Pre-K 4 SA Evaluation Report

YEAR 2

Final Report Submitted to

Early Childhood Education Municipal Development Corporation

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TABLE OF CONTENTS

Executive Summary **1**

Introduction **3**

Research Questions **4**

Evaluation Sample and Methods **5**

Methods 6

Structure of Year 2 Evaluation 6

Evaluation Results **7**

Descriptive Study Results 7

Child Attendance in Pre-K 4 SA *7*

Family Engagement *7*

Professional Development *9*

Teacher Practices *12*

Assessment 13

Physical environment 14

Family involvement 15

Instruction 16

Curriculum 18

Interaction and emotional climate 21

Leadership and supervision 22

Classroom Observations *23*

Classroom Assessment Scoring System (CLASS) 23

Implementation Study Results 27

Family Engagement Support *28*

Intentional Quality Standards *28*

Teacher-child ratio and attendance 29

Teacher-child interaction quality 29

Developmentally appropriate strategies that address instructional support (DAP-IS) and conflict resolution strategies 31

Professional Development *33*

Fidelity summary *33*

Outcome Study Results 34

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Kindergarten Readiness *34*

Differences in Readiness Outcomes *38*

Pre-K 4 SA years of implementation 38

Amount of family engagement 41

Limitations and Recommendations 41

References 43

Appendix A. Pre-K 4 SA Logic Model 45

Appendix B. Evaluation Methods 46

Measures 46

Classroom Assessment Scoring System (CLASS) *46*

Teacher Survey of Early Education Quality (TSEEQ) *47*

Pre-K 4 SA Classroom Observation Measure (P-COM) *47*

Teaching Strategies Gold (GOLD) *47*

Analytic Approach 48

Appendix C: Implementation Year Comparison of Year 2 CLASS Results 49

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EXECUTIVE SUMMARY

Pre-K 4 SA served more than 1,500 children during its second year of implementation. The Year 2 evaluation of Pre-K 4 SA sought to address eight research questions across three categories: *Descriptive*, *Implementation*, and *Outcome* questions.

The intention of the Pre-K 4 SA program is to reach beyond the Pre-K 4 SA centers to the larger education community in the city with both competitive and non-competitive educational supports. Together, the Pre-K 4 SA centers and educational supports are intended to support a 'whole child' approach which is hypothesized to lead to children arriving in kindergarten ready to learn, anticipates that children and families will lead more nutritious and healthy life styles, and that children will see greater academic success that includes outcomes such as decreased rates of grade retention and special education placements, as well as greater success on state standardized testing.

Pre-K 4 SA served slightly more boys (51.3%) than girls (48.7%) during Year 2. The majority of Pre-K 4 SA children were Hispanic (70.9%) with the remaining children identified as White (17.4%), Black (9.2%), and other ethnicities (2.5%). Almost 77% of children attended Pre-K 4 SA for free; 9% on scholarship, and nearly 14% of children were tuition-paying children. Of those children who attended Pre-K 4 SA for free, 84% did so based on income eligibility.

Average attendance for Pre-K 4 SA children was 91.3% which increased slightly to 92.5% when children who withdrew were excluded. Family engagement events were attended by family members of 93% of the Pre-K 4 SA children and included attendance by more than 4,000 individuals. Close to 60% of those attending family engagement events were mothers.

Edvance administered teacher surveys and conducted classroom observations. Through these surveys and classroom observations, teachers reported frequent use of developmentally appropriate practices and were observed displaying high levels of emotional support and relatively high levels of classroom organization. Instructional support was, on average, at the low end of the mid-range which is consistent with other studies of early childhood programs.

Fidelity of implementation findings were mixed, suggesting some facets of the Pre-K 4 SA program are being implemented with fidelity while other areas may need more focus to reach expected levels of implementation; more complete data collection and submission is necessary to fully understand all facets of implementation.

Pre-K 4 SA children's kindergarten readiness outcomes (measured by the *Teaching Strategies GOLD*) were compared to a nationally representative normed sample of children for six outcomes: cognitive, literacy, mathematics, oral language, physical, and social-emotional. Results indicated that although Pre-K 4 SA children started the school year significantly below the normed sample in all six outcomes, they surpassed the normed sample in three of the six outcomes (cognitive, literacy, and mathematics) by the end of the year were not statistically different in oral language, and closed the gap in the remaining two outcomes (physical and

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social-emotional) by 40% and 76% respectively. Looking further into the Pre-K 4 SA sample with regard to program maturity, significant differences were found for all six outcomes in favor of centers in the second year of implementation (North and South) compared to centers completing the first year of implementation (East and West).

Limitations of the Year 2 evaluation include the lack of a local comparison or control group of children for a comparison to a more similar group of children, as well as lack of a direct child assessment measure. Classroom observation data was also based on one observation of each classroom during the spring, as such no inferences can be made about changes in classroom quality over time. Also, professional development data was only available in the form of hardcopy sign-in sheets which limited analysis. Finally, fidelity of implementation analyses could only include three of the seven critical components of the Pre-K 4 SA program due to data and ongoing program development constraints. Recommendations include collection of more information concerning professional development, working to increase instructional support in the classroom, and the inclusion of developmentally appropriate direct child measures.

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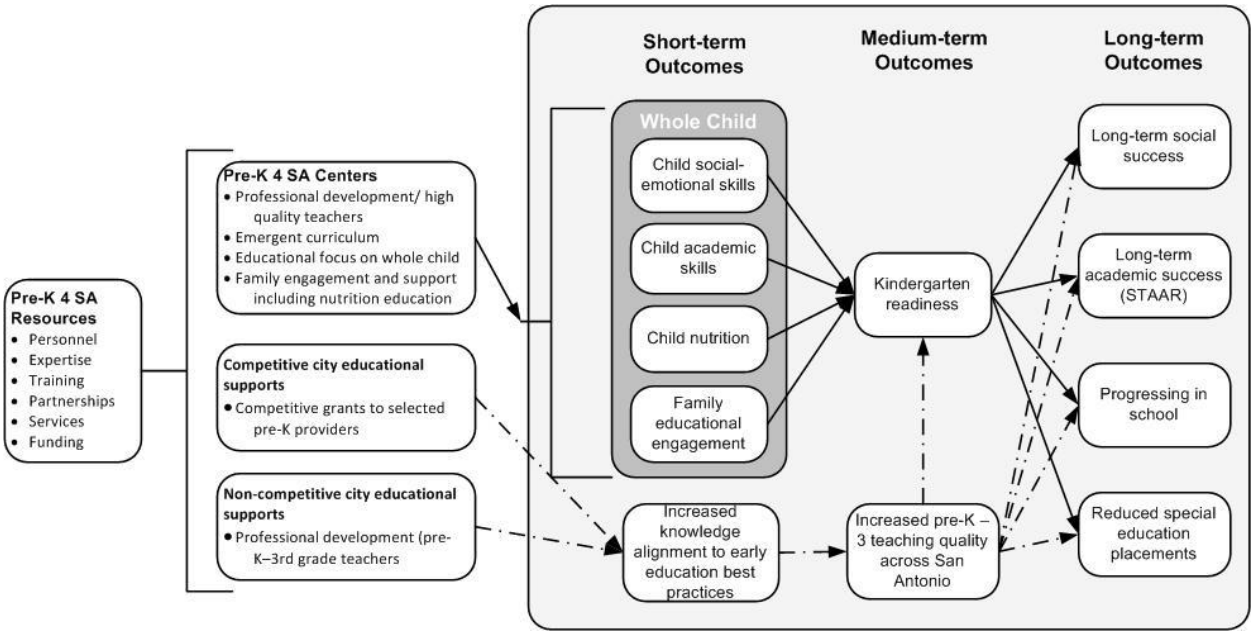
INTRODUCTION

Improving children's kindergarten readiness and narrowing the achievement gap are twin education goals receiving considerable attention throughout the United States (Barnett, 2011). Public investments in preschool education programs have been promoted on the grounds that they can accomplish these twin goals and produce benefits that lead to a high rate of return over time (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002; Heckman, Moon, Pinto, Savelyev, & Yavitz, 2010; Reynolds, Temple, White, Ou, & Robertson, 2011; Rolnick & Grunewald, 2003).

As a result of the evidence for high-quality early education and the recent loss of state-funded seats and slow growth of state programs, new initiatives are emerging. This includes programs at the city level to increase school readiness, decrease achievement gaps, and align early care and education programs with K-12 education systems. San Antonio, Texas is among several cities that have opted for investing in preschool education, in addition to state mandates, much like the Boston pre-K program (National League of Cities, 2012). San Antonio is unique because the city has funded the program through a voter-approved 1/8 cent increase in local sales tax rates starting April 1, 2013. The program, called Pre-K 4 SA, serves many children who are at risk for falling behind their peers and for lacking in kindergarten readiness, with the goal of increasing early childhood quality and school readiness across the city of San Antonio (see Figure 1 for the Pre-K 4 SA theory of change)[1].

Figure 1. Pre-K 4 SA Theory of Change



Note. The solid lines in the theory of change represent pathways inside the Pre-K 4 SA Centers and the dashed lines are pathways outside of the Centers in the larger community.

[1] For a more detailed logic model which supports this theory of change, see Appendix A.

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One of the three main components of the Pre-K 4 SA program theory—educating children in created centers (referred to as Pre-K 4 SA Centers in the visual theory of change)—began during the 2013/14 school year and served nearly 700 children in the first two Pre-K 4 SA Centers (North and South Centers). The past school year (2014/15) saw an increase to more than 1,500 children served across all four Pre-K 4 SA Centers. Pre-K 4 SA estimates it will reach full capacity (serving 2,000 children annually) by 2016/17 in the four Centers across the city.

The purpose of the current report is to present evaluation findings from the second year of the Pre-K 4 SA program. Investigations included: 1) descriptive information concerning child attendance, parent engagement, teacher professional development, and classroom and teacher quality information; 2) fidelity of implementation results for the two active Centers in their second year of operation; and 3) outcome analysis results of the *Teaching Strategies Gold* assessment system (GOLD) which is the primary outcome of interest at the end of the pre-K year.

RESEARCH QUESTIONS

The Year 2 (2014/15) evaluation of Pre-K 4 SA sought to address research questions in three study categories:

1. *Descriptive Research Questions*:
    - What were the reported levels of child attendance during the pre-K year?
    - What were the reported levels of family engagement during the pre-K year? Who were the family members that engaged most often?
    - What were the reported levels of professional development participation by Pre-K 4 SA classroom teachers? Participation in externally offered professional development events?
    - What were teacher reported curriculum and classroom practices?
    - What was the overall observed teacher-child interaction quality in Pre-K 4 SA classrooms in Year 2? Did the interaction quality vary by second year versus first year implementing Centers?
2. *Implementation Research Questions:*
    - Was the Pre-K 4 SA program implemented with fidelity in the two Centers which were in their second year of operation (North and South Centers)?
3. *Outcome Research Questions:*
    - Is the Pre-K 4 SA program associated with a change in Pre-K 4 SA children's' GOLD outcomes at the end of Pre-K 4 SA? How do Pre-K 4 SA children compare to a nationally representative normed sample of children?
    - Do differences in GOLD spring outcomes vary significantly by center program maturity or when amount/level of family engagement is taken into account?

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EVALUATION SAMPLE AND METHODS

Table 1. Children who attended Pre-K 4 SA by District

District name	*Number of children*	*Percentage (%) of total children*
Northside	434	27.7
San Antonio	330	21.0
North East	224	14.3
Edgewood	99	6.3
Harlandale	68	4.3
Southwest	43	2.7
Southside	9	0.6
Tuition	216	13.8
Scholarship	145	9.3
Total	1,568	100.0

Note: Children counted by district attend the program at no cost.

Data was provided for 1,568 children; in Year 2, Pre-K 4 SA served slightly more boys (51.3%) than girls (48.7%). Of those more than 1,500 children, the majority represented three districts: Northside ISD, San Antonio ISD, and North East ISD[2]. In addition, nearly 14% of children paid tuition and slightly more than 9% received scholarships (all other children attended for free). Table 1 also includes the percentage of children per represented school district.

The majority of Pre-K 4 SA children were Hispanic (70.9%) with the remaining children reported as White (17.4%), Black (9.2%), and other ethnicities (2.5%). Out of all children enrolled (both tuition and free attending), almost 78% qualified for free lunch. Of the children who attended for free, 84% were eligible to attend due to income. It is important to note, 145 scholarship children would have met income eligibility criteria; however, they were not in an attendance zone of a partner school district. Table 2 includes the percentage of children, by eligibility, who attended Pre-K 4 SA for free.

Table 2. Children who attended Pre-K 4 SA for free by Eligibility Criteria

Eligibility criteria	*Number of children*	*Percentage (%) of total eligible children*
English language learner	128	10.6
Foster care	12	1.0
Homeless	6	0.5
Income	1,014	84.0
Military	47	3.9
Eligible total	1,207	100.0

Note. The percentage of children who attended Pre-K 4 SA for free was 76.9% of children. Children were removed from eligibility criteria counts in this table if they were identified as scholarship or tuition children. Scholarship children would have qualified but were not associated with partner districts; therefore, actual numbers for eligibility would be higher if scholarship children were included.

[2] These same three districts were also the majority in representation in Year 1 (2013/14).

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Methods

Descriptive research questions were addressed through analysis of existing Pre-K 4 SA databases and two measures (TSEEQ and CLASS). To address the first three descriptive questions pertaining to attendance, family engagement, and professional development, data collected by Pre-K 4 SA was submitted to Edvance and descriptively analyzed. Weights were also assigned to various types of family engagement. The fourth descriptive research question, *What are teacher reported curriculum and classroom practices?* relied on data collected from teachers through a self-report survey. The survey, Teacher Survey for Early Education Quality (TSEEQ), asks teachers to report on several aspects of curriculum and classroom practices. The TSEEQ is a self-report survey for early childhood teachers regarding their classroom practices and quality (Hallam, Rous, Riley-Ayers, & Epstein, 2012). To address the final descriptive questions, *What was the overall observed teacher-child interaction quality in Pre-K 4 SA classrooms in Year 2?* and *Did the interaction quality vary by second year versus first year implementing centers?*, data were analyzed from the Classroom Assessment Scoring System (CLASS).

The implementation research question, *Was the Pre-K 4 SA program implemented with fidelity in the two Centers which were in their second year of operation (North and South Centers)?*, was addressed through fidelity analyses of three critical components of the Pre-K 4 SA logic model: professional development, family engagement support, and intentional quality standards. Thresholds were established by Pre-K 4 SA and results for each component were assessed in reference to the Pre-K 4 SA established thresholds.

The outcome research questions were addressed through inferential tests of differences between the Pre-K 4 SA children and a nationally representative normed sample of children on the GOLD assessment outcomes. In addition, inferential tests were conducted to investigate potential differences in GOLD results by years of implementation (Centers in their second year or first year of implementation), and whether differences in family engagement participation (amount/weight of types of engagement) were related to higher spring GOLD outcomes for students. Refer to Appendix B for more detailed information on the Year 2 evaluation methodology including detailed information pertaining to measures used.

Structure of Year 2 Evaluation

The Year 2 evaluation contained three study categories: descriptive, implementation, and outcome to follow the three types of research questions addressed. These study categories and all Year 2 research questions were guided by the Pre-K 4 SA theory of change and logic model developed in Year 1.

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EVALUATION RESULTS

Descriptive Study Results

Child Attendance in Pre-K 4 SA

Children began attendance in Pre-K 4 SA at different times. Although the majority of children (86.5%) began at the start of the academic year (August 25, 2014), 13.5% of the 1,568 children with attendance data began after that date. The last date children began Pre-K 4 SA was April 20, 2015[3]. Because of these varied dates, some children had the opportunity to attend more days than other children. In fact, the range of possible membership days ranged from 1–178 days with an average of 160.4 days. Average percent attendance across all children was 91.3%. When considering children who stayed in membership with Pre-K 4 SA through the year (did not withdraw), the attendance percentage increases slightly to 92.5%.

Average attendance for Pre-K 4 SA children was 91.3% which increased slightly to 92.5% when children who withdrew were excluded.

One-hundred and seventy-four children withdrew from Pre-K 4 SA over the course of the year. The earliest withdrawals were August 26, 2014 with the last on May 21, 2015. Fifty percent of withdrawals occurred before the end of December. No significant differences were found between children who did and did not withdraw in terms of gender (t (1,566)=0.286, p=.78); eligibility to attend Pre-K 4 SA for free, on scholarship or tuition (F (2, 1,567)[4]=0.07, p=.93), or free lunch status (t (1,566)=-0.077, p=.94) or between racial categories (F (3, 1,567)=5.248, p=.001)[5].

Family Engagement

As part of the Year 1 evaluation, Edvance was only able to report on the total number of family engagement events and participants as information about particular participants was not collected. After discussions and consultation with Edvance at the beginning of Year 2, Pre-K 4 SA began collecting more detailed information concerning participants.

Year 2 family engagement data was provided in connection with 1,460 children (93.1%)[6]; meaning that 93% of children who attended Pre-K 4 SA during Year 2 had at least one family member participate in at least one type of engagement over the course of the pre-K year. In addition, analysis of the family

93% of Pre-K 4 SA children had a family member participate in at least one engagement activity.

[3] Although some children did not begin membership in Pre-K 4 SA until late spring, more than 96% of all children were in membership by the end of the 2014 calendar year.

[4] The F-statistic is represented, for example, as F(2, 1,567) where the first number

[5] Although the overall, F statistic was found to be significant, no post-hoc group comparisons were significantly different from one another. Results from Levene's test of homogeneity of variances showed equal variances could not be assumed; therefore, the Games-Howell post-hoc procedure was employed.

[6] Initial submission of family engagement data appeared to contain more information; however, after data cleaning and removal of children who were actually recognized as Year 3 incoming children, unique children were reduced from 1,590 to 1,471.

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engagement data suggested more than 4,000 unique individuals participated in at least one type of engagement (*n*=4,743)[7] with more than 13,000 engagements documented across those individuals (*n*=13,009).

Of the more than 13,000 engagements, the majority were attended by mothers (7,707; 59%) followed by fathers (1,990; 15%). This is not surprising given that previous research has often focused on involvement and engagement of mothers due to a variety of factors (e.g., Van Voorhis, Maier, Epstein, Lloyd, & Leung, 2013). Table 3 displays the breakdown of engagement by relationship to the Pre-K 4 SA child.

Table 3. Number of family engagement occurrences by relationship

Relationship to Pre-K 4 SA child	*Number of engagement occurrences*	*Percentage (%) of total engagement occurrences*
Mother	7,707	59.24
Father	1,990	15.30
Grandmother	1,274	9.79
Grandfather	336	2.58
Aunt	313	2.41
Uncle	92	0.71
Relative (not specified)	79	0.61
Non-relative[a]	72	0.55
Sister	59	0.45
Friend	41	0.32
Cousin	25	0.19
Brother	23	0.18
Guardian/Case Worker	11	0.08
Unknown	987	7.59
Total	13,009	100.0

[a] Pre-K 4 SA included step-family members such as step-parents in the non-relative category.

As many different types of engagement and events were available during the course of the year, Edvance, in consultation with Pre-K 4 SA, developed a weighted system of engagement which contains four levels of intensity. Those four levels were defined as follows, in descending order:

- Level 4 includes the most intense or direct one-on-one interactions with families such as individual conferences and service referrals.
- Level 3 includes family events in groups where events have a particular educational focus for the attending family members such as events focused on finances, literacy, parenting, or nutrition and health.

[7] As no identification variables were available to link to individuals, the process to identify unique individuals required matching on names; therefore, it is possible that the total number of unique individuals is inflated due to multiple spellings or data entry issues with name entry.

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- Level 2 includes Center celebrations which do not include direct training components for family members such as volunteer opportunities in the classroom, parades, ceremonies, and celebrations.
- Level 1 includes cursory and abbreviated contact with family members which are focused on updates, scheduling, or enrollment tasks.

Level 2 engagement occurred most often for family members (*n*=6,665 instances of Level 2 engagement by family members; 51.2%) and also included at least one family member connected to more than 1,300 Pre-K 4 SA children. Level 1 engagement occurred least often (*n*=911 instances of Level 1 engagement by family members) and was related to the smallest number of Pre-K 4 SA children out of the four types of family engagement (*n*=515). See Table 4 for participation across all four levels.

Table 4. Number of children and family engagement occurrences by engagement level

Level of engagement	*Number of Pre-K 4 SA children represented in family engagement*	*Number of engagement occurrences*	*Number of engagement occurrences (%)*
Level 4	875	2,860	22.0
Level 3	635	2,573	19.8
Level 2	1,365	6,665	51.2
Level 1	515	911	7.0
Total	--	13,009	100.0

Note. A total number of Pre-K 4 SA children is not provided as the numbers representing each level of family engagement were not mutually exclusive as children could be represented in multiple levels.

Pre-K 4 SA also used the newly-created family engagement database to capture other actions and efforts taken by family engagement specialists that did not directly involve family members. Such records included efforts pertaining to more than 500 Year 2 children (*n*=501). Such documentation included attempted family contacts on the part of family engagement specialists that did not lead to actual contact with a family member, direct services to children or observations of specific children in the classroom (no family member present)[8].

Professional Development

As part of the Year 2 evaluation, Edvance was able to request information pertaining to professional development efforts and activities both inside and outside of the Pre-K 4 SA Centers. After several conversations with Pre-K 4 SA, Edvance collected available data for Year 2 and also participated in consultation which resulted in improvement recommendations for registration and data collection, as well as the creation of data collection templates for Pre-K 4 SA to use both internally and with external professional development efforts.

Data available in Year 2 included paper sign-in sheets for events or, in some cases, total number of participants within events. Descriptive information based on the available information is

[8] This data was not included in analyses as it does not pertain to the questions of interest.

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presented here. It is important to note that all descriptive estimates provided here may or may not capture the complete professional development efforts of Pre-K 4 SA as various types of information were available depending upon the type of event, the entity leading the event, and the Center location. It is believed that more complete data will be available in future years as Pre-K 4 SA utilizes improved strategies and data collection templates such as those resulting from consultation with Edvance in the past year.

Internal professional development

Internal professional development refers to professional development activities which were focused within the Pre-K 4 SA Centers specifically for Pre-K 4 SA teachers. Data for participation in internal professional development were received for three types of teachers: those who were assigned to particular classrooms with children (master teachers and teacher assistants) and those who support multiple classrooms and other environments with children (such as buses). For the purposes of this evaluation, results focus on master teachers and teacher assistants (n=112)[9].

Internal professional development efforts were ongoing throughout the academic year and attendance information was provided for 86 of the 105 events[10]. Date ranges on all events began prior to the start of school (July 31, 2014) and continued through June 1, 2015. Topics of events also varied and included foci such as procedures and compliance (CPR training, Hatch training, etc.), academic topics (Phonemic Sequencing & Teaching, Nurturing Young Writers), support for high quality instruction (Adult Child Interactions Instructional Support Training), and identification and behavior management/resolution strategies (Behavior Plan Make and Take Workshop).

Pre-K 4 SA teachers participated in an average of 18 events over the course of the 2014/15 school year.

On average, the 112 teachers attended nearly 18 (M=17.70) separate professional development events during the course of the year ranging from 4–28 events across teachers.[11] When master teachers and teacher assistants (one of each per classroom) are broken into separate groups, results indicate a difference in the average number of professional development events. Specifically, master teachers participated in significantly more professional development events compared to teacher assistants (t (99.3)=-7.28, p<0.000). More specifically, master

[9] Internal professional development data was received for 245 individuals from three of the four Centers. Less concrete information was available to Edvance prior to the writing of this reporting concerning teachers who were not primarily assigned to a particular classroom. Due to this fact, and the fact the primary focus of the evaluation report centers around children and their primary teachers, this focus has been taken concerning reporting of internal professional development efforts.

[10] According to all data received, Pre-K 4 SA hosted 105 internal professional development events; however, individual attendance data was only available for 86 of the 105 events. Total counts of participants not linked to individual teachers were available for the remaining events.

[11] The average number of events does not include the 19 events for which individual data was not available nor for teacher engagement in Professional Learning Communities as information was not available with regard to amount of participation in such activities.

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teachers attended, on average nearly 21 events (*M*=20.98; *SD*=5.50) while teacher assistants attended slightly more than 14 events on average (*M*=14.41; *SD*=3.92). No significant differences were found in professional development attendance across centers based on data provided.

External professional development

External professional development refers to professional development activities which were focused outside of the Pre-K 4 SA Centers to the larger population of early childhood teachers and other early childhood personnel, across the city of San Antonio. In some cases such efforts also yielded interest and attendance from early childhood personnel from outside of the city, as well.

Multiple types of external professional development efforts occurred during the 2014/15 school year. Often different types of external professional development efforts were geared towards early childhood and elementary educators working in particular settings. Table 5 provides more details about targeted early childhood and elementary settings and types of external professional development offered.

Table 5. Early childhood setting by professional development engagement type

Early childhood setting	*Engagement Types*				
	Center/individual requests	*In district support/district or individual request*	*Early Childhood Training and Resource Fairs*	*Saturday Academy*	*Summer Academy*
Childcare/ private	X		X	X	X
Home care			X	X	X
Non-partner school district				X	X
Partner school district		X		X	X

Note: Saturday Academies could include singular Saturday events, as well as series events which followed a topic over multiple Saturdays.

Individual attendance data was primarily available for Saturday and Summer Academies. Data was provided for 35 Saturday and Summer Academy events during the 2014/15 school year. Individual event attendance ranged from 5–46 individuals with an average attendance of 20.6. Across those events, nearly 400 (*n*=399) separate individuals registered for at least one event with 331 (83.0%) ultimately attending at least one event. Of those 331 individuals who attended at least one external professional development, 55.0% (*n*=182) returned to Pre-K 4 SA for further professional development within the 2014/15 school year (attended two or more events). The range of external professional development events attended by an individual ranged from 1–12 with an average of 2.06 events per individual.

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Participants who attended at least one Saturday or Summer Academy represented all seven partner districts, 9 non-partner districts, and 46 childcare/ preschool locations (see Table 6 for more information). Additionally, although external professional development events were primarily for early childhood and elementary educators outside of Pre-K 4 SA, some Pre-K 4 SA teachers were found to participate in these opportunities, as well. In fact, although not required for Pre-K 4 SA teachers, 17 master teachers were identified as having attended at least one external event.

Table 6. Number of external professional development attendees by educational setting

Educational setting	*Number of unique attendees*	*Percent (%) of unique attendees*
Childcare/ private	94	28.40
Non-partner school district	26	7.86
Partner school district	156	47.13
Pre-K 4 SA	29	8.76
Other/Unknown	26	7.86
Total	331	100.0

Note: Attendees from non-partner school districts included nearby districts, as well as districts from other Texas locations. Non-partner districts represented included the following: Alamo Heights ISD (San Antonio), Austin ISD, Comal ISD, Dallas ISD, Lamar CISD, Poteet ISD, Schertz-Cibolo ISD, South San ISD (San Antonio), and Uvalde CISD.

Summary information was also available for Early Childhood Training and Resource Fairs, as well as efforts particularly focused on individual partner districts. More specifically, Pre-K 4 SA participated in and contributed to six Early Childhood Training and Resource Fairs during the 2014/15 school year in nearly 30 sessions. Participation in these Early Childhood Training and Resource Fairs was usually done in collaboration with Voices for Children, and in one instance also in collaboration with St. Phillips College. In addition, during the 2014/15 school year, Pre-K 4 SA external professional development staff collaborated with the City of San Antonio Head Start in the San Antonio Early Learning Summit, as well as the Texas Association of Administrators & Supervisors of Programs for Young Children at their annual state conference.

Finally, 14 partner district-focused professional development efforts with four partner districts occurred across the year. These events focused on multiple content areas such as literacy (in both English and bilingual contexts), writing, mathematics, and science.

Teacher Practices

During the spring, 166 Pre-K 4 SA teachers completed the Teacher Survey for Early Education Quality (TSEEQ)[12]. The majority of responding teachers were female (95.2%) and had obtained

[12] There is a difference in respondents between Years 1 and 2 of the evaluation. During Year 2, Center directors also shared the survey with teachers classified as teaching assistants (TA1s) who support multiple classrooms and the Center outside of the classrooms. Only master teachers and teaching assistants assigned to specific classrooms (TA2s) were included as Year 1 respondents.

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at least a bachelor's degree (76.5%; *n*=127). Nearly 28% possess a master's degree (*n*=46). All surveys were completed in May and the beginning of June.

Teachers responded to questions in seven categories: assessment, physical environment, family involvement, instruction, curriculum, interaction and emotional climate, and leadership and supervision. Most items were reported using a 6-point scale of frequency although meaning of items changed depending on the category and item. Results are presented separately for each of the seven categories (see Table 7, Table 8, and Table 9).

Assessment

Teachers responded to seven items concerning assessment practices. Overall, teachers reported high levels of frequency with which they participated in various assessment activities. Teachers reported documenting children's physical, social, emotional and cognitive development most often across all Assessment items. Table 7 provides average frequency reports by item.

Overall, teachers reported high levels of frequency with which they participated in various assessment activities.

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Table 7. TSEEQ Average Assessment Frequency Responses by Item

Item–How often do you:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
Look for the development of learning goals, when assessing children that are based on a preschool curriculum?	165	1–5	4.42 (0.67)	Between frequently and always
Ask children questions in a variety of ways to assess their learning (such as "How do you feel about...?" "In what ways do you think...?")	165	3–5	4.56 (0.54)	
Assess children's physical, social, emotional and cognitive development?	165	3–5	4.58 (0.55)	
Assess children's development and learning individually and while they work together in groups?	164	3–5	4.52 (0.56)	
Assess children when they play?	164	3–5	4.48 (0.61)	
Adapt your assessment strategies for students with disabilities?	164	0–5	4.21 (1.11)	
Document informal child assessment information?	164	1–4	3.32 (0.8)	Between monthly and weekly

SD=standard deviation

Physical environment

Teachers responded to eight items concerning physical environment of their classrooms. Overall, teachers reported positively about the physical classroom environment. In general, resources and materials were reported to be in good condition with environments conducive to learning. Table 8 and Table 9 provide results by item.

Overall, teachers reported positively about the physical classroom environment. In general, resources and materials were reported to be in good condition with environments conducive to learning.

Table 8. TSEEQ Average Physical Environment Frequency Responses by Item

Item	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
How often do you have your books organized and easily accessible to the children in your classroom?	164	2–5	4.71 (0.59)	Between frequently and always
How often do you manage usage of technology equipment to provide equal opportunities for all children, including children with disabilities?	164	1–5	4.57 (0.72)	

SD=standard deviation

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Table 9. TSEEQ Physical Environment Category Responses by Item

Item (Categories):	*Response frequency*	*Response percentage (%)*
How many information books does your classroom book area contain?	164	
0–2 books	4	2.44
3–5 books	37	22.56
6–10 books	38	23.17
10 or more books	85	51.83
The materials in my classroom are in good condition.	164	
No	0	0
Yes	158	96.34
Sometimes	6	3.66
The classroom environment is peaceful and calming for children (such as use of soft or natural lighting, avoid overwhelming or distracting colors and objects, reducing clutter).	164	
No	1	0.61
Yes	145	88.41
Sometimes	18	10.98
I have a science area set up in the classroom that is full of a variety of real life materials.	164	
No	26	15.85
Yes	138	84.15
Outside, there is a designated area for plants/ and or a garden.	164	
No	0	0
Yes	164	100
How much of the furniture in your classroom is in good condition?	164	
None	0	0
Some	0	0
Most	12	7.32
All	152	92.68

Family involvement

Teachers responded to six items concerning family involvement. Overall, teachers reported that both they and Pre-K 4 SA are thoughtful about family engagement, provide a variety of participatory opportunities, and hold such events at various times so more families can participate. Similarly to Year 1 evaluation findings, teachers also report having working relationships with most, if not all, families and reported engaging in frequent conversations with families about their children. Table 10 provides results by item.

Teachers reported having working relationships with most, if not all, families.

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Table 10. TSEEQ Family Involvement Category Responses by Item

Item (categories):	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
How often do you encourage parents and/ or family members of different cultures and ethnicities to share cultural traditions with the teachers and children in my classroom?	164	0–5	3.67 (1.1)	Between sometimes and frequently
How often do you have conversations with families aimed at learning more about their goals for their child?	164	1–5	3.99 (0.91)	
How often do you vary the times that special events are held so more families can participate?	164	0–5	4.14 (0.92)	Between frequently and always
How often do you have programs that invite families to participate in program wide family involvement opportunities (e.g., family advisory board; parent education classes, etc.)?	164	0–5	4.28 (1.01)	
In my classroom, I have a good working relationship with:	164	1–4	3.59 (0.59)	Between most and all families
Families participate in orientation activities to get to know the class.	164	0–4	3.18 (0.79)	

SD=standard deviation

Instruction

Teachers responded to 18 items concerning instruction. Overall, teachers reported performing several high-quality practices on a frequent basis. Such practices included providing stimulating and developmentally appropriate learning environments and situations for children to participate in, as well as avoiding practices that are discouraged from use with young children such as rote worksheet practice of concepts. Table 11 provides results by item.

Overall, teachers reported creating developmentally appropriate learning environments and situations for children as well as avoiding practices discouraged from use with young children such as using rote worksheets.

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Table 11. TSEEQ Instruction Category Responses by Item

Item–How often do you:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
Plan and implement activities that build on children's interests?	162	3–5	4.62 (0.57)	Between frequently and always
Have conversations with the children based on their interests and questions?	162	2–5	4.7 (0.52)	
Change activities when you notice children are disengaged or having a hard time paying attention?	162	2–5	4.56 (0.63)	
Use incidental teaching to help children expand their language (such as encouraging a child to verbally ask for a ball instead of gesturing towards the ball)?	162	3–5	4.74 (0.48)	
Follow a schedule where the children alternate between quiet and active times?	162	3–5	4.67 (0.53)	
Provide advanced notice to the children before transitioning to another activity (e.g. "In two minutes we will be putting the blocks away and washing our hands").	162	4–5	4.83 (0.37)	
Actively structure your classroom activities, routines and the environment to help prevent challenging behaviors?	162	2–5	4.7 (0.51)	
Plan instruction based on what you know about individual needs of children, including those with disabilities?	162	2–5	4.63 (0.58)	
Talk with the children about why it is important to be healthy?	162	3–5	4.53 (0.57)	
Structure play experiences that encourage children to interact with one another?	162	3–5	4.73 (0.47)	
Group children in a variety of ways for classroom activities (e.g. large groups, small groups, one on one with a teacher, one on one with another child)?	162	2–5	4.76 (0.5)	
Plan activities and events to help children transition to kindergarten (such as visit kindergarten classrooms with the children)?	162	0–5	3.47 (1.52)	Between sometimes and frequently
Ask children a variety of questions during activities to encourage their learning?	162	0–5	4.71 (0.59)	Between frequently and always
Integrate science concepts (such as observing, explaining, experimenting, classifying, and gathering information) into classroom activities?	162	3–5	4.53 (0.56)	
Teach math and number concepts through worksheets?	162	0–5	0.6 (1.42)	Between never and rarely
Children have opportunities to engage in open ended creative art activities?	162	2–5	4.86 (0.43)	Between weekly and daily
Provide children with opportunities to play games in the classroom?	162	0–5	4.67 (0.74)	
Plan and implement small group activities?	162	0–5	4.9 (0.55)	

SD=standard deviation

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Curriculum

Teachers responded to 37 items concerning curriculum. Overall, teachers report frequently engaging in developmentally appropriate practices with children. Teachers also report encouraging children to share and discuss activities and creations, as well as make predictions. The only curriculum items teachers rated as occurring less often were items related to behaviors and expectations that are not developmentally appropriate such as expecting children to eat lunch quietly and manage children's access to writing materials to avoid messes. Table 12 and Table 13 provide results by item.

Overall, teachers reported frequently engaging in developmentally appropriate practices with children.

The only curriculum items rated as occurring rarely or once in a while, were items related to behaviors and expectations such as expecting children to eat lunch quietly and manage children's access to writing materials to avoid messes.

First, teachers reported on 19 curricular items with a scale ranging from *never* to *always*.

Table 12. TSEEQ Curriculum Category Responses by Item with Scale from Never to Always

Item–How often do you:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
Include specific child assessment tools or ideas for assessment in your curriculum?	160	0–5	4.15 (0.9)	
Modify the curriculum to better engage children in the learning process?	160	3–5	4.45 (0.59)	
Think your curriculum meets the needs of the children in your classroom?	160	0–5	4.43 (0.71)	
Have an organized plan for how to teach literacy concepts to the children in your classroom?	160	2–5	4.5 (0.63)	
Ask the children questions about the story when reading to them (such as "what do you think might happen next?")?	160	3–5	4.73 (0.46)	Between frequently and always
Encourage children to demonstrate their understanding about a story or book by acting it out, drawing a picture about it, or using some other expressive approach?	160	1–5	4.45 (0.7)	
Have math books readily accessible in the classroom?	160	0–5	4.02 (1.12)	
Have fine arts books (music and art) readily accessible in the classroom?	160	0–5	4.02 (1.18)	

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Item–How often do you:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
Manage children's access to writing materials to avoid messes?	160	0–5	2.64 (2.07)	Between once in a while and sometimes
Encourage children to separate familiar words into syllables (such as clapping out the syllables in their names)?	160	1–5	4.21 (0.82)	Between frequently and always
Expect children to sit quietly while they eat their meal during lunchtime?	160	0–5	1.06 (1.53)	Between rarely and once in a while
Encourage children to talk with you about their art creations?	160	3–5	4.76 (0.46)	Between frequently and always
Encourage children to engage in art projects over several days (such as, by storing their materials and creations and provide opportunities for them to continue their work)?	160	2–5	4.39 (0.7)	
Play music in the classroom for a group time, dramatic play, movement, or other activities (besides naptime)?	160	1–5	4.51 (0.75)	
Encourage children to adopt a variety of roles in the dramatic play area?	160	1–5	4.49 (0.72)	
Have science goals for the children in my classroom?	160	1–5	4.04 (0.92)	
Allow children to play outside every day?	160	4–5	4.87 (0.34)	
Discuss the importance of healthy habits with the children (such as washing hands, brushing teeth)?	160	3–5	4.75 (0.48)	
Ensure that children properly wash their hands before meals and snacks?	160	4–5	4.94 (0.23)	

SD=standard deviation

Teachers were also asked to rate the ability with which supervisors are able to answer teacher questions about the curriculum. Reported ratings ranged from *never* to *always* with an average between *frequently* and *always* (*M*=4.54; *SD*=0.74). Additionally, teachers were asked whether they implement any of the following: a published curriculum, written curriculum, or curriculum framework. One hundred-thirty teachers (81.3% of 160 responders) answered in the affirmative.

Next, teachers also reported on classroom curriculum behaviors on a scale of frequency ranging from *never* to *daily*, 2–3 times per day, or every few weeks as indicated in Table 13. Overall, teachers reported avoiding practices that are discouraged from use with young children such as use of worksheets.

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Table 13. TSEEQ Curriculum Category Responses by Item with Various Scales

Item–How often does the following occur:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
Scale: Never, Rarely; A few times a year; Monthly; Weekly; Daily				
I use worksheets to improve handwriting skills (such as tracing letters or words).	160	0–1	0.81 (0.39)	Between never and rarely
When children share thoughts, I write their ideas down in front of them.	160	0–5	0.61 (1.33)	Between never and rarely
I plan activities in the classroom that encourage children to use one to one correspondence (attaching one and only one number to each object or event).	160	0–5	4 (1.23)	Between weekly and daily
I show children written numbers and the corresponding number of objects and actions (such as the number 2 and two crayons; the number 1 and one clap).	160	0–5	4.26 (0.96)	
I encourage children to play interactive math computer games.	160	0–5	4.46 (0.82)	
I discuss the shapes that children create in their drawings, using building blocks, or other activities.	160	0–5	3.8 (1.28)	Between monthly and weekly
I encourage children to describe features and parts (such as aides, curves, and angles) of two and three dimensional objects.	160	1–5	4.71 (0.56)	Between weekly and daily
I incorporate maps of familiar places in our classroom activities (classroom, playground, center).	161	1–5	4.32 (0.86)	
I encourage children to measure things through standard (such as measuring with a yard stick) and not standard units of measurement (measuring with shoes).	161	0–5	3.82 (1.21)	Between monthly and weekly
I encourage children to make predictions about will happen during typical classroom activities (such as stacking books, mixing paints).	161	0–5	3.61 (1.41)	
I encourage children to describe their mathematical understanding and problem solving.	161	2–5	4.76 (0.51)	Between weekly and daily
I encourage children to record (such as draw, write) natural materials or objects.	161	1–5	4.55 (0.81)	
I talk with children about changes in their environment (such as changes to the playground, animal lifecycles).	161	0–5	4.42 (0.8)	

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Item–How often does the following occur:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
Scale: Never, Rarely; Monthly; Weekly; Once a day; 2-3 times a day				
I teach phonological awareness through intentional activities (such as rhyming and sound games).	161	2–5	4.47 (0.71)	Between once a day and 2-3 times a day
I initiate conversations with small groups of children during free play and meal times.	161	1–5	4.9 (0.49)	
Scale: Never, Rarely; Once a year; Every few months; Every few weeks				
I rotate the materials in my science center.	161	0–4	3.59 (0.81)	Between every few months and every few weeks

SD=standard deviation

Interaction and emotional climate

Teachers responded to 12 items concerning interaction and emotional classroom climate. Overall, teachers reported creating supportive emotional climates and positive teacher-child interactions in the classroom. Table 14 provides results by item.

Overall, teachers reported creating supportive emotional climates and positive teacher-child interactions in the classroom.

Table 14. TSEEQ Interaction and Emotional Climate Category Responses by Item

Item–How often does the following occur:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
I spend extra time with new children who are transitioning into my classroom.	148	2–5	4.63 (0.57)	Between frequently and always
I encourage children who are shy or withdrawn to interact with peers.	157	3–5	4.61 (0.58)	
Comfort the children in your classroom when they are upset?	161	4–5	4.81 (0.4)	Between frequently and always
Talk with the children about the artwork they create in your classroom?	161	3–5	4.77 (0.44)	
Talk to individual children frequently throughout the day?	161	2–5	4.84 (0.42)	
Get down on a child's level when you are talking to him/ her?	161	4–5	4.89 (0.32)	
Provide children access to a wide variety of materials in your classroom?	161	4–5	4.93 (0.26)	
Encourage children to help you make classroom decisions (such as let them help you develop classroom rules or plan certain activities)?	161	3–5	4.69 (0.5)	

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Item–How often does the following occur:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
See that the children in your classroom typically get alone with each other?	161	3–5	4.66 (0.5)	
Encourage children to respect each other's differences?	161	4–5	4.89 (0.32)	
Encourage children to problem solve to develop strategies to resolve conflicts?	161	4–5	4.9 (0.3)	
Encourage children to comfort each other when they became upset?	161	3–5	4.78 (0.46)	

SD=standard deviation

Leadership and supervision

Teachers responded to 14 items concerning leadership and supervision. Overall, teachers report they are adequately prepared to work with children and their families, as well as work with them and others, know and receive appropriate support, and often attend training or receive resources to support children in their classrooms. Teachers also reported rarely using strategies that are not developmentally appropriate while reporting that developmentally appropriate strategies were used often. Table 15 provides results by item.

Overall, teachers report they are adequately prepared to work with children and their families, as well as work with them and others, know and receive appropriate support, and often attend training or receive resources to support children in their classrooms.

Table 15. TSEEQ Leadership and Supervision Category Responses by Item

Item–How often do you:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
Spend a significant amount of time setting limits in my classroom?	159	0–5	3.2 (1.29)	Between sometimes and frequently
Allow children to actively participate in solving their own problems and conflicts?	159	3–5	4.75 (0.45)	Between frequently and always
Keep time spent transitioning between activities at a minimum?	159	0–5	4.31 (0.84)	
Know the evaluation process and tools your supervisor uses to assess your performance?	159	1–5	4.21 (1.01)	
Are you provided time to reflect on your practice?	159	0–5	3.86 (1.14)	Between sometimes and frequently
Feel that you are aware of the appropriate steps to take when referring a child for special services?	159	0–5	3.72 (1.28)	
Receive information from your supervisor that he/ she receive from trainings, workshops, or conferences?	159	1–5	4.09 (1.08)	Between frequently and always

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Item–How often do you:	*Number of responses*	*Range of responses*	*Average response (SD)*	*Position in response scale*
Feel that you have had sufficient training in how to successfully implement our center's curriculum?	159	1–5	4.06 (1.04)	
Attend workshops or trainings that are relevant to your own particular needs and interests as a teacher?	159	0–5	4.11 (1.01)	
Feel that you have been adequately prepared to work effectively with diverse groups of children and their families?	159	2–5	4.38 (0.77)	
Receive appropriate resources and support when referring a child for special services?	134	0–5	3.94 (1.15)	Between sometimes and frequently
I send my children to time out in my classroom[a]	159	0–5	0.14 (0.58)	Between never and rarely
I work with other professionals and families to develop individualized behavior plans for children with challenging behaviors	151	0–5	3.75 (1.24)	Between sometimes and frequently

SD=standard deviation

[a] The scale for this item is slightly different than the other items in this table. The scale for this item is as follows: *rarely*, *a few times a year*, *monthly*, *weekly*, *daily*. The scale for the other items in this table is as follows: *rarely*, *once in a while*, *sometimes*, *frequently*, *always*.

Teachers were also asked to report on how much they agreed that teaching evaluations inform their professional development plans. While reported scores ranged from 1–5 on the 5-point scale (strongly disagree to strongly agree with the midpoint being neutral), teachers, on average, reported neutrally regarding whether teaching evaluations informed their professional development plans (M=2.99; SD=0.77).

Classroom Observations

All 76 Pre-K 4 SA classrooms were observed during Year 2 using both the *Classroom Assessment Scoring System* (CLASS) and the *Pre-K 4 SA Classroom Observation Measure* (P-COM). Of the 76 classrooms observed, 17 were located at the East Center, 20 at the North Center, 20 at the South Center, and 19 at the West Center.

Classroom Assessment Scoring System (CLASS)

Scores for the Emotional Support domain ranged from 3.44–7.00 (on the 1 to 7 scale) across all five observation cycles with most scores in the high range of Emotional Support, suggesting effective teacher-child interactions were observed most often during the observation period. Slightly lower, yet with an overall score in the upper end of the middle range, Classroom Organization domain scores ranged from 2.33–7.00, which suggests classrooms showed a mix of effective interactions with periods when interactions were not as effective or were absent with regard to classroom organization. Finally, Instructional Support domain scores ranged from

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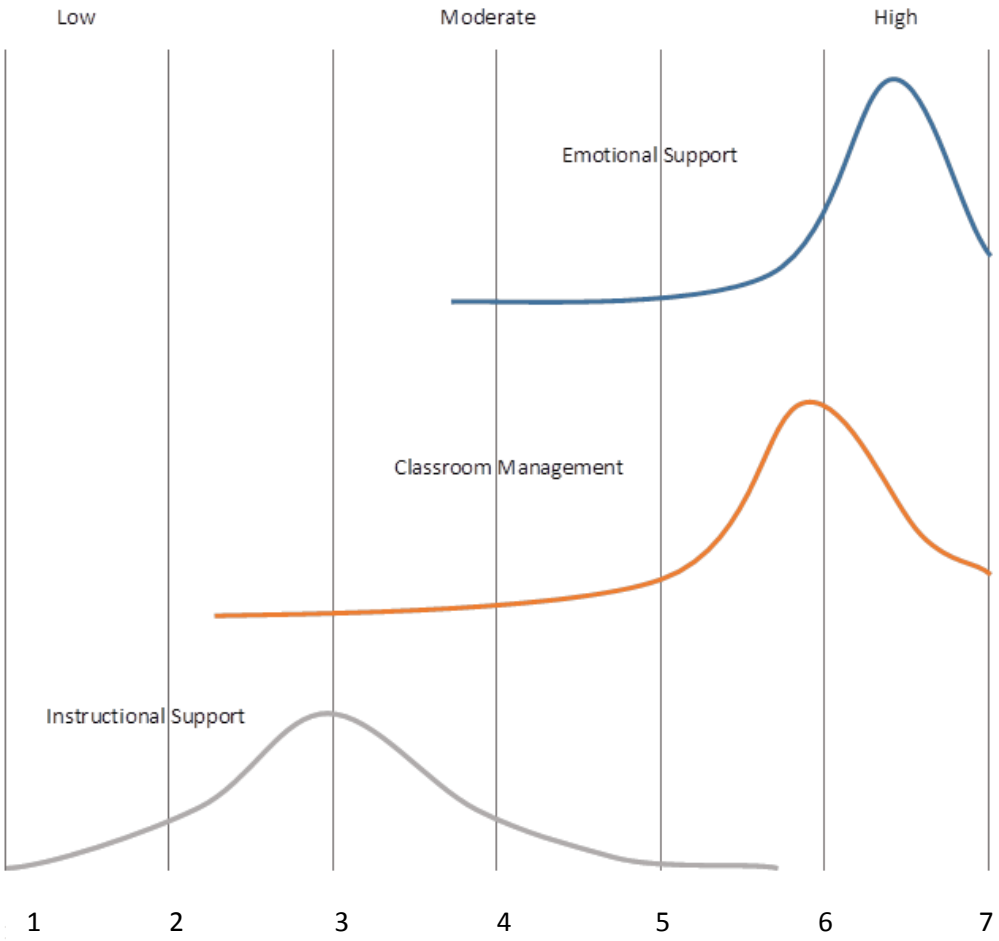
1.00–5.73 with an average score at the low end of the middle range at 3.02, which suggests only some observed interactions included support from teachers that extends children's thinking or asking questions that encourage children to analyze and reason throughout the observation period. Past research using the CLASS has often noted the low scores that are commonly seen with respect to the Instructional Support domain (La Paro, Pianta, & Shuhlman, 2004; Locasale-Crouch et al., 2007; Mashburn et al., 2008). Average observed scores for each of the three CLASS domains are provided in Figure 2.

Figure 2. Average classroom quality scores for Pre-K 4 SA Year 2



Looking more into the average Emotional Support domain scores, only 7% of classrooms were observed in the middle range while 93% of classrooms observed provided high levels of emotional support in the classroom. Approximately 28% of classrooms (27.6%) were observed providing middle range classroom organization quality while the remaining 71% were observed providing high levels of classroom organization. The remaining 1% were observed providing low-range classroom organization. Finally, approximately 40% of the classrooms (39.5%) were observed providing low levels of instructional support, approximately 60% (59.2%) were

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observed providing moderate levels of instructional support, and 1% were observed providing high levels of instructional support.

Table 16 provides average scores by each of the 10 outcomes that make up the three domains.

Table 16. Average Year 2 CLASS scores

CLASS outcome	*Average*	*Total range observed*	*Standard deviation (SD)*
Emotional Support Domain	6.34	3.44–7.00	0.64
Positive Climate	6.38	2.75–7.00	0.81
Negative Climate[a]	6.82	5.00–7.00	0.37
Teacher Sensitivity	6.16	2.50–7.00	0.81
Regard for Student Perspectives	5.99	2.25–7.00	0.95
Classroom Organization Domain	5.93	2.33–7.00	0.97
Behavior Management	6.06	2.25–7.00	1.07
Productivity	6.05	2.40–7.00	1.06
Instructional Learning Formats	5.67	2.00–7.00	1.06
Instructional Support Domain	3.02	1.00–5.73	1.14
Concept Development	2.85	1.00–5.80	1.13
Quality of Feedback	2.98	1.00–6.00	1.36
Language Modeling	3.23	1.00–5.80	1.13

SD=standard deviation

[a] Negative Climate is initially scored with lower values representing no or low negative climate. These scores are then reverse-coded to reflect the same direction (higher values are positive) as the other dimensions.

The three CLASS domains and 10 CLASS dimensions were analyzed to determine if there were differences in classroom teacher-child interactions across Pre-K 4 SA Center program maturity. For this analysis the North and South Centers were grouped together and the East and West Centers were grouped together. The rationale was the North and South Centers were in the second year of implementation while the East and West Centers were in the first year of implementation. Therefore, this analysis would provide information to determine if there were differences on the three CLASS domains based on the number of years a Center has been implementing Pre-K 4 SA.

For the three domains and 9 of the 10 dimensions the results were statistically significant (see Table 17). The dimension of Negative Climate was not statistically significant. All significant findings were in favor of the North and South Centers which provide evidence that there are higher quality teacher-student interactions as teachers gain more experience. The lack of statistical significance for Negative Climate suggest that teachers provide similar levels regardless of the years of implementation of the Center in which they teach. (See Appendix C for *t*-test results of these significant differences.)

These findings suggest teacher-child interactions at Pre-K 4 SA Centers in their second year of implementation are higher in quality than interactions in first year centers.

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Table 17. Average Year 2 CLASS Scores by Center Group

CLASS outcome	*North/South Centers*		*East/West Centers*		*Is difference between center groups statistically significant?*
	M (SD)	*Total range observed*	*M (SD)*	*Total range observed*	
Emotional Support Domain	6.56 (0.55)	(4.75–7.00)	6.09 (0.65)	(3.44–-7.00)	Yes
Positive Climate	6.57 (0.69)	(4.60–-7.00)	6.16 (0.88)	(2.75–-7.00)	Yes
Negative Climate[a]	6.89 (0.36)	(5.00–-7.00)	6.74 (0.38)	(5.80–-7.00)	No
Teacher Sensitivity	6.40 (0.75)	(3.60–-7.00)	5.89 (0.81)	(2.50–-7.00)	Yes
Regard for Student Perspectives	6.37 (0.66)	(4.60–-7.00)	5.56 (1.05)	(2.25–-7.00)	Yes
Classroom Organization Domain	6.21 (0.93)	(3.12–-7.00)	5.60 (0.93)	(2.33–-6.93)	Yes
Behavior Management	6.34 (1.00)	(3.00–-7.00)	5.75 (1.07)	(2.25–-7.00)	Yes
Productivity	6.30 (1.05)	(2.40–-7.00)	5.77 (1.02)	(2.75–-7.00)	Yes
Instructional Learning Formats	6.00 (0.95)	(3.75–-7.00)	5.30 (1.06)	(2.00–-7.00)	Yes
Instructional Support Domain	3.46 (1.13)	(1.13–-5.33)	2.53 (0.94)	(1.00–-5.73)	Yes
Concept Development	3.23 (1.14)	(1.00–-5.20)	2.42 (0.96)	(1.00–-5.80)	Yes
Quality of Feedback	3.45 (1.36)	(1.00–-6.00)	2.45 (1.15)	(1.00–-5.60)	Yes
Language Modeling	3.71 (1.09)	(1.40–-5.40)	2.71 (0.94)	(1.00–-5.80)	Yes

M=mean
SD=standard deviation

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Implementation Study Results

Information on fidelity of program implementation conveys whether the intended program components were in place and, in turn, whether results found in an evaluation can be attributed to the actual intended program. In other words, an analysis of the program fidelity is important to ensure evaluation results can be attributed to the program and not to other factors that may have affected the outcomes investigated. For example, if positive evaluation results are found but fidelity information suggests the program was not fully in place, it is likely the results are not due to the intended program. Similarly, if no results were found and fidelity information suggests the program was not in place, a lack of results is not surprising because the program was not delivered as intended. In newly initiated programs such as Pre-K 4 SA this information can be formatively helpful to understand growth and potential improvement points in implementation. Additionally, programs receiving such information then have an opportunity to more completely and specifically state expectations for implementation on the most critical components of the program.

The fidelity of implementation in Year 2 focused on measurable indicators across three critical components of the Pre-K 4 SA program for which definitive expectations were in place[13]. Future investigations into fidelity of implementation will most likely include additional indicators and critical components as programming and expectations are solidified and quality of measurement increases. The three critical components investigated in the Year 2 study were Family Engagement Support, Intentional Quality Standards, and Professional Development[14]. Data was available for between one and four indicators across these critical components for a total of six indicators which were investigated (see Table 18).

Table 18. Components and indicators included in fidelity analysis

Critical components	*Indicators*
Family Engagement Support	1. Parent attendance in fall and end of year conferences with teachers.
Intentional Quality Standards	2. Teacher-child ratio 3. Attendance 4. Teacher-child interaction quality 5. Use of instructionally-focused developmentally appropriate strategies and conflict resolution strategies
Professional Development	6. Attendance in pre-service professional development sessions prior to the beginning of the school year

[13] Four additional critical components are reflected in the Pre-K 4 SA logic model; however, these components could not be included in this initial fidelity investigation for three primary reasons. One component (Civic Engagement) is still in development by Pre-K 4 SA, two components (Curriculum and Authentic Assessment and Nutrition) have no indicators with definitive expectation thresholds and/or data was not collected on some indicators. Finally, although there was at least one expectation in the final component (Community Enrichment) it rested on a comparison to the 2013/14 external professional development information which was not part of the evaluation efforts in Year 1.

[14] For a complete picture of all Pre-K 4 SA critical components and indicators see the Logic Model in Appendix A.

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Because the East and West centers were in the initial year of implementation during Year 2, fidelity of implementation results were only investigated for the North and South centers (the centers with two years of implementation). Information on fidelity of implementation was gathered primarily through five sources[15]:

1. Collection of family engagement data by Pre-K 4 SA.
2. Administration by Edvance researchers and other trained observers of the Classroom Assessment Scoring System (CLASS).
3. Administration by Edvance researchers and other trained observers of the Pre-K 4 SA Classroom Observation Measure (P-COM).
4. Collection of attendance data by Pre-K 4 SA.
5. Collection of internal professional development data by Pre-K 4 SA.

It is important to note all fidelity of implementation analyses were conducted on available data which may under-represent actually levels of fidelity if data entry was not complete. For example, if all family engagement interactions were not captured in the family engagement data provided to Edvance, results for this component may under-represent actual attendance by family members. Likewise, if some family members did not sign into some events, their participation may not have been captured by the provided data.

Family Engagement Support

One indicator was investigated to assess fidelity of this critical component: parent attendance in fall and end of year conferences with teachers[16]. The Pre-K 4 SA established expectation for this indicator was 100% of children would be represented by at least one adult at both the fall and end-of-year (spring) conferences with teachers. A total of 196 adults, representing 191 unique Pre-K 4 SA children, attended conferences with teachers in the fall; 526 adults representing 332 unique Pre-K 4 SA children, attended conferences with teachers in the spring[17]. Pre-K 4 SA staff members have indicated family engagement data collected and provided are not encompassing of all family engagement instances; therefore, caution is warranted in interpretation of family engagement fidelity findings. Edvance and Pre-K 4 SA are already working to ensure completeness of engagement data in future years.

Intentional Quality Standards

Four indicators were investigated to assess fidelity of this critical component: 1) teacher-child ratio, 2) attendance, 3) teacher-child interaction quality, and 4) use of developmentally

[15] For more information on the CLASS and P-COM see Appendix B.

[16] Three other indicators comprise this critical component; however, no set expectations were identified pertaining to the remaining components (staff communication, parent training sessions, and BCFS parenting classes. As expectations are specified Edvance will engage with Pre-K 4 SA to identify appropriate data to include in future fidelity investigations.

[17] It is important to note some children appeared to have adults attend multiple conferences during the spring.

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appropriate strategies (instructionally focused) and conflict resolution strategies[18]. Overall, Pre-K 4 SA was found to partially implement this critical component with fidelity. More specifically, two of the four indicators met or exceeded respective thresholds, and one indicator was found to be borderline. The final indicator was not found to reach the intended threshold in Year 2.

Teacher-child ratio and attendance

The teacher-child ratio was collected through the spring CLASS observations. In all 40 North and South classroom observations, the ratio of 1:10 was maintained with an average of 2.1 teachers and 16.8 children (1:8 ratio) present across all observation cycles in both centers.

When attendance data from North and South center children who did not withdraw from Pre-K 4 SA during the year was examined, the attendance was found to be 92.7% just below the 93% threshold.

Teacher-child interaction quality

The expectation with regard to teacher-child interaction quality was to increase average values across all three domains; however, no specific increased value was identified. Table 19 shows the average CLASS domain scores for the North and South centers from Year 1 (2013/14) and Year 2 (2014/15).

Table 19. CLASS domain average scores over time for North and South centers

	Year 1		*Year 2*	
CLASS Domain	*M (SD)*	*Total range observed*	*M (SD)*	*Total range observed*
Emotional Support	6.28 (0.35)	5.60–6.75	6.56 (0.55)	4.75–7.00
Classroom Organization	5.75 (0.60)	4.53–6.73	6.21 (0.93)	3.12–7.00
Instructional Support	2.82 (0.82)	1.07–4.67	3.46 (1.13)	1.13–5.33

M=mean, SD=standard deviation

As shown in Table 19, average scores did increase across all three CLASS domains for the North and South centers. To further investigate these increases, a dependent *t*-test was conducted to determine if there was significant growth over time for each of the three CLASS domains. Specifically, this test was conducted on the 19 identified master teachers from the North and South centers that received CLASS observations in 2013/14 and 2014/15[19].

Results indicated the observed average increases were not statistically significant for Emotional Support[20] or Instructional Support[21] but were statistically significant for Classroom

[18] Items for Instructionally-focused developmentally appropriate practices were provided by Pre-K 4 SA. Work is in progress to collection information more broadly on developmentally appropriate practices in future years. When this data becomes available, more information on the extent to which such practices are used will be included.
[19] A total of 21 master teachers had CLASS observations in both years; however, one teacher moved to the East and West center respectively in Year 2 leaving 19 teachers identified in the North or South centers both years.
[20] There was a non-significant yet substantively meaningful positive gain in Emotional Support between 2013/14 (M=6.3, SD=0.35) and 2014/15 (M=6.5, SD=0.58); t (18)=2.01, p=.059; Hedges' g=.43.

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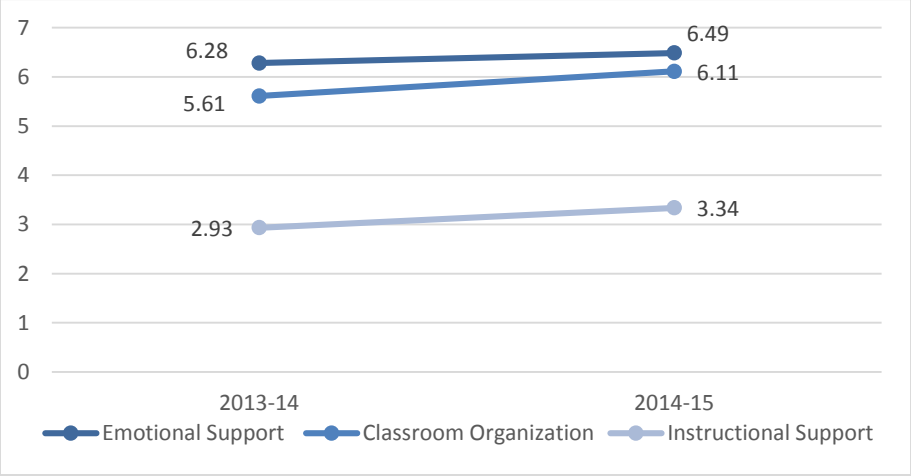
Organization[22] (see Table 20 and Figure 3). However, due to the small sample size of this analysis (n=19), effect sizes[23] are also presented. Effect sizes (measures of meaning that are not as influenced by sample size) are often used in educational and medical research to account for biases associated with significance testing (Sullivan & Feinn, 2012; What Works Clearinghouse, 2014). Effect sizes calculated for each of the three CLASS differences do suggest substantively meaningful effects (ranging from .42–.61 which are considered to be in the medium range). Although not all significant statistically speaking, these findings suggest North and South center classrooms have increased abilities in the classroom in potentially important ways, on average, to support not only children's emotional and social functioning, but also student's attention, behavior, and time. Additionally, these classrooms have increased opportunities for children to use higher order thinking and processing skills.

Table 20. CLASS statistical difference results on second year master teacher classrooms

	2013-14	*2014-15*		
CLASS Domain	*M (SD)*	*M (SD)*	*Difference statistically significant?*	*Difference substantively meaningful*
Emotional Support	6.28 (0.35)	6.49 (0.58)	No	Yes
Classroom Organization	5.61 (0.58)	6.11 (1.00)	Yes	Yes
Instructional Support	2.93 (0.76)	3.34 (1.13)	No	Yes

Figure 3. Visual depiction of CLASS domain average scores for 19 North and South classrooms



[21] There was a non-significant yet substantively meaningful positive gain in Instructional Support between 2013/14 (*M*=2.9, *SD*=0.76) and 2014/15 (*M*=3.3, *SD*=1.13); *t* (18)=1.46, *p*=.160; Hedges' *g*=.42.
[22] There was a significant and substantively meaningful positive gain in Classroom Organization between 2013/14 (*M*=5.6, *SD*=0.58) and 2014/15 (*M*=6.1, *SD*=1.00); *t* (18)=2. 49, *p*=.022; Hedges' *g*=.61.
[23] Effect sizes presented here are Hedges' *g*.

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Developmentally appropriate strategies that address instructional support (DAP-IS) and conflict resolution strategies

The use of developmentally appropriate strategies that address instructional support (DAP-IS)[24] and conflict resolution strategies were observed using the P-COM. Nine DAP-IS items and seven conflict resolution items were rated. Overall, the North and South center classrooms (*n*=40) ranged from 1–5 (*never* to *always*) across the DAP-IS items with averages ranging from 3.12 (*some of the time*) to 4.39 (between *most of the time* and *always*). (See Table 21.) Although all DAP-IS item averages ranged between occurring *some of the time* and *always*, this falls short of the expectation that use of such strategies would occur 100% of the time. This is not surprising as overlap exists between DAP-IS items and the Instructional Support domain of the CLASS measure (discussed earlier in this report) which was found to be in the mid-range of quality.

Table 21. DAP-IS item results by Pre-K 4 SA center

	North center		*South center*	
Instructional DAP item	*M (SD)*	*Total range observed*	*M (SD)*	*Total range observed*
Acknowledge what children do/say	4.35 (0.74)	2.40–5.00	4.27 (0.72)	2.00–5.00
Encourage persistence and effort	3.75 (1.20)	1.20–5.00	3.87 (1.03)	1.60–5.00
Give specific feedback	3.86 (0.89)	2.00–5.00	3.67 (0.97)	1.40–5.00
Model/demonstrate attitudes and behaviors	4.39 (0.84)	2.40–5.00	4.24 (1.03)	1.60–5.00
Create/add challenge	3.16 (1.41)	1.00–4.80	3.12 (1.23)	1.00–5.00
Ask questions that provoke thinking	3.49 (1.11)	1.40–5.00	3.56 (0.95)	1.20–5.00
Give assistance (cues/hints)	3.61 (1.27)	1.40–5.00	3.66 (1.04)	1.80–5.00
Provide information	3.46 (1.24)	1.60–5.00	3.66 (0.98)	2.20–5.00
Give directions for action/behavior	4.00 (1.17)	1.60–5.00	3.88 (1.08)	1.40–5.00

M=mean, SD=standard deviation

In investigating the second element of the first indicator (conflict resolution strategies), a similar pattern emerged when a conflict arose. First, it is important to note that 9 of the 40 classrooms observed across the North and South centers (22.5%) did not experience a conflict between children during the observation period. The remaining 31 classrooms were observed to experience at least one child conflict during anywhere from 1 to all 5 observation cycles. (See Table 22 for the breakdown of classrooms by number of observation cycles where at least one conflict was observed.)

[24] DAP-IS items focus on instructional support and are not encompassing of all developmentally appropriate practices.

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Table 22. Frequency of classrooms by observation cycles with conflict observed

	North center		*South center*	
Number of observation cycles where conflict observed	*Number of classrooms*	*Percent (%) of classrooms*	*Number of classrooms*	*Percent (%) of classrooms*
0	5	25	4	20
1	7	35	4	20
2	3	15	4	20
3	5	25	4	20
4	0	0	3	15
5	0	0	1	5

Of the 31 classrooms with at least one conflict, the North and South center classrooms ranged from 1–5 (*never* to *always*) across the conflict resolution items with averages ranging from 3.98 (*most of the time*) to 4.87 (slightly below *always*; see Table 23). Although all conflict resolution item averages ranged between occurring *most of the time* and *always*, this falls short of the expectation that use of such strategies would occur 100% of the time. It is important to note that it is possible children's resolution abilities may not have required all steps to be used at all times[25]; therefore, Edvance plans to work with Pre-K 4 SA to understand how these more nuanced patterns may be captured in future data collection efforts.

Table 23. Conflict resolution item results by Pre-K 4 SA center

	North center		*South center*	
DAP item	*M (SD)*	*Total range observed*	*M (SD)*	*Total range observed*
Approach calmly	4.84 (0.60)	2.67–5.00	4.86 (0.31)	4.00–5.00
Stop hurtful actions	4.81 (0.67)	2.67–5.00	4.81 (0.33)	4.00–5.00
Remain neutral	4.84 (0.60)	2.67–5.00	4.81 (0.42)	3.67–5.00
Acknowledge feelings	4.11 (1.38)	1.00–5.00	4.43 (1.00)	1.33–5.00
Gather information	4.51 (0.96)	2.00–5.00	4.32 (1.04)	1.33–5.00
Restate problem	4.29 (1.07)	2.00–5.00	3.98 (1.17)	1.00–5.00
Ask for solutions	4.31 (1.21)	1.00–5.00	4.14 (1.16)	1.00–5.00

M=mean, SD=standard deviation

Note. If conflict resolution strategies in total or a particular strategy was not applicable to a situation, an N/A rating option was available within the P-COM. Any item indicated as scoring an N/A was excluded from averages presented here. All averages presented here are taken from the number of cycles per observation where valid data was available; therefore, the range of cycles included in the averages presented here is 1–5.

[25] This statement is in reference to other steps in the strategy aside from the step of stopping hurtful actions; this step was already included in the observation protocol as an optional step that may not be required in all instances.

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Professional Development

One indicator was investigated to assess fidelity of this critical component: attendance in pre-service professional development sessions prior to the beginning of the school year[26]. Information was provided on 21 internal professional development events which teachers from the North and South centers attended prior to the beginning of the 2014/15 school year[27]. As data provided by each center was variable, information for each center is provided separately.

Data pertaining to the North center suggested an average of 17.8 master teachers (range 13–19[28]) and 12.9 TA2 teachers (range 7–17[29]) attended each of 11 pre-service sessions. Overall participation by master teachers in pre-service professional development sessions was 93.1% and 89.4% for teaching assistants[30].

Data pertaining to the South center suggested an average of 18.4 master teachers (range 9–24 out of 24[31]) attended each of eight pre-service sessions and an average of 12.9 TA2 teachers (range 4–21 out of 24) attended each of 10 sessions[32]. Overall participation by master teachers in pre-service professional development sessions was 76.6% and 53.8% for teaching assistants.

Fidelity summary

Overall, fidelity of implementation results indicated a mix of meeting and working towards Pre-K 4 SA threshold expectations (see Table 24 for an overall summary of fidelity of implementation results). Specifically, more focus appears to be needed on consistently using Instructional DAP and conflict resolution strategies, attendance by parents in expected conferences, and teacher attendance in professional development sessions. It is important to note, however, that data limitations likely play a role in some of the fidelity findings presented here. Edvance will continue working with Pre-K 4 SA to improve data collection efforts, as well as continue to inquire about concrete expectations for all critical component indicators so more robust information can be included in future fidelity of implementation investigations.

[26] Two other indicators comprise this critical component; however, one indicator (on-going training) did not have a set expectation and the other (Professional Learning Communities; PLCs) did have an expectation of 100% attendance but data was not systematically collected to track this type of participation. PLCs are fluid throughout the year and teachers may participate in several at one time.

[27] Calculations using this information may under-represent fidelity due to varying expectations that may have existed for new and returning teachers and/or master teachers and teacher assistants. Information pertaining to hire dates and teacher types for all teachers were not submitted to Edvance until the present report was already near completion; therefore, this information could not be fully investigated in time to meet the report deadline.

[28] Individual attendance data was available; the total number of possible master teachers ranged from 17–20 depending upon the date of event as verified by master teacher hire dates.

[29] Individual attendance data was available; the total number of possible TA2 teachers ranged from 7–17 depending upon the date of event as verified by TA2 teacher hire dates.

[30] These percentages were taken from verifiable teacher names in each category employed by Pre-K 4 SA to the respective center during the dates of the professional development sessions in question.

[31] Calculations were done based on the total number of possible teachers and total number of session attendees.

[32] According to the data provided, it appears two pre-service South Center events were focused on teaching assistants as no master teachers were present.

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Table 24. Summary of fidelity of implementation study results

Critical component (Indicator)	*Finding*	*Threshold*	*Progress toward threshold*
Family Engagement Support			
Parent resource activities	196 adults of 191 unique children, attended fall conferences; 526 adults of 332 unique, attended spring conferences	Family member attends both fall and end of year conferences for all children	Undetermined due to potential missing data
Intentional Quality Standards			
Teacher-child ratio	1:8 average ratio	1:10 ratio	Threshold met
Attendance	92.7% attendance	93% attendance	Borderline*
Teacher-child interaction quality	All 3 domains increased between Y1 and Y2; all three substantively meaningful	Increase in overall domain scores from Y1	Threshold met
DAP-IS and conflict resolution strategies	Most DAP-IS items observed *most of the time*; all conflict resolution items observed between *most of the time* and *always*	Use of DAP-IS consistently (all of the time) with all children; 100% use of conflict resolution strategies	In progress
Professional Development			
Pre-service sessions (internal)	Range of 53.8%–93.1% participation across pre-service sessions	All Pre-K 4 SA teachers attend all sessions prior to beginning of school year[a]	Undetermined due to nuanced expectations

[a]Initial communications with Pre-K 4 SA concerning the expectation related to this indicator was that all sessions prior to the beginning of school were considered mandatory; however, depending on the position of the teacher or if the teacher is new or returning, nuanced expectations may exist. Edvance plans to work with Pre-K 4 SA during the upcoming school year to gather this nuanced information through the year so that a more fine-grained fidelity analysis can be conducted in Year 3.

Outcome Study Results

Kindergarten Readiness

Pre-K 4 SA conducted *Teaching Strategies Gold* (GOLD) assessment system on children at three time points throughout the academic year: fall, winter, and spring. Children (84.3%; n=1,322) were included in analyses if they had outcome data for all three time points in at least one of the following six outcomes: cognitive, language, literacy, mathematics, physical, and social-emotional. No significant differences were found between children included and not included in analyses for gender (t (1,566)=-0.536, p=.592); however, differences were found for free lunch status, race, and tuition status. Children who were able to be included in at least one outcome analysis were more likely to be of free lunch status (t (322.49)=-2.501, p=.013), Hispanic

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(compared to Black) (F (3, 1,567)=4.302, p=.005), and attending Pre-K 4 SA for free rather than paying tuition (F (2, 1,567)=5.294, p=.005) [33].

By spring, the Pre-K 4 SA children scored significantly greater than the normed sample on three GOLD outcomes: cognitive, literacy, and mathematics.

As data were not collected on a comparison or control group, comparisons were conducted using the nationally representative normed data for the GOLD assessment (Lambert, Kim, & Burts, 2013). When starting Pre-K 4 SA, children began the fall significantly below the normed sample on all six GOLD outcomes. By spring, this gap was overcome in three outcome domains; meaning, the Pre-K 4 SA children scored statistically significantly (p<.001) greater than the normed sample on three outcomes (cognitive, literacy, and mathematics). Effect sizes (Hedges' g) for the significant results ranged from very small (0.14 for cognitive) to medium (0.40 literacy and 0.54 for mathematics). Spring results for the oral language outcome suggested the initial gap between Pre-K 4 SA children and the normed sample was eliminated; by spring, no significant difference was found between Pre-K 4 SA children and the normed sample for oral language. Although a gap still remained for the physical and social-emotional outcomes, each was reduced by the spring. With regard to the physical outcome, the initial gap of more than 22 scale score points was reduced by 40% to approximately 13 scale score points. Similarly, with regard to the social-emotional outcome, the initial gap of more than 30 scale score points was reduced by nearly 76% to a difference of approximately 7 scale score points. See Table 25.

[33] Post-hoc analyses for race and attendance status were conducted using Games-Howell due to unequal variances between groups.

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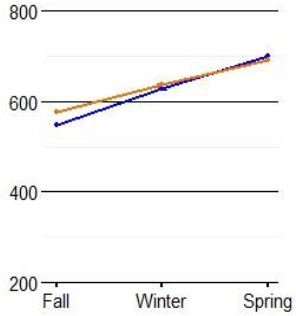
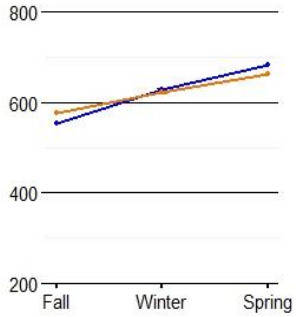
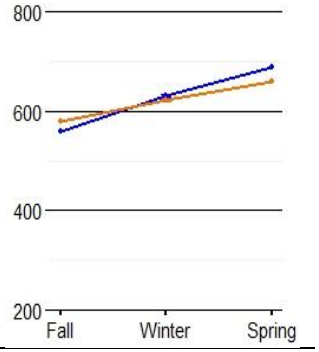
Table 25. Pre-K 4 SA and Normed Sample comparison results for six GOLD outcomes across time

Outcome	*Time point*	*Pre-K 4 SA mean*	*Normed mean*	*Gap (Pre-K – Normed)*	*t-test statistic*	*df*	*Initial p-value*	*Adjusted significance*	*Group favored*[a]	*Graphic depiction of finding* (Blue line=Pre-K 4 SA; Orange line=normed sample)
Cognitive	Fall	547.32	575.72	-28.40	-10.785	1559.81	0.000	Significant	Normed	
	Winter	627.68	636.00	-8.32	-3.207	1625.99	0.001	Significant	Normed	
	Spring	699.58	690.71	8.87	3.143	1683.91	0.002	Significant	Pre-K	
Literacy	Fall	552.72	576.00	-23.28	-11.301	1538.27	0.000	Significant	Normed	
	Winter	627.45	623.10	4.35	2.105	1672.28	0.035	Significant	Pre-K	
	Spring	682.62	661.65	20.97	8.787	1715.91	0.000	Significant	Pre-K	
Mathematics	Fall	559.62	578.93	-19.31	-9.450	1630.33	0.000	Significant	Normed	
	Winter	630.49	622.33	8.16	4.167	1731.20	0.000	Significant	Pre-K	
	Spring	687.42	659.91	27.51	12.150	1786.19	0.000	Significant	Pre-K	

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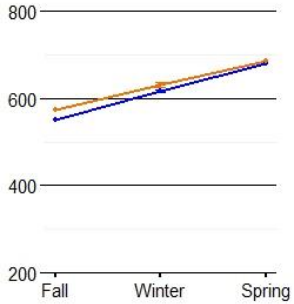
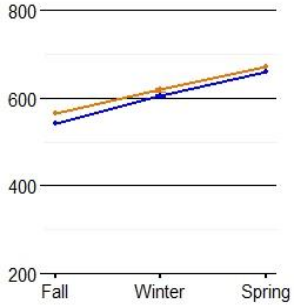
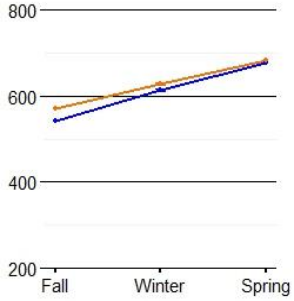
Outcome	*Time point*	*Pre-K 4 SA mean*	*Normed mean*	*Gap (Pre-K – Normed)*	*t-test statistic*	*df*	*Initial p-value*	*Adjusted significance*	*Group favored*[a]	*Graphic depiction of finding* (Blue line=Pre-K 4 SA; Orange line=normed sample)
Oral Language	Fall	550.87	574.43	-23.56	-8.261	1513.61	0.000	Significant	Normed	
	Winter	615.40	630.80	-15.40	-5.325	1470.47	0.000	Significant	Normed	
	Spring	680.50	686.17	-5.67	-1.794	1571.27	0.073	Non-Significant	No difference	
Physical	Fall	542.67	564.82	-22.15	-8.647	1517.23	0.000	Significant	Normed	
	Winter	605.45	618.47	-13.02	-5.645	1494.77	0.000	Significant	Normed	
	Spring	657.98	671.27	-13.29	-5.037	1451.50	0.000	Significant	Normed	
Social-Emotional	Fall	540.53	570.67	-30.14	-10.857	1690.03	0.000	Significant	Normed	
	Winter	614.14	628.05	-13.91	-5.520	1582.26	0.000	Significant	Normed	
	Spring	675.19	682.47	-7.28	-2.491	1526.58	0.013	Significant	Normed	

df=degrees of freedom

Note: Group mean information is presented in scaled scores. The Adjusted Significance column indicates significance levels (p-values) after adjustment to correct for multiple hypothesis testing using the Benjamini-Hochberg technique (1995).

[a] If a statically significant difference was found, the group whose score was greater (the 'favored' group) is listed in this column. If there was no statistically significant difference, this column states that there was 'no difference'.

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Differences in Readiness Outcomes

Analyses were also conducted within the Pre-K 4 SA sample to explore potential differences related to GOLD outcomes for children. These analyses were conducted between centers which had completed one (East and West) versus two years (North and South) of implementation (program maturity). Additionally, analyses were also conducted to explore the variance in GOLD outcomes accounted by the amount of Pre-K 4 SA family engagement.

Pre-K 4 SA years of implementation

During Year 2 of program implementation, two Pre-K 4 SA centers (North and South) had been previously established and were working through their second year of implementation while the other two centers (East and West) had only begun the initial year in the fall (2013/14). Because it is natural to assume some amount of start-up focus in the new centers, one may expect potential differences in child outcomes between such centers and those that were past this stage and into a fuller implementation focus.

When starting Pre-K 4 SA for the first time, children attending second-year centers began the fall significantly below the first-year center children on five of the six GOLD outcomes (cognitive, language, literacy, physical, and social-emotional). By spring, however, children in the second-year centers scored statistically significantly ($p<.001$ in all cases) greater than the first-year center children, on average, on all six outcomes. Effect sizes (Hedge's *g*) for the significant results ranged from small (0.30 for oral language and 0.37 for literacy) to medium (0.41 physical, 0.42 cognitive, 0.50 mathematics, and 0.54 social emotional). These findings suggest greater growth was found for children attending centers in the center's second year of implementation as compared to centers in their first year of implementation. See Table 26.

These findings suggest greater growth was found for children attending centers in their second year of implementation as compared to centers in their first year of implementation.

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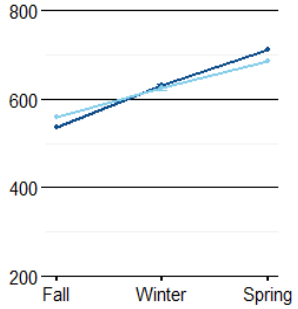
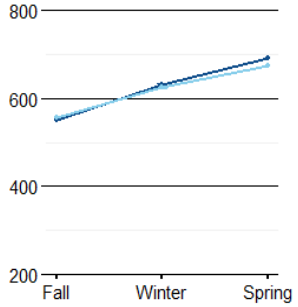
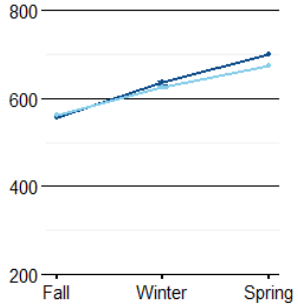
Table 26. Results for six GOLD outcomes across time for 2-year versus 1-year implementing centers

Outcome	*Time point*	*2-year mean*	*1-year mean*	*Gap (2-yr – 1-yr)*	*t-test statistic*	*df*	*Initial p-value*	*Adjusted Significance*	*Group favored*[a]	*Graphic depiction of finding* (Dark Blue line = 2-year Light Blue = 1-year)
	Fall	535.71	560.36	-24.65	-8.054	1263.71	0.000	Significant	1-year	
Cognitive	Winter	630.79	623.96	6.83	2.139	1228.04	0.033	Significant	2-year	
	Spring	712.03	685.44	26.60	7.652	1288.12	0.000	Significant	2-year	
	Fall	548.93	556.82	-7.88	-3.229	1145.94	0.001	Significant	1-year	
Literacy	Winter	629.66	625.07	4.59	1.751	1188.18	0.080	Non-Significant	No difference	
	Spring	692.04	672.58	19.46	6.407	1186.57	0.000	Significant	2-year	
	Fall	557.12	562.54	-5.43	-2.140	1160.73	0.033	Non-Significant	No difference	
Mathematics	Winter	635.31	624.99	10.32	4.105	1253.71	0.000	Significant	2-year	
	Spring	699.36	673.64	25.72	8.933	1253.97	0.000	Significant	2-year	

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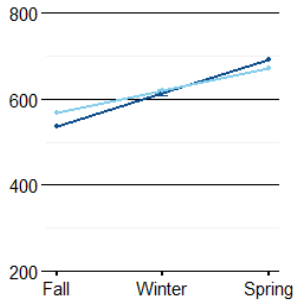
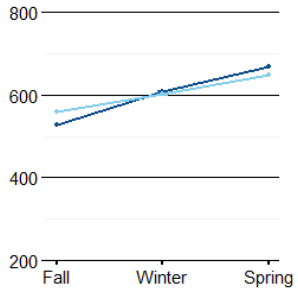
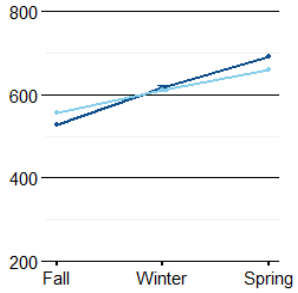
Outcome	*Time point*	*2-year mean*	*1-year mean*	*Gap (2-yr – 1-yr)*	*t-test statistic*	*df*	*Initial p-value*	*Adjusted Significance*	*Group favored*[a]	*Graphic depiction of finding* (Dark Blue line = 2-year Light Blue = 1-year)
Oral Language	Fall	535.73	567.21	-31.48	-9.800	1186.73	0.000	Significant	1-year	
	Winter	613.13	617.81	-4.69	-1.423	1209.32	0.155	Non-Significant	No difference	
	Spring	689.95	670.33	19.62	5.255	1239.94	0.000	Significant	2-year	
Physical	Fall	527.77	559.12	-31.36	-11.006	1282.19	0.000	Significant	1-year	
	Winter	608.14	602.31	5.84	2.188	1150.39	0.029	Significant	2-year	
	Spring	668.23	646.61	21.62	7.472	1290.44	0.000	Significant	2-year	
Social-Emotional	Fall	526.27	556.15	-29.88	-8.741	1270.46	0.000	Significant	1-year	
	Winter	616.93	610.92	6.01	1.993	1288.98	0.046	Non-Significant	No difference	
	Spring	690.46	658.29	32.16	9.803	1307.16	0.000	Significant	2-year	

df = degrees of freedom.

Note. Group mean information is presented in scaled scores. The Adjusted Significance column indicates significance levels (p-values) after adjustment to correct for multiple hypothesis testing using the Benjamini-Hochberg technique (1995).

[a] If a statically significant difference was found, the group whose score was greater (the 'favored' group) is listed in this column. If there was no statistically significant difference, this column states that there was 'no difference'.

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Amount of family engagement

Total sum scores were calculated from the family engagement data, weighted by level of engagement (for more information concerning the various levels of family engagement refer to the family engagement section beginning on pg. 7 of this report). Across all six GOLD outcomes, results for the amount of family engagement were non-significant indicating amount of family engagement over the course of the pre-K year was not related to child outcomes on the GOLD assessment after taking into account demographic characteristics of the children, including children's initial GOLD scores in the fall.

LIMITATIONS AND RECOMMENDATIONS

Six important limitations of the Year 2 evaluation require mention. First, approval to include an investigation into professional development data was not received until the second half of the academic year; therefore, analyses were reliant upon the type and amount of data available without prior consultation. As a result, all raw data was received in the form of hardcopy, hand written sign-in sheets which may or may not have represented an accurate or complete account of all professional development activities. As part of Year 2 work, during the spring of the 2014/15 school year, Edvance engaged in multiple conversations with Pre-K 4 SA staff and developed electronic templates to assist in data entry for both internal and external professional development efforts. It is recommended the developed templates be used throughout future school years (including the current year) to capture all professional development activities to increase the utility (both for Pre-K 4 SA and Edvance) and accuracy of such data.

Second, the current evaluation ultimately rests on a primary outcome that is a teacher report rather than a direct child measure conducted by unbiased data collectors. Because a teacher-report measure is the primary outcome of interest, variance in the results related to teacher bias or other teacher factors cannot be excluded. A recommendation related to this limitation is the consideration of additional funding for at least one brief, developmentally appropriate directly assessed outcome measure to be conducted.

Third, the fidelity of implementation results presented here were limited to three of the seven critical components of the Pre-K 4 SA program because some components are still under development and not all indicators and components currently have defined expectations and data collection in place. Further development of expectations and components is recommended to be done during the 2015/16 school year, if possible, so consultation with Edvance can continue to develop data collection strategies across components that will allow for a more thorough investigation of fidelity in future years.

The remaining three limitations were also previously mentioned in the Year 1 evaluation report and continued to be limitations in Year 2. Due to resource constraints Edvance was not able to collect information on a control or comparison group of children with which to compare the Pre-K 4 SA children with respect to kindergarten readiness outcomes. This is important because the

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normed sample that was used for comparison purposes is most likely very different from the Pre-K 4 SA children. When a comparison or control group can be formed with children who are most like the Pre-K 4 SA children, more confidence can be had with respect to resulting differences on outcomes, meaning there can be more confidence that differences are the result of the program in question and not a result of other factors[34]. This is particularly true when using a control group formed from random assignment into the program. A recommendation related to this limitation is the consideration of additional funding to form a control group of children based from the lottery selection process for admittance to Pre-K 4 SA from which data can be collected and compared between children who attend Pre-K 4 SA and children who do not. Towards this recommendation a proposal has been submitted, with approval from the Early Childhood Education Municipal Development Corporation, for consideration of an Institute of Education Sciences grant award to conduct a randomized controlled trial[35].

Additionally, although the total number of classroom observations was greatly increased between Year 1 and Year 2, classroom observation data continues to be based on one observation of each classroom during the spring[36]. As such, no inferences can be made about changes in classroom quality over time. Although this was primarily due to resource and time constraints it is recommended that additional funding be a consideration to conduct multiple observations across a year to begin to understand potential changes or consistencies in classroom interactional quality.

Finally, although slightly improved from Year 1, the average CLASS score for the teacher-child interactional quality domain, Instructional Support, was still found to be at the low end of the mid-range of the CLASS scale. It is recommended that strategies and professional development be provided to assist teachers in increasing instructional support behaviors and interactions in the classroom. Edvance is aware that Pre-K 4 SA directors attended a CLASS training this past spring and there are plans to utilize such training in teacher support during Year 3 of implementation.

[34] One way to form such a group of children, similar in nature to Pre-K 4 SA children, would be to work with Teaching Strategies to create a matched comparison group from the normed sample of children in the future.
[35] Grant awards are set to occur during the summer of 2016 with work to begin during the 2016/17 school year.
[36] The increase in total observations was due to the opening of the East and West centers which added additional classrooms to the already existing North and South centers bringing the total number of classrooms up to 76 in Year 2 from 36 in Year 1. Permission and resources were granted to cover additional classroom observations during Year 2; approval has not yet been obtained to continue observations in all classrooms during future evaluation years.

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REFERENCES

Barnett, W. S. (2011). Four reasons the United States should offer every child a preschool education. In E. Zigler, W. Gilliam, & W. S. Barnett (Eds.), *The pre-K debates: Current controversies and issues*, (pp. 34–39). Baltimore: Brookes Publishing.

Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society Series B Methodological*, *57*(1), 289–300.

Campbell, F.A., Ramey, C.T., Pungello, E., Sparling, J., & Miller-Johnson, S. (2002). Early childhood education: Young adult outcomes from the Abecedarian Project. *Applied Developmental Science*, *6*, 42–57.

Century, J., Cassata, A., Rudnick, M., & Freeman, C. (2012). Measuring enactment of innovations and the factors that affect implementation and sustainability: Moving toward common language and shared conceptual understanding. *Journal of Behavioral Health Services & Research*, *39*, 1–19.

Century, J., Rudnick, M., & Freeman, C. (2010). A framework for measuring fidelity of implementation: A foundation for shared language and accumulation of knowledge. *American Journal of Evaluation*, *31*(2), 199–218.

Hallam, R., Rous, B., Riley-Ayers, S., & Epstein, D. (2012). *Teacher survey for early education quality*. National Institute for Early Education Research. Unpublished measure.

Heckman, J. J., Moon, S. H., Pinto, R., Savelyev, P. A., & Yavitz, A. (2010). The rate of return to the HighScope Perry Preschool Program. *Journal of Public Economics*, *94*, 114–28.

La Paro, K. M., Pianta, R. C., & Shuhlman, M. (2004). Classroom Assessment Scoring System (CLASS): Findings from the pre-k year. *Elementary School Journal*, *104*(5), 409–26.

Lambert, R., Kim, D., & Burts, D. (2013). *Technical manual for the teaching strategies GOLD assessment system* (CEMETR-2013-05). Retrieved from University of North Carolina Charlotte, Center for Educational Measurement and Evaluation website: https://education.uncc.edu/ceme/ceme-technical-reports

Locasale-Crouch, J., Konold, T., Pianta, R., Howes, C., Burchinal, M., Bryant, D., Clifford, R., Early, D., & Barbarin, O. (2007). Observed classroom quality profiles in state-funded pre-kindergarten programs and associations with teacher, program, and classroom characteristics. *Early Childhood Research Quarterly*, *22*(1), 3–17.

Mashburn, A. J., Pianta, R. C., Hamre, B. K., Downer, J. T., Barbarin, O. A., Bryant, D., Burchinal, M., Early, D. M., & Howes, C. (2008). Measures of classroom quality in prekindergarten and children's development of academic, language, and social skills. *Child Development*, *79*(3), 732–49.

National League of Cities. (2012). *Educational alignment for young children.* Washington, D.C.: Institute for Youth, Education and Families. Available from http://www.nlc.org/documents/Find%20City%20Solutions/IYEF/Early%20Childhood/educational-alignment-for-young-chldren-case-studies-april-2012.pdf

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Pianta, R., La Paro, K., & Hamre, B. (2008). *Classroom assessment scoring system*. Baltimore, MD: Brooks Publishing Company.

Reynolds, A. J., Temple, J. A., White, B., Ou, S., & Robertson, D. L. (2011). Age-26 cost benefit analysis of the Child-Parent Center Early Education Program. *Child Development, 82*, 379–404.

Rolnick, A., & Grunewald, R. (2003). Early childhood development: Economic development with a high public return. *The Region, 17*(4), 6–12.

Sullivan, G. & Feinn, R. (2012). Using effect size-or why the p-value is not enough. *Journal of Graduate Medical Education, 4*(3), 279-282.

Van Voorhis, F., Maier, M., Epstein, J., Lloyd, C. & Leung, T. (2013). *The Impact of Family Involvement on the Education of Children Ages 3 to 8. Focus on Literacy and Math Achievement Outcomes and Social-Emotional Skills*. New York: MDRC.

What Works Clearinghouse. (2014). *WWC procedure and standards handbook 3.0*. Washington, DC: Available at: http://ies.ed.gov/ncee/wwc/DocumentSum.aspx?sid=19

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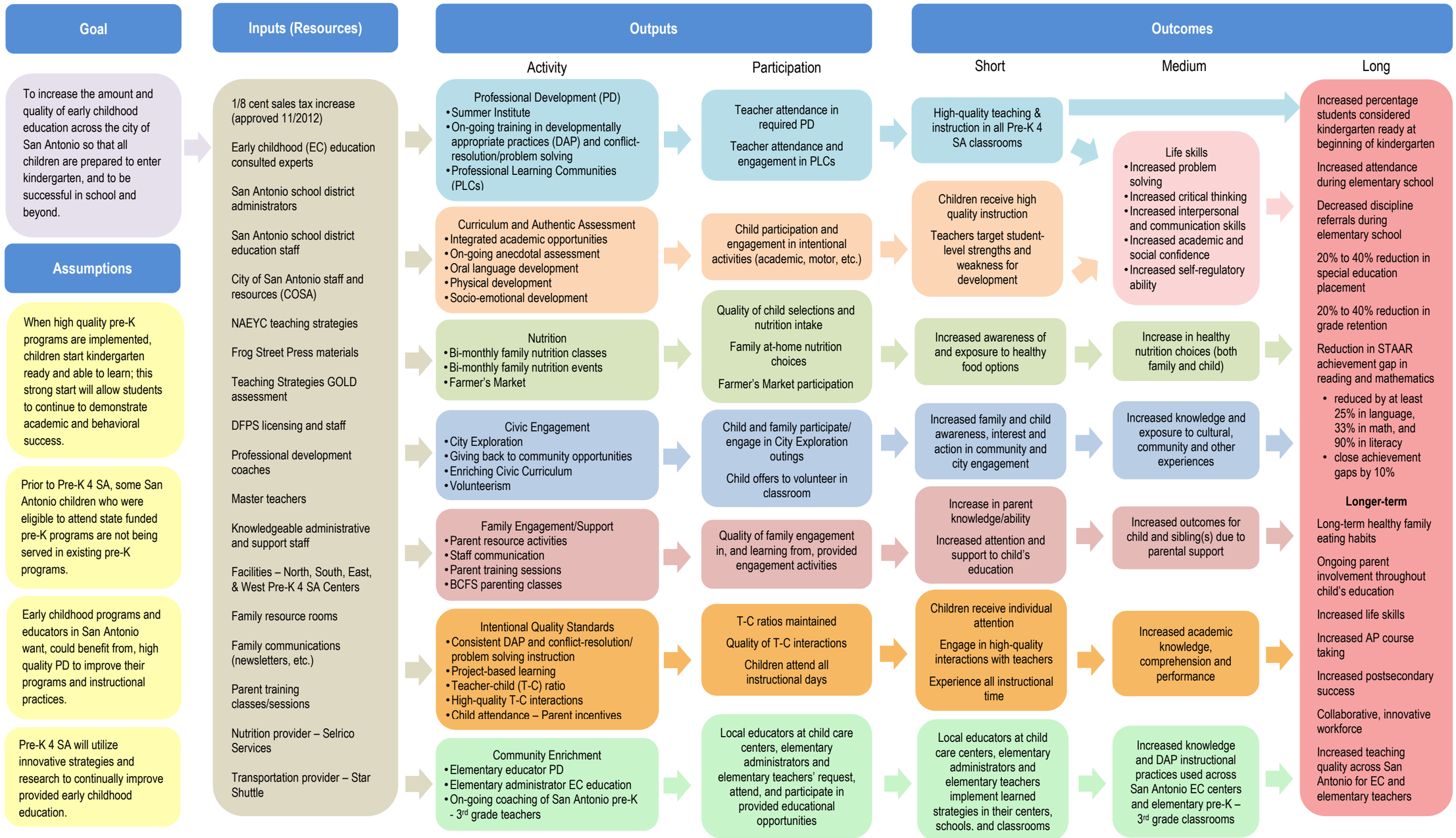
APPENDIX A. PRE-K 4 SA LOGIC MODEL



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APPENDIX B. EVALUATION METHODS

This appendix provides more information on measures used in the Year 2 evaluation, as well as more detail on the analytic approach to analyses reported.

MEASURES

Classroom Assessment Scoring System (CLASS)

The CLASS (Pianta, LaParo & Hamre, 2008) is an observational system that assesses classroom practices in preschool by measuring the interactions between students and adults. Observations in the Year 2 evaluation consisted of five, 20-minute cycles, followed by 10-minute coding periods. Scores were assigned during various classroom activities, and then averaged across all cycles for an overall quality score.

Interactions were measured through 10 different dimensions (see Table B-1 for descriptions of each CLASS dimension) which are divided into three larger domains. The *Emotional Support* domain is measured through the use of four dimensions: Positive Climate, Negative Climate, Teacher Sensitivity, and Regard for Student Perspectives. The CLASS also measures *Classroom Organization* through three dimensions: Productivity, Behavior Management, and Instructional Learning Formats; and *Instructional Support* through three dimensions: Concept Development, Quality of Feedback, and Language Modeling.

The CLASS uses a 7-point Likert-type scale, for which a score of 1 or 2 indicates low range quality and a score of 6 or 7 indicates high range quality. Each dimension and domain is assigned a score during each 20-minute cycle (or, observation period). The number of children and adults in the classroom were also recorded during each 20-minute cycle.

Table B–1. Descriptions of CLASS Dimensions

Domain	*Dimension*	*Description*
Emotional Support	Positive Climate	Reflects the emotional connection between teachers and children and among children, and the warmth, respect, and enjoyment communicated by verbal and nonverbal interactions.
	Negative Climate	Reflects the overall level of expressed negativity in the classroom. The frequency, quality, and intensity of teacher and peer negativity are key to this dimension
	Teacher Sensitivity	Encompasses the teacher's awareness of and responsiveness to students' academic and emotional needs.
	Regard for Student Perspectives	Captures the degree to which the teacher's interactions with students and classroom activities place an emphasis on students' interests, motivations, and points of view and encourage student responsibility and autonomy.
Classroom Organization	Behavior Management	Encompasses the teacher's ability to provide clear behavior expectations and use effective methods to prevent and redirect misbehavior.

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Domain	*Dimension*	*Description*
	Productivity	Considers how well the teacher manages instructional time and routines and provides activities for students so that they have the opportunity to be involved in learning activities.
	Instructional Learning Formats	Focuses on the ways in which teachers maximize students' interest, engagement, and abilities to learn from lessons and activities.
Instructional Support	Concept Development	Measures the teacher's use of instructional discussions and activities to promote students' higher-order thinking skills and cognition and the teacher's focus on understanding rather than on rote instruction.
	Quality of Feedback	Assesses the degree to which the teacher provides feedback that expands learning and understanding and encourages continued participation.
	Language Modeling	Captures the effectiveness and amount of teacher's use of language-stimulation and language-facilitation techniques.

Teacher Survey of Early Education Quality (TSEEQ)

The TSEEQ (Hallam, R., Rous, B., Riley-Ayers, S., & Epstein, D., 2012) is a self-report survey for early childhood teachers regarding their classroom practices and quality. Teachers are asked to reflect on several aspects of the curriculum and classroom practices including: literacy, mathematics, science, physical education, and art curriculum; curriculum in general; instruction; assessment; physical environment; interaction and emotional climate; leadership and supervision; and family involvement. The survey averages approximately 30 minutes to complete.

Pre-K 4 SA Classroom Observation Measure (P-COM)

The P-COM is an observation checklist that was developed and piloted for use in the current evaluation (2014/15) and beginning of the 2015/16 school year. The P-COM is based on the Pre-K 4 SA logic model (completed in Year 1 of the program) and captures structural components of fidelity to the Pre-K 4 SA model such as expected teacher practices (e.g., conflict resolution strategies). The measure consists of 21 items in four categories: integrated academic opportunities, developmentally appropriate practices, conflict resolution strategies, and child engagement. The checklist is conducted in 4–5 cycles of 20 minute classroom observations during a consistent observation time in a classroom over the course of a morning.

Teaching Strategies Gold (GOLD)

The GOLD is a teacher-report measure selected and used by Pre-K 4 SA which collects information on children's progress in 36 objectives across six main categories: cognitive, literacy, oral language, mathematics, physical, and social emotional. (Other categories are available to be tailored to specific programs.) The GOLD assessment is conducted at three time points throughout the year: fall, winter, and spring.

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ANALYTIC APPROACH

Descriptive research questions were addressed through analysis of existing Pre-K 4 SA databases and two measures (TSEEQ and CLASS). To address the first three descriptive questions pertaining to attendance, family engagement, and professional development, data collected by Pre-K 4 SA was submitted to Edvance and descriptively analyzed. Weights were also assigned to various types of family engagement. The fourth descriptive research question, *What are teacher reported curriculum and classroom practices?*, relied on data collected from teachers through a self-report survey. The survey, Teacher Survey for Early Education Quality (TSEEQ), asks teachers to report on several aspects of curriculum and classroom practices. The TSEEQ is a self-report survey for early childhood teachers regarding their classroom practices and quality (Hallam, Rous, Riley-Ayers, & Epstein, 2012). To address the final descriptive questions, *What was the overall observed teacher-child interaction quality in Pre-K 4 SA classrooms in Year 2?* and *Did the interaction quality vary by second year versus first year implementing centers?*, data were analyzed from the Classroom Assessment Scoring System (CLASS) both descriptively and inferentially using independent samples *t*-tests.

The theoretical framework for fidelity of implementation is based on the work of Century et al. (2010; 2012). This framework rests on two broad types of fidelity: structural and instructional. Structural components represent the design and organization intentions of program developers whereas instructional components represent interactions and behaviors that are intended to occur. The implementation research question, *Was the Pre-K 4 SA program implemented with fidelity in the two centers which were in their second year of operation (North and South centers)?*, was addressed through fidelity analyses of three critical components of the Pre-K 4 SA logic model: professional development, family engagement support, and intentional quality standards. Thresholds were established by Pre-K 4 SA and results for each component were assessed in reference to the Pre-K 4 SA established thresholds.

The outcome research questions were addressed through independent samples *t*-tests between the Pre-K 4 SA children and a nationally representative normed sample of children on the GOLD assessment outcomes. In addition, inferential tests were conducted to investigate potential differences in GOLD results by years of implementation (centers in their second year or first year of implementation), and whether differences in family engagement participation (amount/weight of types of engagement) were related to higher spring GOLD outcomes for students. More specifically, independent samples *t*-tests were used to investigate center differences and six block regression analyses were used to investigate relationships between family engagement and GOLD outcomes. The block regression analyses included child demographic variables and the fall GOLD pretest of the respective outcome of interest in the first block, following by the weighted sum of family engagement in the second block.

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APPENDIX C: IMPLEMENTATION YEAR COMPARISON OF YEAR 2 CLASS RESULTS

Table C-1. Pre-K 4 SA comparison CLASS results

Class Domain	*CLASS Outcome*	*North/South center group mean*	*East/West center group mean*	*t-test statistic*	*df*	*Initial p-value*	*Adjusted p-value*	*Adjusted significance*
Emotional Support	Regard for Student Perspectives	6.37	5.56	4.0438	74	0.000	0.010	Significant
	Emotional Support Domain	6.56	6.09	3.3751	74	0.001	0.020	Significant
	Teacher Sensitivity	6.40	5.89	2.8541	74	0.006	0.030	Significant
	Positive Climate	6.57	6.16	2.2529	74	0.027	0.040	Significant
	Negative Climate	6.89	6.74	1.7201	74	0.090	0.050	Non-Significant
Classroom Organization	Instructional Learning Formats	6.00	5.30	3.0498	74	0.003	0.013	Significant
	Classroom Organization Domain	6.21	5.60	2.8526	74	0.006	0.025	Significant
	Behavior Management	6.34	5.75	2.4818	74	0.015	0.038	Significant
	Productivity	6.30	5.77	2.2496	74	0.028	0.050	Significant
Instructional Support	Language Modeling	3.71	2.71	4.2493	74	0.000	0.013	Significant
	Instructional Support Domain	3.46	2.53	3.9043	74	0.000	0.025	Significant
	Quality of Feedback	3.45	2.45	3.4621	74	0.001	0.038	Significant
	Concept Development	3.23	2.42	3.2966	74	0.002	0.050	Significant

df=degrees of freedom.

Note: The *Adjusted p-value* column indicates the actual *p*-value used for determining statistically significance to account for multiple hypothesis testing. The *Adjusted significance* column indicates significance levels (*p*-values) after adjustment to correct for multiple hypothesis testing using the Benjamini-Hochberg technique. The table has been reordered by the initial *p*-value is ascending order based on the guidelines for implementing the Benjamini-Hochberg technique.

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