

Final Grantee Report:
Texas 21st Century Learning Centers Program
Cycle 8, Year 3 (AY2015-16)
YES Prep Public Schools, Inc.

Durand Research and Marketing Associates, LLC

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I. Executive Summary

In this report, results are presented from both a process and outcomes evaluation concerning the 21st Century Community Learning Centers program of the YES Prep Public Schools, Cycle 8, Year 3.

Beginning in 2013 the Yes Prep Public Schools, Inc. (hereafter simply “YES Prep”), received grant funding from the Texas Department of Education for an after-school program under the provisions of the Federal “No Child Left Behind Act” as reauthorized in 2002. This Federal program was subsequently replaced in 2015 by the “Every Student Succeeds Act,” which shifted more responsibility away from the Federal government to the states. Under provisions of these acts, YES Prep received a funding Cycle 8 grant to provide 21st Century Community Learning Centers (21st CCLC) programming at eight (8) campuses or “program center sites.” These eight program center sites included East End, Fifth Ward, Southeast, Gulfton, North Central, North Forest, Northside, and Southwest. All of these sites are located in Harris County, Texas, in the greater Houston metropolitan area.

In developing its after-school program, YES Prep designed and implemented a program in furtherance of the following objectives of the Federal legislation:

- To assist students in meeting State and local achievement standards in core academic subjects, such as reading and mathematics
- To provide students with opportunities for academic enrichment and other activities during non-school hours or periods when school is not in session
- To reinforce and complement the regular academic programs of the schools attended by the students served
- To offer families of students served by the entity, opportunities for literacy and related educational development

In order to meet these objectives, YES Prep offered activities appropriate to the following areas of focus: Academic Support; Enrichment; Behavior; Family Engagement; and College and Career Readiness. The type of Academic Support provided to program participants was based on student and community needs assessments. Students received homework assistance or tutorials based on this assessment. Participants were also given opportunities to select activities from the other activity groups.

The following were among the most notable *process evaluation findings* of the Durand Research and Marketing Associates, LLC, evaluation team, the external program evaluator of the program:

1. Considerable confirming evidence was found by the evaluation team that the grantee supported the program’s theory of action as set forth by TEA and its consultant, Westat, as well as the implementation of that theory at each of the eight program sites. The grantee did so through resources, leadership, staffing, and guidance -- among other ways.

2. The evaluation team found that the YES Prep ACE program was well-implemented and as intended.
3. Additionally, the evaluation team found that the program's activities were appropriate and implemented with fidelity to their respective centers' logic models.
4. Considerable site to site variation was found in total operating budgets, "operating budgets per attendee" and in "per regular student operating budgets." This was completely expected since variations in activities and in teaching resources were evident; and differences were found in "student mix," especially in economic disadvantages, the proportion of at-risk students, and in the percent Hispanic/Latino (with likely variances in English proficiency) across the campuses themselves.
5. Program requirements for regular student participation and for adult participation were met at all eight centers. In fact, all required levels for students and adults were exceeded at each and every center.
6. Considerable variation was found among the centers in the number and percentage of time for each activity type. This variation we found to be a function mainly of differences in student needs (as identified by needs assessments), student-parent preferences (as identified by Voice and Choice Surveys), student compositional "mix" in the program (especially by grade level), activity enrollments, and in what each individual site chose to emphasize.

Below, the most notable *outcomes evaluation findings* of the Durand Research and Marketing Associates, LLC, evaluation team are summarized:

1. While varying somewhat by site and subject area, the team found *grade improvements* for each YES Prep center in each of the four subject areas: reading, math, science, and social science.
2. Besides grade improvement, another major finding at each and every YES Prep center was that of substantial "grades maintenance" or "reinforcement" among participants.
3. YES Prep ACE participants outperformed impressively their Texas 21st Cycle 8, Year 3, counterparts in grade improvements.
4. Our analysis of dose-response relationships supported the conclusion that regular program participation (the "dose"), as opposed to non-regular participation, had a positive impact on students' reduced school day absences and on positive learning outcomes (the "responses"). Indeed, we found that all five of the intermediate program outcomes we were able to investigate -- school absences and grade increases in reading, math, science, and social studies -- improved among regular, relative to non-regular, program participants over the last two academic years. However, this was not found to be true at all of the centers. The outcomes that were most frequently found related to regular participation across the YES Prep centers were improvements in school reading grades (at 6 of the 8 sites) and improvements in math grades (at five of the sites).

5. In evaluating stakeholder perceptions, we found a considerable reservoir of program support and approval among students participating at all of the YES Prep ACE centers as well as on the part of their parents.

Finally, a number of recommendations are offered in this report. However, *we found so many “positives” about the YES Program at its various sites that few of them were directed to the grantee. Indeed, our more important recommendations for the program are directed to TEA and its consultant, Westat, rather than to YES Prep.*

Among the most notable recommendations we offer to TEA and Westat are the following --

1. No feedback about last year’s final evaluation report was ever received. The provision of such feedback from TEA and its consultant, Westat, would assist greatly the YES Prep program, as well as future evaluators.
2. The TEASE data system needs considerable improvement. Data entry should not be closed prior to the end of a term (especially the fall term) and data entry checks need to be incorporated. Additionally, there is great need to build into data available through TEASE, evidence on a comparison or control group of non-participants in ACE. We found such data available in evaluations of other states’ programs.
3. We suggest several ways to improve the conduct of evaluations, to provide better evaluation evidence and to render assessment results more useful to program managers.
4. TEA and Westat need to take the lead in addressing serious human resource issues resulting from staff illnesses, necessary leaves of absence, and other personal emergencies in order to avoid programming shortcomings and limitations on students’ achievements.

Lastly, the most notable recommendations we offer to YES Prep are the following --

1. At least two site staff members (names and roles withheld to protect confidentiality) expressed the view that school leaders at their respective campuses needed to become much more involved in the after-school program. These staff members further noted that there was a failure to “own” the ACE program on the part of their schools. This is a critical problem that seems to require intervention on the part of the leadership of YES Prep Charter Public Schools, Inc.
2. YES Prep’s ACE program could usefully devise a system for identifying and making known high-quality vendors for its various centers.
3. Results from our evaluation suggest that providing more and better incentives for more YES Prep ACE participants to become regular participants rather than remaining non-regular ones is likely to appreciably improve program outcomes.
4. We recommend site coordinator exchanges between centers. That is, site coordinators should be encouraged to take the role of a coordinator at a different center for a limited period of time. Such exchanges, we expect, could be an important training experience in

which coordinators learn new “best practices,” different problem solutions, and possibly about different activities and ways to implement them.

5. We recommend that students be given the opportunity to participate actively in an open-ended “design your own program” activity, the results of which should guide ACE programming. Such an activity, we believe, could effectively supplement present “voice and choice” methods as well as provide students a greater sense of program ownership and empowerment.

II. Introduction and Purpose of Program

A. Introduction

In this report results are presented from a process and an outcomes evaluation of the Cycle 8, Year 3 (AY 2015-16) Texas 21st Century Community Learning Centers program (hereafter commonly referred to as the “ACE program,” an acronym for “Afterschool Centers on Education,”) of the YES Prep Public Schools, Inc. This document includes a final assessment report of the Grantee program, a report that follows the guidelines described in *Texas ACE Independent Evaluation Guide, 2015-16*, especially pages 28 and 29. It also includes appendices that incorporate the executive summaries of evaluations completed at eight YES Prep ACE Centers (discussed below), data tables about “dose-response relationships” deemed too detailed to include in the body of this report, and a methodological appendix about linearity in dose-response.

Several especially noteworthy points about the contents of this document require particular emphasis. First, the materials contained in this document are based in considerable measure on three completed “recommended deliverables”: a logic model for the Grantee and for each Center; an interim discussion on implementation practices (including school program alignment); and an interim discussion on “outputs: activities and participation.” Second, all three of these deliverables were completed prior to this report with assistance and commentary provided by the evaluation team of Durand Research and Marketing Associates, LLC. To avoid needless repetition and redundancy, the content of these deliverables are incorporated directly into the body of this report and are not separately presented. Third and finally, the *recommended* final reports on YES Prep’s eight centers were completed following “Center Final Report Guidelines” (from *Texas ACE Independent Evaluation Guide, 2015-16*, pp. 22-27). However, the evaluation team in concert with YES Prep’s program director observed at the outset of the assessment that center reports contained information that, by and large, was repeated in the Grantee report. Accordingly, the decision was made to report on YES Prep’s eight centers in “executive summary” form only with a particular emphasis on the special, unique findings for each. This decision was made to avoid needless redundancy.

B. Section Overview

In this report section we describe briefly the Texas 21st Century Community Learning Centers program for the YES Prep Public Schools, Cycle 8, Year 3 (AY2015-16), along with the

program's goals, its theory of action in relation to local ACE centers, the various school contexts, and the students served by it.

C. Program Description

Beginning in 2013 the Yes Prep Public Schools, Inc. (hereafter simply "YES Prep), received grant funding from the Texas Department of Education for an after-school program under the provisions of the Federal "No Child Left Behind Act" as reauthorized in 2002. This Federal program was subsequently replaced in 2015 by the "Every Student Succeeds Act," which shifted more responsibility away from the Federal government to the states. Under provisions of these acts, YES Prep received a funding Cycle 8 grant to provide 21st Century Community Learning Centers (21st CCLC) programming at eight (8) campuses or "program center sites." These eight program center sites included East End, Fifth Ward, Southeast, Gulfton, North Central, North Forest, Northside, and Southwest. All of these sites are located in Harris County, Texas, in the greater Houston metropolitan area.

In developing its after-school program, YES Prep designed and implemented a program in furtherance of the following objectives of the Federal legislation:

- To assist students in meeting State and local achievement standards in core academic subjects, such as reading and mathematics
- To provide students with opportunities for academic enrichment and other activities during non-school hours or periods when school is not in session
- To reinforce and complement the regular academic programs of the schools attended by the students served
- To offer families of students served by the entity, opportunities for literacy and related educational development

In order to meet these objectives, YES Prep offered activities appropriate to the following areas of focus: Academic Support; Enrichment; Behavior; Family Engagement; and College and Career Readiness. The type of Academic Support provided to program participants was based on student and community needs assessments. Students received homework assistance or tutorials based on this assessment. Participants were also given opportunities to select activities from the other activity groups.

These objectives and activities aside, an overarching program goal – an outcome of particular interest -- was that of participants' college and career readiness. Such an outcome was and is entirely consistent with the mission of YES Prep Public Schools, Inc., as stated on its Web site: "The YES story is a unique one – we're making college an accessible goal for our kids and we're transforming communities here in Houston." (Retrieved June 13, 2016 from http://yesprep.org/schools/).

In addition to participants' college and career readiness, other overarching YES Prep program goals included increased academic performance, cultural enrichment, increased family engagement, and improved school attendance.

A final overarching goal was and is supportive of YES Prep's vision: transforming low-income communities by giving back to them. As is stated on the YES Prep Web site, "At YES Prep we are redefining possible by creative life-changing opportunities for students from low-income communities. We provide our kids with a high-quality, college-preparatory education that prepares them to compete in the global marketplace and give back to their communities." (Retrieved June 13, 2016, from <http://yesprep.org/vision>).

In order to attain these overarching goals, the YES Prep's Grantee and centers' ACE staff in collaboration with students and families, adopted a number of intermediate program outcomes and activities intended to further academic performance, improve school attendance as well as participants' behavior, to increase the promotion and graduation rates of students, to enhance the likelihood of participants' parent reaching out to school teachers and staff (or family engagement) and to promote healthy lifestyles.

Finally, YES Prep's centers provided students with a healthy snack at the start of each program day, an important component given the high proportion of economically disadvantaged students enrolled at each site (see below in this report).

D. Program Theory of Action

The YES Prep Program and its eight component sites were found by the evaluation team of Durand Research and Marketing Associates, LLC, to be completely faithful to the following theory of action (otherwise known to professional evaluators as "program fidelity"):

Students in need, spending additional time (min. 30 days) in well-structured and aligned afterschool activities, taught by qualified personnel, focused on the 4 activity components, will yield improvement in the academic performance, attendance, behavior, and promotion and graduation rates of students.

Specific details concerning the implementation of this theory of action will be found below in the body of this report and in appendices to it.

Furthermore, considerable confirming evidence was found by the evaluation team that the grantee supported the above theory of action and its implementation at each of the sites through resources, leadership, staffing, and guidance -- among other ways.

E. School Contexts

In the two tables immediately below, data are presented on the school contexts of the eight centers that comprised the YES Prep ACE Program:

Tables: School Contexts for the YES Prep ACE

Center	% Hispanic/Latino	Economically Disadvantage	At-Risk	Student/Teacher Ratio	STAAR Met 8 th Grade Reading Standard	Accountability Rating	Grades Served
East End	98.3%	78.6%	31.1%	14.4	98%	Met Standard	6-12
Fifth Ward	92.7%	84.9%	39.6%	15.4	84%	Met Standard	6-10*
Southeast	94.1%	68.5%	16.2%	15.7	96%	Met Standard	6-12
Gulfton	90.9%	91.1%	47.5%	15.0	91%	Met Standard	6-12
North Central	96.5%	76.9%	39%	16.4	92%	Met Standard	6-12
North Forest	70.1%	86.2%	43.9%	14.3	82%	Met Standard	6-12
Northside	94.1%	75.9%	45.%	14.9	82%	Met Standard	6-10*
Southwest	87.3%	90.6%	26.7%	14.9	95%	Met Standard	6-12

Source: Texas Academic Performance Reports, 2014-15. *Notes: A tenth grade was added to Northside and to Fifth Ward in 2016; there was no grade 10 at either school in 2015. The current Web site (as of July 23, 2016) lists an 11th grade for Fifth Ward.

School Campus	% Beginning Teachers (2014-15)
East End	28.1%
Fifth Ward	46.7%
Southeast	20.5%
Gulfton	21.9%
North Central	23.1%
North Forest	24.9%
Northside	42.9%
Southwest	27.5%
Average and standard deviation	29.45%; .099

Source: Texas Academic Performance Reports, 2014-15.

In addition to the above data, we noted that the eight sites received variable Academic Distinctions from the Texas Education Agency. These Distinctions were as follows –

East End: Academic Achievement in Mathematics.

Southeast: Academic Achievement in Mathematics; Top 25 Percent Closing Performance Gaps; Postsecondary Readiness

Gulfton: Academic Achievement in Math; Academic Achieve in Science; Postsecondary Readiness

North Central: Academic Achievement in Reading/English Language Arts; Academic Achievement in Mathematics; Postsecondary Readiness

North Forest: Postsecondary Readiness

Northside: Academic Achievement in Mathematics

Southwest: Academic Achievement in Mathematics; Postsecondary Readiness

Fifth Ward: Academic Achievement in Mathematics; Postsecondary Readiness

Of particular note in the above data is that all of the campuses on which the centers are located serve a large proportion of Hispanic/Latino students as well as a sizable percentage of students from economically disadvantaged and at-risk backgrounds. All had very good to excellent student-to-faculty ratios; and all had very good to excellent STAAR cumulative “met” standards for 8th grade reading. Additionally, all were located on school campuses found to have received a 2014-15 Texas Academic Performance accountability rating of “met standard.”

Finally, we found especially noteworthy that all of the campuses on which the ACE sites were located had considerable percentages of “beginning teachers.” In our experience such teachers bring with them to the classroom both educational advantages (e.g., enthusiasm, the latest educational thinking, low levels of burnout) and possible disadvantages (e.g., inexperience in handling student behavior issues and in dealing with parents; a relative lack of first-hand familiarity with student learning problems).

F. Students Served by the Program

The YES Prep Cycle 8, Year 3, program enrolled a total of 2850 students, a decrease of about 91 students from the Year 2 program, but an increase of 496 participants over the Year 1 Program. Of the Year 3 students enrolled in the program, 1185 or about 42% were regular participants. This represented a decline of about 123 students from Year 2, but an increase of 467 over the Year 1 program.

The table immediately below shows a demographic breakdown of Cycle 8, Year 3, participating students by regular and non-regular students for the academic 2015-16:

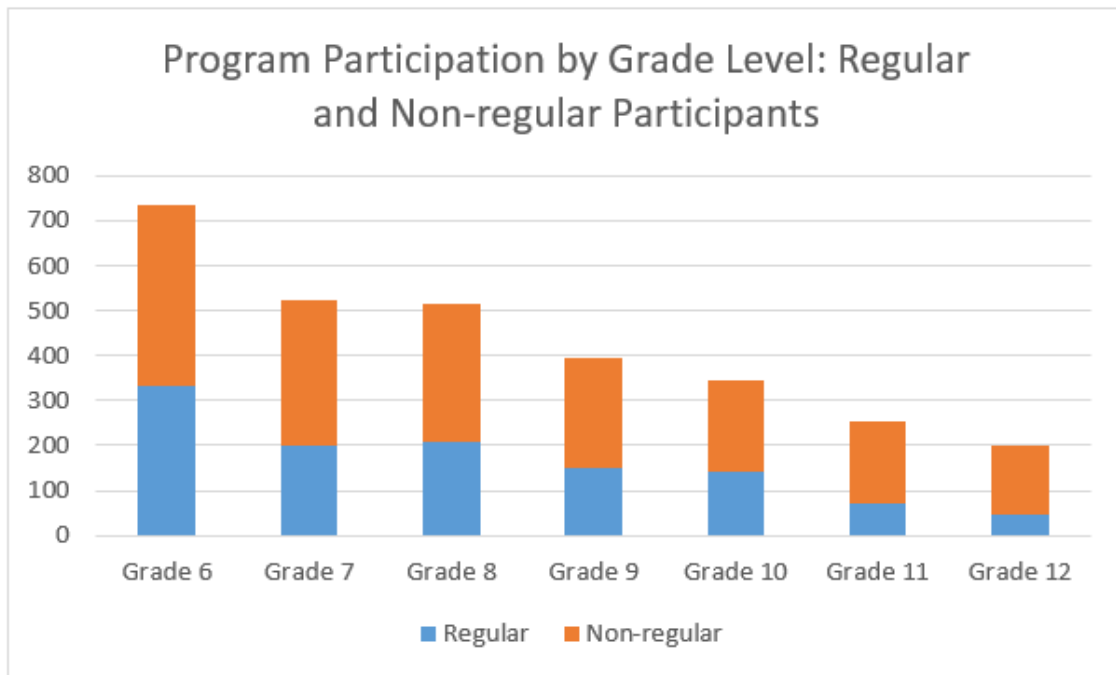
Table: Demographic Breakdown of ACE Students by Regular and Non-Regular Participation, AY2015-16

Demographic Characteristic	Regular Participation	Non-regular Participation
Females	589	963
Males	562	851
African American Descent	164	120
Hispanic/Latino Background	966	1645
Other Ethnicities	20	39

Economically Disadvantaged	886	1381
At-Risk	407	637

Source: Texas 21st Report Data

In the chart below, the number of students served by the program by grade level and regular and non-regular participation status are shown.



Source: Texas 21st Report Data

As can be seen in the above chart, regular participants generally declined monotonically in number by grade level, the exception being for a break in the pattern for grades seven and eight. This same pattern was generally the same for non-regular students. Thus, overall there was a monotonic decline in total participants from grade 6 through grade 12.

III. Evaluation Strategy Plan

A. An overview

In this report section the evaluation strategy and plan for assessing YES Prep’s ACE program are discussed. Overall, the firm of Durand Research and Marketing Associates, LLC, conducted systematically both a *process* and an *outcomes evaluation* of the program. In general, process

assessments are concerned with the implementation of a project or program, especially how the project is being implemented, how the various components complement one another, and how the various project participants or “stakeholders” perceive the program. In the present instance, the results of the process assessment were used *formatively*, i.e., for on-going project development and improvement, as well as for the purposes of assessing the program’s implementation of centers’ logic models, and for enabling the diffusion and dissemination of implementation information to others considering the future adoption of a similar program.

Outcomes assessments, on the other hand, are generally concerned with the comparing of actual to desired or expected goal achievement often according to success standards. In the present instance, the outcomes component of the evaluation was used “*summatively*,” i.e., to judge the program’s effectiveness in producing desired outcomes.

In conducting both types of evaluations, a number of important principles central to effective program assessment were followed by Durand Research and Marketing Associates, LLC. These important principles included, but were not limited to, the following --

- Strict adherence to *Guiding Principles for Evaluators* of the American Evaluation Association.
- The use of multiple measures and multiple forms of data collection to enhance the reliability and validity of findings
- The triangulation of multiple measurement models and results
- The utilization of evaluation designs well-known and widely adopted by evaluation professionals, designs that limit internal validity problems
- Standardized ways of presenting data and findings
- The selection of statistical models on the bases of the level of measurement involved (nominal, ordinal, interval, ratio) and on the number of variables in the problem under consideration.
- Careful attention to the adequacy of evidence to judge program “dose-response”
- The use of appropriate data transformations in analysis
- The use of well-recognized criteria for assessing a program’s logic model fidelity.

B. Types of Evaluation Designs

In evaluating this program, a combination of “pre-experimental designs” and “quasi-experimental designs” were utilized (see Creswell, 2014; Campbell and Stanley, 1963; Shadish, Cook, and Campbell, 2002; Kerlinger 1986; and Fink, 2015). The primary design utilized was pre-experimental both in nature and in purpose. However, this primary design was supplemented with information derived from quasi-experimental designs.

Much of the evaluation evidence employed in this assessment was from the *TX21st* data reports and from data listed below:

- Year End Summary
- Activity Attendance Percentage
- Student Attendance Percentage
- Participant Attendance

- Participant Activity Attendance Detail
- Student Export (Excel spreadsheet) 2014-15 and 2015-16 for the Center.
- Texas Academic Performance Report (TARP) for the campus, 2014-15

The data listed above, of course, are largely pre-experimental in nature; that is, they were derived principally from pre-experimental designs. However, some of them (e.g., attendance data on increases or decreases on multiyear participants; and site level data from the previous academic year) were derived from quasi-experimental data collection designs.

Data other than those above were also utilized. Such “other data” principally included qualitative evidence derived from site visits, surveys of students and their parents collected by YES Prep for a variety of programmatic purposes, and both informal and more formal conversations with knowledgeable persons, especially the program director and site coordinators. These “other data” were generally derived from evaluation designs typically identified as pre-experimental, “one-shot” ones.

In drawing inferences and conclusions from evaluation data, some comparisons were made with other observations, chiefly but not solely from statewide ones. The use of such comparative observations render our designs quasi-experimental in nature – at least in part.

C. Limitations of evaluation designs and our approach to dealing with them.

Pre-experimental designs typically only describe program processes and outcomes, but afford little to no ability to attribute outcomes to the program itself. Indeed, a large number of considerations other than the out-of-school-time ACE program could be responsible for such matters as college readiness, school behavior, normal grade progression and the like. Data on such “other considerations” are generally not available from TX21st Century or from Texas Performance Accountability System Site Level Reports. (However, our site visits did help to fill in some important gaps.) Accordingly, there can be only a limited inference of an ACE program effect from such evidence.

Quasi-experimental designs generally fare somewhat better in identifying out-of-school time program impacts. Time series designs, for example, engender few internal validity (“did the program make a difference?”) problems save possibly for history (specific events between observations that could make a difference) and for instrumentation (changes in the calibration of measuring instruments like the change to STAAR testing in recent years in measuring student learning achievement). (On this point, see Campbell and Stanley, 1963.) However, quasi-experimental designs require that controls be placed over *those antecedent conditions which could possibly result in spurious findings*. Unfortunately, information about antecedent conditions is quite limited in TX21st data bases and even from site visits.

Our general solution to these design limitations was to opt for comparisons whenever possible. Thus, in this evaluation we present a variety of comparisons, including those between ACE participants with differing levels of active participation (“program dose” in other words);

between a program and statewide observations; and between first and second year participants – among others. Indeed, as Tufte (1997) has demonstrated, comparisons of this kind are essential to assessment and to program decision making. Of course, *every comparison*, including the ones we make in this report, entail a *ceteris paribus* assumption. But this is an assumption we make because everyone must do so in evaluating programs and because we think it is better than promoting spurious findings. Moreover, we also think the *ceteris paribus* assumption is quite reasonable in the instances where we draw comparisons: considerations that influence such matters as normal grade progression, college readiness, and graduation rates seem likely to be at least similar across Texas and in the greater Houston area.

D. Assessing Program Implementation Fidelity to Logic Models

As part of its process assessment, the evaluation team of Durand Research and Marketing Associates, LLC, assessed the fidelity of the implementation of each program site (center) to its corresponding logic model. Most of this work was reported earlier in Deliverables 2 and 3, Interim Discussions 2 and 3. As noted above, to avoid needless repetition, this work is not reported here. The reader interested in more details should consult those deliverables, which are available upon request.

In those earlier reports we found that the program’s activities were appropriate and implemented with fidelity to the program’s and, especially, each center’s logic model. This finding followed a careful review of the extensive, professional literature on fidelity. (Indeed, the topic of fidelity to a program’s logic model has become central to much recent discourse among evaluation professionals; see, for example, Renger, R. (2006); Knowlton, L.W. and Phillips, C.C. (2013); Rog, D. (2012); Mowbray, Holter, Teague and Bybee (2003); and Mowbray, Bybeen, Holder, and Lewandowski (2006). Following this review, we examined the site’s logic model in some detail utilizing “concept mapping” procedures devised by Yampolskaya and others (2004). We then assessed the fidelity of each site’s implementation by means of on-site observations, a review of site coordinator responses to deliverables, logic model table construction, and through informal conversations with the YES Prep Program Director and site coordinators.

E. Data Analysis

Two important considerations guided our selection of the statistical models we employed in this evaluation: the level of measurement and the number of variables in the problem under consideration (on the importance of such considerations see Andrews and others, N.D. and Hoel, 1962).

By level of measurement we refer to whether program observations were measured on a nominal, ordinal, interval or ratio scale of measurement.

By the number of variables in the problem, the usual categories are one variable, two variables, and three or more variables.

Thus, for example, in examining the gender distribution at a program site, a percent (%) was utilized since gender is generally considered a nominal level variable (males, females or transgender) and there is only one variable – gender distribution – of interest. On the other hand,

in establishing a program's impact on reading grade changes in relation to program hours devoted to tutoring while controlling for the antecedent condition of percent Hispanic in the program (under the hypothesis of cultural bias to the STAAR test) resulted in our using multiple, least square estimation procedures since there are three variables in such a problem, all of which were measured on an interval or ratio scale.

Specific statistical models utilized in this report can be readily discerned by the reader either from the tabular entries shown below in this report or from notes to the tables as well from the report text itself.

Similarly, data transformations (such as log-linear ones), where such transformations were utilized, are identified in each specific table below.

Further, establishing comparison group equivalence when quasi-experimental designs were utilized was relatively straight forward. The three most common methods generally employed by evaluators are to randomize control (comparison) subjects, to utilize "propensity scores," or to control for individual influences in a serial manner. In this report we employed the first and the third methods.

In utilizing "randomization," we actually did not randomly assign subjects. Rather, we gathered the *population* of students in a site and used that as a 100% sample for comparison purposes. We then utilized good-of-fit tests (like the Chi-square statistic) to test for differences in relevant characteristics (e.g., ethnic mix of program participants versus the entire campus student profile).

We chose not to use propensity scores, which have become something of a statistical fashion in recent years. At base, propensity scores are based upon the multivariate estimation of variables related to both the treatment condition and to an outcome. As Holmes (2014) defines them, propensity scores are the conditional probability that a particular evaluation subject will be in the program given a certain set of characteristics. Typically, they are used with quasi-experimental data to create matched samples, weights for transforming data and the like.

We chose not to use propensity scores because we believe that they posed considerable problems to our evaluation. First and foremost, there is still little knowledge or theory of what produces desired out-of-school-time program results. So, on what bases should subjects' characteristics be chosen for deciding whether the treatment and control (or comparison) groups are equivalent in such a way as not to confound program outcomes? After all, an infinite number of variables might be chosen for inclusion – if the data were available. But, second, the TX21st Century data sets do not provide sufficient evidence about variables we suspect as especially important: student motivation to be in school, for example, or parental engagement at home with their after-school or their nonparticipating students. Further, the data in the TX21st Century database often are aggregate evidence, not evidence about individual subjects. Accordingly, drawing inferences from aggregate data about individual program participants or non-participating controls invites the familiar "ecological fallacy." Finally, our discussion of the *ceteris paribus* assumption above is relevant here and we invite the reader to consider it further. What other things should we take to be "equal" or in need of "control" in deciding what we should be comparing to what?

The third way of studying equivalence between program participants and non-participating control or comparison subjects is that of introducing statistical controls for individual, antecedent variables or conditions. Introducing statistical controls one variable at a time allowed us to better understand what was happening in our data and the matters affecting outcomes in specific sites; to avail ourselves of a variety of statistical models; to readily understand statistical interactions; and yet to identify, within the limits of data, sources of spurious findings. In the evaluation findings below, specific statistical controls that were introduced are either made clear in the tables, in the tabular footnotes, or in discussions of results in the text.

IV. Program Support Strategy

A. Introduction

In this report section, the program’s support strategy is discussed with particular emphasis on variations across the eight YES Prep ACE centers. We describe the approach taken and data utilized to prioritize services in support of the centers’ activities.

B. Background: Program Implementation among the Sites

As important background prior to considering program support and variations in that support, we discuss the program’s implementation across the eight ACE sites.

As noted above in the preceding section of this report, we found that the program’s activities were appropriate and implemented with fidelity to their respective centers’ logic models. In that preceding section we also discussed our evaluation strategy and plan for assessing such fidelity. This plan and strategy need not be repeated here.

In addition, the evaluation team found generally that the YES Prep ACE program was implemented as intended.

Initially, however, we noted some exceptions to this general finding. Subsequently, all of these exceptions were explained quite satisfactorily to us by the YES Prep Program Director and by means of a careful examination of operations evidence in TEASE for fall and spring as well as by an examination of center attendance count calendars.

Shown in the three tables immediately below are our eventual, final findings by center concerning the program’s implementation of the requirements for program operations, of the requirements for regular program participation, and of the program activity components requirements:

Table: Meeting of Program Operations Requirements by Center

Center	Hours/Week Fall (12 required)*	Hours/Week Spring (12 required)*	Weeks in Service Fall (14 required)*	Weeks in Service Spring (15 required)*
Southeast	Met	Met	Met	Met
North Central	Met	Met	Met	Met

Southwest	Met	Met	Met	Met
East End	Met	Met	Met	Met
Gulfton	Met	Met	Met	Met
North Forest	Met	Met	Met	Met
Northside	Met	Met	Met	Met
Fifth Ward	Met	Met	Met	Met

Source: Texas 21st Report Data *Note: Please see the discussion in the text below this table for more details concerning these findings.

Table: Meeting of Participation Requirements (Regular Participants) by Center

Center	# of Regular Student Participants (100 required)*	% of Total Students that are Regular	Adult Participants (40 required)*	Total Adult Participants
Southeast	Met Standard	41%	Met Standard	54
North Central	Met Standard	39%	Met Standard	100
Southwest	Met Standard	51%	Met Standard	83
East End	Met Standard	18%	Met Standard	66
Gulfton	Met Standard	40%	Met Standard	60
North Forest	Met Standard	61%	Met Standard	79
Northside	Met Standard	30%	Met Standard	42
Fifth Ward	Met Standard	59%	Met Standard	108

Source: Texas 21st Report Data, Retrieved June 12, 2016. * Note: Please see the discussion in the text below this table for more details concerning these findings.

Table: Meeting of Program Activity Components Requirements by Center

Center	Academic Component	College Component	Enrichment Component	Family Component
Southeast	Met	Met	Met	Met
North Central	Met	Met	Met	Met
Southwest	Met	Met	Met	Met
East End	Met	Met	Met	Met
Gulfton	Met	Met	Met	Met
North Forest	Met	Met	Met	Met
Northside	Met	Met	Met	Met
Fifth Ward	Met	Met	Met	Met

Source: Texas 21st Report Data

As can be seen in the above tables, all program activity component requirements were met y at each of the centers.

We also found that operations and participation requirements were met, but explanation of this finding for the reader is necessary. In the TEASE data system, we initially found that program operations requirements and participation requirements were seemingly not met at all of the centers. This finding led us to inquire further, especially of the Program Director, why program

operations requirements and participation requirement were sometimes apparently not met. We learned and subsequently confirmed that the seemingly unmet program operations requirements typically were an artifact of the Texas 21st TEASE system and its data entry restrictions. But the establishing of this required considerable investigation work on the part of the evaluation team.

The Texas 21st TEASE data system closed early in the fall term relative to the timing of YES Prep's actual fall programming. This gave the appearance, still reported in TEASE for the fall term (see, for example, TEASE data for North Center and Southwest among others), that program operations requirements were not met for a number of centers. However, when we examined data on the full academic year, especially the spring term as well as centers' attendance count calendars, we found this was not the case. Hours per week and weeks in service for the fall term, we found, had been "rolled over" to the spring in the TEASE system. Thus, we found that in fact center operations and participation requirements had been -- save for participation requirements at Gulfton.

In investigating the Gulfton center further, we found that the center coordinator had suffered serious medical problems during the fall term, problems which considerably delayed programming and resulted in program operation and participation requirements not being met. We also learned that Ms. Shanya Dean, Technical Assistance Manager at Westat, TEA's consultant on the Texas 21st Century Program, advised the YES Prep program that Gulfton would be found in compliance with requirements if any shortcomings in requirements were made up by the end of the 2015-16 grant year, the year ending during the summer. Accordingly, the YES Prep program put in place a plan to ensure that program requirements would be met. After further investigation, the evaluation team found that operations and participation requirements, indeed, had been met (see TEASE data on Gulfton for the spring and summer terms of 2016).

Based upon the above data and findings, the Durand Research and Marketing Associates, LLC, evaluation team offers two recommendations to improve Texas 21st program management –

- First, we recommend to TEA and to Westat that TEASE data entry and reporting be improved considerably to avoid erroneous artifacts of the kind we initially found. There is no reason of which we are aware that fall data entry should be closed to grantees prior to the end of their fall programming.
- The future likelihood of serious program staff issues resulting from illnesses, necessary leaves of absences, and other personal emergencies suggests a strong need for human resource backup plans to avoid programming shortcomings and limitations on students' achievements. We think that "cross-training," additional funds for temporary staffing and the like need to be considered. Since the likelihood of future staffing problems are common to all Texas 21st Century grantees and sites, we believe that TEA and Westat need to take responsibility for addressing this matter.

Our recommendations aside, the final report guidance for centers calls for an overall process evaluation rating for each on a 10-point scale. After careful consideration of this guidance, the evaluation team found itself unable to provide a 1 to 10-point assessment. First, evaluation guidelines give insufficient information about the weighting of each of the four major logic model areas (resources, implementation practices, activities, and participation). Were all four

areas to be weighted equally? Were some areas, such as activities or implementation, both of which were more under the control of program officials, to be given extra consideration? Second, and more importantly, we strongly believe that the process evaluation measures available to us, as outlined in the guidelines, lacked sufficient measurement precision and granularity to condense process evaluation findings to a single, interval-level or ordinal-level index or metric. Rather, we felt that there was sufficient precision and granularity in measures to provide an overall assessment *only at a nominal-level of measurement*. On these points about measurement and rating scales, we refer the reader to the following professional references: Thorndike RM and Thorndike-Christ 2011, Kerlinger, 1986, especially pages 392-433; Carmines and Zeller, 1979; Dayton, 1998; and Campbell and Russo, 2001. Accordingly, *we concluded the overall YES Prep program and the program at each center was well-implemented.*

C. Program Staffing at the Sites

As part of our process evaluation, our discussion of support, and our analysis of variations in support across the eight YES Prep sites, we examined in detail the levels of program staffing. Such staffing is, of course, a vital part of a program's support strategy. These staffing levels are shown according to ACE center in the table below. In addition, the total ACE enrollments to teacher ratios and to "other staff" ratios are also shown by center.

Table: Program Staffing Levels by Center

Center	Paid Staff		Volunteers		ACE Attendance to Teacher/Other Staff Ratio**	
	Fall 2015	Spring 2016	Fall 2015	Spring 2016	Fall 2015	Spring 2016
Southeast						
Teachers	9	15	0	0	30.44	17.8
Other staff	9	8	0	0	30.44	33.38
North Central						
Teachers	12	11	0	1	16.58	16.92
Other staff	3	8	0	0	66.33	25.38
Southwest						
Teachers	23	22	0	0	9.39	7.27
Other staff	7	6	0	0	30.86	26.67
East End						
Teachers	15	17	0	0	26.13	31.71
Other staff	10	12	0	0	42.2	44.92
Gulfton						
Teachers	13	11	0	0	8.15	15.56
Other staff	5	9	1	0	17.67	18.78
North Forest						
Teachers	4	3	0	0	66.75	78.33
Other staff	11	9	2	1	20.54	23.6

Northside						
Teachers	13	18	1	0	19.57	15.67
Other staff	5	8	0	0	65.8	35.25
Fifth Ward						
Teachers	8	15	0	0	31.25	19.33
Other staff	9	7	1	0	25	41.43
Average and Std. Deviation (Attendance/Teacher)					26.28 and 18.66	25.3 and 22.46
Average and Std. Deviation (Attendance/Staff)					35.98 and 17.18	31.16 and 9.12

Source: Texas 21st Report Data

** Notes: The total attendance consists of regular and non-regular attendance by term. Volunteers are included in the above ratios.

As will be seen, in the above table the total staff at each site was disaggregated by the categories of “paid staff” and “volunteers” (unpaid) for the fall and spring terms. Those two major categories, in turn, were further disaggregated by “teachers” and “other staff.”

Also included in the above table are ratios of enrollment to teaching staff and enrollment to total staff. *An important caveat about these ratios needs to be emphasized.* Enrollments to staff are, of course, conventional metrics utilized to understand and plan staffing by human resource managers. *But these metrics are limited here in important ways.* Indeed, the number and types of activities were found to differ across sites as did students’ needs based on pre-programming assessments. Further, different types of activities require varying teaching resources. For example, a parents’ information activity that enrolls, say, 50 parents may only require a single administrative official and no teacher to conduct. But an activity like cooking likely requires small class sizes for more “hands-on,” specialized instruction. Moreover, the targeting of students from disadvantaged backgrounds seems likely to require more teachers and counselors than a regular classroom that enrolls students from many backgrounds. Finally, the planning of staffing needs for a forthcoming term is typically like trying to hit “a moving target.” Staffing decisions generally have to be made before students and parents are actually enrolled. *In short, our point here is simply to warn against too easy reliance on the enrollments to teachers and staff ratios in assessing inter-site variations in staffing.*

D. Variations in Operating Budgets Across the Sites

Operating budgets, of course, provide a “dollars and cents scorecard” of support across program sites. In this section we report on funding in support of the YES Prep program at its eight sites. The table below shows each ACE center’s total operating budget for the year as well as the operating budget for each enrollee and each participant.

Table: Operating Budgets for YES Prep ACE sites, 2015-16

Center	Total Operating Budget	Per Attendee* Operating Budget	Per Regular** Student Participant Operating Budget
Southeast	\$177,354	\$327.83	\$1062.00
North Central	\$168,087	\$418.13	\$1647.91
Southwest	\$160,020	\$425.59	\$1367.69
East End	\$172,058	\$179.04	\$1564.16
Gulfton	\$204,060	\$742.04	\$2378.44
North Forest	\$241,733	\$481.54	\$1239.66
Northside	\$169,677	\$305.17	\$1663.50
Fifth Ward	\$215,847	\$399.72	\$976.68
Average	\$189,855	\$409.88	\$1487.51
Standard Deviation	\$29,754	\$163.39	\$443.06

*Based on fall and spring combined attendance data from TEASE. **Identified in TEASE system as regular participant with 30 days or more of attendance.

An examination of the data in the above table reveals considerable site to site variation in total operating budgets, “operating budgets per attendee” and in “per regular student operating budgets.” The evaluation team did not expect otherwise. Student needs differed across the centers (as identified by an assessment), variations in activities and in teaching resources were identified by the team, and differences were found in “student mix,” especially in economic disadvantages, the proportion of at-risk students, and in the % Hispanic/Latino (with likely variances in English proficiency) across the campuses themselves (see especially the tables in Section I.e. above).

E. Approach Taken and Data Used to Prioritize Services to Support ACE Center Activities

Decisions about services priorities for resource allocations to support the various centers were made chiefly by the program director based on the total amount provided by TEA. The program director used the original budgets for each campus site from Cycle 8, year 1, as the starting point. She then made adjustments during Year 3 based on whether the site previously hit their targeted student numbers and on whether YES Prep Public Schools, Inc., required certain expenses (e.g., increases in insurance).

More specifically, funds allocated to the campus sites were based on the number of students reportedly being served 30 days into the programming year. The center coordinators and their campus-based managers reviewed their budgets and line-item based them in large measure on the activities they expected to have given both student interest and school campus alignment needs. The program director then reviewed the centers’ budgets to insure compliance with guidelines in the TEA grant.

At the level of the ACE centers, each coordinator used student interest and campus needs from surveys, meetings with the school leadership team and teachers along with program results from the past year to determine what to focus on for the next year. For supplies, coordinators kept an inventory log so they know and knew what supplies they are able to use the next year and what

Observational checklists with and of activity staff	X				X			X
Coordinator meetings with grade level chairs		X	X					
Meetings/conversations with vendors	X	X	X	X			X	X
Site coordinator budget reviews							X	
Social, emotional referral data	X	X		X	X	X		X

*Note: Specifically mentioned at meetings of site coordinators and program director with program evaluator, in two interim discussion reports (School Program Alignment and Outputs: Activities and Participation) completed by site coordinators, in site visits, and in logic models.

The above table suggests some variations across the sites in the kinds of information used for arriving at services priorities for each center. *However, we are uncertain of whether these variations reflect the different programmatic needs or operations of the sites, on the one hand, or whether they are an artifact of the methods we employed to gather information, on the other.* Indeed, we relied heavily upon responses from site coordinators to “open-ended” questions. For example, Westat’s questions included in the recommended interim reports were generally open-ended and evoked wide-ranging responses. Such wide-ranging responses could well involve the stimulus of whatever problem or issue was salient to coordinators at the time questions were asked. Moreover, human minds are typically unable to retain in immediate memory a long list of items such as the list of data we compiled. Given these considerations, *we can only conclude that each of the site coordinators, the project director, and others in the collaborative process of services prioritization utilized a variety of important data in decision making.*

As a final assessment regarding services prioritization, the evaluation team also investigated reporting relationships (read “organization chart”) in the YES Prep program, relationships that could reasonably be expected to be an important component of the program’s support strategy. What the team found was akin to a matrix form of organizational structure. All of the site coordinators had a campus-based supervisor or manager as well as having regular meetings with the program director to insure program alignment, the implementation of shared best practices, and the troubleshooting of common problems. In the case of most of the centers, the campus operations managers, who also served on each campus’ leadership team, were the site-level managers of each site coordinator. (Exceptions are North Forest’s supervisor who served as dean of students, and Fifth Ward, whose campus’ supervisor is the school director -- read “principal.” These exceptions follow from particular circumstances at those two sites.) Lastly, the Grantee program director reported to YES Prep’s director of school operations and was, therefore a member of the operations team, a position that facilitates school and program alignment as well as strategic planning.

During and immediately following its investigation of these reporting relationships, the evaluation team quickly concluded that this type of organizational structure was not typical of the many after-school programs it previously assessed (more than one hundred in all). However, after reflection and consideration of the above reporting relationships, the evaluation team also

concluded that this structure appears to work quite well and to meet especially the particular needs of the YES Prep program and its participants.

F. Additional Program Support Needs

During the course of its process evaluation, the Durand Research and Marketing Associates, LLC, evaluation team found evidence of needs for some additional program support. These needs for additional support were as follows:

- At least two site staff members (names and roles withheld to protect confidentiality) expressed the view that campus-level leaders needed to get much more involved in the after-school program. These staff members further noted that there was a failure to “own” the ACE program on the part of the schools.
- Assistance is needed by YES Prep in devising a system for identifying and making known high quality vendors for the centers. Such a list could be organized by category such as academic assistant, enrichment, college and workforce readiness and the like. We think that TEA and its consultant, Westat, need to assist such a system by making resources for it available to YES Prep and to other after-school programs.
- No feedback about last year’s final evaluation report was received. The provision of such feedback would assist greatly YES Prep and the program in the future as well as future evaluators.

Section V. Program Participation

In this report section participation in the ACE program at the YES Prep centers is discussed. Also discussed are strategies to support centers with low levels of participation.

A. Student Program Participation by ACE Site

The table below displays the yearly (2015-16) total (fall, spring, and summer) participation for students by ACE center:

Center	Total Participation	Regular Participation Required	Regular Participation Actual
Southeast	403	100	182
North Central	281	100	105
Southwest	243	100	124
East End	645	100	120
Gulfton	228	130	133
North Forest	324	175	197
Northside	350	100	105
Fifth Ward	376	150	222

As can be observed in the above table, the program requirements for regular student participation were met at all eight centers.

B. Adult Program Participation by ACE Site

In the table below, the yearly (2015-16) total (fall, spring, and summer) program participation by adults is shown by ACE center:

Center	Required Participation Level	Actual Adult Participation
Southeast	40	73
North Central	40	109
Southwest	40	87
East End	40	68
Gulfton	40	60
North Forest	50	79
Northside	40	47
Fifth Ward	40	110

As shown above, actual adult program participation exceeded required participation levels at all eight centers.

C. Strategies to Support Centers in Regard to Low Participation

As can be seen readily in the two tables above, none of the YES Prep centers had low participation relative to the program's required levels on the part of either students or adults. In fact, all required participation levels for students and adults alike were *exceeded* at each and every center.

Please note that this conclusion was even true at the Gulfton Center. In Section IV of this report, it was reported that in investigating the Gulfton center, the evaluation team found that the center coordinator had suffered serious medical problems during the fall term, problems which considerably delayed programming. Such delayed programming further resulted in unmet center participation requirements according to TEASE data retrieved in June 2016. However, by the third week of July 2016, the Gulfton Center had met these requirements (again as reported in TEASE).

We attribute this change to the excellent leadership of the program director, the Gulfton site coordinator, and to the family engagement specialist. This leadership included adopting a strategy of carefully monitoring enrollment and attendance, rigorous program recruitment and marketing, and to the adopting of activities of considerable interest to students. The latter strategy component, adopting activities of considerable interest to students, we noted especially in the inclusion of five recreational activities during the summer term that enrolled some 193 students as well as in the inclusion of a driver's education program that enrolled an additional 20 student participants (data retrieved from TEASE in July 2016).

As a final footnote to our assessment of participation levels at Gulfton, we remind the reader that Ms. Shanya Dean, Technical Assistance Manager at Westat, TEA's consultant on the Texas 21st Century Program, advised the YES Prep program that Gulfton would be found in compliance with requirements as long as operations and program participation were made up by the end of the 2015-16 grant year. We note that Gulfton did make up program requirements – both in operations and, most relevant here, in participation – as shown by the evidence immediately above.

D. Center Participation by Number and Type of Activity

In the tables below, the total number of activities by type of activity for the fall and spring terms are shown for each of the YES Prep centers. Also shown by center in each table is the percentage of the total program time participants spent in each activity type. Finally, the means or averages, the standard deviations and the coefficients of variability are displayed. (As a reminder to the reader, the coefficient of variability, the standard deviation divided by the mean, is a useful statistical model for understanding when various mean scores are found to have considerably higher or lower values from one another.)

Fall term

Center	Academic Assistance		Enrichment		College/Workforce Readiness		Family Engagement	
	Number	Pct. Time	Number	Pct. Time	Number	Pct. Time	Number	Pct. Time
Southeast	1	18%	18	72%	1	7%	3	2%
North Central	7	13%	19	73%	1	1%	3	13%
Southwest	6	35%	10	53%	2	7%	2	5%
East End	3	20%	24	74%	3	5%	4	1%
Gulfton	3	36%	6	58%	1	<1%	1	6%
North Forest	6	48%	13	49%	0	0%	7	3%
Northside	4	10%	17	85%	1	4%	2	0%
Fifth Ward	6	46%	18	41%	2	8%	5	5%
Averages	4.5	28%	15.625	63%	1.375	5%	3.375	4%
Standard Deviations	2.07	15%	5.68	15%	0.92	3%	1.92	4%
Variability Coefficient	0.46	0.53	0.36	0.24	0.67	0.68	0.57	0.93

Spring Term

Center	Academic Assistance		Enrichment		College/Workforce Readiness		Family Engagement	
	Number	Pct. Time	Number	Pct. Time	Number	Pct. Time	Number	Pct. Time
Southeast	6	40%	15	49%	1	7%	1	4%
North Central	7	11%	18	61%	2	17%	5	12%
Southwest	5	29%	12	69%	0	0%	2	3%
East End	2	6%	12	91%	5	3%	2	1%
Gulfton	5	29%	12	64%	2	6%	2	1%
North Forest	7	53%	17	38%	1	2%	5	7%
Northside	11	36%	23	60%	3	3%	4	1%
Fifth Ward	5	46%	17	45%	2	6%	4	3%
Averages	6	31%	15.75	60%	2	6%	3.125	4%
Standard Deviations	2.56	16%	3.85	16%	1.51	5%	1.55	4%
Variability Coefficient	0.43	0.52	0.24	0.28	0.76	0.95	0.50	0.95

As shown by the evidence in the above tables, considerable variation was found among the centers in the number and percentage of time for each activity type. Moreover, this was true both in the spring and in the fall terms. Indeed, as is evident from an examination of the coefficient of variability in the two tables above, the greatest variance relative to averages across the centers in both semesters was in the percentage of time spent in family engagement and in college and workforce readiness activities.

This variation we further found to be a function mainly of differences in student needs (as identified by needs assessments), student-parent preferences (as identified by Voice and Choice Surveys), student compositional “mix” in the program (especially by grade level), activity enrollments, and in what each site chose to emphasize.

Particularly noteworthy, on the other hand, was the common emphasis throughout YES Prep of college preparedness. As discussed more fully in Section I (above) of this report, as an institution YES Prep emphasizes college preparedness and subsequent college matriculation during its day (regular school) program. Accordingly, the ACE in alignment with the day school program made the decision not to reemphasize college preparation in the after-school offerings. Further, as also discussed in recommended Deliverable #3 (submitted earlier but available on request), a needs assessment and student “Voice and Choice” revealed both the need for and an expression of desire for more enrichment offerings.

E. Strategies by the Centers to Deal with Low Activity Attendance

While overall participation levels for students and adults alike were *exceeded* at each and every center, within each center there were individual activities with “relatively low attendance.” Indeed, “relatively low attendance” was and is a tautology: TEA’s and Westat’s guidelines call for the identification of activities with the lowest relative participation (attendance) levels and so requires them to be specified (see especially our earlier report in recommended Deliverable #3 as well as implicitly in Center Evaluation Report Guidelines).

The Durand Research and Marketing Associates, LLC, evaluation team found that the YES Prep program and its centers pursued a multifaceted strategy to increase participation in activities with relatively low numbers of attendees. This strategy was identified in recommended Interim Report #3; to avoid needless repetition, this strategy, especially by individual centers, will not be presented here in detail. At base, the elements of such strategy commonly included the following

- The use of recruitment activities to encourage additional student and adult enrollment. Such activities included informational sessions; brochures and information sheets; activity demonstrations; and the use of student-parent voice and choice surveys.
- The continual monitoring of enrollment and attendance for individual activities.
- The use of retention activities, including having the parents of students sign an agreement about attendance/participation expectations prior to students entering ACE; regular gatherings with students in which the site coordinator reminded students of attendance and participation expectations; meetings with parents about excessive absences; the use of student focus groups to discuss an activity; follow-ups with individual, enrolled “non-attenders”; and the use of classroom observational checklists to ensure instructional quality.
- Careful consideration of an activity, its relationship to identified student needs, and possible suitable replacements before dropping that activity from the program.
- The discussion of observed trends with regard to desired activities and changes in participation among the program director and the site coordinators.

This strategy was implemented by the program director in collaboration with the site coordinators, the family engagement specialist, and each campus leadership team.

VI. Program Intermediate Outcomes

A. Introduction

In this report section the intermediate outcomes of YES Prep’s program are discussed with particular emphasis on variations across centers. Also discussed are programmatic considerations in relation to positive intermediate outcomes.

In the tables below, we report first the grade changes by individual ACE center for all of the eight campuses included in the YES Prep Public Schools, Cycle 8, Year 3, program. As will be seen, we discuss them initially by individual subject area: reading, math, science, and social studies. We then discuss the intermediate outcomes of school absences, non-criminal referrals, and course pass percent across the eight YES Prep Schools sites.

B. Some Important Caveats

Before proceeding to the tabular data, there are several troubling caveats that need to be discussed. First, in conducting our work, we found the “Center Guidelines” for reports to be strongly directed in favor of documenting students’ “experiencing improvements” in grades and other outcomes. Note, especially, the following research questions from these guidelines:

1. Are there a greater number of students experiencing improvement?
2. Are there a greater % of students experiencing improvement?
3. Are there greater amounts of improvements by students?

We acknowledge the importance of improvements in grades and other intermediate outcomes. Yet, in our judgment, the students showing “no change” and “no change necessary” over the life of this funding cycle and grantee program are also important. Indeed, no grade change and no needed grade change among participants are suggestive, if not indicative, of a “*reinforcing*” or “*maintaining*” program effect, rather than *converting* one. Such reinforcing effects we believe to be important if only for the reason that a number of ACE participants, including ACE participants discussed at the Texas State level, experienced grade decreases. Thus, reinforcing or maintaining grade effects should not be overlooked in evaluating the YES Prep program and its outcomes.

A second caveat concerns the limitations of the Texas 21st Century TEASE data system that we earlier discussed in this report (see Section III above). We found these data limitations to be so severe that it was not possible either to document or to eliminate influences other than programmatic ones that might have had a more important effect on intermediate outcomes, parental influences on student academic or behavioral importance, for example. In short, *many supposed programmatic outcomes could be spurious and entirely attributable to factors, especially antecedent ones, outside of the program*. While we tried to eliminate as many sources of spuriousness as possible, we found data in the TEASE to be quite limiting of our ability to do so.

A third caveat concerns the “Grantee Guideline” that this report section should discuss programmatic aspects of centers that have positive intermediate outcomes. *We strongly take issue with this guideline*. There are only eight (8) separate ACE centers under this grant, yet there are considerably more variables—programmatic and otherwise—that differ among these centers and that could influence outcomes. Expressed differently, this is completely a case of more possible variables than there are numbers of centers to evaluate. Such a situation does not permit tying specific programmatic aspects to intermediate outcomes. Further, the data and designs available for this evaluation, especially given the guidelines for centers and grantees, were

seemingly never intended to and are incapable of linking specific programmatic aspects to particular outcomes.

A fourth and final caveat concerns the measurement of “Intermediate Outcomes.” The guidelines for centers and grantees, call for grades as the first principal “metric” for intermediate outcomes. We believe strongly that this is a mistake and that test scores, especially scores on standardized tests, constitute a far better measure than grades of academic improvement. Grades tend to be highly variable across teachers and classes. Moreover, in comparison to standardized tests, there is no “norm,” no test of reliability and no validation of grades as measures of academic performance. Further, grades frequently involve systematic bias on the part of those awarding grades. Additionally, we note that evaluations of other out-of-school-time programs we have examined, including the highly successful “Houston’s Kids Program” as well as 21st Century Programs in Alaska and Rhode Island among others, utilize test scores, not grades. Accordingly, we recommend that in the future test scores be substituted for grades as intermediate outcome metrics.

These caveats aside, we invite the reader’s attention to the results presented in the tables below. The first four tables display the improvement, absence of change, decreases in grades, and “no changes needed” (consistent “A” grades over time) for participating ACE students on the eight YES Prep campuses over the two-year period from the fall of 2014 through the spring of 2016. Thus, in conducting the analysis of intermediate we followed the guidelines for the center reports and studied changes over two years rather than AY2015-16 alone. It is important to note that the changes presented are for the same identical students – a true “panel” of students -- over that period and, thus, only for students in the program over that time. (Methodological note: In order to construct this true panel, it was necessary to download from different TEASE files data on individual students from two different years and to match those students present in both years on the basis of names, birthdates, Yes Prep center, and other personal information, including ethnicity and gender, to ensure that the same individuals enrolled in the same center program were correctly identified. This was an arduous task involving meticulous data handling by several members of the Durand Research and Marketing Associates, LLC, evaluation team.)

Also shown in the tables below is the mean change among these panels of participants across all eight YES Prep sites, the standard deviation across these same sites (highlighted in green), and above the coefficients of variability. Further, the reader should note that the modal observation for each category is highlighted in yellow in the ensuing tables. Finally, grade changes for all Texas 21st Cycle 8 students for 2015-16 (one-year only) are included for comparison purposes.

C. Intermediate Outcomes: Changes in School Grades

Reading

Center	Increase	No Change	Decrease	No Change Necessary	Total
East End	20%	51%	26%	4%	100% (N=141)
Fifth Ward	26%	42%	28%	5%	100% (N=148)
Southeast	40%	37%	15%	7%	100% (n=97)

Gulfton	19%	59%	11%	11%	100% (N=27)
North Central	20%	51%	29%	0%	100% (N=55)
Southwest	36%	49%	13%	3%	100% (N=76)
North Forest	36%	47%	15%	1%	100% (N=74)
Northside	30%	49%	15%	6%	100% (N=108)
YES Prep Mean	28%	48%	19%	5%	
YES Prep S.D. *	0.08	0.07	0.07	0.04	
Coefficient of Variability	0.29	0.14	0.39	0.76	
State of Texas Cycle 8 (Regular Students Only in 2015-2016 fall and spring terms)	17%	47%	18%	18%	

Source: Texas 21st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. *Denotes standard deviation

Mathematics

Center	Increase	No Change	Decrease	No Change Necessary	Total
East End	36%	39%	16%	9%	100% (N=141)
Fifth Ward	41%	35%	18%	7%	100% (N=150)
Southeast	36%	41%	12%	10%	100% (N=97)
Gulfton	37%	41%	15%	7%	100% (N=27)
North Central	29%	40%	18%	13%	100% (N=55)
Southwest	37%	33%	21%	9%	100% (N=76)
North Forest	28%	41%	27%	4%	100% (N=75)
Northside	29%	35%	28%	8%	100% (N=108)
YES Prep Mean	34%	38%	19%	8%	
YES Prep S.D. *	0.05	0.035	0.06	0.03	

Coefficient of variability	0.14	0.09	0.29	0.31	
State of Texas Cycle 8 (Regular Students Only in 2016)	18%	47%	17%	18%	

Source: Texas 21st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. *Denotes standard deviation

Science

Center	Increase	No Change	Decrease	No change Necessary	Total
East End	20%	48%	22%	11%	100% (N=141)
Fifth Ward	48%	43%	5%	5%	100% (N=151)
Southeast	21%	28%	31%	21%	100% (N=97)
Gulfton	33%	33%	19%	15%	100% (N=27)
North Central	19%	52%	19%	11%	100% (N=54)
Southwest	36%	37%	20%	8%	100% (N=76)
North Forest	36%	40%	19%	5%	100% (N=75)
Northside	33%	34%	18%	15%	100% (N=108)
YES Prep Mean	32%	39%	19%	11%	
YES Prep S.D.*	0.10	0.08	0.07	0.056	
Coefficient of variability	0.30	0.20	0.37	0.48	
State of Texas Cycle 8 (Regular Students Only in 2016)	17%	41%	16%	26%	

Source: Texas 21st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. *Denotes standard deviation

Social Studies

Center	Increase	No Change	Decrease	No Change Necessary	Total
East End	42%	43%	12%	3%	100% (N=141)
Fifth Ward	37%	46%	12%	6%	100% (N=147)
Southeast	33%	35%	20%	12%	100% (N=94)
Gulfton	35%	38%	8%	19%	100% (N=26)
North Central	45%	30%	13%	11%	100% (N=53)
Southwest	63%	28%	1%	7%	100% (N=67)
North Forest	15%	40%	38%	7%	100% (N=68)
Northside	24%	42%	21%	13%	100% (N=108)
YES Prep Mean	37%	38%	16%	10%	
YES Prep S.D.*	0.14	0.06	0.11	0.05	
Coefficient of variability	0.39	0.17	0.71	0.52	
State of Texas Cycle 8 (Regular Students Only)	16%	38%	17%	30%	

Source: Texas 21st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. *Denotes standard deviation

Commentary and Interpretation

While varying by site and subject area, we found *grade improvements* for each center in each of the four subject areas: reading, math, science, and social science. Additionally, in light of one of our caveats above, if one combines the column percentages for “grade increase” with the “reinforcing” or “maintaining” columns of “no change” and “no change needed,” it is clear that the data strongly suggest (within the limits of our other caveats) that students showing a decrease in grades were a statistical minority {relatively small} in percentage terms. Moreover, seemingly the major program result at YES Prep across the centers was that of “maintaining” or “reinforcing grades,” a result most evident in comparing the modal category in each table to the column labeled “decrease.” Further, this result appears even more enhanced if one also includes the “no change necessary” column in with the “no change” category of responses.

Several other observations about the above tables are also worthy of mention. First, as shown in the tables, *YES Prep ACE participants outperformed impressively those for Texas 21st Cycle 8, Cycle 3, participants in grade increases* (Of course, the grade improvements for YES Prep

participants are for the two-year period, fall of 2014 to spring of 2016, while those for Texas 21st Cycle 8 participants are only for AY2015-16.) Second, in every subject area, the average grade increases across the centers far exceeded the average grade decreases. Finally, the largest percentage of grade increases on the part of YES Prep grantee participants during the period were for social studies followed by mathematics. However, the largest intercampus variation in grade increases was in the subject area of social studies (see the coefficients of variability), a variation that we are unable to explain at the present time.

D. Changes in School Absences, Non-criminal Referrals, and Course Pass Percentages

In the tables below we present evidence on changes in the intermediate outcomes of school absences, non-criminal referrals, and for course pass percent across the eight YES Prep Schools sites over the same two-year period (fall 2014 through spring 2016). Of course, these data are for the same panel of students as above.

Before presenting the evidence, several more caveats must be emphasized. Criminal referrals are not included below because the total number of such referrals among the panel of participants at each site was generally zero. Further, the numbers on school day absences may seem unusual, but that is because the total number of school days in the fall of 2014 was not the same as the total number in the spring of 2016. Thus, school day absences had to be adjusted by the difference in such total days, an adjustment that was made by dividing school absences by the total number of school days in each term. Additionally, non-criminal referrals were generally not reported for the fall term of 2014. We are uncertain of why that was the case. Perhaps such referrals were handled by campus officials during the regular school day. But in any case, this made impossible the calculation of average *changes* in such non-criminal referrals among students in the panel. Finally, in comparing course pass rates for the two-year period we found that the total number of classes taken by ACE students in the fall of 2014 was far more (six to seven classes was common) than the number taken in the spring of 2016 (about four classes was most common). This means that the pass rates had to be adjusted for different total class numbers and, thus, these rates are not truly comparable over the period – the denominators of the rates were different. (For example, a failure to pass a course in the fall of 2014 meant a pass rate of 87.5% while a single course failure in the spring of 2016 meant a course pass rate of just 75%.) Nonetheless, the pass rates *within a single year are comparable across the centers* within that year and, therefore, provide important inter-site information.

School Day Absences (fall 2014 through spring 2016)

Center	Average School Day Absences Per School Day Fall 2014	Average School Day Absences Per School Day Spring 2016	Change in School Day Absences Per School Day
East End	.022	.031	.009
Fifth Ward	.026	.03	.003
Southeast	.015	.024	.008
Gulfton	.019	.03	.011
North Central	.02	.03	.01
Southwest	.023	.034	.012
North Forest	.048	.03	-.017
Northside	.011	.03	.02
YES Prep Mean	0.02	0.03	0.01

YES Prep S.D.*	0.01	0.002	0.01
Coefficient of Variability	0.48	0.09	1.54

Source: Texas 2st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16.

Note that in the above the only improvement (decline in school day absences) was at the North Forest site. Notice also that coefficient of variability (standard deviation adjusted for the size of the mean) was largest for *changes over the period*. Finally, the greatest increases in school absences was found for the Northside site.

Changes in Non-Criminal Referrals by Center (fall 2014 through spring 2016)

Center	Average Number of Non-Criminal Referrals in Fall 2014	Average Number of Non-Criminal Referrals in Spring 2016	Average Change in Non-Criminal Referrals from Fall 2014 to Spring 2016
East End	0	.15	Not calculated**
Fifth Ward**	0	0	Not calculated
Southeast	0	.16	Not calculated
Gulfton**	0	0	Not calculated
North Central	0	.02	Not calculated
Southwest	0	.12	Not calculated
North Forest	0	.51	Not calculated
Northside	0	.17	Not calculated
YES Prep Mean		.14	
YES Prep S.D.*		.17	
Coefficient of Variability		1.17	

Source: Texas 2st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16.. *Denotes standard deviation. **Calculation was not possible since none was reported for fall 2014.

Changes in Course Pass Percentage by Center (fall 2014 through spring 2016)

Center	Adjusted** Average Fall 2014 Pass Rate	Adjusted** Average Spring 2016 Pass Rate
East End	90%	89%
Fifth Ward	84%	89%
Southeast	92%	92%
Gulfton	85%	98%
North Central	90%	92%
Southwest	94%	91%
North Forest	86%	83%
Northside	92%	91%
North Central	90%	92%
YES Prep Mean	89%	91%
YES Prep S.D.*	.03	0.04

Coefficient of Variability	.04	.05
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Source: Texas 2st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. *Denotes standard deviation. **Adjustment is for differences in the total number of classes taken in fall 2014 and the spring of 2016.

Note that as discussed in the text above the pass rates for fall of 2014 and for spring of 2016 are not comparable owing to a difference in rate denominators (different numbers of classes taken by ACE participants). Accordingly, change rates over the period are not shown. But across center variations in each year provide valuable information.

Commentary and Interpretation

It is important to remind the reader that since no control group or comparison group was available, there is no way to tell whether the outcomes in school absences, noncriminal referrals, and course pass percentages shown in the tables indicate “success” for the program or not. It could be that school absences and noncriminal referrals were much higher and course pass percentage much lower among YES Prep students who did not participate in ACE. Moreover, our experience with a number of after school programs suggests to us that over two years, course subject matter frequently involves more difficult concepts and problems and, also, that youth often become experimental about their lives and more disruptive as they mature.

Further, “school day absences” are rather suspect as an intermediate outcome metric, especially in the way these are reported in TEASE and by the State. The definition of “school day absence” as reported according to State absence is shown in the table below –

YES Prep Public Schools, Cycle 8, Year 3

The criteria include the following: State Group absent codes

Attendance Codes List							
<input type="button" value="Checklist"/> <input type="button" value="Search"/> <input type="button" value="New"/> <input type="button" value="Delete"/> <input type="button" value="Code Color"/>							
Number of records found: 24							
Code	Description	Accountability Code	Use Arrive Time	Use Dismiss Time	State Group	District Group	Delete
AU	Absent - Unexcused		None	None	Absent	Absent - Unexcused	
B	Religion		None	None		Present	
AE	Absent - Excused		None	None	Absent	Absent - Excused	
C	College Visit w/out YES rep		None	None		Present	
I	Illness		None	None	Absent	Absent - Excused	<input type="checkbox"/>
OSS	Out of School Suspension		None	None	Absent	Absent - Excused	
ISS	In School Suspension		None	None		Present	
M	Medical		None	None		Present	
S	School Activity - Approved Off-Campus Trip		None	None		Present	
T	Tardy		Optional	Optional		Tardies	
X	Truant		None	None	Absent	Absent - Unexcused	
A	Absent		None	None	Absent		
Tst	Testing		Optional	Optional		Present	
ACT	Activity		Optional	Optional		Present	
CEHI	Compensatory Education Home Instruction		None	None		Present	
LL	Learning Lab		Optional	Optional		Present	
N	Nurse		Optional	Optional		Present	
O	Office		Optional	Optional		Present	
HB	Homebound		None	None		Present	
HBE	Homebound - Excused DONOT USE		None	None	Absent	Absent - Excused	
CA	Court Appearance		None	None		Present	
NS	No Show		None	None		No Show	<input type="checkbox"/>
ALT	Alternative Class		Optional	Optional		Present	<input type="checkbox"/>
MA	Military Active Duty		None	None		Present	<input type="checkbox"/>

Note, for example, in the above that “illnesses” and “excused absences” are counted as a school day absences as are “truancies” and “out of school suspensions.” Yet, the difference is critical: the former two types are often non-volitional deriving from accidents, epidemics, or other episodic illnesses while the latter are typically volitional. In all likelihood, an after-school program can more likely influence volitional excuses than those resulting from true emotional or physical maladies.

VII. Program Impacts

A. Introduction

In this section, we discuss the impacts of the YES Prep, Cycle 8, Year 3, program. In discussing this impact, we remind the reader of our previously discussed caveat (in Section III above in this report) that the data available for this evaluation report and the designs by which these data were collected are quite limited in drawing inferences about “program impacts.”

We should also point out that the phrase “statistically significant intermediate outcomes” is used ill-advisedly in the Grantee Guidelines for this section. “Statistical significance” appropriately refers to data drawn from samples and not to populations of data. Yet, we have consistently employed only populations – self-selected ones at that -- of data in our work in deriving

observations for our evaluation from the Texas 21st Century data system, a system which seems to us to contain no sample data.

What we discuss in this report section initially are the findings of our evaluation drawn from an examination of “dose-response relationships,” the association between intermediate program outcomes and the level or degree of ACE participation. We do so by first comparing “regular” vs. “non-regular” program ACE participants at the eight YES Prep sites. Indeed, if outcomes are attributable to the programs implemented at the YES Prep center sites, they should be more evident among the “regular” as opposed to the “non-regular” participants who were, after all, less exposed to the program centers’ “interventions.” Next, we report our findings regarding the “dose-response relationships” between outcomes and the total number of days of ACE participation – after controlling for the effects of other antecedent variable that might otherwise lead to spurious interpretations of program effects. Indeed, if outcomes are a result of the program, greater, more direct exposure (in days) to the program should lead to more positive intermediate results, other things being equal. However, there is no reason to expect merely linearity in such relationships. Accordingly, we consider the possibility of non-linear, especially logarithmic, relationships between “dose” and “response” as well. (Logarithmic relationships typically are widely found with data that are “counts” – like number of days—and have the advantage of showing *increases with declining rates* of change that are often found in dose-response relationships.) Particular details about findings and our tests for nonlinearity are discussed in depth in Appendix 3 to this report. Finally, we report comparisons between intermediate program outcomes for the YES Prep sites, on the one hand, and outcomes reported for all of Texas 21st Cycle 8, in 2016, on the other, as well as findings from other states. In the several findings discussed in this report section, the outcomes or “impacts” at YES Prep are *changes* observed in the “panel” of matched program participants over the period called for in the centers’ guidelines: the two-year period of fall 2014 through the spring of 2016.

B. Regular vs. Non-Regular Participation: Dose-Response Relationships

In the tables below the cells in the “regular participants” and “non-regular participants” columns highlighted in green indicate a *more positive outcome* among regular ACE participants compared to their non-regular counterparts. As will be observed, the tables show such categories of participants across the eight centers regarding changes in school day absences and changes in school reading grades along with changes in math, science, and social science changes. For reasons discussed in the preceding section of this report (Section VI), it was not possible to report on changes in criminal referrals, in non-criminal referrals, or in course pass percentages.

Table: Changes in *School Absences* from Fall 2014 through Spring 2016 by Regular and Non-Regular ACE Participation

Center	Regular Participation	Non-Regular Participation
Southeast	.01 (N=35)	.0075 (N=63)
North Central	.01 (N=30)	.009 (N=25)
Southwest	.02 (N=48)	.003 (N=29)
East End	.004 (N=30)	.01 (N=113)
Gulfton	.005 (N=20)	.03 (N=7)
North Forest	-.02 (N=55)	-.02 (N=24)

Northside	-.02 (N=31)	-.01 (N=77)
Fifth Ward	.000 (N=79)	.007 (N=75)

Source: Texas 2st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. Notes: Tabular entries are mean change scores from fall 2014 through spring 2016. Greater relative improvements on the part of regular program participants compared to non-regular ones are highlighted in green.

Table: Changes in *School Reading Grades* from Fall 2014 through Spring 2016 by Regular and Non-Regular ACE Participation

Center	Regular Participation	Non-Regular Participation
Southeast	.54 (N=35)	.29 (N=62)
North Central	-.17 (N=30)	-.04 (N=25)
Southwest	.28 (N=47)	.24 (N=29)
East End	-.07 (N=30)	-.10 (N=111)
Gulfton	.20 (N=20)	-.14 (N=7)
North Forest	.33 (N=52)	.19 (N=21)
Northside	-.03 (N=31)	.16 (N=77)
Fifth Ward	-.05 (N=78)	-.10 (N=70)

Source: Texas 2st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. Notes: Tabular entries are mean changes from fall 2014 through spring 2016. Greater relative improvements on the part of regular program participants compared to non-regular ones are highlighted in green.

Table: Changes in *School Math Grades* from Fall 2014 through Spring 2016 by Regular and Non-Regular ACE Participation

Center	Regular Participation	Non-Regular Participation
Southeast	.34 (N=35)	.38 (N=62)
North Central	.03 (N=30)	.12 (N=25)
Southwest	.36 (N=47)	.000 (N=29)
East End	.37 (N=30)	.14 (N=111)
Gulfton	.40 (N=20)	-.14 (N=7)
North Forest	.00 (N=54)	-.38 (N=21)
Northside	-.13 (N=31)	.01 (N=77)
Fifth Ward	.35 (N=78)	.14 (N=72)

Source: Texas 2st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. Notes: Tabular entries are mean changes from fall 2014 through spring 2016. Greater relative improvements on the part of regular program participants compared to non-regular ones are highlighted in green.

Table: Changes in *School Science Grades* from Fall 2014 through Spring 2016 by Regular and Non-Regular ACE Participation

Center	Regular Participation	Non-Regular Participation
Southeast	-.49 (N=35)	.066 (N=61)
North Central	.28 (N=29)	-.04 (N=25)
Southwest	.17 (N=47)	.14 (N=29)
East End	-.17 (N=30)	-.03 (N=111)
Gulfton	.35 (N=20)	-.14 (N=7)
North Forest	.17 (N=54)	.05 (N=21)

Northside	.03 (N=31)	.18 (N=77)
Fifth Ward	.46 (N=70)	.46 (N=73)

Source: Texas 2st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. Notes: Tabular entries are mean changes from fall 2014 through spring 2016. Greater relative improvements on the part of regular program participants compared to non-regular ones are highlighted in green.

Table: Changes in *School Social Studies Grades* from Fall 2014 through Spring 2016 by Regular and Non-Regular ACE Participation

Center	Regular Participation	Non-Regular Participation
Southeast	-.03 (N=34)	.27 (N=60)
North Central	.29 (N=28)	.36 (N=25)
Southwest	.67 (N=42)	.88 (N=25)
East End	.37 (N=30)	.34 (N=111)
Gulfton	.42 (N=19)	-.14 (N=7)
North Forest	-.40 (N=49)	-.42 (N=19)
Northside	-.16 (N=31)	-.10 (N=77)
Fifth Ward	.31 (N=77)	.24 (N=70)

Source: Texas 2st Data Reports on Grades by Individual Participants, 2014-15 and 2015-16. Notes: Tabular entries are mean changes from fall 2014 through spring 2016. Greater relative improvements on the part of regular program participants compared to non-regular ones are highlighted in green.

Commentary and interpretations

The evidence presented in the tables above suggests that regular participation (the higher “dose” in this case) had an impact on important outcomes (the “response”) of the YES Prep ACE program relative to non-regular participation. Indeed, when dose-response relationships involving such participation were examined, we found all five of the outcomes shown above were improved for regular participants over the time period. However, this was not found to be true at all of the centers. That is, variations across the centers were found (as seen in the highlight results in the five tables below) in the apparent impact of regular participation. As is further evident, the outcomes that were most frequently found associated with regular participation as opposed to non-regular participation across the eight centers were improvements in school reading grades (at 6 of the 8 sites) and improvements in math grades (at five of the sites). Finally, it is interesting and important to note that both at the Gulfton center and at the North Forest center regular participants showed greater improvements in all five outcomes studied compared to non-regular participants.

In brief, the above results support the conclusion that regular participation had a positive impact of the YES Prep ACE program on students’ (reduced) school day absences and learning outcomes. However, it is important to recall the second caveat mentioned above in part B in Section VI of this report. Both regular and non-regular program participants are self-selected individuals who chose their levels of participation for reasons unknown to us. The underlying reason(s) for self-selecting a particular participation level may well be the true cause of the “response” shown above rather than program “dose.”

C. Total Days of ACE Participation: Dose-Response Relationships, Part 2

In addition to examining the impact of regular vs. non-regular participation on intermediate outcomes at YES Prep sites, we also studied the effects of the total number of days of ACE participation on the same outcomes. We did so under the expectation that if outcomes were a result of the program, greater, more direct exposure in days (a greater “dose” or more program participation, in other words) should lead to more positive, intermediate outcomes. In this report section we present the results of this examination and the test of our expectation.

In order to study these dose-response relationships between total ACE days of participation and intermediate outcomes, it was first necessary to merge data on our two-year panel of YES Prep participants (as discussed in the methodological note in Section VI.B above) with other available data from TEASE concerning actual days of program of ACE attendance or participation. That is, the necessary data were not available in a single file. Rather, it was necessary once again to match ACE students by name, birth date, program center, and other variables (ethnicity, gender, year in school) from multiple, different TEASE data files. Thus, to conduct this analysis we were required to merge student data for the two-year period from 32 different, distinct TEASE data files.

Once the necessary data were merged, we then analyzed the relationships between total ACE days of participation and the outcomes of school day absences, reading grade changes, math grade changes, science grade changes, and social studies grade changes. (For reasons discussed in Section VI above, it was not possible to study criminal referrals, non-criminal referrals, and pass percentages as outcome variables.) We did so using multiple regression statistical models fit to observations by means of ordinary least-squares estimation procedures (see the methodological note below). In particular we regressed each intermediate outcome variable on total ACE days of participation after first controlling for the effects of students’ ethnicity, gender, and grade level in school (the first two of these as dummy variables). (We tried to also control for age, but found that it was a variable that was strongly and directly related to grade level – a phenomenon termed “a collinear vector” in statistics – that prevented separating the effects of age from those of grade level.)

We deemed it important to first control for ethnicity, gender, and grade level in order to get at the true impact of ACE participation. As is apparent, the term “impact” implies “cause and effect.” To get at such cause and effect with regard to total days of ACE participation at YES Prep, three necessary but not necessarily sufficient conditions had to be satisfied: an association between the presumed cause and the presumed effect, time ordering (as in the cause – in this case, days of participation – had to precede in time the presumed effect – school days absent, grade changes, etc.) and the absence of spuriousness. The classic case of spuriousness is that ice cream eating and murders in New York City are associated and likely could have the right time ordering. But the relationship between eating ice cream and murders is a spurious one; the association is merely coincidental resulting from the heat of the summer, an “antecedent” variable that preceded in time both eating ice cream and murders. In order to identify possible spuriousness

and eliminate its effects – that is, to identify true cause -- it is necessary to control for (or eliminate the impact of) as many antecedent conditions as possible. In the case of YES Prep, as noted above it was important to eliminate students’ ethnicity, gender, and grade level as possible, alternative explanations – antecedent variables resulting in the possible spurious attribution of impacts.

The tables below show the standardized regression coefficients (beta) for the total days of ACE participation for the academic years from fall 2014 through spring 2016 after controls were introduced for individual participants’ ethnicity (Hispanic versus other), gender (female vs. male), and grade in school. *More complete tables will be found in an appendix to this report.* Following the tables presented below, a methodological note will be found that discusses how the tables were constructed and the conclusions derived. This note is intended for those interested in the statistical modeling procedures employed.

Table: Standardized Regression Coefficients for Total Days of ACE Participation (AY2014-2016) by Center with *Changes in School Day Absences as the Dependent Variable*

Center	Standardized Regression Coefficient (Beta) After Controls for Ethnicity, Gender, and Grade Level
Southeast	.125
North Central	-.002
Southwest	-.012
East End	-.032
Gulfton	-.265
North Forest	.038
Northside	.083
Fifth Ward	-.112

Table: Standardized Regression Coefficients for Total Days of ACE Participation (AY2014-2016) by Center with *Changes in Reading Grades as the Dependent Variable*

Center	Standardized Regression Coefficient (Beta) After Controls for Ethnicity, Gender, and Grade Level
Southeast	.007
North Central	-.110
Southwest	-.108
East End	.024
Gulfton	.091
North Forest	-.071
Northside	.001
Fifth Ward	-.136

Table: Standardized Regression Coefficients for Total Days of ACE Participation (AY2014-2016) by Center with *Changes in Mathematics Grades as the Dependent Variable*

Center	Standardized Regression Coefficient (Beta) After Controls for Ethnicity, Gender, and Grade Level
Southeast	.111
North Central	-.108
Southwest	.224
East End	.122
Gulfton	.425
North Forest	.112
Northside	-.100
Fifth Ward	-.020

Table: Standardized Regression Coefficients for Total Days of ACE Participation (AY2014-2016) by Center with *Changes in Science Grades as the Dependent Variable*

Center	Standardized Regression Coefficient (Beta) After Controls for Ethnicity, Gender, and Grade Level
Southeast	.082
North Central	.053
Southwest	-.039
East End	-.085
Gulfton	.015
North Forest	-.060
Northside	-.074
Fifth Ward	.009

Table: Standardized Regression Coefficients for Total Days of ACE Participation (AY2014-2016) by Center with *Changes in Social Studies Grades as the Dependent Variable*

Center	Standardized Regression Coefficient (Beta) After Controls for Ethnicity, Gender, and Grade Level
Southeast	.089
North Central	-.081
Southwest	.016
East End	-.024
Gulfton	.103
North Forest	-.301
Northside	.006
Fifth Ward	-.125

As shown in the above tables, the total number of days of ACE participation over the period from AY2014 -15 through AY2015-15 had some, although generally limited, influence on

improvements in program outcomes – reductions in school day absences and increases in school grades -- after controls were introduced for ethnicity, gender and grade levels.

There were, however, a few exceptions to this, highlighted in yellow in the above tables. Notice, in particular, that at Gulfton fewer school day absences and improvements in math scores were found related to the total number of days of ACE participation. Further, at Southwest improvements in math scores were found similarly related to more total days of ACE participation. These dose-relationships were further studied by examining their strength with the evidence shown in the table below:

Center and Outcome	Model Multiple R	Partial correlation between total days of participation and outcome after controls
Gulfton School Day Absences	.271	-.172
Gulfton Math Improvement	.387	.281
Southwest Math Improvement	.269	.190

The relationships shown in the above table are, arguably, rather robust as judged by conventional social science statistical standards. In particular, even after controls were introduced for the antecedent variables of ethnicity, gender, and grade level, total days of ACE participation still “moved” outcomes in the desired direction.

(A methodological note: In the analysis of dose-response regarding total days of ACE participation reported immediately above, ethnicity and gender were encoded as “dummy variables” (Hispanic vs. others and females versus males) in the ordinary least squares estimation.

Changes in absences were derived from taking the difference of days absent over the time period from the fall of 2014 through the spring of 2016. Grade changes were computed by taking the difference in grades over the period after converting letter grades to their numerical equivalents normally utilized in schools and colleges – A=4, B= 3, etc.

The models fit initially to observations initially were linear ones. However, we were concerned that relationships between total days of ACE participation, on the one hand, and the absence and grade outcomes on the other, were actually nonlinear. Our concern stemmed in part from our evaluation of YES Prep dose-response relationships for the 2014-15 academic year. In that evaluation we found evidence of non-linearity in the form of natural log transformation of dose (days) often having a better fit to outcomes than just simple counts of days. In other words, in our 2014-15 evaluation we found an increasing rate of change but at a decreasing rate involving dose-response relationships. To detect possible nonlinearity in this year’s evaluation (for AY 2015-16) we examined scatterplots of observations and of residuals. We also examined partial regression plots in addition to attempting to fit models in which days of ACE participation were transformed by means of log functions. *We found no nonlinearity, evidence for which is presented in Appendix 3 to this report.)*

D. Program Management Implications of our Dose-Response Analysis

What do the findings in the preceding two sections about dose-response suggest to us about managing the YES Prep ACE program in order to improve outcomes? First and foremost, the results suggest that providing incentives for more YES Prep ACE participants to become regular participants rather than remaining non-regular ones could well improve program outcomes. Indeed, the association between regular program participation, on the one hand, and lower school day absences as well as improved grades in reading, math, science, and social studies, on the other, was impressive. Moreover, this association was evident across most YES Prep centers.

But how can this be done? What kinds of incentives might suitably increase regular program participation at YES Prep? The complete findings on the impact of total days of ACE participation provide us an important clue (see Appendix 2 below). Indeed, these findings suggest that site coordinators need to take carefully into account the ethnic, gender, and the grade level composition of participants in program planning. Indeed, we found that at every YES Prep Center at least some – or even many – of these student characteristics – were related to the intermediate outcomes of school days absent, reading grades, math grades, science grades, and social studies grades. Activities that are of particular interest to ethnic and gender groups of participants promise to provide increased participation dividends.

What about grade levels in improving outcomes? In a majority of outcomes, we found that students' grade levels were *inversely related to improved outcomes* – the higher the grade level, the lower the improvement in intermediate outcomes (again, see Appendix 2). It seems to us that as students progress in grade level, they often find the material in reading, math, science and social studies more difficult to grasp – learning becomes harder for them -- and, further, they seemingly get frustrated and more often “skip” regular day classes. Our suggestion is for site coordinators to work on more closely aligning school day classes with ACE activities, possibly by hiring regular day instructors for the after-school program.

Finally, if our findings on total days of ACE participation are only approximately correct, they suggest a possible diminishing return for program outcomes. That is, site coordinators seemingly will likely find that encouraging more total days of participation – especially beyond the 30 days required for a student to be classified as a regular participant – may not appreciably affect most intermediate program outcomes. That is, encouraging regular participation seems likely to work from the viewpoint of outcomes, but there seems a limit on the impact of total program days over a two-year program period.

E. Comparison to all of Texas 21st Cycle 8 Year 3

In the preceding section of this report (Section VI), tables showing grade changes (or the absence of such changes) over the time period from fall 2014 through the spring of 2016 for the same “panel” of students at each of the eight YES Prep centers were presented. These same tables also showed and permitted comparison with all of Texas 21st (statewide) Cycle 8, year 3, grade changes -- or non-changes -- for AY 2015-16.

For reasons of economy of space and time, these tables (presented in Section VI) will not be repeated here. However, we call attention to findings from those tables for what they tell us about the YES Prep ACE program.

Most importantly, participants at the eight YES Prep center sites *collectively* outperformed those of the Texas 21st Cycle 8, year 3, programs in *grade improvements* in all of the subject areas – reading, mathematics, science, and social science. The percentages shown are all the more impressive since the results for Texas 21st Cycle 8, Year 3 include the numbers for YES Prep (they are not subtracted out) and thus elevate the statewide increases.

Yet, the reader is warned that the increases for Texas 21st are for one year only while the results for YES Prep shown above are for the two-year period from fall 2014 through spring 2016. Perhaps the longer period had a greater impact on improvement in school grades at YES Prep.

Nonetheless, the above grade improvement results offer impressive evidence about the YES Prep ACE program. Indeed, the results are consistent with the expectation that the YES Program had an impact on improved school grade outcomes. However, we point to such consistency with considerable circumspection. *The above results could be attributable to other variables the effects of which could not be evaluated given the limitations of the TEASE data system.*

F. Comparison with Other 21st Century Programs

In preparing this report, the evaluation team sought for comparative purposes to find evidence of the results of 21st Century programs in other locations. We were less than completely successful, however, principally for reasons of a lack of direct comparability and considerable variability in other 21st Century Programs as well as in the evaluation of those programs. In particular, in reviewing published materials we especially noted the use of different measurement metrics, variations in designs for gathering data, and the use of a variety of other statistical models for analysis.

However, we did find a study of statewide 21st Century programs in Michigan conducted by Michigan State University's Community Evaluation and Research Collaborative reported in 2014. This study found a 31% improvement in math grades on the part of program participants in AY 2012-13. This was, of course, slightly lower than the 34% improvement found in math grades for YES Prep Centers (see above). The same Michigan State study also found a 31% increase over A2012-13 in reading grades among participants, slightly higher than the 28% found among YES Prep students, a group with likely more limited English proficiency than Michigan students.

We also located the results of an impact evaluation conducted by the American Institutes for Research in June of 2013 of Rhode Island's 21st Century CCLC program. This evaluation reported only a small program effect on reading achievement (p. 42) among students and only a statistically *non-significant effect* on math achievement (*Ibid*). Moreover, the investigation also found no program impact on either unexcused absences or on disciplinary actions among student program participants (p. 43).

Further, probably the most far-reaching, but dated, 21st Century CCLC program evaluation we located was conducted by the National Center for Education Evaluation and Regional Assistance of the U.S. Department of Education. This national evaluation reported for after-school programs conducted at elementary schools that “Students attending after-school programs scored no better on reading tests than their peers who did not participate, nor did their grades in English, mathematics, science, and social studies increase” (p. xix). At middle schools, the evaluation found “few differences in academic outcomes” and no differences in homework completion (p. xxiii). But school absences were found to be lower for participants than for comparison students (*Ibid.*)

We do not want to place too much emphasis on comparing YES Prep results to these other evaluations, especially since there were differences in dates (years) as well as in methodological approaches. Yet, *the Durand Research and Marketing Associates, LLC, evaluation team came to believe that the YES Prep outcomes were at least equal to and more often superior to those reported above in these other locations.*

VIII. Stakeholder Perceptions

In this report section we discuss the results of surveys concerning the perceptions of important program stakeholders, YES Prep students and their parents. We are grateful to the administration of YES Public Schools, Inc., which collected these data on perceptions, for making the results available for this report. However, the Durand Research and Marketing Associates, LLC, evaluation team is responsible alone for the use and interpretations of the evidence presented.

A. Stakeholder Support Surveys

Surveys both of parents and of students were conducted by YES Prep officials at each of the eight campuses included in this grantee report. An attempt was made to survey by means of standardized questionnaires all (100%) students at a campus irrespective of their ACE participation as well as to survey the parents of all enrolled students at each respective campus. As might be expected, there was variation in the cross-campus survey response rates among students and their parents alike. That is, it was not possible to achieve a 100% completion rate among students and their parents. Rather, variations in total survey response rates are shown by campus in the table immediately below.

Table: Survey response rates for students and parents by campus

Campus	Campus Response Rate of Students	Campus Response Rate of Parents
East End	95%	100%
Fifth Ward	97%	50%
Southeast	94%	89%

Gulfton	94%	82%
Southwest	96%	83%
North Central	92%	23%
North Forest	92%	44%
Northside	94%	61%
Mean and Standard Deviation	94%; 1.8%	77%; 26%

Student survey responses to questions about ACE are shown by campus in the table immediately below.

Question:	East End	Fifth Ward	South-east	Gulfton	South-west	North Central	North Forest	North-side
I participate in ACE	40% (n=602)*	48% (n=543)	23% (n=706)	21% (n=666)	30% (n=706)	26% (n=639)	36% (n=448)	36% (n=517)
I enjoy coming to ACE	97% (n=233)**	97% (n=252)	91% (n=150)	86% (n=126)	90% (n=186)	93% (n=153)	83% (n=157)	96% (n=181)
ACE is helping me to do better in school.	85% (n=230)	78% (n=250)	84% (n=148)	77% (n=124)	73% (n=183)	75% (n=153)	70% (n=154)	69% (n=181)
ACE allows me to learn new things	90% (n=229)	93% (n=251)	88% (n=145)	83% (n=126)	86% (n=183)	91% (n=152)	77% (n=152)	85% (n=181)
I would recommend ACE to my friends	94% (n=229)	93% (n=247)	92% (n=144)	82% (n=124)	85% (n=176)	88% (n=147)	80% (n=152)	91% (n=178)

Notes: *indicates total number of students interviewed at a campus. **Total number of ACE participants responding to a question at each site.

In the above tables, notice the variation in reported levels of participation in after-school programming among students. The highest percentage in reported participation was at Fifth Ward followed by East End. On the other hand, the lowest percentage was at Gulfton followed rather closely by Southeast.

Note in the above table the positive feelings that students have about after school programming at these YES Prep campuses. In particular notice that students strongly believe that after school programming is helping them to do better in school.

In the table immediately below, the survey responses from *parents* about ACE are shown by campus. As will be noted, relatively strong and weak factors regarding each campus' after school program as well as inter-campus variations can be readily seen.

Question:	East End	Fifth Ward	South-east	Gulfton	South-west	North Central	North Forest	North-side
My student attends ACE	36% (n=535)	43% (n=194)	19% (n=392)	23% (n=320)	27% (n=323)	32% (n=105)	32% (n=146)	37% (n=209)
ACE staff communicate clearly about programs and students' progress	88% (n=202)	89% (n=202)	79% (n=104)	89% (n=93)	85% (n=114)	91% (n=39)	77% (n=65)	82% (n=86)
ACE helps my student do better in school.	89% (n=188)	91% (n=96)	93% (n=101)	92% (n=94)	91% (n=113)	88% (n=38)	80% (n=65)	92% (n=87)
ACE provides my student with fun and educational enrichment opportunities.	95% (n=188)	95% (n=94)	93% (n=99)	97% (n=92)	98% (n=113)	97% (n=38)	88% (n=65)	92% (n=86)
ACE provides interesting and valuable programs for parents.	84% (n=184)	89% (n=95)	74% (n=97)	85% (n=91)	85% (n=113)	80% (n=38)	83% (n=64)	78% (n=85)

Perhaps most striking to the evaluation team was the high percentage of parents who responded affirmatively to the survey question: “ACE provides my student with fun and educational enrichment opportunities.”

Finally, *taken together the findings in the two tables above show a considerable reservoir of support and approval among those students participating at the YES Prep ACE centers as well as on the part of their parents. On the other hand, given such support and approval, coupled with likely “word of mouth” at each campus, it is all the more surprising that active participation among students at the various YES Prep campuses is not higher.*

IX. Principal Evaluation Findings, Evaluator Commentary, and Recommendations (Including Next Steps)

A. Commentary about Principal Evaluation Findings.

1. Considerable confirming evidence was found by the evaluation team that the grantee supported the program’s theory of action as set forth by TEA and its consultant, Westat,

as well as the implementation of that theory at each of the eight program sites. The grantee did so through resources, leadership, staffing, and guidance -- among other ways.

2. The evaluation team found that the YES Prep ACE program was well-implemented and as intended.
3. Additionally, the evaluation team found that the program's activities were appropriate and implemented with fidelity to their respective centers' logic models.
4. All of the campuses on which the eight YES Prep centers are located serve a large proportion of Hispanic/Latino students as well as a sizable percentage of students from economically disadvantaged and at-risk backgrounds. All campuses had in our judgment very good to excellent student-to-faculty ratios; and all had very good to excellent STAAR cumulative "met" standards for 8th grade reading. Finally, all were located on school campuses found to have received a 2014-15 Texas Academic Performance accountability rating of "met standard."
5. The YES Prep Cycle 8, Year 3, program enrolled a total of 2850 students, a decrease of about 91 students from the Year 2 program, but an increase of 496 participants over the Year 1 Program. Of the Year 3 students enrolled in the program, 1185 or about 42% were regular participants. This represented a decline of about 123 students from Year 2, but an increase of 467 over the Year 1 program.
6. Consistent with Federal, state and program goals, the ACE program enrolled students rather diverse in ethnicity, but especially in gender as well as in being at-risk and in being economically disadvantaged.
7. "Regular participants" generally declined monotonically in number by grade level, the exception being a break in the pattern for grades seven and eight. This same pattern was generally the same for non-regular students. Thus, overall there was a monotonic decline overall in total participants from grade 6 through grade 12.
8. Considerable site to site variation was found in total operating budgets, "operating budgets per attendee" and in "per regular student operating budgets." This was completely expected. Student needs differed across the centers (as identified by an assessment); variations in activities and in teaching resources were evident; and differences were found in "student mix," especially in economic disadvantages, the proportion of at-risk students, and in the percent Hispanic/Latino (with likely variances in English proficiency) across the campuses themselves.
9. A sound decision-making process with accountability, the appropriate use of diverse data sources, and inter-site variations were found in the approach taken to prioritize services.
10. Program requirements for regular student participation and for adult participation were met at all eight centers. In fact, all required levels for students and adults were exceeded at each and every center.

11. Considerable variation was found among the centers in the number and percentage of time for each activity type. The greatest variance relative to averages across the centers was in the percentage of time spent in family engagement and in college and workforce readiness activities. This variation we further found to be a function mainly of differences in student needs (as identified by needs assessments), student-parent preferences (as identified by Voice and Choice Surveys), student compositional “mix” in the program (especially by grade level), activity enrollments, and in what each site chose to emphasize.
12. College preparedness was and is a common emphasis through YES Prep Public Schools, Inc. Accordingly, the ACE in alignment with the school day resulted in the decision not to reemphasize college preparation in after-school offerings. Further, as also discussed in recommended Deliverable #3 (submitted earlier but available on request), a needs assessment and student “Voice and Choice” revealed both the need for and an expression of desire for more offerings in the activity category of enrichment.
13. While varying by site and subject area, we found grade improvements for each of the eight YES Prep center in each of the four subject areas: reading, math, science, and social science. Additionally, the data strongly suggest (within the limits of certain caveats) that students showing a decrease in grades were a statistical minority {relatively small} in percentage terms. Moreover, seemingly the major program result at YES Prep across the centers was that of “maintaining” or “reinforcing grades,” a result that was even more enhanced if one also includes “no change needed” in grade change outcomes.
14. YES Prep ACE participants outperformed impressively their Texas 21st Cycle 8, Cycle 3, counterparts in school grade increases.
15. In studying dose-response relationships, we found that “regular participation” (the higher “dose” in this case) was associated with important outcomes (the “response”) of the YES Prep ACE program relative to “non-regular participation.” Indeed, when dose-response relationships involving such participation were examined, we found all five of the outcomes we investigated – school absences and grade increases in reading, math, science, and social studies – were improved among regular participants over the time period. However, this was not found to be true at all of the centers. That is, variations across the centers were found in the apparent impact of regular participation. The outcomes that were most frequently found associated with regular participation as opposed to non-regular participation across the eight centers were improvements in school reading grades (at 6 of the 8 sites) and improvements in math grades (at five of the sites).
16. In studying dose-relationships further, the total number of days of ACE participation over the period from AY2014 -15 through AY2015-15 had some, although generally rather limited, influences on improvements in program outcomes – reductions in school day absences and increases in school grades -- after controls were introduced for ethnicity, gender and grade levels. However, we also observed that at Gulfton fewer school day

absences and improvements in math scores were found related appreciably to the total number of days of ACE participation. At Southwest improvements in math scores were found similarly related to more total days of ACE participation.

17. The Durand Research and Marketing Associates, LLC, evaluation team also examined the impacts of 21st Century programs in other locations – nation-wide as well as in the states of Michigan and Rhode Island – by studying previously published reports. We inferred that the YES Prep program outcomes were at least equal to and more often superior to those found in these other locations.
18. Finally, in evaluating stakeholder perceptions, we found a considerable reservoir of program support and approval among students participating at the YES Prep ACE centers as well as on the part of their parents.

B. Evaluator Recommendations (Including Next Steps)

The following are the recommendations of the Durand Research and Marketing Associates, LLC, evaluation team:

Recommendation 1: The YES Prep after-school program needs to emphasize student recruitment and retention among students in higher level grades (especially grades 11 and 12). The monotonic declines we observed both in regular and non-regular participation with increasing grade levels were of concern to the team. This was especially so since in our prior experience higher grade students quite often tend to experience behavioral issues as well as communication problems with parents that might be at least partially remediated by ACE.

Recommendation 2: We recommend to TEA and to Westat that TEASE data entry and reporting be improved considerably to avoid erroneous artifacts and data errors that produced problems for YES Prep staff as well as for us evaluators. There is no reason of which we are aware that fall term data entry should be closed to grantees prior to the end of their fall term programming. Furthermore, there are seemingly no data entry checks in TEASE to prevent errors in the large amounts of data that have to be uploaded to the system. Finally, we found at centers that data are, at least initially, “hand-entered” which invite both validity (systematic errors) and reliability (random error) problems.

Recommendation 3: The future likelihood of serious program staff issues resulting from illnesses, necessary leaves of absences, and other personal emergencies suggests a strong need for human resource backup plans to avoid programming shortcomings and limitations on students’ achievements. We think that “cross-training,” additional funds for temporary staffing and the like need to be considered. Since the likelihood of future staffing problems are common to all Texas 21st Century grantees and sites, we believe that TEA and Westat need to take the lead in addressing this important matter.

Recommendation 4: At least two site staff members (names and roles withheld to protect confidentiality) expressed the view that school leaders at their respective campuses needed to get much more involved in the after-school program. These staff members further noted that there was a failure to “own” the ACE program on the part of their schools. This is a critical problem that seems to require intervention on the part of the leadership of YES Prep Charter Public Schools, Inc.

Recommendation 5: Assistance is needed by the YES Prep ACE program in devising a system for identifying and making known high-quality vendors for its centers. Such a system, which could be organized by category such as academic assistant, enrichment, college and workforce readiness, would likely assist the quality of program activities. We recommend that TEA and its consultant, Westat, need to assist such a system by making resources for it available to YES Prep and to other after-school programs.

Recommendation 6: No feedback about last year’s final evaluation report was ever received. The provision of such feedback from TEA and its consultant, Westat, would assist greatly the YES Prep program in the future as well as future evaluators.

Recommendation 7: “School day absences” are rather suspect as an intermediate outcome metric, especially in the way these are reported in TEASE and to the State. Illnesses, excused absences, and trancies are mixed together with unexcused absences in such a way as to raise serious doubts about the validity of this intermediate outcome measure. We recommend to TEA and its consultant that school absences reported in TEASE be restricted to unexcused absences (including trancies) alone. After all, the difference in types of absences is critical: non-volitional ones derive from accidents, epidemics, or other episodic illnesses while others are volitional in nature. In all likelihood, an after-school program can more likely influence volitional absences than those resulting from true emotional or physical maladies.

Recommendation 8: Results from our evaluation suggest that providing incentives for more YES Prep ACE participants to become regular participants rather than remaining non-regular ones is likely to appreciably improve program outcomes. Indeed, the power of regular program participation seemingly to lower school day absences and to improve grades in reading, math, science, and social studies was impressive in our findings. But what kinds of incentives might suitably increase regular program participation at YES Prep? The complete findings on the impact of total days of ACE participation provide us an important clue (see Appendix 2 below). Indeed, these findings suggest that site coordinators need to take carefully into account the ethnic, gender, and the grade level composition of participants in program planning. Indeed, we found that at every YES Prep Center at least some – or even many – of these student characteristics – was/were related to the intermediate outcomes of school days absences, reading grades, math grades, science grades, and social studies grades. Activities that are of particular interest to ethnic and gender groups of participants could well provide increased participation dividends (please refer to Appendix 2 below for additional evidence on this point).

Recommendation 9: What about grade levels in improving intermediate outcomes? In a majority of outcomes, we found that students’ grade levels were *inversely related to improved outcomes* –

the higher the grade level, the lower the improvement in intermediate outcomes (again, see Appendix 2). It seems to us that as students progress in grade level, they often find the material in reading, math, science and social studies more difficult to grasp – learning gets harder for them -- and, further, they seemingly get frustrated and more often “skip” regular day classes. Our recommendation is for site coordinators to work on more closely aligning school day classes at varying grade levels with ACE activities, possibly by hiring regular day instructors for the after-school program.

Recommendation 10: In our site visits with YES Prep site coordinators, the idea was raised of site coordinator exchanges between centers. Accordingly, we recommend that site coordinators be encouraged to take the role of a coordinator at a different center for a limited period of time. Such exchanges, we expect, could be an important training experience in which coordinators learn new “best practices,” different problem solutions, and possibly about different activities and ways to implement them.

Recommendation 11: We found no specific reason to question the Spanish language skills of coordinators who, in general, offer programs to the large proportions of Hispanic/Latino students and adults who tend to comprise the YES Prep ACE program. Yet, either by hiring or by training classes, we recommend that coordinators be well-versed in Spanish. Such could well-assist student recruitment and retention, program planning, and the building of effective mentoring relationships between coordinators and those for whom they have responsibility.

Recommendation 12: The results of stakeholder surveys, especially the survey findings across the centers, coupled with smaller enrollments at higher grade levels (see Recommendation 1) suggests to us that students be given the opportunity to participate actively in an open-ended “design your own program” activity, the results of which should guide ACE programming. Such an activity, we believe, could effectively supplement present “voice and choice” as well as provide students a greater sense of program ownership and empowerment. Further, based on our experience with other after-school programs we also believe that a greater sense of student ownership and empowerment, in turn, could lessen program attrition and enhance activity attendance, thereby furthering the improvement of program outcomes.

Recommendation 13: Our final recommendation, which is particularly addressed to TEA and to its consultant, Westat, concerns ways to appreciably improve the conduct of evaluations, to provide better evaluation evidence, and to render assessment results more useful to program managers.

- a. There is great need to build into data available through TEASE, evidence on a comparison or control group of non-participants in ACE. Such data, which could be gathered on a sample of regular day students at school campuses on which there are after-school centers, would considerably enhance the internal validity (“does the program really make a difference”?) of outcomes findings.
- b. We found a considerable amount of evaluation paperwork required of site coordinators that was deemed “not useful” by those coordinators. Detailed logic

model construction and Interim Reports 2 and 3 were frequently mentioned by coordinators in our discussions with them as “time-consuming and unhelpful.” We concur and recommend reducing appreciably the evaluation guidelines and considerably simplifying evaluation tasks required, especially of site coordinators. (See the following point.)

- c. One way of reducing the evaluation burden on coordinators and, at the same time, enhancing both evaluation results and program management is to adopt a “SWOT” (Strengths, Weaknesses, Opportunities, and Threat) analysis approach. In the course of conducting our evaluation, we came upon 21st Century CCLC site evaluation instructions for the State of Arizona (Arizona 21st CCLC Site Evaluation Report Instructions, 2016). Those instructions are based on a SWOT approach. Such an approach, we believe, offers considerable advantage in that its focus is principally on improving program management, the principal purpose of evaluation in the first place. We not only recommend this approach for future 21st Century program assessment, but also recommend adopting the instructions and instruments developed for Arizona’s program.
- d. One of the absent features we noticed immediately in the evaluation guidelines developed by Edvance (now Westat) and TEA is that of “success standards.” A more than typical approach to conducting evaluations and offering recommendations on results is to adopt standards for judging a particular program’s goal achievement (or success). For example, in the Houston Kids program the standard of a 5% behavioral improvement in relationships with adults over an academic year is employed to judge whether the program has met an important objective. Another way of expressing the idea of success standards is in the language of SMART goals. “SMART,” an acronym for specific, measurable, attainable, realistic, and time-bound, is one way to express program goals. SMART goals have been shown to enhance the performance management of organizations (see, example, Nelson and Quick, 2013, pp. 204-206). We recommend that SMART goals and success standards be adopted in future evaluations to judge the success of future 21st Century learning centers.
- e. Our final recommendation for improving evaluation of 21st Century programs is to promote more continuous program monitoring over the at-present, largely post-hoc assessment. Such continuous evaluation monitoring, especially of implementation processes, will not only help to correct problems along the way but avoid waiting until after the fact to identify such problems.

X. Assessment of Evaluator Recommendations and Site Coordinator Commentary

This space is made available for assessment of the evaluation team’s recommendations and commentary by site coordinators as well as the program director.

XI. Evaluator Information

A. Scope of Work and Cost of Evaluation

The following elements were specified in the scope of work for this evaluation:

Charge

The local evaluator, Durand Research and Marketing Associates, LLC, has been engaged by the YES Prep Cycle 8 to evaluate the implementation and intermediate outcomes of the Texas ACE (aka 21st Century Community Learning Centers/21st CCLC) grant from the Texas Education Agency (TEA).

Reporting and Dissemination

The evaluator will be responsible for collaborating with the Project Director to develop and edit evaluation reports as outlined in the Evaluation Focus below including; interim reports, the state outcome data file, and a comprehensive annual evaluation report. YES Prep Cycle 8 will be responsible for completing reporting requirements indicated by the TEA, with evaluator support. It is understood that the evaluation report will be as concise as possible, but additional information can be provided by the evaluator upon request.

Evaluation Activities

- Meet with the Project Director to review TEA's evaluation requirements and create a project plan for implementing the evaluation activities.
- Meet with the Project Director and Site Coordinators to develop the Center logic models; review the evaluation questions outlined in the Texas ACE Independent Evaluation Guide 2015-16; add additional evaluation questions as desired; and sign the Evaluator Agreement.
- Meet with program staff routinely for planning and for using improvement plans.
- Help staff create the two required interim reports based on the evaluation questions and other findings from ongoing internal monitoring processes.
- Help Program Director and Site Coordinators to use data to plan professional development, hire staff with different skills and interests, link personnel evaluation with internal monitoring results.
- Conduct unstructured or structured observations of program activities.
- Have informal conversations with staff
- Assist centers in administering student, parent, and teacher surveys (primary effort for administering surveys rests with grantee).
- Develop the final report in collaboration with the Project Director that answers the evaluation questions

The charges for the full and complete evaluation was \$2,500 per site. However, it should be noted that the costs incurred by Durand Research and Marketing Associates, LLC, to complete the evaluation grew dramatically over the last year as a consequence of additional tasks required in the evaluation, increased labor costs, and more data analysis tasks.

B. Evaluator Experience Narrative

Durand Research and Marketing Associates, LLC, was originally founded in the early 1980s with a focus on conducting process and outcomes evaluations of health and medical programs. In the 1990s under new leadership, the scope of its work changed to include marketing research as well as evaluations of educational and social services. In the field of education, the extensive experience of the firm includes, among others, evaluations for the Greater Houston Collaborative for Children (HELP for Kids under provisions of the Federal government's Learning Opportunities Act as administered by the U.S. Department of Health and Human Services); an evaluation of student retention activities for the University of St. Thomas; evaluation of the "Regional Innovations in Nursing Education" program for the University of Texas Medical Branch in Galveston under provision of a Federal grant; "Regalo de Vida," an educational program of LifeGift funded by a grant from the United States Public Health Service; and on-going evaluation activities for the Education for Children Agency Affinity Group of the United Way of Greater Houston. Since 2006 Durand Research and Marketing Associates has also conducted regular, continuous evaluations of the *Houston's Kids* after school and summer programs. (*Houston's Kids* is a collaborative effort of the United Way of Greater Houston, the Children's Museum of Greater Houston, the United Way of Greater Houston, Communities in Schools of Houston, Inc., and the Alief Independent School District.) Finally, Durand Research and Marketing Associates, LLC, previously conducted evaluations of YES Prep's Cycle 8, Year 2, 21st Century after-school program.

The professional experience of the evaluation team for the present evaluation of the YES Prep ACE program is discussed more fully below.

Measurement professional and educational statistician **Jeffrey K. Durand** holds a Master's degree from The Pennsylvania State University. In addition, he studied mathematics and mathematical statistics at the University of Virginia. An internationally recognized expert on measurement, testing, and assessment, he is the author of a number of research papers published in professional journals and presented at conferences held in countries ranging from the U.S. to South Korea, China and Japan. Of particular importance to this evaluation, his recent research is on the quality of rater effectiveness and on improving the quality of rated observations. Presently, he is a member of the board of directors of the Pacific Rim Objective Measurement Society (PROMS).

Lead evaluator **Roger Durand** holds a Ph.D. awarded with Distinction (University of California – Berkeley and Los Angeles campuses) and has completed post-doctoral studies in mathematical modelling in the social sciences at Virginia Tech as well as additional studies in survey research, research design, sampling, and statistical modeling at the Institute for Social Research of the University of Michigan. In addition to serving as a principle with Durand Research and Marketing Associates, LLC, he is he is also Professor of Public Affairs at the University of Houston-Clear Lake where his teaching has emphasized the instructing of graduate courses in program evaluation. Besides his academic career, Dr. Durand has served as Senior Evaluator in the Division of Evaluation, U.S. Department of Health, Education, and Welfare, and later the

U.S. Department of Health and Human Services, in Washington, D.C. Throughout his career, he has been involved in more than 80 program evaluations including assessments of the Houston's Kids Out-of-School-Time Program, the HELP for Kids program of the Greater Houston Collaborative for Children, and the Gulfon Project of Neighborhood Centers, Inc. In addition, he has worked previously on evaluations of Texas 21st Century programs of the Houston Independent School District, the Texas Serenity Academy, YES Prep Public Schools, Inc., and Be-A-Champion. The author or co-author of more than 200 peer-reviewed publications, research papers, monographs and book chapters, his most recent peer-reviewed publications in evaluation include articles in the *American Journal of Evaluation* (in 2014), the *Academy of Educational Leadership Journal* (also in 2014), and *Housing, Care and Support* (2015).

Data entry specialist **Matthew McGaughey** has extensive experience in working with educational statistical data and with Microsoft Excel. In this project he was responsible for analytical file construction and data file merging.

Co-lead evaluator **Melvin Waits** has widespread, significant experience in evaluations of after-school programs, especially those funded by Texas 21st Century. He previously directed evaluations of Texas 21st Century ACE programs for the Houston Independent School District (Cycles 5, 6, 7, and 8); Be-a-Champion (Cycle 6 years 2, 3, 4, and 5); Texas Serenity Academy (Cycle 7 years 2 and 3); and YES Prep (Cycle 8 year 1). He also was involved extensively in conducting site visits to YES Prep program centers in Cycle 8, years 1 and 2.

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Appendix 1: Executive Summaries of Center Reports

Executive Summary: East End Center

In this report, results are presented from both a process and an outcomes evaluation conducted by the firm of Durand Research and Marketing Associates, LLC, of the East End ACE Program of the YES Prep Public Schools, Inc.

In developing its after-school program, hereafter referred to as the ACE program, an acronym for “Afterschool Centers on Education,” YES Prep East End designed and implemented a program in furtherance of the objectives of Federal legislation, originally the “No Child Left Behind Act,” which was subsequently replaced in 2015 by the “Every Student Succeeds Act.”

An overarching East End program goal—an outcome of particular interest—was that of participants’ college and career readiness. Such an outcome was and is entirely consistent with the mission of YES Prep Public Schools, Inc.

In addition to participants’ college and career readiness, another overarching YES Prep East End ACE Program goal was that of increased family involvement. This second overarching goal was and is an integral part of YES Prep Public Schools’ mission of a commitment to improving disadvantaged communities.

The East End ACE program center is located in a neighborhood of Harris County, Texas, approximately seven (7) miles east and slightly south of downtown Houston. It served a total of 645 student participants in grades 6 through 12. It also served 68 adults participants. It did so with a total staff size of 25 in the fall and 29 in the spring. Its operating budget for the year was \$172,058.

The following were among the most notable findings of the evaluation team of Durand Research and Marketing, LLC:

1. The program’s theory of action and the implementation of that theory at the site were supported through resources, leadership, staffing, and guidance—among other ways.
2. The program’s activities were appropriate and implemented with fidelity to the logic model developed for the center.
3. During our site visit, we were impressed with the high degree of engagement in activities that we observed among East End ACE students.
4. The program was well-implemented.
5. The East End center met the program requirements for student and adult participation, for hours per week, and for weeks in service.

6. Program activities were well-targeted to meet students' needs and met requirements for activity components.
7. Demographically, ACE program participants mirrored rather well in ethnicity that of the campus population as a whole.
8. Program activities at East End especially emphasized enrichment both in the spring and in the fall.
9. An examination of changes from the fall of 2014 to the spring of 2016 revealed increases in reading, math, science, and social studies grades among ACE participants; the largest percentage increases among participants were in social studies and math.
10. The findings regarding grade changes also are suggestive of an ACE program "reinforcing effect" in addition to a converting or improving one on intermediate outcomes.
11. An analysis of dose-response relationships revealed that regular program participants at East End showed relative improvement in school day absences (i.e., fewer absences), changes in reading grades, changes in math grades, and changes in social studies grades compared to non-regular participants.
12. Surveys of students and their parents revealed a considerable reservoir of program support and approval.

These and other findings resulted in a number of evaluator recommendation for next steps, steps that most notably include the following –

1. We recommend to TEA and to Westat that TEASE data entry and reporting be improved considerably to avoid erroneous artifacts and data errors that produced problems for YES Prep staff as well as for us evaluators. Most especially, data entry checks are needed in TEASE to prevent errors in the large amounts of data that have to be uploaded to the system.
2. Assistance is needed by the program in devising a system for identifying and making known high-quality vendors. Such a system, which could be organized by category such as academic assistant, enrichment, college and workforce readiness, would likely result in enhanced student participation and increase the impact of program activities.

3. “School day absences” are rather suspect as an intermediate outcome metric, especially in the way these are reported in TEASE and to the State. Illnesses, excused absences, and trancies are mixed together with unexcused absences in such a way as to raise serious doubts about the validity of this intermediate outcome measure. We recommend to TEA and its consultant that school absences reported in TEASE be restricted to unexcused absences (including trancies) alone.
4. Results from our evaluation suggest that providing incentives for more ACE students to become regular participants rather than remaining non-regular ones could well improve program outcomes. We recommend the devising and implementation of such incentives.
5. We recommend that students be given the opportunity to participate actively in an open-ended “design your own program” activity the results of which should guide programming. Such an activity, we believe, could effectively supplement present “voice and choice” as well as provide students a greater sense of program ownership and empowerment.

Executive Summary: Gulfton Center

In this report, results are presented from both a process and an outcomes evaluation conducted by the firm of Durand Research and Marketing Associates, LLC, of the Gulfton ACE Program of the YES Prep Public Schools, Inc.

In developing its after-school program, hereafter referred to as the ACE program, an acronym for “Afterschool Centers on Education,” YES Prep Gulfton designed and implemented a program in furtherance of the objectives of Federal legislation, originally the “No Child Left Behind Act,” which was subsequently replaced in 2015 by the “Every Student Succeeds Act.”

An overarching Gulfton program goal—an outcome of particular interest—was that of participants’ college and career readiness. Such an outcome was and is entirely consistent with the mission of YES Prep Public Schools, Inc.

In addition to participants’ college and career readiness, another overarching YES Prep Gulfton ACE Program goal was that of increased family involvement. This second overarching goal was and is an integral part of YES Prep Public Schools’ mission of a commitment to improving disadvantaged communities.

YES Prep’s Gulfton ACE site is located approximately 11 miles west and slightly south of downtown Houston in Harris County, Texas. It served a total of 228 participants during AY2015-16 in grades 6 through 12. It also served 60 adults participants. It did so with a total staff size of 19 (including a volunteer) in the fall and 20 in the spring. Its operating budget for the program year was \$204,060.

The following were among the most notable findings of the evaluation team of Durand Research and Marketing, LLC:

1. We found that programming at the Gulfton Center was delayed as a result of a serious illness experienced by the site coordinator. Yet, thanks to the effective leadership of the program director, the Gulfton site coordinator, and the family engagement specialist, these delays were overcome. Indeed, we further found that such leadership eventually resulted in the meeting of all operations, participation, and activity component program requirements.
2. The program’s theory of action and the implementation of that theory at the site were supported through resources, leadership, staffing, and guidance—among other ways.
3. The program’s activities were appropriate and implemented with fidelity to the logic model developed for the center.
4. The program was well-implemented.

5. Program activities were well-targeted to meet students' needs. Such activities at Gulfton especially emphasized, first, enrichment, and, second, academic assistance as evidenced by the percent of time participants spent in types of activities.
6. We examined the demographic characteristics of ACE students who were in the Gulfton program for the two-year period from the fall of 2014 through the spring of 2016. Our examination showed that ACE students slightly underrepresented the proportion of Hispanic/Latino students on the school day campus (85% compared to 90.9% for the campus) and slightly underrepresented the campus students who were in grades 10 and above (26.2% of ACE students compared to 32.6% of campus students). We also found that 56% of two-year ACE students at Gulfton were females, but could find no campus percentage against which to compare.
7. We found considerable improvements in math, science, and social studies grades for students who participated in the Gulfton program from the fall of 2014 through the spring of 2016. We found some, but far less, improvement in reading grades.
8. We also found evidence of a grade "reinforcing effect" in addition to a converting or improving one on grade changes over the two-year period from fall 2014 through spring 2016.
9. Regular participants showed fewer school day absences as well as more positive improvements in reading grades, math grades, science grades, and social studies grades compared to non-regular ACE participants over the last two academic years.
10. In further studying dose-response relationships, we found that the total number of days of ACE participation at Gulfton appreciably reduced school day absences and appreciably increased math grades *after the effects of students' ethnicity, gender, and grade level were controlled statistically*. This means that total days in the program and not ethnicity, gender, or school grade level appeared to account for these improvements in (fewer) absences and in math grades.
11. Survey data revealed that 86% of students reportedly enjoyed coming to ACE while 97% of their parents responded affirmatively to the statement, "ACE provides my student with fun and educational enrichment opportunities."

These and other findings resulted in a number of evaluator recommendation for next steps, steps that most notably include the following –

1. We recommend to TEA and to Westat that TEASE data entry and reporting be improved considerably to avoid erroneous artifacts and data errors that produced problems for YES

Prep staff as well as for us evaluators. Most especially, data entry checks are needed in TEASE to prevent errors in the large amounts of data that have to be uploaded to the system.

2. The future likelihood of serious program staff issues resulting from illnesses, necessary leaves of absences, and other personal emergencies suggests a strong need for human resource backup plans to avoid programming shortcomings and limitations on students' achievements. We think that "cross-training," additional funds for temporary staffing and the like need to be considered. Since the likelihood of future staffing problems are common to all Texas 21st Century grantees and sites, we believe that TEA and Westat need to take the lead in addressing this important matter.
3. No feedback about last year's final evaluation report was ever received. The provision of such feedback from TEA and its consultant, Westat, would assist greatly the YES Prep program in the future as well as future evaluators.
4. The finding (number 6 above) of somewhat smaller enrollments at higher grade levels suggests to us that students be given the opportunity to participate actively in an open-ended "design your own program" activity, the results of which should guide ACE programming. Such an activity, we believe, could effectively supplement present "voice and choice" methods as well as provide students a greater sense of program ownership and empowerment.

Executive Summary: North Central Center

In this report, results are presented from both a process and an outcomes evaluation conducted by the firm of Durand Research and Marketing Associates, LLC, of the North Central ACE Program of the YES Prep Public Schools, Inc.

In developing its after-school program, hereafter referred to as the ACE program, an acronym for “Afterschool Centers on Education,” YES Prep North Central designed and implemented a program in furtherance of the objectives of Federal legislation, originally the “No Child Left Behind Act,” which was subsequently replaced in 2015 by the “Every Student Succeeds Act.”

An overarching North Central program goal—an outcome of particular interest—was that of participants’ college and career readiness. Such an outcome was and is entirely consistent with the mission of YES Prep Public Schools, Inc.

In addition to participants’ college and career readiness, another overarching YES Prep North Central ACE Program goal was that of increased family involvement. This second overarching goal was and is an integral part of YES Prep Public Schools’ mission of a commitment to improving disadvantaged communities.

YES Prep’s North Central ACE center was and is located approximately 15 miles directly north of downtown Houston in Harris County, Texas. The center served a total of 281 student participants in grades 6 through 12. It also served 109 adults participants. It did so with a total staff size of 15 in the fall and 20, including a volunteer, in the spring. Its operating budget for the year was \$168,087.

The following were among the most notable findings of the evaluation team of Durand Research and Marketing, LLC:

1. The program’s theory of action and the implementation of that theory at the site were supported through resources, leadership, staffing, and guidance—among other ways.
2. The program’s activities were appropriate and implemented with fidelity to the logic model developed for the center.
3. During our site visit, we were impressed with the high degree of engagement in activities that we observed among North Central ACE students. No students were observed merely “hanging out”; all were involved actively in learning activities.
4. The program was well-implemented.
5. The North Central Center met the program requirements for student and adult participation for hours per week, and for weeks in service.

6. Program activities were well-targeted to meet students' needs and met requirements for activity components.
7. During both the fall and spring terms, the North Central program emphasized enrichment activities over other types. This emphasis was consistent with the results of a student needs assessment.
8. An examination of the demographic characteristics of ACE students in the fall and spring of AY 2015-2016 revealed that the ethnicity of such students mirrored rather well that of the campus as a whole. In the fall 96% of ACE students were of Hispanic/Latino background, a percentage that dropped slightly to 94% in the spring; the percentage for the entire campus was reported to be 96.5% in 2015 in the Texas Academic Performance Report of that year. Further, the percentage of females in the North Central ACE program increased from 50% of enrollments in the fall to 57% in the spring (there are no comparable campus data on gender). Additionally, the ACE program's grade level distribution favored lower levels (6 through 9) compared to the campus population as a whole. Finally, the total attendance in the ACE program increased slightly from fall to spring (from 199 to 203).
9. An examination of changes from the fall of 2014 to the spring of 2016 revealed considerable increases in math and social studies grades accompanied by rather sizeable increases in reading and science grades as well.
10. The findings regarding grade changes also are suggestive of an ACE program "reinforcing effect" in addition to a converting or improving one on intermediate outcomes.
11. An analysis of dose-response relationships revealed that regular program participants at North Central outperformed their non-regular counterparts in science grade improvements over the two-year period from the fall of 2014 through the spring of 2016.
12. Surveys conducted at North Central showed that 93% of student reported enjoying coming to ACE while 91% of parents responded positively to a survey statement, "ACE staff communicate clearly about programs and students' progress."

These and other findings resulted in a number of evaluator recommendation for next steps, steps that most notably included the following –

1. Assistance is needed by the program in devising a system for identifying and making known high-quality vendors. Such a system, which could be organized by category such as academic assistant, enrichment, college and workforce readiness, would likely result in enhanced student participation and increase the impact of program activities.
2. There is great need to build into data available through TEASE, evidence on a comparison or control group of non-participants in ACE. Such data, which could be gathered on a sample of regular day students at school campuses on which there are after-school centers, would considerably enhance the internal validity (“does the program really make a difference”?) of outcomes findings.
3. In our site visits with YES Prep site coordinators, the idea was raised of site coordinator exchanges between centers. Accordingly, we recommend that site coordinators be encouraged to take the role of a coordinator at a different center for a limited period of time. Such exchanges, we expect, could be an important training experience in which coordinators learn new “best practices,” different problem solutions, and possibly about different activities and ways to implement them.
4. One of the absent features we noticed immediately in the evaluation guidelines developed by Edvance (now Westat) and TEA is that of “success standards.” A more than typical approach to conducting evaluations and offering recommendations on results is to adopt standards for judging a particular program’s goal achievement (or success). For example, in the Houston Kids program the standard of a 5% behavioral improvement in relationships with adults over an academic year is employed to judge whether the program has met an important objective. Another way of expressing the idea of success standards is in the language of SMART goals. “SMART,” an acronym for specific, measurable, attainable, realistic, and time-bound, is one way to express program goals. SMART goals have been shown to enhance the performance management of organizations. We recommend that SMART goals and success standards be adopted in future evaluations to judge the success of future 21st Century learning centers, including the North Central Center.

Executive Summary: North Forest Center

In this report, results are presented from both a process and an outcomes evaluation conducted by the firm of Durand Research and Marketing Associates, LLC, of the North Forest ACE Program of the YES Prep Public Schools, Inc.

In developing its after-school program, hereafter referred to as the ACE program, an acronym for “Afterschool Centers on Education,” YES Prep North Forest designed and implemented a program in furtherance of the objectives of Federal legislation, originally the “No Child Left Behind Act,” which was subsequently replaced in 2015 by the “Every Student Succeeds Act.”

An overarching North Forest program goal—an outcome of particular interest—was that of participants’ college and career readiness. Such an outcome was and is entirely consistent with the mission of YES Prep Public Schools, Inc.

In addition to participants’ college and career readiness, another overarching YES Prep North Forest ACE Program goal was that of increased family involvement. This second overarching goal was and is an integral part of YES Prep Public Schools’ mission of a commitment to improving disadvantaged communities.

YES Prep’s North Forest ACE site is located approximately 12 miles north and slightly east of downtown Houston in Harris County, Texas. During AY2015-16, center served a total of 324 student participants in grades 6 through 12. It also served 197 adults participants. It did so with a total staff size of 15 in the fall and 15 in the spring. Its operating budget for the year was \$241,733.

The following were among the most notable findings of the evaluation team of Durand Research and Marketing, LLC:

1. The evaluation team found that the program’s activities were appropriate and implemented with fidelity to the program’s logic model.
2. The team concluded that the program was implemented as intended.
3. During a site visit, the evaluation team observed that the site coordinator adopted a number of important practices to further motivate student learning. Among these practices were competitive teams, a theme of “sleuthing” or detective work, and “hands on” art activities that contributed to the campus appearance. The team further observed no students merely “hanging out.” Rather, all students were actively engaged in activities.
4. The evaluation team also found that program practices were well-implemented. This was particularly true with regard to the alignment of activities with students’ needs and with the school day; to the management of activities offered in the program; to the encouragement of students’ program attendance; to the incorporation of student and

family “voice” into the activities offered; to a shared understanding of students’ needs and program direction between the regular day school leadership and the ACE staff; and to formal professional development.

5. Demographically, the North Forest campus as a whole has a rather heavy Hispanic/Latino population (70.1%). We found that this ethnic group was somewhat underrepresented in the ACE program both in the fall term (57%) and in the spring term (59%).
6. A further examination of demographic characteristics revealed an increase in the female percentage of students enrolled in North Forest’s ACE program from 46% in the fall to about 50% in the spring. Additionally, attendance in the program declined from 267 in the fall to 235 in the spring.
7. We found participation in the program sufficient to meet the student participation and adult participation requirements, as well as program objectives.
8. We also found that the North Forest program met the program operations requirements as well as program activity components requirements.
9. The North Forest program tended to emphasize enrichment activities (49% of the total program time participants spent). However, a nearly equal percentage of such total program time (48%) also was devoted to academic assistance activities.
10. An examination of changes from the fall of 2014 to the spring of 2016 revealed that sizeable percentages of students improved their grades in reading, math, science, and social studies.
11. The findings regarding grade changes also were suggestive of an ACE program “reinforcing effect” in addition to a converting or improving one on intermediate outcomes.
12. We observed a decline in school day absences over the same period, the last two academic years, from the fall of 2014 to the spring of 2016.
13. The results of our investigation into dose-response relationships revealed relative increases in school reading grades, math grades, science grades, and social studies grades among regular participants compared to non-regular ones.
14. Surveys showed that about 80% of students reported that they would recommend ACE to their friends while the same percentage of parents reported that ACE helped their student(s) to do better in school.

These and other findings resulted in a number of evaluator recommendation for next steps, steps that most notably include the following –

1. We recommend to TEA and to Westat that TEASE data entry and reporting be improved considerably to avoid erroneous artifacts and data errors that produced problems for YES Prep staff as well as for us evaluators. Most especially, data entry checks are needed in TEASE to prevent errors in the large amounts of data that have to be uploaded to the system.
2. Assistance is needed by the program in devising a system for identifying and making known high-quality vendors. Such a system, which could be organized by category such as academic assistant, enrichment, college and workforce readiness, would likely result in enhanced student participation and increase the impact of program activities.
3. “School day absences” are rather suspect as an intermediate outcome metric, especially in the way these are reported in TEASE and to the State. Illnesses, excused absences, and trancies are mixed together with unexcused absences in such a way as to raise serious doubts about the validity of this intermediate outcome measure. We recommend to TEA and its consultant that school absences reported in TEASE be restricted to unexcused absences (including trancies) alone.
4. Results from our evaluation suggest that providing incentives for more ACE students to become regular participants rather than remaining non-regular ones is likely to appreciably improve program outcomes. We recommend the devising and implementation of such incentives.
5. We recommend that students be given the opportunity to participate actively in an open-ended “design your own program” activity the results of which should guide programming. Such an activity, we believe, could effectively supplement present “voice and choice” as well as provide students a greater sense of program ownership and empowerment.
6. We recommend that North Forest’s practices to further motivate student learning (see finding 3 above) be considered for adoption at other YES Prep sites.

Executive Summary: Northside Center

In this report, results are presented from both a process and an outcomes evaluation conducted by the firm of Durand Research and Marketing Associates, LLC, of the Northside ACE Program of the YES Prep Public Schools, Inc.

In developing its after-school program, hereafter referred to as the ACE program, an acronym for “Afterschool Centers on Education,” YES Prep Northside designed and implemented a program in furtherance of the objectives of Federal legislation, originally the “No Child Left Behind Act,” which was subsequently replaced in 2015 by the “Every Student Succeeds Act.”

An overarching Northside program goal—an outcome of particular interest—was that of participants’ college and career readiness. Such an outcome was and is entirely consistent with the mission of YES Prep Public Schools, Inc.

In addition to participants’ college and career readiness, another overarching YES Prep Northside ACE Program goal was that of increased family involvement. This second overarching goal was and is an integral part of YES Prep Public Schools’ mission of a commitment to improving disadvantaged communities.

The Northside Center of YES Prep’s ACE program is located slightly over four (4) miles north of downtown Houston in Harris County, Texas. During AY 2015-16, the center served a total of 350 student participants in grades 6 through 10. It also served 79 adults participants. It did so with a total staff size of 19 in the fall and 26 in the spring. Its operating budget for the year was \$169,677.

The following were among the most notable findings of the evaluation team of Durand Research and Marketing, LLC:

1. The program was well implemented and well aligned.
2. Program activities seemed to be targeted well to students’ needs.
3. The program’s activities at the center were appropriate and implemented with fidelity to the adopted logic model.
4. In the team’s site visit to Northside, we observed considerable student learning engagement and considerable energy on the part of a relatively new site coordinator.
5. The ethnic characteristics of program participants slightly underrepresented those of the 2015 campus population as a whole. The campus percentage of Hispanic/Latino background students was 94% compared to an ACE program enrollment of 88%.

6. We observed a slight increase in total student participation from the fall term to the spring term (274 to 282, respectively).
7. The program was well-implemented.
8. The Northside center met the program requirements for student and adult participation, for hours per week, and for weeks in service. This finding, especially regarding participation, we found particularly impressive since the Northside site coordinator was replaced by a new one following a considerable hiatus.
9. Program activities were well-targeted to meet students' needs and met requirements for activity components.
10. Program activities at Northside especially emphasized enrichment (85% of the total program activity time during the year).
11. An examination of changes from the fall of 2014 to the spring of 2016 revealed that sizeable percentages of participants increased their reading, math, and science grades. The largest percentage increases among participants were in math and science.
12. The findings regarding grade changes also are suggestive of an ACE program "reinforcing effect" in addition to a converting or improving one on intermediate outcomes.
13. Surveys of perceptions revealed that 96% of Northside student participants reported enjoying ACE while 92% of the parents of such students answered affirmatively to the question, "ACE provides my student with fun and educational enrichment opportunities."

These and other findings resulted in a number of evaluator recommendation for next steps, steps that most notably include the following –

1. We recommend to TEA and to Westat that TEASE data entry and reporting be improved considerably to avoid erroneous artifacts and data errors that produced problems for YES Prep staff as well as for us evaluators. Most especially, data entry checks are needed in TEASE to prevent errors in the large amounts of data that have to be uploaded to the system.
2. We recommend that the program and activities put into place by the new Northside site coordinator following a coordinator hiatus be continued.

3. Assistance is needed by the program in devising a system for identifying and making known high-quality vendors. Such a system, which could be organized by category such as academic assistant, enrichment, college and workforce readiness, would likely result in enhanced student participation and increase the impact of program activities.
4. “School day absences” are rather suspect as an intermediate outcome metric, especially in the way these are reported in TEASE and to the State. Illnesses, excused absences, and trancies are mixed together with unexcused absences in such a way as to raise serious doubts about the validity of this intermediate outcome measure. We recommend to TEA and its consultant that school absences reported in TEASE be restricted to unexcused absences (including trancies) alone.
5. We recommend that students be given the opportunity to participate actively in an open-ended “design your own program” activity the results of which should guide programming. Such an activity, we believe, could effectively supplement present “voice and choice” as well as provide students a greater sense of program ownership and empowerment.

Executive Summary: Southeast Center

In this report, results are presented from both a process and an outcomes evaluation, conducted by the firm of Durand Research and Marketing Associates, LLC, of the Southeast ACE Program of the YES Prep Public Schools, Inc.

In developing its after-school program, hereafter referred to as the ACE program, an acronym for “Afterschool Centers on Education,” YES Prep Southeast designed and implemented a program in furtherance of the objectives of Federal legislation, originally the “No Child Left Behind Act,” which was subsequently replaced in 2015 by the “Every Student Succeeds Act.”

An overarching YES Prep Southeast program goal—an outcome of particular interest—was that of participants’ college and career readiness. Such an outcome was and is entirely consistent with the mission of YES Prep Public Schools, Inc.

In addition to participants’ college and career readiness, another overarching YES Prep Southeast ACE Program goal was that of increased family involvement. This second overarching goal was and is an integral part of YES Prep Public Schools’ mission of a commitment to improving disadvantaged communities.

YES Prep’s Southeast ACE site is located approximately fourteen (14) miles south and somewhat east of downtown Houston in Harris County, Texas. The program served a total of 403 student participants during the school year in grades 6 through 12. It also served 87 adults participants. It did so with a total staff size of 18 in the fall and 23 in the spring. Its operating budget for the year was \$ 177,354.

The following were among the most notable findings of the Durand Research and Marketing, LLC, evaluation:

1. In its systematic *process assessment*, the evaluation team found that the program’s activities were appropriate and implemented with fidelity to the program’s logic model.
2. Based upon its systematic process evaluation, the team also found that the YES Prep Southeast ACE Program was implemented as intended.
3. The evaluation team concluded that the program’s resources were sufficient both in availability and quality for program success.
4. Evidence on the ethnicity of the campus’ student population showed that the largest percentage was of Hispanic/Latino descent (94.1%). We found that the ethnic composition of the ACE program closely mirrored this percentage in the fall (93%) and in the spring (95%).

5. Evidence on the grade level distribution of the campus' population showed that about 35% of students were in grades 10 through 12 in 2015. In the fall of 2015 the Southwest ACE Center program consisted of 33.9% of students in those same grades while in the spring of 2016 the percentage was 37%. Thus, the ACE program also mirrored rather closely the campus' grade distribution.
6. The Southeast Center met the program requirements for student and adult participation for hours per week and for weeks in service.
7. Program activities were well-targeted to meet students' needs and met requirements for activity components.
8. At Southeast program activities especially emphasized enrichment in the fall, but did so somewhat less in the spring. The emphasis on enrichment was consistent with the results of a students' needs assessment.
9. Substantial grade increases were found over the two-year period from the fall of 2014 through the spring of 2016 in reading, math, and social studies accompanied by a somewhat smaller percentage increase in science. The largest percentages of increases among students were in the subject areas of reading and mathematics.
10. The findings regarding grade changes also are suggestive of an ACE program "reinforcing effect" in addition to a converting or improving one on intermediate outcomes.
11. In a dose-response analysis we found that regular participants at Southeast outperformed their non-regular counterparts in improvements in reading grades.
12. On stakeholder perception surveys, 93% of students indicated that they would recommend ACE to their friends while 93% of parents reported that ACE helps their student(s) to do better in school.

These and other findings resulted in a number of evaluator recommendation for next steps, steps that most notably include the following –

1. We recommend to TEA and to Westat that TEASE data entry and reporting be improved considerably to avoid erroneous artifacts and data errors that produced problems for YES Prep staff as well as for us evaluators. Most especially, data entry checks are needed in TEASE to prevent errors in the large amounts of data that have to be uploaded to the system.

2. Assistance is needed by the program in devising a system for identifying and making known high-quality vendors. Such a system, which could be organized by category such as academic assistant, enrichment, college and workforce readiness, would likely result in enhanced student participation and increases in the impact of program activities.
3. There is great need to build into data available through TEASE, evidence on a comparison or control group of non-participants in ACE. Such data, which could be gathered on a sample of regular day students at school campuses on which there are after-school centers, would considerably enhance the internal validity (“does the program really make a difference”?) of outcomes findings.
4. TEA and Westat needs to replace students’ grades as outcome metrics with test scores, especially on math and reading.
5. The future likelihood of serious program staff issues resulting from illnesses, necessary leaves of absences, and other personal emergencies suggests a strong need for human resource backup plans to avoid programming shortcomings and limitations on students’ achievements. We think that “cross-training,” additional funds for temporary staffing and the like need to be considered. Since the likelihood of future staffing problems are common to all Texas 21st Century grantees and sites, we believe that TEA and Westat need to take the lead in addressing this important matter.
6. No feedback about last year’s final evaluation report was ever received. The provision of such feedback from TEA and its consultant, Westat, would assist greatly the YES Prep program in the future as well as future evaluators.

Executive Summary: Southwest Center

In this report, results are presented from both a process and an outcomes evaluation conducted by the firm of Durand Research and Marketing Associates, LLC, of the Southwest ACE Program of the YES Prep Public Schools, Inc.

In developing its after-school program, hereafter referred to as the ACE program, an acronym for “Afterschool Centers on Education,” YES Prep Southwest designed and implemented a program in furtherance of the objectives of Federal legislation, originally the “No Child Left Behind Act,” which was subsequently replaced in 2015 by the “Every Student Succeeds Act.”

An overarching Southwest program goal—an outcome of particular interest—was that of participants’ college and career readiness. Such an outcome was and is entirely consistent with the mission of YES Prep Public Schools, Inc.

In addition to participants’ college and career readiness, another overarching YES Prep Southwest ACE Program goal was that of increased family involvement. This second overarching goal was and is an integral part of YES Prep Public Schools’ mission of a commitment to improving disadvantaged communities.

The Southwest ACE program center, located approximately 14 miles south and west of downtown Houston in Harris County, Texas, served a total of 243 student participants in grades 6 through 12. It also served 87 adults participants. It did so with a total staff size of 30 in the fall and 28 in the spring. Its operating budget for the year was \$160,020.

The following were among the most notable findings of the evaluation team of Durand Research and Marketing, LLC:

1. The program’s theory of action and the implementation of that theory at the site were supported through resources, leadership, staffing, and guidance—among other ways.
2. The program’s activities were appropriate and implemented with fidelity to the logic model developed for the center.
3. The program was well-implemented.
4. In examining the demographic characteristics of students who participated in the ACE program over the two-year period from the fall of 2014 through the spring of 2016 at Southwest, we found that 56% were females; 68% were Hispanic/Latino in background; 28% were African Americans; 69% were from grades 10 and above; and 30% were from grade 9 and lower.
5. The Southwest Center met the program requirements for student and adult participation, for hours per week, and for weeks in service.

6. Program activities were well-targeted to meet students' needs and met requirements for activity components.
7. Program activities at Southwest especially emphasized enrichment both in the spring and in the fall.
8. Substantial increases in reading, math, science, and social science grades were found over the period from the fall of 2014 through the spring of 2016. In fact, these increases were found to be considerably greater than those for Texas State Cycle 8 in AY2015-16.
9. The findings regarding grade changes also are suggestive of an ACE program "reinforcing effect" in addition to a converting or improving one on intermediate outcomes.
10. In our dose-response analysis we found that regular participants at Southwest outperformed their non-regular counterparts in improvements in reading grades, in math grades, and in science grades over the last two academic years.
11. A further dose-response analysis revealed that the total number of days of ACE participation over the past two years was related rather strongly to improvements in math grades *after the effects of ethnicity, gender, and grade level were controlled*. (This means that days in the program and not ethnicity, gender or school grade level appeared to account for this math grade improvement).
12. Surveys conducted at Southwest showed that 90% of students reported, "I enjoy coming to ACE," while 98% of their parents responded positively to the statement, "ACE provides my student with fun and educational enrichment opportunities" and 91% of parents reported that "ACE helps my student do better in school."

These and other findings resulted in a number of evaluator recommendation for next steps, steps that most notably include the following –

1. We recommend to TEA and to Westat that TEASE data entry and reporting be improved considerably to avoid erroneous artifacts and data errors that produced problems for YES Prep staff as well as for us evaluators. Most especially, data entry checks are needed in TEASE to prevent errors in the large amounts of data that have to be uploaded to the system.
2. Assistance is needed by the program in devising a system for identifying and making known high-quality vendors. Such a system, which could be organized by category such as academic assistant, enrichment, college and workforce readiness, would likely result in enhanced student participation and increase the impact of program activities.

3. There is great need to build into data available through TEASE, evidence on a comparison or control group of non-participants in ACE. Such data, which could be gathered on a sample of regular day students at school campuses on which there are after-school centers, would considerably enhance the internal validity (“does the program really make a difference”?) of outcomes findings.
4. We recommend to TEA and its consultant, Westat, that a “SWOT” (Strengths, Weaknesses, Opportunities, and Threat) approach be adopted for future evaluations. The present evaluation burden on site coordinators, including the Southwest site coordinator, could be appreciably reduced while providing considerable advantage in improving program performance management. Such an approach has already been adopted for the State of Arizona and suitable accompanying measurement instruments have been devised.
5. While more total programming days are probably not possible at Southwest, it seems from our dose-response findings that providing incentives for more regular participation (as opposed to non-regular participation) in the program would yield more positive intermediate outcomes. Such incentives could include prizes for participation, special recognitions, and, with the help of outside support, additional financial assistance for college.

Executive Summary: Fifth Ward Center

In this report, results are presented from both a process and an outcomes evaluation conducted by the firm of Durand Research and Marketing Associates, LLC, of the Fifth Ward ACE Program of the YES Prep Public Schools, Inc.

In developing its after-school program, hereafter referred to as the ACE program, an acronym for “Afterschool Centers on Education,” YES Prep Fifth Ward designed and implemented a program in furtherance of the objectives of Federal legislation, originally the “No Child Left Behind Act,” which was subsequently replaced in 2015 by the “Every Student Succeeds Act.”

An overarching Fifth Ward program goal – an outcome of particular interest -- was that of participants’ college and career readiness. Such an outcome was and is entirely consistent with the mission of YES Prep Public Schools, Inc.

In addition to participants’ college and career readiness, other overarching YES Prep Fifth Ward ACE Program goals included increased academic performance, cultural enrichment, increased family engagement, improved school attendance.

A final overarching goal was and is supportive of YES Prep’s vision: transforming low-income communities by giving back to them.

The Fifth Ward ACE program center, located approximately three driving miles east and slightly north of downtown in a historical neighborhood of Houston, in Harris County, Texas, served a total of 376 student participants in grades 6 through 10. [Grade level ten (10) was added during the current 2015-16 academic year]. It also served 110 adult participants. It did so with a total staff size of 18, including one volunteer, in the fall and 22 in the spring. Its operating budget for the year was \$215,847.

The following were among the most notable findings of the evaluation team of Durand Research and Marketing, LLC:

1. The program’s theory of action and the implementation of that theory at the site were supported through resources, leadership, staffing, and guidance—among other ways.
2. The program’s activities were appropriate and implemented with fidelity to the logic model developed for the center.
3. During a site visit to the campus, the lively engagement of students in program activities was apparent.
4. The program was well-implemented. This finding was true with regard to the alignment of activities with students’ needs and with school day classes as well as with regard to the program’s overall management.

5. Targeted students, including those in need of homework assistance, those in need of cultural enrichment, those with health problems, those who could benefit from self-esteem enhancement, and those struggling with behavior management issues, were well served by the program and its activity components.
6. In examining the demographic characteristics of students who participated actively in the ACE program over the two-year period from the fall of 2014 through the spring of 2016 at Fifth Ward, we found that 51% were females and that 87% were from Hispanic/Latino backgrounds, the latter only a slightly smaller percentage than the 92.7% of students from this background found on the total campus (in 2015). We also found that by grade level, the largest percentages active in the ACE program were 8th and 9th graders, the same grade levels that were found to be rather large on the campus in 2015.
7. The Fifth Ward Center met the program requirements for student and adult participation, for hours per week, and for weeks in service.
8. Program activities emphasized academic assistance and enrichment in nearly equal percentages of the total time participants spent in each activity type. This was true in both the fall and spring.
9. Substantial increases in math, science, and social science grades were found over the period from the fall of 2014 through the spring of 2016 accompanied by somewhat smaller, but still sizeable, increases in reading grades. In fact, all of these increases were found to be greater than those for Texas State Cycle 8 for the single academic year, 2015-16.
10. The findings regarding grade changes also are suggestive of an ACE program “reinforcing effect” in addition to a converting or improving one on intermediate outcomes.
11. In our dose-response analysis we found that regular participants at Southwest outperformed their non-regular counterparts in improvements in reading grades, math grades, and in social studies grades as well as in having fewer school day absences over the last two academic years.
12. Surveys conducted at Fifth Ward revealed that 97% of students indicated enjoyment in attending ACE while 95% of their parent responded affirmatively to the statement, “ACE provides my student with fun and educational enrichment opportunities.”

These and other findings resulted in a number of evaluator recommendation for next steps, steps that most notably include the following –

1. Probably our most important recommendation is for TEA and Westat to significantly improve the data available in TEASE to facilitate effective program evaluations. The greatest needs are for data on a control group of nonparticipating (in ACE) students from the same campus, as well as data on antecedent conditions that allow for the elimination of spurious findings. The latter, most prominent antecedent conditions are well established in educational research, research that should inform data elements to be added.
2. TEA/Westat need to replace students' grades as outcome metrics with test scores, especially on math and reading. Test scores do not suffer the same validity and reliability limitations as grades, since most tests are "normed" or otherwise comparable across groups of students.
3. We recommend to TEA and to Westat that TEASE data entry and reporting be improved considerably to avoid erroneous artifacts and data errors that produced problems for YES Prep staff as well as for us evaluators. Most especially, data entry checks are needed in TEASE to prevent errors in the large amounts of data that have to be uploaded to the system.
4. Assistance is needed by the program in devising a system for identifying and making known high-quality vendors. Such a system, which could be organized by category such as academic assistant, enrichment, college and workforce readiness, would likely result in enhanced student participation and increase the impact of program activities.
5. In examining dose-response relationships, we noticed that regular and non-regular ACE participants at Fifth Ward were about equal in improving their science grades over the past two years. We were, of course, delighted to see such strong science grade improvement (nearly a half a letter grade) for both groups. However, in view of our finding of greater improvement among regular participants in reading, math and social studies grades (see finding 11 above), we were curious about why science grades did not follow the same trend. We were unable to determine why this might be so. While this is clearly not a bad problem, we do encourage the site coordinator to investigate why regular participants did not show greater relative grade improvement in science. We are inclined to think that the coordinator might uncover a need for changes in some science activities or in the kinds of students who are non-regular program participants.

Appendix 2: Complete Dose-Response Tables

In this appendix the complete tables on dose-response relationships are shown. In particular, the impact of total days of ACE participation on each intermediate outcome of interest (changes in school days absent as well as changes in reading grades, math grades, science grades, and social studies grades) are shown by center. The period covered by these tables is that of the fall of 2014 through the spring of 2016.

In the tables below, with three exceptions the strongest predictor is highlighted in yellow. In three instances (the exceptions) we found that more total days of ACE participation actually was associated with decreases in grades; these exceptions are highlighted in red. Further, the reader is reminded that the dependent variables in the models are encoded in the direction of improvement over time (fewer school absences and grade increases). On the other hand, the independent variables are encoded as follows: ethnicity (Hispanic= 0, other = 1), gender (females = 1), and grade level as years in school (e.g., 12 is the highest number at some schools). Tabular entries are standardized regression coefficients (Beta). The sign of each coefficient indicates the direction (direct or inverse) of the relationship depending, of course, upon the encoding of the variables.

Center: Southeast

Dependent variable:	Changes in school days absent	Changes in Reading Grades	Changes in Math Grades	Changes in Science Grades	Changes in Social Studies Grades
Ethnicity	-.057	.041	-.141	-.036	-.193
Gender	-.004	.097	.002	.044	.135
Grade Level	.276	-.448	-.184	.397	.268
ACE Participation Days	.125	.007	.111	.082	.089

Center: North Central

Dependent variable:	Changes in school days absent	Changes in Reading Grades	Changes in Math Grades	Changes in Science Grades	Changes in Social Studies Grades
Ethnicity	-.040	.053	.090	.088	-.091
Gender	.131	-.077	.071	.048	-.163
Grade Level	.078	-.211	-.255	-.497	-.195
ACE Participation Days	-.002	-.110	-.108	.053	-.081

Center: Southwest

Dependent variable:	Changes in school days absent	Changes in Reading Grades	Changes in Math Grades	Changes in Science Grades	Changes in Social Studies Grades
Ethnicity	-.001	-.013	.045	.255	-.118
Gender	-.107	-.024	.044	.320	-.041
Grade Level	.016	-.380	-.041	-.199	.393
ACE Participation Days	-.012	-.108	.224	-.039	.016

Center: East End

Dependent variable:	Changes in school days absent	Changes in Reading Grades	Changes in Math Grades	Changes in Science Grades	Changes in Social Studies Grades
Ethnicity	.062	.096	-.070	.009	.023
Gender	-.062	.121	.151	.009	-.010
Grade Level	-.029	.296	.073	.165	-.205
ACE Participation Days	-.032	.024	.122	-.085	-.024

Center: Gullfton

Dependent variable:	Changes in school days absent	Changes in Reading Grades	Changes in Math Grades	Changes in Science Grades	Changes in Social Studies Grades
Ethnicity	-.064	-.145	.115	.015	.009
Gender	.053	.202	.201	.418	.418
Grade Level	.009	-.292	.021	-.201	-.144
ACE Participation Days	-.265	.091	.425	.015	.103

Center: North Forest

Dependent variable:	Changes in school days absent	Changes in Reading Grades	Changes in Math Grades	Changes in Science Grades	Changes in Social Studies Grades
Ethnicity	-.052	-.212	.022	-.207	-.127
Gender	.007	.049	.194	-.098	.019
Grade Level	-.134	.167	-.278	-.094	-.085
ACE Participation Days	.038	-.071	.112	-.060	-.301

Note: In the case of North Forest we did not find evidence of nonlinearity and we did not find evidence of an improved model fit by replacing total ACE days with the logarithm of days when changes in social studies grades was the dependent variable. (See Appendix 3 of this report for further information about this determination.)

Center: Northside

Dependent variable:	Changes in school days absent	Changes in Reading Grades	Changes in Math Grades	Changes in Science Grades	Changes in Social Studies Grades
Ethnicity	.055	-.255	.022	-.005	.056
Gender	-.008	.034	.207	.102	.108
Grade Level	-.146	-.018	-.055	-.125	-.234
ACE Participation Days	.083	.001	-.100	-.074	.006

Center: Fifth Ward

Dependent variable:	Changes in school days absent	Changes in Reading Grades	Changes in Math Grades	Changes in Science Grades	Changes in Social Studies Grades
Ethnicity	.134	.062	-.019	.045	.056
Gender	.038	-.070	-.011	-.035	.054
Grade Level	.083	-.045	-.324	.076	.096
ACE Participation Days	-.112	-.136	-.020	.009	-.125

Note: In the case of Fifth Ward we did not find evidence of nonlinearity and we did not find evidence of an improved model fit by replacing total ACE days with the logarithm of days either with reading grade change or with changes in social studies grades as dependent. (See Appendix 3 of this report for further information about this determination.)

Appendix 3: Testing for Non-Linearity in Dose-Response Relationships

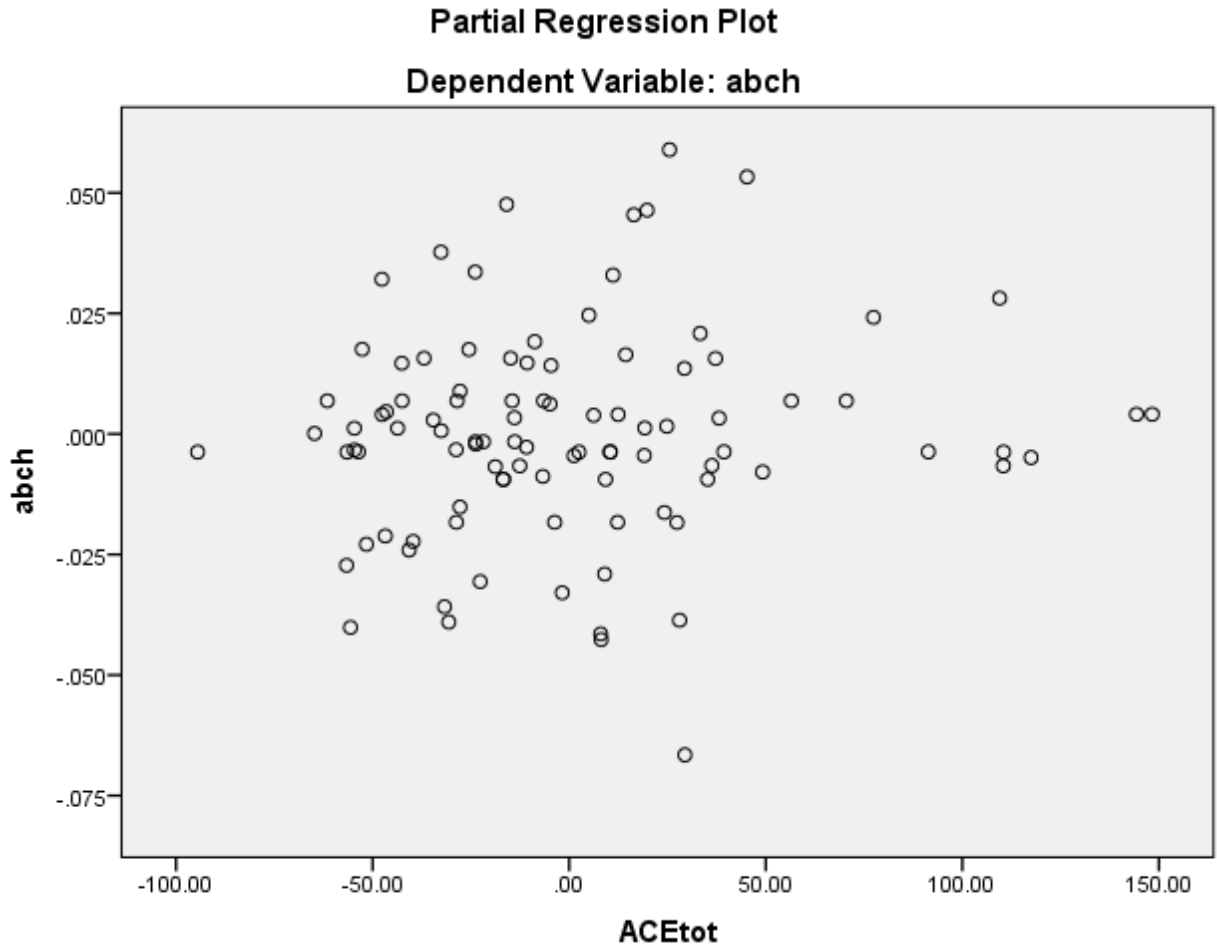
In this appendix we illustrate the tests we employed to study the possibility that the dose-response relationships we reported above were erroneous as a consequence of nonlinearity. That is, we considered whether total days of ACE participation had a greater influence on intermediate outcomes (changes in school day absences, changes in reading grades, and the like) than indicated above in this report owing to such total days bearing a *non-linear* relationship with outcomes. (The reader will recall from the above that we reported the results of fitting a linear model by means of ordinary least squares in estimating dose-response relationships.)

The research team of Durand Research and Marketing Associates, LLC, believed it was entirely possible that a linear model, one involving a linear fit of days of ACE participation, *underestimated* the impact of ACE participation. After all, in our evaluation report on YES Prep's AY 2014-15 ACE program we found evidence that a non-linear model involving total ACE days at times had a better fit to observations than a linear one (see pages 21-22 of that earlier report). In particular, we found that a model that included the logarithm of total days provided a better fit with certain outcomes. This finding was in keeping with the expectation or hypothesis that total days have a diminishing, marginal effect on outcomes (such as school days absent). It was also in keeping with general statistical results that transforming "counts" (like counts of days) using logarithms often linearize regression relationships (on this point see Neter and Wasserman, 1974, especially page p. 125).

Accordingly, we calculated the logarithm of total days of ACE participation and conducted a series of tests for the possibility of nonlinearity in dose-response relationships. The first such test was to examine two scatterplots. (Here and below we illustrate our tests using changes in school day absences at Southeast and the total days of participation at that same center.)

The first scatterplot, shown immediately below, was a "partial regression plot" of the relationship between changes in school days absent over the period from the fall of 2014 through the spring of 2016, on the one hand, and total days of ACE participation with ethnicity, gender, and grade level controlled.

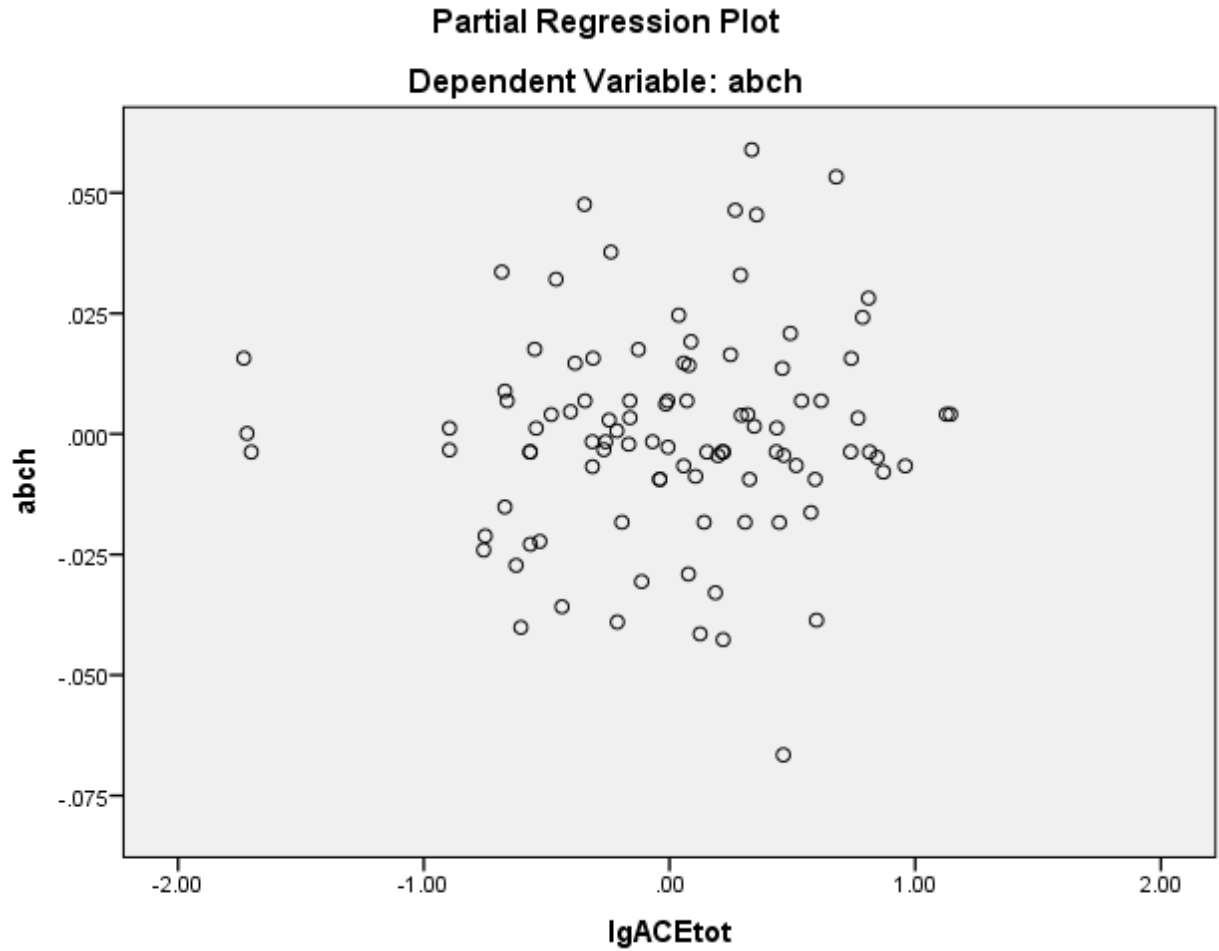
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Notes: “abch” is the variable name for changes in absences while “ACEtot” is the variable name for total days of ACE participation.

The second scatterplot was a “partial regression plot” of the same relationships only with the *logarithm of total ACE days of participation* replacing just the count of total ACE participation in the model.

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Notes: “abch” is the variable name for changes in absences while “lgACEtot” is the variable name for the logarithm of total days of ACE participation.

In comparing the two scatterplots above we did not find evidence of nonlinearity in the dose-response relationship.

The next test for nonlinearity in days of participation was to compare the size of the standardized regression coefficient (Beta) in the linear (i.e., count of days) model against that for the model that included the nonlinear transformation of count of days. In effect this test amounted to a test of the “diminishing, marginal effect of participation days” hypothesis described above.

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These coefficients are shown in the table below –

Independent Variable	Linear Model Beta	Beta for Model with Log Transformation
Ethnicity	-.057	-.060
Gender	-.004	-.001
Grade level	.276	.254
Total ACE days	.125	N/A
Logarithm of Total ACE days	N/A	.073

Note: The dependent variable remains changes in school days absent over the same period

As shown in the above table, the standardized coefficient (Beta) for the model that included the logarithm of total days of ACE participation was smaller than that for the simple, linear model (simple count of participation days). Such a finding runs counter to the hypothesis about non-linearity and diminishing marginal returns in this dose-response relationship.

The final test we conducted was seemingly unnecessary given the above table, but we report it here anyway. That final test was to study the overall fit of the linear model compared to that of the model containing the logarithm of days. We studied the overall fit of the two models using standard regression model statistics as seen below –

Model	R	R-squared	Standard Error of the Estimate
Linear (count of days)	.237	.056	.02199
Non-linear with log term	.220	.048	.02219

Note: The dependent variable remains changes in school days absent over the same period as do the other predictors (ethnicity, gender, and grade level).

As can be seen in the above table, replacing the simple count of ACE days with a logarithmic transformation of ACE days merely confirmed that the dose-response relationship was – counter to our hypothesis – linear and was not improved by including a non-linear term.

Concluding Comment:

In this appendix we have illustrated the tests we conducted for nonlinear dose-response relationships between total ACE days of participation and outcomes of interest (changes in absence, changes in reading grades, and the like) over the period from the fall of 2014 through the spring of 2016.

We conducted the same tests for all of the intermediate outcomes. However, at no time did we find evidence of a nonlinear dose-response relationship between ACE participation and the several outcomes after controls were introduced for ethnicity, gender, and grade level.