activity leader interacts with each student participating in the activity, a task made easier by lower staff to student ratios.
- A positive and significant cross-level interaction was found between academic enrichment activities and centers employing mostly teachers on the *interaction* score of the PQA ($p < 0.01$). This suggests that the relationship between academic enrichment and the *interaction* score on the PQA is stronger in centers staffed mostly by school-day teachers.
- A negative and marginally significant relationship was found between program maturity and the *engagement* score of the PQA ($p < 0.10$). This was somewhat unexpected and not consistent with expectations that as a program matures, program staff become more

effective in efforts to engage students. However, earlier in this report, a finding noted that less mature programs were more apt to engage in collaborative communication about program development and design. Possibly, mature programs perceive less need for these meetings, even though a possible consequence is fewer opportunities for staff to discuss how to make programming engaging for participating youth.

- Finally, a positive and marginally significant relationship was found between a program's status as only serving high school students and the *engagement* score on the PQA ($p < 0.10$). This was expected given the evaluation team's past experience in using the PQA. It has been the evaluation team's experience that programs serving high school programs have had higher scores on engagement scales, because more control is ceded to students due to students' requiring less guidance and direction to keep them on track.

In the second set of analyses, using the scale scores derived from the site coordinator survey, several findings were generated.

- There was a significant and positive cross-level interaction between academic enrichment activities and the *youth ownership* scale (derived from the site coordinator survey) and the *total PQA* score ($p < 0.001$), the *supportive environment* score ($p < 0.001$), the *interaction* score ($p < 0.05$) and the *engagement* score ($p < 0.01$). This indicates there is a stronger relationship between academic enrichment activities and PQA scores in programs where there are more efforts to support youth ownership in the program (as indicated by higher scales scores on the youth ownership scale of the coordinator survey).
- In terms of scores on the *interaction* scale, two additional site coordinator survey scale scores were found to be significantly related to the PQA subscale score examined. A significant and negative relationship was found to exist between the program's score on the *internal communication and collaboration* scale of the survey and the activity's *interaction* PQA score ($p < 0.01$). This relationship was unexpected and not one the evaluation team would have hypothesized. In addition, a significant and marginally positive relationship was found between the *interaction* score and the center's score on the *intentionality in program design* scale of the survey ($p < 0.10$). This suggests that sessions are more apt to be interactive when activity planning is deliberate.

There were also a series of significant cross-level relationships between lower *staff-to-student ratios* and survey scales scores, particularly in relation to two scales: *internal communication and collaboration* and *intentionality in program design*.

- A significant and positive cross-level relationship was found between *lower staff-to-student ratios* and the center's score on the *internal communication and collaboration* scales. This suggests that the relationship between low staff-to-student ratios and the *interaction* score of the PQA is stronger in centers where there is more internal communication and collaboration ($p < 0.01$).
- In comparison, a similar cross-level relationship between lower *staff-to-student ratios* with the *intentionality in program design* scale was negative, suggesting a weak

relationship between *intentionality in program design* scores and low *staff-to-student ratios* ($p < 0.05$). This suggests that effort invested in planning an activity is not dependent on lower staff-to-student ratios.

Generally, the multilevel analyses that were run to explore the significance of key center-level characteristics and site coordinator survey variables in relation to PQA scores resulted in a series of findings that were consistent across multiple models and worth summarizing in greater detail:

- PQA scores were consistently highest (with higher scores reflecting higher quality) in academic enrichment activities. This is important because the provision of these types of activities is the primary service delivery mechanism for 21st CCLC programs.
- Low staff-to-student ratios are important when attempting to support meaningful and substantive interactions between student and adults during an activity session, although the importance of this element may be reduced if substantive effort is invested in planning the activity session. This finding is related to the CSFs which articulate the need to provide programming that supports the formation of student-adult relationships that foster students' increased sense of involvement in school.
- Inclusion of opportunities that support youth ownership in the program only serve to strengthen the positive relationship between academic enrichment and setting level quality, as represented by higher PQA scores. This is also consistent with the TEA established milestone, embedded in the CSM framework, which directs programs to provide students with opportunities for leadership in the program.

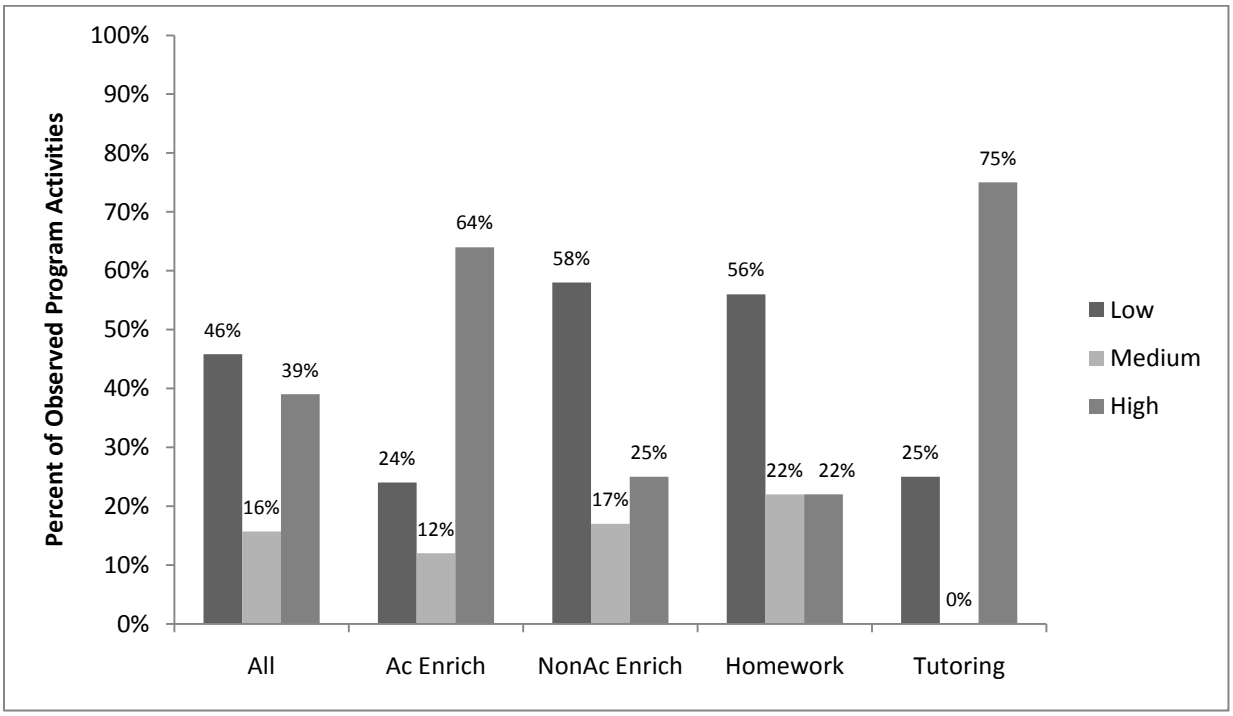
Academic Climate – Observation Results as Measured by the PQA

The PQA includes an *academic climate* scale, which is made up of seven items, each rated as rated as low, medium, or high. The seven items address the activity's focus on developing specific academic skills, the appropriate level of challenge, staff encouraging students to use higher-order thinking skills, and staff feedback, questioning, and guidance of discussion in a way that supports student learning.

Of the 157 observations, 83 were assigned PQA academic climate ratings. The ratings were scaled using Rasch analysis techniques and activities were then assigned a score of 0 to 100 on academic climate. Higher scores indicate a higher level of quality. Based on the scale score, activities were distributed across the low quality range of the scale, the medium range, and the high range.

As shown in Figure 24, approximately 39% of all observed activities scored in the *high quality* range of the academic climate scale. This percentage varied substantially by the type of activity observed with 64% of academic enrichment activities and 75% of tutoring activities falling in the *high* range of the scale, compared to 25% of non-academic enrichment activities and 22% of homework help activities. One hypothesis related to the differences across activities is that academic content is intentionally embedded in tutoring and academic enrichment activities. However, this is not the case with non-academic enrichment activities, which serve a different purpose, and homework help, which is more responsive to students' daily assignments and needs.

Figure 24. PQA Academic Climate Quality Scores by Activity Type, 2010–11



Source: PQA (*n*=83 activities)

Across activities, there was a significant difference in academic climate by grade level served(p <0.01, F = 5.13, df = 2) in that high school activities (*n*=14) had higher *academic climate* scores than middle school activities (*n*=26). This finding seemingly contradicts the site visit interview and focus group finding showing that academic programming was not as intentional among the high school programs (none rated high on the dimension) as programs serving other students. However, analysis of interview and focus group responses focused on a program's structured and purposeful approach to aligning activities with academic objectives. A number of the academic climate items for this scale, however, refer to instructional methods (e.g., engaging youth in dialogue, connecting new knowledge with prior knowledge). Different levels of motivation between high school and middle school students may also contribute to the difference. It is possible as well that the higher level of *academic climate* observed in the high school program activities was simply due to higher developmental stage of the students: more rigorous and substantive content can be packed into a single session with high school students than a single session with middle school students.

Academic Content – Observation Results as Measured by the APT-O

The APT-O was used as an observation tool for the purpose of measuring the extent to which staff prompted and students practiced content-specific skills in reading, written communication, verbal communication, mathematical communication and reasoning, and mathematical problem-solving. As an example, Table 31 presents different staff and student practices associated with mathematical problem-solving. The table shows some corresponding staff and student practices. For example, three student practices include solving math problems, overcoming challenges to complete a math task or project, and brainstorming potential solutions on their

own or in groups. Staff practices listed include, helping youth think through problems, providing explanations in relation to the problems, and encouraging youth to persist and to reflect.

Table 31. APT-O Practices Associated with Mathematical Problem-Solving

Staff Practices	Student Practices
• Help youth think through math problems. • Help youth brainstorm solutions to math problems. • Provide explanations in relation to math problems. • Encourage youth to persist on math tasks even when they are experiencing difficulties. • Encourage youth to reflect on why they arrived at a correct—or incorrect answer	• Solve math problems. • Overcome challenges to complete a math task/project. • Brainstorm potential solutions on own or in groups.

Eighty-four of the 157 observed activities were assigned APT-O ratings. Four types of activities were scored:

- Academic enrichment (typically with a focus on reading, mathematics or science); 30% of activities were in this category.
- Non-academic enrichment (e.g. art, service learning, character education); 42% of activities were in this category.
- Homework help; 21% of activities were in this category.
- Tutoring; 6% of activities were in this category.

The APT-O ratings were scaled using Rasch analysis techniques (see Appendix C), and each activity was given a score of 0 to 100, with higher scores indicating the presence of more academic content

ANOVA-based analyses showed that academic enrichment and tutoring activities had significantly higher mean APT-O scores than activities classified as non-academic enrichment (p <0.01, F = 5.04, df = 3), indicating there were more attempts by staff to promote academic content and more opportunities for students to practice academic skills in these activities than in homework help and non-academic enrichment activities. This is consistent with findings from the PQA on *academic climate*: scores for academic climate were higher in academic enrichment and tutoring activities than other observed activities. The evaluation team noted that homework help activities were not significantly different from non-academic enrichment activities in terms of academic content, even though non-academic enrichment activities are not intentionally meant to impart academic content.

Similar analyses explored differences in average APT-O scores based on the grade level of the students participating in the activity. Activities with high school participants were associated with higher APT-O scores than activities with middle school participants (p <0.01, F = 5.42, df = 2). (Again, this is similar to the PQA findings on *academic climate*.) This difference may have something to do with different levels of motivation between high school and middle school students participating in activities with an academic focus.

Student Engagement in Program Activities

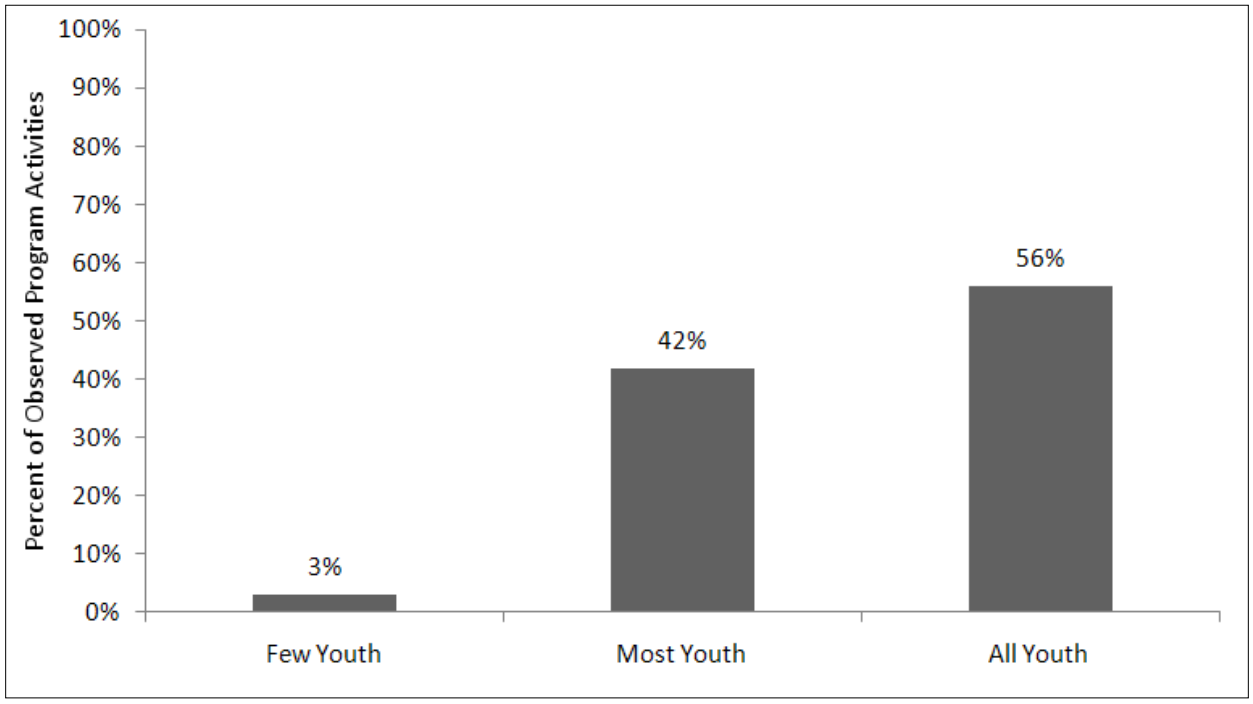
Student engagement was examined by the OCE instrument and the student surveys administered to students participating in the observed sessions. The OCE is a measure that assesses the extent to which students participating in observed activities demonstrate behavioral cues indicative of engagement in the activity. The OCE measures student engagement across five dimensions: *engagement* (youth are focused on the work, concentrated, show enthusiasm); *attention* (youth are focused on the teacher and show sustained focus on the main classroom activity); *self-reliance* (youth are self-directed, take charge of their learning, manage self, materials and responsibilities); *compliance* (youth meet teacher requests, go along with the flow of the classroom); and *disruption* (the only negative behavior – youth show inappropriate behavior, exhibit disruptive behavior).

Every 10 minutes, the observer rated each of the dimensions by recording how many youth participating in the activity were observed engaging in a particular behavior: none, few youth, most youth, and all youth.

Scale scores were calibrated for each activity employing MFRM techniques, including segment as a facet in the model. This allowed analysts to determine if scores varied by segment, and, if so, to adjust for the differences.

Because the OCE was only scored by raters assigned to observation package B, 110 of the 157 activities observed were assigned OCE scores during the spring 2011 site visits. As shown in Figure 25, 56% of observed activities where the OCE was scored were in the *all youth* range of the scale while only 3% of activities fell within the *few youth* range. This is more positive than the *engagement* scale of the PQA presented earlier, which focuses on the practices employed and opportunities promoted by activity leaders, as opposed to the student behaviors which demonstrate engagement in the activity.

Figure 25. Percentage of Activities Observed in Which Youth Engagement Behaviors Were Evident by OCE Quality Categories, 2010–11



Source: n=110 activities

Further analysis examined how OCE scores varied by grade level and the type of activity. No significant difference was found by grade level. There were, however, significant differences between mean OCE scores when comparing academic enrichment activities with homework help (p <0.05, F = 3.42, df = 2). Academic enrichment scores were higher, suggesting that more was done in the academic enrichment activities than homework activities to develop and sustain student engagement. A similar difference was not found between non-academic enrichment activities and homework help activities.

Student Engagement – Student Survey Findings

For observations in activities with students in Grades 4 and above, an end-of-session student survey was administered. The survey asked students to report on their levels of interest and engagement during the observed session. The survey was aligned with Shernoff and Vandell's (2007) definition of engagement: "the simultaneous experience of concentration, enjoyment, and interest" (p. 891). Similar to a survey developed by Shernoff and Vandell, the student engagement survey was comprised of eight questions which addressed *concentration*, *enjoyment*, and *interest*. The questions on the survey are:

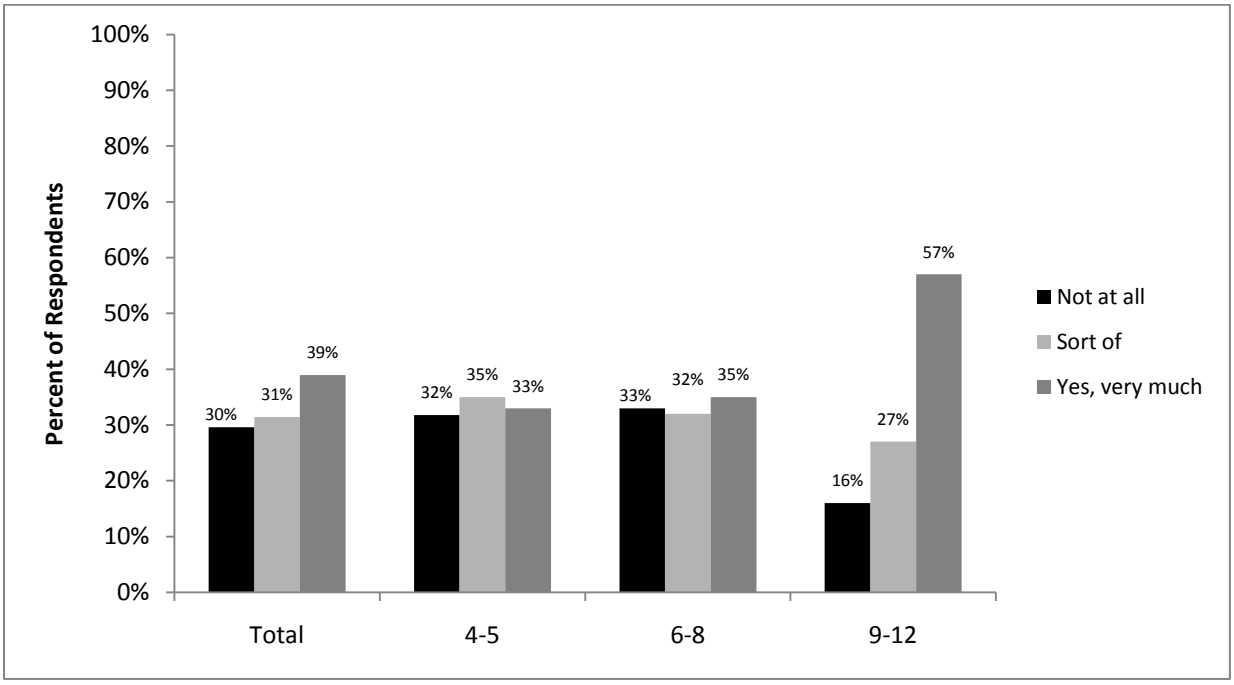
- Was today's activity interesting?
- Was this activity important to you?
- Did you really have to focus to do the activity?
- Did you enjoy what you were doing during this activity?
- Was it easy to pay attention during today's activity?

- Was the activity something you were good at doing?
- Did you wish you were doing something else?
- Did you feel like you had a say in what you did during the activity?

Response options included *yes, very much*; *sort of*; and *not at all*. Survey results were scaled employing Rasch techniques.

As shown Figure 26, 39% of survey respondents fell in the *yes, very much* range indicating a high level of engagement in the activity, while 31% fell in the *sort of* range and 30% in the *not at all* range. Substantial differences were noted by grade level. For example, as shown in Figure 26, 33% of Grade 4 and 5 respondents fell within the *yes, very much* range of the scale, and 57% of students in Grades 9 through 12 fell in this response range. This is consistent with the evaluation team's hypothesis that high school students who participate in afterschool programs are motivated to be there; otherwise, they would have chosen a different way to spend their afterschool hours.

Figure 26. Degree of Student Engagement Reported on Student Survey Results by Grade Level, Activities Observed in 2010–11



Source: N=1,224 respondents (348 in Grades 4–5; 548 in Grades 5–8; 259 in Grades 9–12; 69 missing)

The analysis explored the relationship between activity characteristics and the degree of engagement reported by participating students on the student survey. Since students were nested within activities, HLM was employed to conduct this analysis. (See Appendix B for additional details.) The student outcome included in the model was the student's scale score on the youth survey. Activity characteristics included in the model were the staff-to-student ratio for the activity session; the grade level of students served in the activity (elementary, middle, or high); the type of activity (academic enrichment, non-academic enrichment, tutoring, or homework help); and the *total PQA score* for the activity. The inclusion of the *total PQA score*

allowed the evaluation team to explore if practices theoretically associated with the creation of a supportive, interactive, and engaging session resulted in higher levels of engagement among participating youth. Key findings associated with this analysis included the following:

- There was a significant and positive relationship between the *total PQA score* and student survey engagement scale scores (p <0.05). This suggests that the more staff adopted practices and created opportunities for students based on the criteria outlined in the PQA, the higher the engagement students reported on the survey.
- There was a significant and positive relationship between an activity which targeted high school students and the engagement score on the student survey (p <0.001). This suggests that high school students more than other students reported higher levels of engagement on the survey.

Innovative Practices in High-Quality Activities

Research Objective 2 addresses the identification of innovative and replicable practices that are demonstrated by the ACE programs. This report section examines innovative practices within program activities, particularly the practices aligned with the CSM and CSFs. (Table 1, located on page 3 of this report, describes the CSM and includes the CSFs, including performance indicators and milestones.) This section also examines patterns of variation in innovative practices by types of activity and grade level of the participants. Finally, exemplars of innovative practice that may be replicated in the program activities at other ACE programs are described.

The qualitative data on which this section is based are the observation narratives which were developed by observers as they watched and recorded program activities during the site visits. The narratives described staff practices, student activities, and many included direct quotes. The narratives examined for this section are from 15 programs (seven elementary programs and eight secondary programs) whose PQA scores and student engagement scores (derived from the student surveys) were high. At these programs, 73 activities were observed, including academic enrichment, non-academic enrichment, homework help and tutoring activities. All observation narratives were organized by grade level and activity type. The distribution of activity types across grade levels is presented in Table 32.

- 30 activities were academic enrichment activities, 17 offered in secondary settings and 13 in elementary settings.
- 33 activities were non-academic enrichment activities, 17 in secondary settings and 16 in elementary settings.
- 8 activities were homework help sessions, 6 in elementary settings and 2 in secondary settings.
- There were only 2 tutoring sessions, both in secondary settings.

Table 32. Distribution of Observations by Grade Level and Activity Type

	Academic Enrichment	Non-Academic Enrichment	Homework Help	Tutoring	Total
Elementary	13	16	6	0	35
Secondary	17	17	2	2	48
TOTAL	30	33	8	2	73

The analysis was anchored on the CSF milestones, which were presented in Chapter 1. The four domains of innovative practices examined include *positive climate, leadership opportunities, engaging activities* and *school connections*. These are either directly listed or implied in the CSFs, particularly CSF1, which refers to student and family engagement, and includes behaviors and indicators related to active engagement in learning, and students assuming leadership roles. In addition, the milestone related to CSF1 is the use of innovative instructional techniques that facilitate these indicators and behaviors.

Academic and non-academic enrichment activities were examined to identify innovative practices related to *positive climate, leadership opportunities, engaging activities* and *school connections*.

At the elementary level, academic enrichment activities were generally organized around supporting the curriculum of the regular school day. While not specifically connected to classroom work (as in homework) these activities provided additional experiences with relevant content. The activities had names such as, Get Inked Writing, Campfire Science, Reading One, Science, Exploring Science, Math, and Reading.

At the secondary level, academic enrichment activities featured content that supported college readiness, and the high scoring programs provided strong adult support for college readiness content and relevant processes. Activities had names such as Engineering, College Readiness, SAT Prep, Rosetta Stone/Language, Science, Reading Club, and Math.

At the elementary level, non-academic enrichment activities provided additional experiences with some school-related content, while also featuring greater autonomy in terms of content and process choices for youth as well as a greater concentration on arts-based and cultural curriculum. The activities had names such as Reader's Theater, Arts Around the World, Art 1, Technology, Read, Write, Think, and Conversation Nation.

At the secondary level, non-academic enrichment activities featured enhanced youth autonomy in terms of process and content choices and shared leadership. Students in most of these activities worked essentially independently or in student-led groups, with staff functioning primarily as facilitators. Activities had names such as Gardening, Drama, College Prep Workshop, Photography, Dancing, Mexican Original Music, and Animation Club.

The following sections present innovative practices that were observed in high-quality academic and non-academic enrichment activities at the elementary and secondary levels across the four domains examined, *positive climate, leadership, engagement, school-day connections*. Appendix G provides additional detail for each of these domains.

Positive Climate

Elementary Level Activities. During academic enrichment activities at the elementary level, practices that support a *positive climate* provided opportunities for the formation of comfortable relationships among students, and between the teacher and students. The relationships made students willing to try new experiences and contribute to group processes. Activities allowed time for both structured and unstructured interaction during which all students were encouraged to offer opinions, and communicate with each other about the session content and reflect. Opportunities for interaction reflected and added to the warmth and familiarity within the group.

Non-academic enrichment activities at the elementary level were similar in many ways to academic enrichment sessions. However, non-academic programs accommodated more fun and autonomy. During sessions, staff and students constantly interacted. Staff appeared to intentionally support the developmental needs of younger students by providing frequent encouragement, refining instructions, and adapting the lesson objective to accommodate the needs and interests of individuals and groups. Students typically received steady attention from adults.

Secondary Level Activities. Academic enrichment activities at the secondary level, practices that supported a *positive climate* focused more on individually supporting students and addressing their academic needs and interests. Small group settings, based on student interests, helped the teacher learn about students' lives, abilities, and interests. Conversation among participants was frequent and encouraged. Staff members were consistently available to students for questions, but the level of intervention varied. For instance, activities like SAT Prep and Rosetta Stone/Language required near constant teacher interaction with individual students.

In the non-academic enrichment activities, participation was less directly related to academic objectives. As such, staff seemed to invest more effort creating an environment that was welcoming, grateful and respectful of students' time. In several sessions, staff frequently thanked students for their involvement (e.g. for coming or for participating), and openly acknowledged that the program was the result of student interest. An environment of interdependence (students need the program and the program needs the students) appeared to contribute to the egalitarian interactions between staff and students. Staff members regarded themselves and were regarded by students as facilitators almost exclusively. The facilitative role was reinforced by the use of first names, and by casual and close interactions between students and staff.

Engaging Activities

Elementary Level Activities. In academic enrichment activities, *engaging activities* were often organized around sensory experiences and active learning. The elementary program activities involved highly stimulating and engaging materials, such as colored candy to support a probability exercise, a scavenger hunt for a measurement activity, color mixtures for science and a writing session that used an especially vivid description as its writing prompt. Vocabulary studies were supported by the use of shared tools (e.g., a pointer, flashlight or trading cards). Physical engagement, including imagery that appealed to physical experiences (e.g. vivid

descriptions of color or smell) was used as a bridge to access higher intellectual experiences. The physical appeared to be the prompt for the intellectual often culminating in reflection (e.g. "What did we learn?" What will we do next?"). Students were encouraged to engage with materials or ideas and to try new skills and reflect on product or process.

Non-academic enrichment activities at the elementary level were also organized around sensory experience of materials and ideas (through discussion and collaborative thinking.) Teachers were constantly circulating; engaging and guiding students through encouragement and positive, specific comments on student work.

Secondary Level Activities. In academic activities at the secondary level, *engaging activities* were associated with the use of sophisticated tools and materials (e.g. computer access and access to specific programs like computer-assisted drafting (CAD) software, and Rosetta Stone, science experiment tools, physical props for writing inspiration, packaged food products for geometry lessons). Students were often stimulated by the presentation of unfamiliar support materials or familiar materials considered in an unusual context (e.g. college brochures, science experiment, prompts for writing assignments asking students to view objects in terms of an ironic or otherwise uncommon verbal prompt).

In the secondary programs' non-academic enrichment activities, students also had a variety of materials and tools to support the lesson objectives. Students were encouraged to reach objectives in a variety of ways and to view familiar materials in a non-traditional way (e.g. a gardening instructor encouraged the use of the Internet to find new recipes; a guitar instructor encouraged experimentation on familiar songs in terms of tempo and key, and the photography instructor encouraged the use equipment in new ways.) Instructors encouraged experimentation. In addition, to their use of different materials, students had frequent opportunities to present their work, and staff regularly discussed such opportunities with students (poetry contest, yearbook, letterman jackets, feeding PTA, discussion of future goals in college prep).

A relationship between *engaging activities* and *positive climate* was evident in the activities that were examined. For example, a staff practice observed in many of the sessions was to circulate among students who were working with materials, encouraging them to experiment, think about and talk about their work. The following practices and conditions were evident and may be replicated in other programs and activities:

- **Staff Affect.** Staff modeled enthusiasm and knowledge of content and materials.
- **Materials.** Materials were developmentally appropriate and logically linked to content, used as an extension of a curricular concept, not a stand-alone activity.
- **Staff Verbal Engagement** (talking with students about content).Conversation contained non-evaluative, or specific praise and encouragement, conveying that student labor is meaningful and will render desired results. Conversations were directed toward the learning objective. Even personal conversation designed to engage students related existing student knowledge and skills back to relevant content whenever possible.

Leadership Opportunities

Elementary Level Activities. In academic enrichment activities at the elementary level, *leadership opportunities* were particularly evident in the sharing and exploring of ideas through structured and open-ended discussion sessions. Students also were provided opportunities to help others in their class. Several activities were based on cooperative learning methods, which anchored group success on the contributions of individuals to the group purpose.

Non-academic enrichment activities were similar to academic enrichment activities in that there were opportunities for both structured and casual conversations during which students could share opinions and reflects. Students assumed the role of discussion leader and were also provided opportunities to help other students.

Secondary Level Activities. In the academic enrichment activities at the secondary level, student self-direction was prominent. Students were frequently encouraged to share personal knowledge and interests, as well as project ideas. Open dialogue about projects and process was facilitated in group project activities, and students were encouraged to raise issues as they occurred. Student mentorship was frequent, but informal. Personal and group projects were generated and directed by students with staff acting as facilitator. Presentations and performances were encouraged and expected (e.g., volunteering to solve a problem in front of class; completing a power point, etc.).

The non-academic enrichment activities at the secondary level were characterized by shared leadership between adults and youth. Personal responsibility (on the part of the student) was important and teacher authority was not emphasized. Students were invested in the success of the project (e.g. creating a good song, tasty food, quality writing). Students were allowed choice – making decisions about roles, process, materials and design. They experienced autonomy and personal leadership within the context of the projects they worked on. There were no struggles for control with staff or other students noted during these activities.

School Connections

For this set of analyses, *school connections* were defined as any reference teachers or students made to the school day curriculum, assignments, or experiences.

Elementary Program Activities. Among the 29 available observational records for elementary program academic and non-academic enrichment activities, only one made direct mention of the regular school day. At least in the academic and non-academic enrichment activities, after school activities seemed to be largely self-contained. Explicit conversations about school connections were not a regular, observable part of instruction. While school connections may have informed the preparation and planning of the afterschool teacher, school connections were not regularly discussed with students during these activities.

Secondary Level Activities. At the secondary level activities, school connections were prominent in both academic and non-academic enrichment activities, and included references to state tests, discussions of future college plans, and references to school day content that reinforced activity content. Of the 34 observations of academic and non-academic activities at the secondary level, staff and students referred to the regular school day 13 times. It may be that older students are more connected to the regular school day or better able to integrate their

educational experiences, or that their use of after school time is more meaningfully anchored school-related goals.

Innovative Practices during Homework Help and Tutoring

The discussion of homework help and tutoring is less lengthy than the previous discussion of academic and non-academic enrichment activities. This is primarily because little data were available. Only 10 of the 73 activities that were analyzed were homework help or tutoring, and six of these were elementary homework help sessions. There were no tutoring activities among the elementary activities, and only two homework help and two tutoring activities among the secondary activities. In some of these sessions, there were no examples of one or more of the domains addressed (*positive climate, engaging activities*, and *leadership opportunities*). Additional detail is provided in Appendix G where available.

Homework help and tutoring activities tended to score lower on the PQA due to the focus of the PQA on items related to engagement. Many homework and tutoring activities that were observed were structured around independent student work, with staff intervening only as necessary. This is typical for these types of activities, due to the often highly individualized nature of the task (e.g., students need to complete individually assigned homework tasks). When students are focused on individual task completion, staff have fewer practical opportunities to interact with students, and fewer opportunities to manifest many of the identified innovative practices.

Homework Help

Elementary Level Activities. An interesting and somewhat paradoxical feature of the homework help activities at the elementary level was that among the more highly rated programs, homework help was provided in a whole group setting, led by the teacher. Students were not simply assigned to work on their homework individually, but were guided in group processes, such as group problem-solving

A positive climate was established by teachers who worked closely with students throughout activities, praised correct answers and offered opportunities for students to correct mistakes. With group success as the central focus, the climate was warm, helpful and busy. Students were allowed to move around, approaching teachers, each other and the board. That students were encouraged to help one another contributed to a warm and interdependent working environment.

Engaging activities during elementary homework help were characterized by group problem solving, with one student having a role in demonstrating the problem, and others working on solving the problem, while carrying on a running conversation about process and results. For example, in one activity all students participated in an imaginary shopping trip, adding and subtracting the costs of items so they did not exceed predetermined spending limits. All students worked on the equations at their seats, as individual students chose which items (the costs of which were known to all) to add or subtract. The group problem-solving process supported both individual and group success.

Leadership opportunities during elementary homework help activities were mainly evident by staff and students maintaining an open forum to talk throughout the lesson and practice. They

discussed process, progress and results and, as with other types of elementary activities, leadership opportunities emerged out of a group process.

School connections during the elementary level homework help activities were discussed in reference to the origin of the homework assignment, e.g., the whole group was working on something that supported the school day curriculum, or all students worked on a specific homework assignment for a school-day teacher. This was noted by the on-site observer (in both instances) as "all session work was for school."

Secondary Level Activities. As noted earlier, only two secondary level homework help activities were available in the data set used for this study and few written records were available for analysis. Both activities were taught by the same teacher.

Positive climate during the homework help sessions was established by the teacher who used terms of endearment when addressing students, answered student questions thoroughly and thoughtfully, and gave students her full attention. Students volunteered information about personal successes (e.g. "I got 100% on [my] forensics paper") and the teacher engaged a student who "seemed too quiet." Overall, environment was organized around individualized student activity.

Engaging activities during secondary homework help sessions was largely inherent in the nature of the work - students had a personal stake in completing homework assignments. Because homework help was attended voluntarily, students who did not want or need it did not come to the session. Staff provided guidance and support when requested.

School connections during the secondary homework help activities were noted when the teacher referred to his/her own classroom and one student referred to an achievement in a school day classroom, which was warmly acknowledged by the afterschool instructor.

No written record was produced for *leadership opportunities* during the secondary program homework help activities.

Tutoring

Only two tutoring activities were available in the data set used for this study and few written records were available for analysis. Both came from same secondary school but were taught by different instructors.

Positive climate during two secondary tutoring activities was demonstrated by the instructors' interest in the students' academic progress and helpful manner. In one activity the instructor, a science teacher, volunteered to spend additional time helping a student, who had expressed interest in science activity, prepare for high school science. Similarly, in another activity, an instructor volunteered his non-teaching time to provide additional support to a student.

Engaging activities during the secondary tutoring sessions were supported by materials, tools and structured content. The chemistry experiment was rich with materials. The teacher frequently checked for prior knowledge by asking if students were familiar with chemical names and checked for interest in subject by asking if students were excited about chemistry. As in the academic and non-academic enrichment activities, engagement was realized by providing stimulating sensory materials (e.g., science experiment) or stimulating conversation (e.g.,

Jeopardy game allowed people to engage in verbal exchanges about relevant curriculum content, and to capitalize on the playful environment associated with a game.)

No written record was produced for *leadership opportunities* during the secondary tutoring activities.

Summary

The activities of 15 high-quality ACE programs spanning Grades K–12 and covering four types of after-school programs (academic enrichment, non-academic enrichment, homework help, and tutoring) were examined for how innovative practices were incorporated. Specifically analysis of observation data from 73 activities demonstrated how innovative practices aligned with the domains of *positive climate, leadership opportunities, engaging activities* and *school connections* which are promoted in the CSM. Major findings include:

- *Positive climate* was evident in groups of students and adults having friendly, casual interactions which were focused on the tasks at hand and were often fun. These characteristics were present across many of the activities in the high-quality programs, including homework help. The finding reinforces the value of high-quality afterschool programs as settings which are responsive to child and youth interests and development needs.
- For all age groups, science and arts sessions, which typically incorporated hands-on activities, were especially rich in *engaging activities.*
- At the elementary level, *school connections* were not evident in either academic enrichment or non-academic enrichment activities. However, at the middle and high school levels, *school connections* were prominent.
- Elementary homework seemed to be most effective when groups of children worked on the same homework in a group learning activity.
- *Leadership opportunities* were less structured at the elementary than the secondary level, and were usually characterized by students having individual roles and responsibilities within the context of a larger group process. For middle and high school students, *leadership opportunities* were embedded in activities, not necessarily the larger group process: including specific tasks, roles, and presentation opportunities afforded by the activities.
- Older youth were actively engaged by challenging content, delivered by teachers with content expertise and related content to real world needs.

That instructional practices look different in activities serving older youth versus those serving younger youth was expected. For example, one prominent developmental theory suggests that while all children and youth have needs for relatedness, competence and autonomy (Ryan & Deci, 2000), the relative degree of importance among these factors, particularly autonomy, varies as a function of development.

Because elementary students are at the developmental stage at which self-regulatory capacities are beginning to emerge and must be fostered by adults, basic learning is still a novelty and

thus intrinsically motivating, and autonomy is comparatively less important than competence and relatedness. Therefore, an environment characterized by structured, whole-group instruction in which all students are focused on the same task is completely consistent with the successful facilitation of active student engagement. The afterschool settings for elementary children in this high-quality subsample built on a *positive climate* to provide activities that were fun and engaging, and from which appropriately supported leadership opportunities emerged.

Conversely, secondary students are at the developmental stage where autonomy (especially to explore more adult or real world roles and skills) is an increasingly significant psychological need, and, thus, adult efforts to control or regulate behaviors can be perceived as an impediment to the satisfaction of this need. As older youth have accumulated larger stores of knowledge from which they can draw upon, opportunities for creative, critical, and higher-order thinking become increasingly necessary for maintaining a level of challenge that makes learning stimulating and engaging. As such, it is expected that active engagement for older students include opportunities for youth to have more choices, more responsibilities and access to more sophisticated materials and tools.

Conclusions and Next Steps

The overarching goal of Texas 21st CCLC/ACE program evaluation is to determine which program strategies and approaches (milestones) are most effective within particular contexts in encouraging student and adult behaviors (CSFs) that lead to improvement in student performance. The evaluation is designed to address two primary research objectives:

- **Research Objective 1.** To conduct a statewide assessment of ACE programs, operations, participation, and student achievement;
- **Research Objective 2.** To identify and describe innovative strategies and approaches implemented by successful Cycle 5 and Cycle 6 grant-funded programs.

The Year 1 analyses related to the first research objective indicate that ACE program participation is associated with higher TAKS scores in reading and mathematics, fewer assigned school disciplinary days, fewer disciplinary incidents (in Grades 9–12 only), and fewer absences, relative to similar students who did not participate. It is important to note, however, that while the above findings are statistically significant, the effect sizes are quite small, although consistent with what would be expected for afterschool programs of this type (Kane, 2004). Also, impact analyses were only in relation to students that participated in the program in 2009–10. In the second year of the evaluation, the evaluation team will address the second research objective in depth by systematically identifying high-quality programs and exploring innovative and effective strategies. At the end of the 2011–12 program year, the evaluation team will visit 15 high-quality programs and analyze and document the practices, as well as circumstances and conditions, that characterize these programs. This effort will result in a series of findings that may be useful to other ACE programs as they design, implement, and assess their programs.

A first step in identifying and describing innovative practices in Year 1 of the evaluation has been to understand the degree of variation in program quality among ACE programs funded during Cycle 5 and Cycle 6. The analyses of programs operating in 2010–11 showed that the range of program quality is quite broad across the state, although some trends and relationships were identified on various program elements of program quality:

- Centers staffed mostly by school-day teachers were more apt to engage in practices supportive of academic skill-building, including relying on externally-developed curriculum to guide activities, developing linkages to the school day, and using student data to inform programming. However, there has been a trend in recent years for ACE programs to rely less heavily on school-day teachers to staff programs and more on other types of non-certified staff to provide program services. This has implications for the type of orientation, induction, training, professional development, and scaffolding site coordinators will need to provide to support quality programming, particularly in relation to linking programming to the school day. It is recommended that TEA may want to consider this when assessing how best to support grantees with training and technical assistance.

- Centers serving high school students exclusively demonstrated a lower degree of intentionality in program design, and weaker linkages to the school-day classes than other programs, even when staff consisted of mostly school-day teachers. High school programs, however, had higher levels of academic content and climate than programs serving other grade levels. This indicates that program activities were focused on academic objectives, but not necessarily as a result of efforts to align sessions with specific class objectives.
- Youth ownership—that is, youth having a role in selecting and shaping program activities—was more evident in the high school programs than other programs, and student-reported engagement in program activities was higher. There is particular interest among the evaluation team in further understanding the relationship between youth ownership and student engagement.
- Academic content and academic climate were found to be higher in academic enrichment and tutoring activities than in non-academic enrichment and homework help activities. Non-academic activities were not necessarily designed to build academic knowledge and skills (though they may). Homework help was an activity that was responsive to students' daily assignments and needs; therefore, academic content was not planned. The finding in relation to homework help is of interest and suggests that more could be done to enhance academic content and climate through supportive and interactive instructional methods.
- Practices likely to foster youth development were more frequently embedded in academic enrichment activities than other program activities, including non-academic enrichment, homework help, and tutoring. This is important because the provision of these types of activities is seen as the primary service delivery mechanism for 21st CCLC. There was evidence to suggest that the more staff adopted practices to support youth development, the higher the engagement reported by students on post-activity student surveys. TEA may want to consider how training and technical assistance provided to ACE programs might enhance the capacity of staff to engage in practices and create opportunities that support positive youth development (CSF4).
- Low staff-to-student ratios are important when attempting to support meaningful and substantive interactions between students and adults during an activity. (This is related to CSF1.) On the other hand, low staff-to-student ratio may be less of a factor relative to these interactions if center staff have made a substantial investment in planning the activity.
- Among 15 high-quality programs, which were identified for further analysis based on observation data and ratings on the PQA tool, teacher knowledge of individual student needs, interests, and personal lives, and teachers' instructional responsiveness were effective in engaging students. (Note that determining student need is addressed in CSF3.)The presence of shared norms guiding the casual interactions among staff and students, typically made activities more enjoyable and helped students focus on tasks. These characteristics were present across many of the activities, even homework help, in the programs assessed as high quality.

- Among the high-quality activities for elementary students, structured, whole-group instruction, in which all students were focused on the same task, facilitated active student engagement (addressed in the CSF 1 milestone). The activities were fun and engaging, the climate was positive, and leadership opportunities were provided.
- In the observed high-quality activities serving secondary students, active engagement (aligned to CSF1) was facilitated by providing students with choices, responsibilities, and relatively sophisticated tools and materials.

The information in this report serves as a starting point from which to identify and describe innovative and effective practices that might be adapted by ACE programs. In 2011–12, the evaluation team will conduct site visits to 40 programs to collect information that will enable the evaluators and TEA to better understand the strategies and procedures employed by ACE programs to deliver quality afterschool programming. From this sample of 40, as well as the sample of programs visited in 2010–11, 15 of the highest quality programs will be identified. These programs will be the focus of an in-depth study which will examine research-based innovative, effective practices. The selection of programs in the sample of 15 will be based on a re-analysis of outcomes using assessment and other outcome data as well as student and program characteristics data tracked in TX21st for the 2010–11 school year. Additionally, the analysis of site coordinator survey data and program data collected in the spring and fall of 2011 and program attendance data from TX21st will be included in the selection criteria for these 15 sites. A report summarizing findings from the site visits will be presented to TEA in August 2012.

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Appendices

Appendix A. Multilevel Modeling of Within-Program Analysis Outcomes

The content of this appendix includes a general description of the multilevel modeling that was used to conduct the within-program analyses, as well as the summary tables associated with each analysis.

Multilevel Modeling

To determine which student- and center-level characteristics are related to the student outcomes, the evaluation team employed a series of hierarchical linear models (HLMs) to test for the presence of statistically significant relationships between student- and center-level characteristics and student outcomes.

The team used a series of two-level HLMs in which students are nested within their 21st CCLC center. This approach allows for the inclusion of covariates at each level, representing potentially important student- and center-level characteristics. The general level-1 model is:

$$Y_{ij} = \pi_{0j} + \sum_{p=1}^{P} \pi_{pj} X_{pij} + e_{ij} \qquad (1)$$

The level-1 model provides a model of student performance as a function of student-level predictors plus a random student-level error where Y_{ij} is the outcome of student i in center j; $ð_{0j}$ is the intercept for center j; X_{pij} is a vector of p=1, …, P student characteristics that are related to student outcomes; $ð_{pj}$ are the corresponding level-1 coefficients that report the direction and magnitude of the relationship between each student characteristic and the student outcome; and e_{ij} is the level-1 random error term that represents the deviation of student ij's score from the predicted score based on the student-level model. The error term is assumed normally distributed with a mean of zero and variance $ó^2$.

The level-2 model is:

$$\pi_{pj} = \beta_{p0} + \sum_{q=1}^{Q_p} \beta_{pq} Z_{qj} + r_{pj} \qquad (2)$$

The level-2 equation depicts the model for variation among centers. For each center effect, $ð_{pj}$, from the level-1 model, $â_{p0}$ is the intercept for center j; Z_{qj} is a vector of q=1, Qp center characteristics that are related to the center effect for which each $ð_p$ may have a unique set of associated level-2 covariates; $â_{pq}$ are the corresponding level-2 coefficients that indicate the direction and magnitude of the relationship between each center characteristic and the center effect; and r_{pj} is the level-2 random error term that represents the deviation of center jk's level-1 coefficient, $ð_{pj}$, from its predicted value based on the center-level model. The set of r_{pj} are assumed to be multivariate normally distributed, each with a mean of zero, some variance $ô_{pp}$,

and some covariance between elements r_{pj} and $r_{p'j}$ of $\hat{o}_{pp'}$ (i.e., the random effects in the P+1 equations of the level-2 model are assumed to be correlated).

The student achievement outcome measures employed in undertaking these analyses were standardized scores for TAKS-ELA/Reading and TAKS-Math, so the coefficients reported in the following tables can be interpreted as effect sizes or standard deviation units. Each standard score or *z*-score was calculated within each grade as follows:

$$z_i = \frac{x_{it} - \mu_t}{\sigma_t} \qquad (3)$$

where z is the standardized score for student i, x_{it} is the raw score for student i in grade t, $\grave{\imath}_t$ is the sample mean of the assessment scores in grade t, and $\acute{o}_t$ is the sample standard deviation of the assessment scores in grade t.

Summary Tables of TAKS Assessment Outcomes

The tables below are a summary of the HLM results. The prior year of achievement was not included in these models. This approach was used to capture the current status of which student and center characteristics are associated with higher scores during the 2009–10 program year. Therefore, the results may reflect conditions from prior years.

As mentioned in the section above, the coefficients in the below table can be interpreted as effect sizes in standard deviation units. For example, it can be said that students attending centers that served elementary and middle school grade levels scored approximately .11 standard deviations lower on both TAKS outcomes relative to students attending centers that served only elementary grade levels.

Table A1. Model Results: TAKS Assessment Outcomes 2009–10 with Student and Center Predictors

Predictors	Standardized reading assessment	Standardized mathematics assessment
Intercept	-0.078 (0.040)	-0.096 (0.037)
Elem/MS grades served	-0.107** (0.039)	-0.115** (0.039)
MS only grades served	-0.005 (0.028)	0.007 (0.030)
MS/HS grades served	-0.145 (0.086)	-0.115 (0.078)
HS only grades served	-0.023 (0.055)	-0.062 (0.058)
Other grades served	-0.045 (0.034)	-0.051 (0.035)
School-based grantee	-0.012 (0.023)	-0.019 (0.024)

Predictors	Standardized reading assessment	Standardized mathematics assessment
Mostly teachers staffing cluster	0.002 (0.024)	0.0008 (0.024)
Grantee maturity (1 = 1st or 2nd year; 0 = 3rd or 4th year)	0.003 (0.034)	0.008 (0.033)
Mostly tutoring activity cluster	-0.063 (0.036)	-0.067 (0.035)
Mostly enrichment activity cluster	-0.035 (0.022)	-0.043 (0.023)
Mostly recreation activity cluster	-0.043 (0.031)	-0.018 (0.031)
Mostly youth leadership activity cluster	-0.053 (0.033)	-0.033 (0.038)
Grade	-0.005 (0.007)	-0.002 (0.008)
African American	-0.049** (0.021)	-0.080** (0.022)
Hispanic/Latino	-0.060** (0.017)	-0.064** (0.016)
Other race/ethnicity	-0.016 (0.035)	0.057 (0.038)
Gender (Male = 1, Female = 0)	0.026** (0.011)	0.097** (0.010)
Economically disadvantaged	-0.019 (0.013)	-0.002 (0.013)
Limited English Proficiency	-0.290** (0.031)	-0.192** (0.026)
Number of school-year days attended	0.0001 (0.0001)	0.0003 (0.0001)
Number of days attending mathematics programming	-0.0003 (0.0004)	-0.0005 (0.0004)
Number of days attending reading programming	-0.0001 (0.0004)	0.00001 (0.0004)
Number of continuous years in programming	-0.174 (0.095)	-0.219* (0.087)
High academic enrichment profile weight	-0.042 (0.090)	-0.001 (0.092)
Low academic enrichment profile weight	-0.483** (0.131)	-0.462** (0.128)

Note: Standard errors are reported in parentheses; *p<0.05, **p<0.01
Source: TX21st, PEIMS, and TAKS data, 2009–10

Summary Tables of Academically Related Outcomes

The tables below are a summary of the hierarchical generalized linear modeling results, utilizing Poisson and Bernoulli models. That is, the variables for the number of disciplinary incidences, number of days of a disciplinary assignment, and number of days absent were modeled

assuming a Poisson (constant exposure) distribution. The variables for whether a student was enrolled in either an advanced or dual credit course or promoted to the next grade were modeled assuming a Bernoulli distribution. Therefore, the coefficients within each model are log-odds. (For those predictors with statistically-significant log-odds, a table of odds ratios follows.) Just as with the above models, the prior year of the outcome variable was not included in any of the models. Note that grade is treated as a continuous variable and thus begins with 0.

Table A2. Model Results: Log Counts of Student Outcomes with Student and Center Predictors

Predictors	Number of disciplinary incidences	Number of days of a disciplinary assignment	Number of days absent
Intercept	-0.829** (0.085)	-0.225** (0.074)	2.071** (0.047)
Elem/MS grades served	0.651* (0.276)	0.660** (0.237)	0.012 (0.038)
MS only grades served	1.460** (0.098)	1.818** (0.116)	0.085** (0.029)
MS/HS grades served	1.393** (0.162)	1.838** (0.186)	0.250** (0.063)
HS only grades served	1.126** (0.154)	1.511** (0.185)	0.602** (0.056)
Other grades served	0.284* (0.140)	0.805** (0.179)	-0.001 (0.053)
School-based grantee	-0.015 (0.096)	-0.054 (0.102)	0.048 (0.027)
Mostly teachers staffing cluster	-0.151 (0.078)	-0.161 (0.082)	-0.109** (0.027)
Grantee maturity (1 = 1st or 2nd year; 0 = 3rd or 4th year)	0.058 (0.103)	0.053 (0.110)	-0.019 (0.028)
Mostly tutoring activity cluster	0.318* (0.122)	0.351** (0.129)	0.064 (0.036)
Mostly enrichment activity cluster	-0.146 (0.090)	-0.155 (0.095)	0.055 (0.030)
Mostly recreation activity cluster	-0.182 (0.093)	-0.141 (0.096)	-0.026 (0.033)
Mostly youth leadership activity cluster	-0.027 (0.110)	0.152 (0.149)	0.058 (0.059)
Grade	0.008 (0.013)	0.010 (0.017)	-0.019** (0.003)
African American	0.664** (0.039)	0.703** (0.054)	-0.108** (0.018)
Hispanic/Latino	0.055 (0.034)	0.035 (0.050)	-0.142** (0.014)
Other race/ethnicity	-0.445** (0.081)	-0.558* (0.118)	-0.385** (0.035)
Gender	0.673** (0.028)	0.816** (0.034)	-0.009 (0.007)
Economically disadvantaged	0.380** (0.024)	0.417** (0.035)	0.185** (0.012)
Limited English Proficiency	0.0004 (0.0374)	-0.012 (0.048)	-0.223** (0.017)

Predictors	Number of disciplinary incidences	Number of days of a disciplinary assignment	Number of days absent
Number of school-year days attended	-0.006** (0.0004)	-0.010** (0.0006)	-0.004** (0.0002)
Number of days attending mathematics programming	0.00001 (0.001)	-0.0004 (0.001)	-0.0002 (0.0003)
Number of days attending reading programming	0.0004 (0.001)	0.0004 (0.001)	0.0009* (0.0004)
Number of continuous years in programming	-0.135 (0.190)	-0.651** (0.154)	0.152 (0.111)
High academic enrichment profile weight	-0.271 (0.231)	-0.277 (0.313)	0.018 (0.107)
Low academic enrichment profile weight	-0.012 (0.305)	0.095 (0.424)	0.060 (0.134)

Note: Standard errors are reported in parentheses; *p<0.05, **p<0.01

Note: Center-level fixed effects for grade-levels served by centers and the student-level fixed effect for continuous years in the program were not modeled for the advanced course/dual credit outcome due to problems with collinearity

Source: TX21st, AEIS, PEIMS, and TAKS data, 2009–10

Table A3. Summary of Rate Ratios Related to 2009–10 Student Outcomes

Predictors	Number of disciplinary incidences	Number of days of a disciplinary assignment	Number of days absent
Elem/MS grades served	1.918 (1.116, 3.297)	1.935 (1.215, 3.083)	-
MS only grades served	4.309 (3.551, 5.230)	6.162 (4.902, 7.748)	1.089 (1.027,1.155)
MS/HS grades served	4.027 (2.926, 5.543)	6.284 (4.360, 9.057)	1.284 (1.134,1.454)
HS only grades served	3.083 (2.276, 4.178)	4.531 (3.147, 6.524)	1.827 (1.635,2.042)
Other grades served	1.328 (1.009, 1.750)	2.236 (1.572, 3.183)	-
Grantee maturity (1 = 1st or 2nd year; 0 = 3rd or 4th year)	-	-	-
Mostly teachers staffing cluster	-	-	0.895 (0.850,0.945)
Mostly tutoring activity cluster	1.375 (1.081, 1.750)	1.421 (1.103, 1.832)	-
Mostly recreation activity cluster	-	-	-
Grade	-	-	0.980 (0.974,0.987)
African American	1.943 (1.798, 2.101)	2.021 (1.817, 2.249)	0.897 (0.865,0.931)
Hispanic/Latino	-	-	0.866 (0.843,0.892)
Other race/ethnicity	0.640 (0.546, 0.751)	0.572 (0.453, 0.722)	0.679 (0.634,0.728)
Gender	1.961 (1.854, 2.076)	2.262 (2.115, 2.420)	-
Economically disadvantaged	1.462 (1.394, 1.535)	1.518 (1.416, 1.629)	1.203 (1.176,1.233)
Limited English Proficiency	-	-	0.800 (0.772,0.829)
Number of school-year days attended	0.993 (0.993, 0.994)	0.989 (0.988, 0.991)	0.995 (0.995,0.996)
Number of days attending reading programming	-	-	1.000 (1.000,1.002)
Number of continuous years in programming	-	0.521 (0.385, 0.706)	-

Note: Confidence intervals are reported in parentheses.

Appendix B. Propensity Score Matching Methods

Propensity score matching is a two-stage process. In the first stage, the probability that each student participates in the 21st CCLC program is modeled on available observable characteristics. By modeling selection into the program, this approach allows us to compare participating and non-participating students who would have a similar propensity to select into the program based on observables. In the second stage, the predicted probability of participation is used to model student outcomes.

Stage 1: Creation of the Comparison Group. The outcome of interest in modeling propensity scores is treatment status (1 for students participating in the 21st CCLC program, 0 for the comparison group). To account for this binary outcome, logistic regression is used to model the logit (or log-odds) of student group assignment status. Because characteristics of students and the campuses they attend will influence whether they attend the 21st CCLC program, data on all of these pre-treatment characteristics were acquired from TEA. Student level variables that were used to fit the propensity score models include, but were not limited to the following:

- Age
- Gender
- Race/ethnicity
- Special education
- Limited English proficient (LEP) status
- Gifted education status
- Previous retention
- Number of prior year disciplinary incidences
- Number of days absent during the prior year
- TAKS scores from the three previous years
- Economically disadvantaged

Campus characteristics used to fit the single-level propensity score model included, but were not limited to the following:

- Attendance rate
- Class size
- Teacher education
- Student mobility
- Percent race/ethnicity
- Percent LEP
- Percent special education
- Accountability status
- Number of full time teachers
- Teacher's average years of experience
- Teacher/student ratio
- Percent economically disadvantaged
- Percent bilingual
- Number of students

Data were not available for each of these covariates for all students. To account for this, indicator variables were used to model the relationship between the pattern of missing data and propensity to participate in the summer program (Rosenbaum & Rubin, 1984).

All pre-treatment covariates were initially considered as candidates for inclusion in the propensity score model. To select an initial propensity score model, we began by regressing each of the covariates on 21st CCLC program participation. All covariates with a *p* value of greater than 0.2 were then included in a forward stepwise regression function to produce an initial propensity score model. Propensity scores and propensity score logits were then estimated using this model. We examined overlap in the treatment and comparison groups and deleted non-overlapping cases. We then looked at balance across the two groups on all covariates. Balance statistics (standardized mean differences and variance ratios) were used to guide model selection. The final models included between 48 and 74 covariates, and the adjusted standardized mean differences between the treatment and comparison groups were below 0.2 on all pretreatment covariates, consistent with current best practice in the propensity score literature (Ho, Imai, King, & Stuart, 2007).

Stage 2: Statistical Modeling of Student Outcomes. Outcomes of students in the 21st CCLC program were then compared with the outcomes of students who did not participate (the comparison group). We balanced pretreatment group differences in observed covariates using a propensity score stratification and marginal mean weighting approach (Hong & Hong, 2009). Fifteen strata were used based on the spread and overlap of the data. The propensity score logit along with the pre-treatment measure of the outcome were also included in the outcome model to control for within strata differences and residual bias (Schafer & Kang, 2008). Student outcomes were modeled using two-level hierarchical linear models to account for the nested nature of the data (students within high schools) as follows:

Level 1 – Students

$$y_{ij} = \beta_{0j} + \beta_{1j} 21CCLC\ Participation_{ij} + \sum_{S=2}^{15} \alpha\beta_s L_{sij} + \beta_{3j} LP_{ij} + \beta_{4j} Pretest_{ij} + r_{ij}$$

Where y_{ij} are the student level outcomes (TAKS scores, discipline, attendance rates, advanced course/dual credit enrollment, and grade promotion), $21CCLC_{ij}$ is an indicator of whether the student participated in the 21st CCLC program, L_{sij} is an indicator variable for the logit propensity score strata, LP_{ij} is the logit propensity score, and $Pretest_{ij}$ is the pre-treatment measure of the outcome.

Level 2 – Campus

$$\beta_{0j} = \gamma_{00} + u_{0j}$$
$$\beta_{1j} = \gamma_{10}$$
$$\beta_{2j} = \gamma_{20}$$

Because the treatment and comparison groups were matched using all of the covariates described above, it is not necessary to include these variables in the final outcome model.

Weighted Averages of Impact Estimates

Analyses were run separately by grade and then pooled together to develop overall estimates of program effect. TAKS results were standardized before pooling to account for scale differences between grades (effect sizes and standard errors were divided by within grade standard deviation). To calculate pooled estimates, the following weighted average equations were used: Weights for each grade-level were calculated by using the inverse variance (1 divided by the squared standard error of the effect). The following equation shows how a weight is calculated for each grade level *g*. The weights are calculated such that the sum of the w_g across all grades equals 1.

$$w_g = \frac{\sigma_g^{-2}}{\sum_g \sigma_g^{-2}}$$

In the above equation, σ_g^{-2} is the inverse variance association with the effect for grade g. Using these weights, the pooled effect δ_p is then calculated as follows:

$$\delta_p = \sum_g w_g \delta_g$$

The pooled standard error is calculated as below:

$$\sigma_p = \sqrt{\sum_g w_g^2 \sigma_g^2}$$

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Appendix C. Rasch Models: Survey and Observational Data

The purpose of this Appendix is to supply additional information about the Rasch models employed in the year one evaluation report. At its most basic level, Rasch modeling techniques yield estimates of an individual respondent's ability and the relative difficulty of a given item appearing 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 less skilled persons, Rasch modeling techniques take person and item difficulty estimates yielded from an instrument, transform them using a log function, and display them on a logit scale that allows person and item difficulties to be directly compared.

One of the benefits from the application of Rasch approaches is that they result in true interval-level scores that can be used when conducting analyses. In order to create true interval measures that could be effectively employed in supporting the domain of analyses needed for the year one report, Rasch analysis techniques were employed to create scale scores for scales associated with several instruments used to support data collection efforts in the spring of 2011. Three different Rasch models were employed in this undertaking.

1. Rasch Rating Scale Model (Linacre, 2005 – This model was used to calibrate scales appearing on the following instruments utilized in year one:
    - Center Coordinator Survey
    - Staff Survey
    - Student Survey
    - PQA Academic Climate Scale

    The Rasch Rating Scale Model employed in calibrating measures on the aforementioned instruments took the following form:
    $\text{Log}(\pi_{nix} / \pi_{ni(x-1)}) = B_n - (\delta_i + \tau_x)$

    where

    π_{nix} = the probability of person n of ability B_n being observed in category x of item i with difficulty δ_i

    $\pi_{ni(x-1)}$ = the probability of person n of ability B_n being observed in category $x-1$ of item i with difficulty δ_i

    B_n = the ability of respondent n

    δ_i = the difficulty of item i

    τ_x=rating scale structure parameter for category x

2. Rasch Dichotomous Model (Wright & Masters, 1982) - This model was used to calibrate scales appearing on the APT-O in year one and took the following form:

    $\text{Log}(P_{ni} / (1 - P_{ni})) = B_n - D_i$

    where

P_{ni} = the probability of activity *n* succeeding on item *i*

B_n = the ability of activity *n*

D_i = the difficulty of item *i*

3. Many Facet Rasch Measurement (MFRM) (Linacre &Wright, 2004) – This model was used to calibrate scales appearing on the following instrument utilized in year one:
    a. PQA (both the Youth and School-Age versions of this instrument)
    b. Observation of Child Engagement (OCE)

    The MFRM model employed in calibrating measures on the aforementioned instruments took the following form:

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

    where

    P_{nijk} = the probability of activity *n* being given a rating of *k* on item *i* by rater *j*

    $P_{nij(k-1)}$ = the probability of activity *n* being given a rating of *k*-1 on item *i* by rater *j*

    B_n = the ability of activity *n*

    D_i = the difficulty of item *i*

    C_j = the severity of rater *j*

    F_k = the difficulty of category *k* relative to category *k* -1

In terms of reliability, the Rasch rating scale model allows for the production of indices that indicate the replicability of the model-based respondent ability estimates across similar instruments (Bond & Fox, 2007). As Bond and Fox note, person reliability is enhanced if there is relatively small error in the ability estimates associated with respondents, which in turn is impacted by the number of items used to support the analysis. In Tables C1 and C2, the reliability indices for each individual subscales calibrated across each of the measures employed in year one are outlined and ranged from .52 to .92. Reliability estimates in the range of .60 to .70 are considered minimally acceptable (Bond & Fox, 2007). Only one scale was found to fall below this threshold, the *family communication* scale appearing on the center coordinator survey.

In addition, Tables C1 and C2 also include a column labeled *Mean Standardized Outfit*. Values found in this field are useful in assessing the extent to which the data associated with a given analysis fit the Rasch model. Using information about how an individual respondent scored across the full domain of items on a given instrument and how the full sample of respondents scored on a given item, the Rasch model constructs an expected score for each person on each item represented in a given analysis. This expected score is then compared with the observed score for that person on the item in question and a residual is calculated. The value represented in Tables C1 and C2 represents the standardized value of the mean squared residual among the items represented in a given analysis and serves as an indication of model fit. If the data perfectly conformed to the Rasch model, then the mean standardized outfit would be 0. Negative values indicate that there was less variation in the data than expected while positive values indicate more variation was found in the data than expected (Bond & Fox, 2007). The standardized mean outfit values outlined in Tables C1 and C2 are almost all negative, which may suggest that there is redundancy among the items and that a more parsimonious

presentation of items on some instruments may be warranted in the future. According to Linacre (2009), non-standardized mean outfit values between .5 and 1.5 are indicative of a productive measure and deemed to be an indicator of acceptable fit which is the case for each of the subscales outlined Tables C1 and C2.

Table C1. Person Reliability Indices, Cronbach Alpha, and Outfit Values by Subscale for Scales Calibrated with the Rasch Rating Scale Model

Instrument/Scale	Rasch Person Reliability Index	Standardized Mean Outfit (Non-standardized)
Center Coordinator Survey		
Intentionality in Program Design	.74	-1.0 (.67)
Receipt and Use of Student Data	.60	-.6 (.65)
Youth Ownership	.68	-.8 (.67)
Partner Collaboration	.61	-.7 (.76)
Family Communication	.52	-.3 (.75)
Internal Communication and Collaboration	.77	-.6 (.77)
Absence of Staff Challenges	.62	-.4 (.84)
Staff Survey		
Intentionality in Program Design	.75	-1.1 (.68)
Youth Ownership	.78	-.6 (.84)
Internal Communication and Collaboration	.83	-1.2 (.67)
Collective Staff Efficacy	.73	-1.3 (.65)
Linkages to the School Day	.83	-.3 (.92)
Observation Tools		
PQA Academic Climate	.68	.1 (.95)
Student Engagement Survey	.60	.1 (1.00)
APT-O – Academic Content	.70	0.0 (.98)

Table C2. Person Reliability Indices, Cronbach Alpha, and Outfit Values by Subscale for Scales Calibrated with Many Facet Rasch Measurement

Instrument/Scale	Rasch Person Reliability Index	Standardized Mean Outfit (Non-standardized)
PQA		
Total	.92	-.1 (1.04)
Supportive Environment	.81	-.1 (.98)
Interaction	.72	-.3 (.83)
Engagement	.61	0.0 (.99)
OCE	.88	0.0 (1.13)

Also, it is important to note that MFRM techniques can also be employed to identify and quantify various sources of error variation. MFRM accomplishes this task by employing fit statistics and separation reliability indices akin to those described earlier to estimate parameters for a specific facet independent of the other facets included in the model. For example, the basic Rasch model allows for both the estimation of the ability of an individual respondent and the difficulty of an individual item and the production of individual standard errors for both persons and items. MFRM allows a researcher to add additional facets to the Rasch model, like rater for example, resulting in the estimation of individual rater severity estimates and standard errors on the same logit scale as person ability and item difficulty estimates, allowing for direct comparison across the three facets in question. As noted by Kim and Wilson (2009), this feature of MFRM allows the researcher to assess the impact of error variance within each facet on the respondent's ability estimate. In this sense, the probability that a respondent will receive a given score on the measure of interest is a function of the difference between the person's ability and the difficulty of the task, after adjusting for error introduced by a given measurement facet (like rater severity, for example). In this regard, as Kim and Wilson emphasize, what MFRM yields is an estimate of the respondent's score that is as free as possible from the particularities associated with the measurement facets included in the model.

Capitalizing on this characteristic of MFRM, a partially-crossed method was employed when conducting PQA-related observations in the spring of year one where observers were paired in an intentional manner to allow for the PQA measures to be calibrated using MFRM. In doing so, the evaluation team was able to obtain an estimate of whether a given rater was systematically more lenient or severe in their ratings and adjust calibrated scores to account for this systematic bias demonstrated by the rater. In Table C3, the severity measure for each rater involved in the collection of PQA data is outlined. A value of 0 would indicate a completely unbiased rater while negative values indicate a more lenient rater and positive values indicate a more severe rater. Most raters were within .5 logits of 0, so a wide range in severity was not considered to be an issue with these data. In Table C3, outfit values are also presented. Values in this column can

be interpreted in the same fashion as those values appearing in Table C1 and C2. Here, however, three raters were found to have both nonstandardized and standardized outfit values beyond desirable levels (raters 1, 4, and 7) which suggests they were not using the PQA rating scale in a consistent fashion across observations. This is different than the issue of systematic bias, which can be quantified and accounted for in the calibration process. Outfit is indicative of error that is being introduced by inconsistent use of the rating scale, although overall reliability levels were still within acceptable ranges as outlined in Table C2. This error cannot be corrected through MFRM; however, this is important information for the evaluation team to have in hand as we prepare to retrain and certify observers, providing us with information about which raters we especially need to target in these efforts.

Table C3. MFRM PQA Severity Measures and Outfit Values

Rater	Severity Measure	Standardized Mean Outfit (Non-standardized)
Rater 1	-.62	3.0 (1.54)
Rater 2	-.25	1.2 (1.06)
Rater 3	-.07	-4.3 (.81)
Rater 4	.05	6.7 (1.86)
Rater 5	.14	2.0 (1.26)
Rater 6	.32	-2.3 (.89)
Rater 7	.43	3.9 (1.59)

In addition to adjusting respondent scores to account for measurement error created by a given facet, MFRM also produces a series of statistics summarizing the outcome of what is termed a fixed effect hypothesis test (Linacre, 2009) for each facet included in the model and their interactions. These tests, employing a chi-square-based statistic, assess whether or not the elements associated with the facet in question can be considered as sharing the same measure after allowing for measurement error. For example, these fixed hypothesis tests allow questions like *Can these raters be thought of as equally lenient?* to be answered. In the case of the PQA data, the answer to this questions was *no*, the raters in question could not be considered to be equally lenient ($p < .001$, Chi-Square = 186.2, df = 6). Failure to employ MFRM techniques would have resulted in biased estimates of activity functioning.

Similar techniques were employed with OCE data, although the facet added to the model was not rater, but segment. The OCE instrument was scored every 10 minutes for a given activity, resulting in up to 6 scored segments per observation. MFRM was used to determine if certain segments of an activity were systematically resulting in higher scores, which was found to be the case ($p < .001$, Chi-Square = 25.7, df = 5). Segment three received the highest OCE scores, while segments five and six at the end of the activity received the lowest. This information is important to have in hand when the number of segments that can be observed varies from one activity to another.

Limitations of Center Coordinator and Staff Survey Data

There are two potential limitations associated with the center coordinator and staff survey data collected during the course of the spring of 2011 that are important to note: (1) the potential for some respondents to complete the survey in a way that is more representative of socially desirable response patterns than an accurate reflection of their practice and policies and procedures adopted by their center and (2) a fair degree of variation within programs in relation to staff practice which complicates the process of using staff-level data to derive a measure of center-level functioning.

Both of these issues became apparent during analyses of staff survey data using MFRM techniques (Linacre & Wright, 2004). The purpose of these analyses was to calibrate center-level scales using staff survey data in which each individual staff member was treated as a rater of the program in question. This allowed the following question to be asked: *To what extent is there consistency in the responses provided by individual staff working in a given center?* This was believed to be a relevant question to ask because of the assumption that centers with a strong organizational culture and climate and with refined policies and procedures may have more consistency in the practices and approaches adopted by staff as compared to centers where these things were weaker or relatively non-existent. Running the MFRM calibrations afforded the evaluation team the capacity to test this assumption statistically to see if there were significant differences among the responses provided by staff within a given center.

As shown in Table C4, when considering the survey scale scores for each of the scales appearing on the staff survey, there were very few centers where there was *not* found to be significant variation in the responses provided by individual staff, ranging from 2 centers on the *Internal Communication and Collaboration Scale* to 7 centers on the *Intentionality in Program Design* scale. As a consequence, the type of experience a given youth will have when attending 21st CCLC may vary considerably within a given center depending upon how much they interact with various staff at a given site.

A second issue which also emerged when calibrating measures using MFRM techniques relates to the issue of potential social desirability in respondent response patterns. By default, the computer program used to run MFRM calibrations excludes cases from the analysis where the maximum score on a given scale is achieved given that the respondent's true score likely lies somewhere beyond the what is measured by the items appearing on the survey. As shown in Table C4, this meant that anywhere from 25 to 63 responses were excluded from MFRM calibrations depending on the scale. Given that an effort was made to include a range of items on each scale, including some items that would be hard for respondents to endorse a response option at the highest level, such maximum scores do seem suspect. It may be possible to investigate this issue further by linking observation data with staff survey data where overlap can be found to exist between the two measures. This is something we plan to investigate for the next report.

Table C4. Staff Survey: MFRM Results

Construct/Subscale	Number of Centers Where *No* Significant Difference Found Between Staff Responses (out of a total *n* of 40)	Cases Dropped from Analysis Given Extreme Score Designation (out of a total *n* of 465)
Collective Staff Efficacy	6	55
Intentionality in Program Design	7	63
Practices Supportive of Academic Skill Building	4	25
Youth Development Practices / Youth Ownership	5	36
Internal Communication and Collaboration	2	33

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Appendix D. Analysis of Site Visit Center Coordinator Interview and Staff Focus Group Data

The data from site coordinator interviews and focus group participants were used to develop program summaries. Thirty-eight of the 40 programs were summarized. Two were not because either the site coordinator interview or the focus group did not occur as scheduled and information was not sufficient to complete a summary.

The program summaries were organized by operational and program dimensions that are relevant to the 21st CCLC programs. Centers were rated on each dimension for which there was sufficient information from interviews and focus groups. The ratings were either on a three-point scale (high, moderate, low) or a two-point scale (low to moderate, moderate to high). Ratings were applied by one rater, and then reviewed by another to ensure consistency across the programs. The ratings for each program and dimension were entered into an SPSS data base. Descriptive analytic techniques were used to determine distribution across ratings per dimension.

Table D1 presents the dimensions and the criteria for a high rating. Throughout the main body of the report, criteria for all ratings are presented in the relevant section.

Table D1. Codes and Criteria for a High Rating

Dimension	Criteria for a High Rating
Enrollment	Program was at, near, or had exceeded capacity.
Recruitment Strategies	Innovative, targeted, planned, active methods were used, and students were involved in recruiting.
Participation	Participation was consistent. Program used effective approaches to encourage consistent participation.
Academic Sessions	The program had numerous academic sessions aligned with school objectives plus structured homework or tutoring activities.
Non-academic Enrichment Sessions	The program had numerous and diverse activities, with qualified providers. Students explored interests and learned new skills.
Administrative Support	Administrative support was acknowledged. The site coordinator and principal met regularly.
Communication with Teachers	Staff communicated with school-day teachers and shared academic and behavioral information.
Access to Data	All or nearly all staff had some level of access to student data that informs planning
Use of Data	The program had procedures for reviewing data and using it to inform programming.
Youth Leadership	Programming was designed to develop leadership in students. Many examples were provided.
Family Connections	Teachers developed relationships with parents. Programming was directed at parents, and there was good participation among parents at events.
Community	Numerous relationships with community partners had been developed, and

Dimension	Criteria for a High Rating
Connections	there were strong examples of community-service projects, with good participation by students.
Staff Development	Most staff attended multiple formal professional development sessions.
Site Coordinator Professional Development	The site coordinator participated in professional development provided by multiple sources and more than once a year.

Appendix E. Hierarchical Linear Models: Staff and Student Surveys and PQA Data

The purpose of this appendix is to further outline the domain of hierarchical linear models run to explore the relationship between center and activity characteristics and scale scores obtained from the staff and student surveys and the PQA data collected in relation to those centers subjected to site visits in the spring of 2011. These analyses were oriented at addressing the following domain of questions:

1. Is there evidence of a relationship between key center characteristics and practices and scale scores obtained on the staff and student surveys and the PQA?

2. Is there evidence of a relationship between activity-level characteristics and scale scores obtained on the student survey and the PQA?

3. Is the there evidence of a relationship between characteristics associated with respondents to the staff survey and scale scores obtained on the staff survey?

Four types of models were run to address these questions:

1. Total PQA scores (R_TOTAL) and scores on each PQA subscale as the outcomes of interest at level one, with level one predictors including whether or not the activity was an academic enrichment activity (ACAD_ENR) and staff to student ratio (SS_RATIO) for the activity in question. Level two predictors included the grade level served by the center (MIDD_ONL, HIGH_ONL); the school-based status of the grantee associated with the center (SCHOOL_B); how mature the center was in terms of years of operation (MATURITY); and whether or not the center employed a mostly teachers staffing model (MOSTLY_T). This set of models took the following form, varying by the level one outcome included:

LEVEL 1 MODEL (bold: group-mean centering; bold italic: grand-mean centering)

$$R\_TOTAL = \beta_0 + \beta_1(\boldsymbol{SS\_RATIO}) + \beta_2(\boldsymbol{ACAD\_ENR}) + r$$

LEVEL 2 MODEL (bold italic: grand-mean centering)

$$\beta_0 = \gamma_{00} + \gamma_{01}(\boldsymbol{MIDD\_ONL}) + \gamma_{02}(\boldsymbol{HIGH\_ONL}) + \gamma_{03}(\boldsymbol{SCHOOL\_B}) + \gamma_{04}(\boldsymbol{MATURITY}) + \gamma_{05}(\boldsymbol{MOSTLY\_T}) + u_0$$

$$\beta_1 = \gamma_{10} + \gamma_{11}(\boldsymbol{MIDD\_ONL}) + \gamma_{12}(\boldsymbol{HIGH\_ONL}) + \gamma_{13}(\boldsymbol{SCHOOL\_B}) + \gamma_{14}(\boldsymbol{MATURITY}) + \gamma_{15}(\boldsymbol{MOSTLY\_T}) + u_1$$

$$\beta_2 = \gamma_{20} + \gamma_{21}(\boldsymbol{MIDD\_ONL}) + \gamma_{22}(\boldsymbol{HIGH\_ONL}) + \gamma_{23}(\boldsymbol{SCHOOL\_B}) + \gamma_{24}(\boldsymbol{MATURITY}) + \gamma_{25}(\boldsymbol{MOSTLY\_T}) + u_2$$

2. Total PQA scores (R_TOTAL) and scores on each PQA subscale as the outcomes of interest at level one, with level one predictors including whether or not the activity was an academic enrichment activity (ACAD_ENR) and staff to student ratio (SS_RATIO) for the activity in question. Level two predictors included the center's scale scores derived from the center coordinator survey on the following scales: (a) internal communication and collaboration (R_COMM); (b) intentionality in program design (R_DESIGN); (2) youth ownership (R_OWN); and (d) the absence of staffing challenges (R_STAFF). This set of models took the following form, varying by the level one outcome.

LEVEL 1 MODEL (bold: group-mean centering; bold italic: grand-mean centering)

$$R\_TOTAL = \beta_0 + \beta_1(\boldsymbol{SS\_RATIO}) + \beta_2(\boldsymbol{ACAD\_ENR}) + r$$

LEVEL 2 MODEL (bold italic: grand-mean centering)

$$\beta_0 = \gamma_{00} + \gamma_{01}(\boldsymbol{R\_COMM}) + \gamma_{02}(\boldsymbol{R\_DESIGN}) + \gamma_{03}(\boldsymbol{R\_OWN}) + \gamma_{04}(\boldsymbol{R\_STAFF}) + u_0$$

$$\beta_1 = \gamma_{10} + \gamma_{11}(\boldsymbol{R\_COMM}) + \gamma_{12}(\boldsymbol{R\_DESIGN}) + \gamma_{13}(\boldsymbol{R\_OWN}) + \gamma_{14}(\boldsymbol{R\_STAFF}) + u_1$$

$$\beta_2 = \gamma_{20} + \gamma_{21}(\boldsymbol{R\_COMM}) + \gamma_{22}(\boldsymbol{R\_DESIGN}) + \gamma_{23}(\boldsymbol{R\_OWN}) + \gamma_{24}(\boldsymbol{R\_STAFF}) + u_2$$

3. Staff survey scores on the following staff survey scales as the outcomes of interest at level one: (a) internal communication and collaboration; (b) intentionality in program design; (c) collective staff efficacy in creating interactive an engaging settings; (d) linkages to the school day; and (e) youth ownership. A single level one predictor was included that was related to whether or not the respondent was a certified teacher (TEACHER). Level two predictors included the grade level served by the center (MIDD_ONL, HIGH_ONL); the school-based status of the grantee associated with the center (SCHOOL_B); how mature the center was in terms of years of operation (MATURITY); and whether or not the center employed a mostly teachers staffing model (MOSTLY_T). This set of models took the following form, varying by the level one outcome:
4.

LEVEL 1 MODEL (bold: group-mean centering; bold italic: grand-mean centering)

$$R\_EFFICA = \beta_0 + \beta_1(\boldsymbol{TEACHER}) + r$$

LEVEL 2 MODEL (bold italic: grand-mean centering)

$$\beta_0 = \gamma_{00} + \gamma_{01}(\boldsymbol{MIDD\_ONL}) + \gamma_{02}(\boldsymbol{HIGH\_ONL}) + \gamma_{03}(\boldsymbol{SCHOOL\_B}) + \gamma_{04}(\boldsymbol{MATURITY}) + \gamma_{05}(\boldsymbol{MOSTLY\_T}) + u_0$$

$$\beta_1 = \gamma_{10} + \gamma_{11}(\boldsymbol{MIDD\_ONL}) + \gamma_{12}(\boldsymbol{HIGH\_ONL}) + \gamma_{13}(\boldsymbol{SCHOOL\_B}) + \gamma_{14}(\boldsymbol{MATURITY}) + \gamma_{15}(\boldsymbol{MOSTLY\_T}) + u_1$$

5. Student survey engagement scores (STUDEN) as the outcomes of interest at level one. Level two predictors included the staff to student ratio for the activity in question (SS_RATIO); the grade level of the students served in the activity (MID and HIGH); whether the activity was academic enrichment (ACAD_ENR), non-academic enrichment (NONAC_ENR), or homework help (HOMEWORK); and the total PQA score given in relation to the activity in question (R_TOTAL). This model took the following form:

LEVEL 1 MODEL (bold: group-mean centering; bold italic: grand-mean centering)

$$R\_STUDEN = \beta_0 + r$$

LEVEL 2 MODEL (bold italic: grand-mean centering)

$$\beta_0 = \gamma_{00} + \gamma_{01}(\boldsymbol{SS\_RATIO}) + \gamma_{02}(\boldsymbol{MID}) + \gamma_{03}(\boldsymbol{HIGH}) + \gamma_{04}(\boldsymbol{ACAD\_ENR}) + \gamma_{05}(\boldsymbol{NONAC\_EN}) + \gamma_{06}(\boldsymbol{HOMEWORK}) + \gamma_{07}(\boldsymbol{R\_TOTAL}) + u_0$$

In Table E1, descriptive data is outlined for each of the center-level, activity-level, and staff-level predictors included in model types 1 through 3 described above. Similar descriptive data on center-level characteristics associated with model type 4 can be found in Table E2. Table E3 to E6 contain the full domain of results associated with the models described above.

Table E1. Summary Statistics for Center-Level, Activity-Level, and Staff-Level Predictors Associated with Models Where PQA or Staff Survey Data Serve as Outcomes

Center Level Predictors	***n***	**%**
Grade Level (*n*=40)		
Elementary	21	52.5%
Middle	12	30.0%
High	7	17.5%
School-Based Status (*n*=40)		
School-Based	32	80.0%
Nonschool-based	8	20.0%
Center Maturity (*n*=40)		
1 year	8	20.0%
2 years	21	52.5%
3 years	11	27.5%
Staffing Model (*n*=40)		
Mostly Teachers	14	35.0%
Other Staffing Approach	26	65.0%
Mean Internal Communication and Collaboration Score (*n*=37)	58.04	
Mean Intentionality in Program Design Score (*n*=37)	61.81	
Mean Youth Ownership Score (*n*=37)	62.30	
Mean Absence of Staffing Challenges Score (*n*=37)	64.28	
Activity-Level Predictors	***n***	**%**
Activity Type (*n*=157, *n*=145)		
Academic Enrichment Activity	48 (44)	30.6% (30.3%)
Non-academic Enrichment Activity	109 (101)	69.4% (69.7%)
Mean Staff to Student Ratio (*n*=157, *n*=145)	.1540 (.1507)	
Staff-Level Predictors	***n***	**%**
Teacher Status (*n*=457)		
Certified Teacher	280	61.3%
Not a Certified Teacher	177	38.7%

Note: Values in parentheses correspond to level one predictor descriptives for 145 activities associated with the analysis of center coordinator survey variables at level 2 for 37 centers

Table E2. Summary Statistics for Center-Level Data Associated with Models Where Student Survey Engagement Data Serve as the Outcome of Interest

Center Level Predictors	*n*	%
Grade Level (*n*=103)		
Elementary	34	33.0%
Middle	44	42.7%
High	25	24.3%
Activity Type (*n*=103)		
Academic Enrichment	30	29.1%
Non-academic Enrichment	45	43.7%
Homework Help	22	21.4%
Mean Student to Staff Ratio	.1579	
Mean Total PQA Score	42.94	

Table E3. HLM Results for Models Where Center Characteristics Are Used as Predictors and PQA Scores Are Used as Outcomes

Predictors	Total	Supportive Environment	Interaction	Engagement
Level 2 Predictors				
Intercept	43.504***	44.652***	43.162***	39.301***
	(1.310)	(1.585)	(1.383)	(1.771)
Middle School Center	-3.515	-3.903	-6.035	-7.039
	(3.348)	(3.925)	(3.987)	(4.378)
High School Center	3.712	-0.002	2.759	9.193^{+}
	(3.749)	(3.987)	(4.166)	(5.018)
School-Based Center	4.624	5.209	5.484^{+}	10.406*
	(2.801)	(3.809)	(2.835)	(4.644)
Center Maturity	0.244	-0.297	2.332	-5.358^{+}
	(2.006)	(2.309)	(2.203)	(3.033)
Mostly Teachers	1.602	2.296	0.876	-1.302
	(2.511)	(3.273)	(2.990)	(3.281)
Level 1 Predictors				
Staff to Student Ratio	13.971	9.239	26.115**	-10.633
	(10.174)	(14.101)	(9.073)	(12.709)
Academic Enrichment	4.714*	6.705 *	1.273	2.543
	(1.883)	(2.820)	(1.705)	(2.976)
Cross-Level Interactions				
Staff to Student Ratio x Center Maturity	0.099	11.238	-20.785	-6.373
	(15.934)	(20.635)	(15.968)	(22.134)
Academic Enrichment x Mostly Teachers	2.069	-2.539	9.922**	-0.347
	(4.008)	(6.332)	(2.914)	(6.166)
Academic Enrichment x Middle School Center	-11.910	13.839	-18.977***	-8.703
	(5.569)	(7.758)	(4.373)	(8.686)
Academic Enrichment x High School Center	-6.618	-2.873	-9.940*	-8.105
	(4.729)	(7.428)	(4.856)	(7.548)

Table E3 (Continued). HLM Results for Models Where Center Characteristics Are Used as Predictors and PQA Scores Are Used as Outcomes

	YPQA Outcomes			
Predictors	**Total**	**Supportive Environment**	**Interaction**	**Engagement**
Academic Enrichment x School-Based Center	10.709 (5.368)	12.651 (7.915)	15.006** (4.526)	17.474 (10.550)

Note: Standard errors are reported in parentheses; $^{+}p< 0.10$, *p<0.05, **p<0.01, ***p<0.001
Note: Only significant cross-level interactions are provided in the table

Table E4. HLM Results for Models Where Center Coordinator Survey Scale Scores Are Used as Predictors and PQA Scores Are Used as Outcomes

	YPQA Outcomes			
Predictors	**Total**	**Supportive Environment**	**Interaction**	**Engagement**
Level 2 Predictors				
Intercept	44.801*** (1.312)	46.419*** (1.468)	39.413*** (2.204)	40.982*** (2.141)
Internal Communication and Collaboration	0.018 (0.160)	0.116 (3.455)	-0.522** (0.186)	0.006 (0.192)
Intentionality in Program Design	-0.022 (0.104)	0.057 (4.127)	0.333 (0.174)	-0.143 (0.145)
Youth Ownership	-0.003 (0.079)	-0.024 (3.753)	-0.071 (0.127)	-0.024 (0.150)
Absence of Staffing Challenges	0.026 (0.100)	-0.059 (2.054)	0.295 (0.198)	-0.093 (0.141)
Level 1 Predictors				
Staff to Student Ratio	20.456^{+} (11.578)	17.809 (15.500)	34.834** (12.536)	-11.766 (21.169)
Academic Enrichment	7.711*** (1.783)	9.630** (2.774)	4.926* (2.141)	7.010* (2.706)
Cross-Level Interactions				
Staff to Student Ratio x Internal Communication and Collaboration	2.486* (1.007)	3.837** (1.366)	3.344 (1.121)	2.830 (2.045)
Academic Enrichment x Youth Ownership	0.454*** (0.096)	0.591*** (0.110)	0.299* (0.117)	0.515** (0.178)
Staff to Student Ratio x Intentionality in Program Design	-1.655 (1.007)	-2.420 (1.525)	-2.176* (0.977)	-2.420 (1.525)

Note: Standard errors are reported in parentheses; $^{+}p< 0.10$, *p<0.05, **p<0.01, ***p<0.001
Note: Only significant cross-level interactions are provided in the table

Table E5. HLM Results for Models Where Center Characteristics Are Used as Predictors and Staff Survey Scale Scores Are Used as Outcomes

	Staff Survey Outcomes				
Predictors	**Internal Comm**	**Intentional Design**	**Staff Efficacy**	**School Linkages**	**Youth Ownership**
Level 2 Predictors					
Intercept	52.207*** (1.724)	53.182*** (1.327)	53.896*** (1.027)	53.050*** (1.202)	54.279*** (1.157)
Middle School Center	3.902 (2.393)	-2.624 (2.009)	2.493 (2.253)	0.829 (2.586)	5.630* (2.091)
High School Center	-1.611 (5.376)	-6.644* (3.131)	-1.163 (2.521)	2.005 (3.254)	8.856* (3.362)
School-Based Center	-0.675 (5.786)	5.125 (5.164)	-2.196 (2.902)	3.379 (3.450)	-2.167 (3.839)
Center Maturity	1.735 (2.257)	1.899 (1.771)	0.709 (1.415)	-1.200 (1.797)	-1.821 (1.313)
Mostly Teachers	1.591 (2.843)	2.840 (1.985)	5.404* (2.064)	6.361* (2.756)	1.680 (2.445)
Level 1 Predictors					
Teacher Status	-2.821 (2.246)	-3.249 (2.334)	-2.191^{+} (1.080)	0.617 (1.901)	0.274 (1.669)
Cross-Level Interactions					
Teacher x High School Center	12.458 (9.581)	-0.659 (6.717)	0.327 (1.080)	-17.988*** (4.349)	2.696 (4.404)
Teacher x Middle School Center	6.222 (4.179)	-0.648 (4.478)	0.204 (1.948)	0.820 (3.714)	-1.678 (3.462)
Teacher Status x Mostly Teachers	3.986 (4.272)	3.332 (4.491)	-0.275 (2.312)	5.986^{+} (3.495)	-3.098 (3.387)

Note: Standard errors are reported in parentheses; $^{+}p< 0.10$, *$p<0.05$, **$p<0.01$, ***$p<0.001$
Note: Only significant cross-level interactions are provided in the table

Table E6. HLM Results for Models Where Center Characteristics Are Used as Predictors and Student Survey Scale Scores Are Used as Outcomes

Predictors	Student Survey Total Engagement Score
Level 2 Predictors	
Intercept	68.876*** (0.866)
Staff to Student Ratio	-2.104 (10.681)
Middle School Activity	2.280 (2.348)
High School Activity	8.741*** (2.259)
Academic Enrichment Activity	-0.702 (3.549)
Non-academic Enrichment Activity	0.759 (3.274)
Homework Help	-5.976 (3.644)
Total PQA Score	0.228* (0.093)

Note: Standard errors are reported in parentheses; $^{+}p< 0.10$, $*p<0.05$, $**p<0.01$, $***p<0.001$

Appendix F. ANOVA Results: Center Coordinator Survey

The purpose of this appendix is to outline results from the full domain of ANOVA-related analyses undertaken to assess if mean differences existed across scale calibrated from data collected from administration of the center coordinator in the spring of 2011 in relation to the following center characteristics:

- School-based status of the grantee associated with the center
  - School-based
  - Not school-based
- The maturity of the center in terms of years of operation
  - 1 year
  - 2 years
  - 3 years
- Whether or not the center was staffed mostly by teachers
  - Staffed mostly by certified teachers
  - Staffed mostly by non-certified staff
- Grade level served by the center
  - Elementary School
  - Middle School
  - High School

To examine the data for between-group differences based on these aforementioned independent variables, one-way ANOVA tests were undertaken (see Table F1). If the presence of group differences was detected for a particular construct for which there were more than two groups, a post hoc multiple-comparison test (Dunnett T3) was conducted to look for significant differences between specific subpopulations (see Table F2). The Dunnett T3 was used because it accounts for nonuniform variance within specific subpopulations due to varying sample sizes. A multiple-comparison procedure is required since many simultaneous comparisons are being conducted, which requires accounting for the compounding of the Type I error rate that occurs when many intergroup comparisons are performed.

Table F1. ANOVA Results by Survey Scale

	School-Based		Maturity		Mostly Teacher		Grade Level	
Scale	***F***	***p***	***F***	***p***	***F***	***p***	***F***	***p***
Intentionality in Program Design	.05	.831	.76	.469	2.10	.148	.744	.476
Receipt and Use of Student Data	3.74	.054	1.10	.334	13.59	.000***	3.43	.033*
Youth Ownership	1.04	.308	.99	.372	.25	.619	10.58	.000***
Partner Collaboration	.26	.608	5.94	.003**	.07	.790	1.55	.214
Family Communication	.79	.376	1.07	.343	2.86	.092^{+}	3.18	.042*
Internal Communication and Collaboration	.48	.489	3.88	.021*	3.04	.082^{+}	.870	.420
Absence of Staff Challenges	.38	.541	2.06	.129	.55	.459	8.34	.000***

Note: $^{+}p< 0.10$, *p<0.05, **p<0.01, ***p<0.001

Table F2. Post-Hoc Results Based on Significant ANOVA

Scale	Characteristics Where Differences	Subgroups Where Mean Differences Exist	Standard Error	*p*
Receipt and Use of Student Data	Grade Level	High School > Elementary	2.37	.076^{+}
Receipt and Use of Student Data	Mostly Teacher	Mostly Teacher > Other Staffing	1.44	.000***
Youth Ownership	Grade Level	High School > Elementary	2.02	.000***
Youth Ownership	Grade Level	Middle School > Elementary	1.35	.009**
Partner Collaboration	Maturity	Two Years > Three Years	1.89	.002**
Family Communication	Mostly Teacher	Other Staffing > Mostly Teacher	1.29	.098^{+}
Family Communication	Grade Level	Elementary > High School	2.02	.051^{+}
Internal Communication	Maturity	First Year > Third Year	1.70	.039*
Internal Communication	Mostly Teacher	Other Staffing > Mostly Teacher	1.10	.087^{+}
Absence of Staff Challenges	Grade Level	High School > Elementary	1.95	.010*
Absence of Staff Challenges	Grade Level	Middle School > Elementary	1.39	.002**

Note: $^{+}p< 0.10$, *p<0.05, **p<0.01, ***p<0.001

Appendix G. Innovative Practices at the Point of Service

The tables in Appendix G describe the practices associated with the domains investigated in the analysis of activity narratives. The emphasis on innovative practices was consistent with the CSM developed by TEA, which describes the following milestone and critical success factors (CSFs).

> Utilize innovative instructional techniques for academic and enrichment activities based on research and best practices (milestone).
>
> a. Students are actively participating and engaged in learning (CSF)
> b. Students display leadership roles, volunteer to participate in and lead activities (CSF)

From the milestone and CSFs, the following four domains were developed: positive climate, leadership opportunities, engaging activities, and school connections. Table G1 aligns high-quality activities (per the PQA and its description of indicators associated with level 5, the highest rating) with CSM domains. Where different practices were used specifically for MS/HS or Elementary activities, these are indicated in brackets [ ]. Tables G2 through G4 provide innovative practices that were observed across activities with respect to climate, leadership, and engagement respectively.

Table G1. Alignment of PQA Level 5 Practices with CSM Domains

Domain	Practices
Climate	• Clear explanation of tasks and expectations given. • Structured opportunities provided for students to get to know one another • Opportunities provided for children to practice group process skills (actively listen, take responsibility for a part, contribute ideas to the group, do a task with others). • Teacher worked side by side with students. • All students and newcomers were included.
Leadership	• Opportunities provided for students to talk about what they are doing and thinking to others. • Opportunities provided to teach or coach another individual [MS/HS] • Opportunities provided for one student to help another with a task [elementary]. • Opportunities provided for students to lead a group (e.g. lead a song, project, event or activity). • Opportunities provided for students to make presentations to the group [secondary].
Engagement	• Activities engaged students with materials or ideas (e.g. creating, combining or reforming materials).

Domain	Practices
	• Guided practice provided for students to improve skills [middle and high school]. • Students encouraged to try new skills and/or attempt higher levels of performance. • Time set aside for children to make plans and/or set goals for activities [Elementary] • Staff provided guidance and facilitation while retaining overall responsibility [MS/HS] • Opportunity provided to make open-ended content choice within the content framework of the activity (e.g. youth decide topics within a given subject area, subtopics or aspects of a given topic) • Opportunity provided to make at least one open-ended process choice (e.g. youth decide roles, order of activities, tools, materials or how to present results) • Youth engaged in an intentional process of reflection (e.g. journals, discussion of activity, sharing progress, accomplishments or feelings about the experience)
School-day Connections	Defined as any mention or reference to activities or experiences that take place during the regular school day (i.e., discussions of curriculum or academic responsibilities yearbook work; performances for school personnel)

Table G2. Observed Innovative Practices in the Climate Domain

Observed Innovative Practices in the Climate Domain: Academic Enrichment Activities in Elementary Programs 2010–11

1. Teacher provided specific, real-life, and culturally relevant exemplars to illustrate instructions.
2. Teacher encouraged students to contribute prior knowledge to illustrate instructions.
3. Teacher allowed time to ensure student understanding by:
  a. Asking if instructions were understood.
  b. Providing written instructions and reading them aloud.
  c. Walking around to see if students are doing the task as described.
4. Teacher facilitated positive and mutual relationships by:
  a. Sitting at student level (e.g. On floor or same size chair; eye level).
  b. Being friendly and available to students throughout session.
  c. Providing culturally, socially and developmentally relevant exemplars.
  d. Directing students to be inclusive.
  e. Facilitating casual conversation that includes the whole group.
  f. Encouraging communication across groups.
  g. Sharing a single tool, e.g.,
  i. Students used pointer, flashlight to support turn-taking: e.g. finding vocabulary words with pointer.
  ii. Students used trading cards to make sentences.
  h. Providing structured opportunities for students to get to know each other, e.g.,
  i. Teacher picked a particularly helpful or prepared student and identifying students and his or her accomplishments.

ii. Students reflected on the best parts of their days and what they might improve for the following day.
iii. Students reflected on the session activity and sharing preferences about the activity – what student liked/didn't like about activity.
iv. Students helped each other in pairs or small groups.

Observed Innovative Practices in the Climate Domain: Non-Academic Enrichment Activities in Elementary Programs 2010–11

1. Teacher waited until students demonstrated listening to ensure understanding by
    a. Asking students to demonstrate listening then giving explicit instructions on how to demonstrate listening: "I will know you are ready when you are in a circle, with your hands behind your back, silent."
2. Teacher modeled correct process by:
    a. Modeling a specific and non-evaluative compliment in a "compliment web," a team-building activity, teacher began by giving first compliment which is specific and non-evaluative: "My complement for Rainey is that she remembered all her lines and was a great lion-eater."
3. Teacher checked for understanding by:
    a. Asking, "What do you think this game is about?"
    b. Encouraging students to provide explanations or clarifications about activities
    c. Circulating throughout session
4. Teacher provided activities that allow students to get to know one another by:.
    a. Acting out a familiar story (e.g. Little Red Riding Hood) for younger students in a small group project.
    b. Having students inculcate newcomers: tell what class is doing.
    c. Having students use each other's names.
    d. Having students work at group tables.
    e. Having students "free dance" together.
5. Teacher allowed students to direct session activity, practice group process skills by:
    a. Allowing students to adapt project to own interests and needs.
    b. Allowing students to negotiate direction of project.
    c. Assigning interdependent student projects.

Observed Innovative Practices in the Climate Domain: Homework Help Activities in Elementary Programs 2010–11

1. Staff taught homework as a whole class activity.
2. Students worked on problems together.
3. Students took turns in different roles: reader, problem solver.
4. Students had access to teacher, central board/work area.
5. Students were encouraged to ask questions.
6. Work was treated as a whole class effort –with emphasis on whole group success.
7. Teacher was constantly available to students for guidance and questions.
8. Teacher checked for understanding by:
    a. Walking around and checking specific student work
    b. Asking questions,
9. Teacher identified student exemplars.
10. Teacher encouraged students to complete own work – for their own benefit.

Observed Innovative Practices in the Climate Domain: Academic Enrichment Activities in Secondary Programs 2010–11
1. Teacher was familiar with students and aware of specific needs and abilities 2. Teacher reviewed relevant material 3. Teacher encouraged alternative methods of accessing ideas a. For students who did not understand directions: “write down five words that describe what you thought about” 4. Teacher provided supplementary materials to support activity 5. Teacher checked for understanding by a. Asking if students understand b. Asking specific questions about instructions/process c. Asking specific questions about content: ‘how many right triangles” d. Walking around and checking student work; if they are doing what was asked. 6. Teacher warmly welcomed students 7. Teacher asked each student to participate. 8. Teacher acknowledged participation by: a. Thanking students for participating in activities, problems, discussions b. Incorporating student contributions into content c. allowing student contributions to manipulate direction of content

Table G3. Observed Innovative Practices in the Leadership Domain

Observed Innovative Practices in the Leadership Domain: Homework Help Activities in Elementary Programs 2010–11
1. Teacher gave students opportunities to lead by solving specific homework problems. 2. Teacher had student take lead in solving a problem by working in the front of a class while other students worked on the same problem individually. 3. Teacher had students take on different roles by: a. Having students taking turns reading instruction b. Having students take turns solving problems c. Allowing students to make content choices within context of problem.
Observed Innovative Practices in the Leadership Domain: Academic Enrichment Activities in Secondary Programs 2010–11
1. Teacher allowed or facilitated open dialogue about projects and process as they were occurring by: a. Encouraging discussion of supplemental materials b. Encouraging discussion of design choice (content and process choices) in terms of advantages/disadvantages of specific choices; consequences of choices; alternatives i. Engineering: choice of bridge design ii. College prep: discussion of brochures, programs, activities 2. Teacher had students work in small groups that encouraged conversation and shared leadership, with students responsible for certain roles. 3. Teacher promoted Interdependence within groups by: a. Having group presentations: i. Students made kites of teacher’s or own design, then flew them to see if

they would fly. ii. Students reported on group work on bridge design, using Power Point. 4. Teachers allowed casual conversations related to goals and personal interests and provided opportunities for sharing.
Observed Innovative Practices in the Leadership Domain: Non-Academic Enrichment Activities in Secondary Programs 2010–11
1. Teacher provided opportunities for small group discussion, which are led by students. 2. Teacher provided structured opportunities for students to present to the class and follow-up with class critique of presentations based on standards of quality and personal opinions.

Table G4. Observed Innovative Practices in the Engagement Domain

Observed Innovative Practices in the Engagement Domain: Academic Enrichment Activities in Elementary Programs 2010–11
1. Teacher gave students verbal encouragement. 2. Teacher asked students to build to build models of relevant concepts, such as a. Food chain models b. Measurement related to objects found in a scavenger hunt c. Creation of a mixture for science experiment 3. Teacher asked students to use physical materials to connect with intellectual concepts, such as a. Colored candy to illustrate probability exercise. 4. Teacher asked students to extend activity, such as: a. Having students learn a new skill (estimation), followed by another skill (visual representation of results) that extends that idea. b. Having students graph results of a probability exercise, and then determine if their estimations were close to graph results, and compare results.
Observed Innovative Practices in the Engagement Domain: Non-Academic Enrichment Activities in Secondary Programs 2010–11
1. Teacher provided activities using materials that stimulate sensory engagement by a. Having students use a variety of materials and settings in art project b. Communicating through an online community c. Creating thematic and impromptu art projects d. Writing songs around a specific theme e. Playing games that required team thinking. 2. Teachers provided gentle encouragement by a. Praising student work in a specific, non-evaluative way b. Circulating among the class, talking with students about Providing reminders to students about next steps.
Observed Innovative Practices in the Engagement Domain: Homework Help Activities in Elementary Programs 2010–11
1. Teachers had students engage with materials a. Teachers designed and led activities that stimulated student's personal interests,

such as
    i. Imaginary shopping spree (math problems; addition, subtraction, estimation)
b. Teacher allowed students choices on
    i. What problems to work on
    ii. How to extend problems e.g. allow students to add content that is personally relevant: e.g. pick the color of the shirt we will buy for an imaginary shopping game
2. Teacher set up opportunities for students to engage in problem-solving. Teacher asked higher level questions about decisions.

Observed Innovative Practices in the Engagement Domain: Academic Enrichment Activities in Secondary Programs 2010–11

1. Teacher supported learning with sensory materials, such as
    a. Packaged food items to support geometry lesson
    b. Computer programs for:
        i. Engineering design
        ii. Language learning
    c. Rats and tools for biology dissection.
    d. Filmed examples of target behavior used for analysis in leadership class.
    e. Whole group works on volcano project, e.g.
        i. Shared materials.
        ii. Individual roles; role interdependence.
2. Teacher encouraged experimentation through:
    a. With sensory materials, e.g.
        i. Touch parts of rat.
        ii. Taste different flavors.
    b. By applying for additional academic support
        i. To colleges.
        ii. For scholarships.
        iii. To camps.
    c. By extending lesson through content and process decisions
        i. Trying new kite design.
        ii. Trying new bridge design.

Observed Innovative Practices in the Engagement Domain: Academic Enrichment Activities in Secondary Programs 2010–11

1. Teacher provided a variety of materials to support activities through:
    a. Use of social media.
    b. Use of non-traditional processes and materials to support photography.
    c. Provision of basics, e.g., basics of song framework, on which students could expand, reinvent.
    d. Availability of technology: cameras for photography, video class; computers.
    e. Inspirational props for writing prompts.
    f. Letterman jackets for embroidery class; contracted by school.
    g. Food for cooking class.
    h. Mexican skirts for Mexican music class

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