Evaluation of the Child Signature Program: 2012–13 School Year

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Summary of Findings

This report presents data from the first of three years of the Child Signature Program (CSP), Request for Application 1, during FY 2012–13. Much of the data described in this report were not available for analysis during the predecessor program, the Power of Preschool (PoP), and therefore represent a significant step forward in First 5 California's ability to assess the value of its early learning programs in collaboration with First 5 county commissions. Two pages of acknowledgments at the end of this report attest to the collaborative work required to support this evaluation.

Key findings of this evaluation focus on program targeting; characteristics of children served, including dual language learners (DLL), children with special needs (SN), and migrant children; classroom teaching staff characteristics; classroom quality; child development; and parent engagement.

Program Targeting

- CSP 1 serves children at risk of school failure as evidenced by participation of children from low-income households or children living in attendance areas of schools with low Academic Performance Index (API) scores. Low income and low API serve as proxy measures for children who may be at risk of school failure.

- With regard to low-income households, 79 percent of CSP 1 classrooms are either State Preschool or Head Start classrooms. Both State Preschool and Head Start programs enroll children based on program-specific income-eligibility requirements.

- One half of CSP 1 classrooms are located in school attendance areas in the three lowest API deciles.

Children Served

- Preschool-age children (3-5 years old) account for 97 percent of the children in CSP 1. Only two percent of children are toddlers, and infants constitute less than one percent.

- Hispanic or Latino children comprise the largest racial and ethnic group in CSP 1 classrooms (58 percent).

Dual Language Learners (DLL), Special Needs (SN), and Children of Seasonal Migrants

- DLLs make up 55 percent of children in CSP 1 classrooms.

- Spanish-speaking children account for 82 percent of these DLLs.

- Children identified with special needs constitute four percent of all children served.

- Children of seasonal migrants constitute less than one percent of all children served.

Classroom Teaching Staff

- Overall, classroom teaching staff are well-qualified: five percent hold graduate degrees, 40 percent have a Bachelor's degree, and 22 percent have an Associate's degree. Teaching staff include lead teachers, assistant teachers, and teacher aides.

- Teaching staff working in Quality Enhanced (QE) classrooms are the most qualified: a larger percentage of teaching staff in QE classrooms hold Bachelor's degrees than in Maintenance of Effort (MOE) classrooms, and QE classrooms tend to employ teaching staff with more ECE or CD units.

- Classroom teaching staff are diverse: 40 percent are Hispanic or Latino, followed by "Other" at 19 percent, White at 13 percent, Asian at 13 percent, and Black or African American at 10 percent.

Classroom Quality

- On average, classroom quality is high as evidenced by scores from the Environment Rating Scales (ERS) and Classroom Assessment Scoring System® (CLASS®) instruments. Most classrooms, whether QE or MOE, meet criteria for CSP 1 program standards: ERS global scores of 5, a "good" level of quality; and CLASS domain scores of 5 for Emotional Support, 3 for Classroom Organization, and 2.75 for Instructional Support, all thresholds of quality shown to impact child outcomes.

Child Development

- Teachers assess children's developmental progress using an observational assessment tool, the Desired Result Developmental Profile (DRDP 2010).

- Teachers in both QE and MOE classrooms report their children make developmental gains; however, teachers of children in QE classrooms report greater gains than teachers of children in MOE classrooms.

Parent Involvement

- Parents were surveyed with the Desired Results for Children and Families-Parent Survey instrument at the end of the school year.

- Parents of children attending CSP sites report being well-informed and satisfied with their children's program.

- Most parents (79 percent) report participating in at least one parent-teacher conference. However, parents report low levels of involvement in other types of activities and support offered through CSP sites.

Program Overview

Research demonstrates high-quality preschool leads to positive early childhood outcomes for disadvantaged and at-risk children with regard to cognitive, language, and social development (Heckman and Masterov 2007). High-quality preschool programs improve school readiness and lead to better academic achievement in elementary school (RAND 2007). Additionally, cost-benefit analyses demonstrate investments in high-quality preschool generate substantial social and economic payoffs by reducing social costs such as unemployment, drug or alcohol abuse, and crime (Rees, Chai and Anthony 2012; Schweinhart et al. 2005; Heckman and Masterov 2007). Recent research also links high-quality preschool to improved adult health outcomes (Campbell et al. 2014).

A major obstacle experienced by underprivileged groups in California is access to high-quality early education. Approximately half of California's disadvantaged and at-risk 3- and 4-year-olds do not attend preschool at all, and fewer attend high-quality preschool. To address the scarcity of high-quality early care and education programs in California, First 5 California allocated funding to improve the quality of early childhood education classrooms in underperforming school catchment areas throughout California. The result of the allocation was the Child Signature Program (CSP). CSP builds on First 5 California's prior program, the Power of Preschool (PoP). Eight counties (Los Angeles, Merced, San Diego, San Francisco, San Joaquin, Santa Clara, Ventura and Yolo) participated in the CSP Request for Application 1 (RFA 1) during the 2012–13 school year. [1]

CSP focuses on increasing quality in early care and education programs for children at greatest risk of school failure, and works to increase access to high-quality preschool and infant/toddler programs for underprivileged groups. A goal of CSP is to realize this dual focus by enhancing quality early childhood education (ECE) environments across California, but specifically in catchment areas associated with underperforming schools as measured by Academic Performance Index (API) scores. Two other long-term goals of the program are to eliminate the achievement gap for at-risk children and improve lifetime academic achievement and associated life success (see Appendix A: *CSP Logic Model*).

The CSP under RFA 1 (First 5 California 2012) was implemented with two classroom quality levels. Maintenance of Effort (MOE) classrooms continue to provide quality and services similar to the First 5 California PoP program. All CSP 1 classrooms must meet minimum quality criteria. Administrators and staff have access to the Early Education Effectiveness Exchange (E4), a consortium for exchanging ECE best practices. In addition to these inputs, Quality Enhanced (QE) classrooms are supported by a group of Quality Essential Staff (QES) (i.e., program coordinator [PC], local evaluator [LE],

[1] This report focuses on data collected for CSP 1 classrooms and sites only—it does not cover classrooms or sites participating in CSP 2 or CSP 3. CSP 1 and CSP2 started in 2012; CSP 3 started in 2013.

early education experts [EEE], family support specialists [FSS], and mental health specialists [MHS]) who work together to increase classroom quality by implementing three specific program elements: 1) instructional strategies and teacher-child interactions; 2) social-emotional development; and 3) parent involvement and support. The program elements are implemented by the QES through activities such as teacher training, developmental screening and assessment, and parent outreach and support.

Evaluation Design

Logic Model, Questions, and Hypotheses

The evaluation of CSP is designed to measure the effectiveness of classroom quality enhancements. As described in the program logic model, the ultimate evaluation question is: *How well does CSP reduce the achievement gap for at-risk young children?* (See Logic Model in Appendix A). Evaluation hypotheses are that quality enhancements such as access to QES, increased parental involvement and outreach, increased developmental screening activities, enhanced classroom interactions, and enhanced classroom environments will improve outcomes for at-risk children.

To help address the ultimate evaluation question, eleven specific questions are outlined in *Attachment B* of CSP RFA 1 (First 5 California 2012) as outcome and process questions. Data collected to answer these questions include process measures useful for examining how well CSP was implemented, how well it serves the public and specific target populations (dual language learners [DLL], children with special needs [SN], and children of seasonal migrants), its cost effectiveness, and outcome measures of children's cognitive, social, and physical development. Outcome and process questions developed for this evaluation are reproduced as *Appendix B* of this report.

Data Collection

Data for this evaluation are structured to answer the research questions listed in *Attachment B* of the CSP RFA 1 (First 5 California 2012). This particular report is the result of analyses conducted using data collected during the 2012–13 school year only and do not allow us to answer all of the questions listed in *Attachment B*; some questions are designed to be answered with data collected over time for all three years of CSP implementation. However, the 2012–13 data help us to establish a baseline from which to analyze trends.

Data collected for CSP 1 can be separated into two levels of aggregation: classroom data and site data.

Classroom descriptive data include all of the following:

- Classroom demographics, including age groups served, counts of children with SN served, a count of DLLs served by primary language, and information on the racial and ethnic makeup of the classroom

- Teacher data, including demographics, work history, and educational attainment of classroom teaching staff

- Data about assigned QES

- A quality improvement narrative

- Data about funding sources and streams
- Teacher-child and provider-child ratios
- Environment Rating Scale (ERS) global scores (i.e., Early Childhood Environment Rating Scale [ECERS], Infant Toddler Environment Rating Scale [ITERS], and Family Child Care Environment Rating Scale [FCCERS])
- Information about developmental screening and assessment activity, and assessment results

Classroom assessment data include all of the following:

- Desired Results Developmental Profile (DRDP) aggregate data (Desired Results Developmental Profile Preschool [DRDP-PS]; Desired Results Developmental Profile, Infant Toddler [DRDP-IT]; Desired Results Developmental Profile Access [DRDP *access*])
- ERS item level scores
- Classroom Assessment Scoring System® (CLASS)® dimension and domain scores

Site data include all of the following:

- Information about outreach and support activities for staff and parents
- Information about professional development activities
- DRDP *access* aggregate data
- Desired Results (DR) Parent Survey aggregate data

Program Targeting

Data on funding sources for CSP classrooms provides contextual data regarding low-income families whose children may be at risk. Table 1 shows counts and percentages of classrooms by different funding sources. Classrooms can have more than one funding source; the total of a classroom's funding sources makes up its funding stream. Federal Head Start and California State Preschool Programs (CSPP) work to serve low-income children, and children are able to attend classrooms funded through these programs only if they meet certain income eligibility standards. For example, 90 percent of the children in Head Start classrooms must be low-income (i.e., household income is below the poverty line) and children can attend CSPP only if their household income is less than or equal to 70 percent of the State Median Income (SMI). Table 1 shows 63 percent of CSP preschool classrooms also are CSPP and 53 percent are federal Head Start. These data show the majority of CSP classrooms serve children of families that meet either state or federal income eligibility standards and are low-income. Eighty-one percent of QE classrooms and 79 percent of MOE are CSPP or Head Start.

Table 1. CSP 1 Classrooms by Funding Source

Funding Source	QE Classrooms Funded (*N* = 99)	Percent	MOE Classrooms Funded (*N* = 1,202)	Percent	Total Classrooms Funded (*N* = 1,301)	Percent
State Preschool	67	67%	753	63%	820	63%
Head Start	46	46%	646	54%	692	53%
Local Proposition 10	59	60%	475	40%	534	41%
State Proposition 10	55	56%	464	39%	519	40%
Local Government	13	13%	271	23%	284	22%
Other	3	3%	124	10%	127	10%
State General Child Care	19	19%	92	8%	111	9%
State Alternative Payment	1	1%	47	4%	48	4%
Federal Other	7	7%	41	3%	48	4%
External Gifts or Donations	5	5%	11	0.9%	16	1%
State Other	0	0%	14	1%	14	1%
Local Other	3	3%	9	0.7%	12	0.9%
Early Head Start	3	3%	6	0.5%	9	0.7%
External Foundation	0	0%	4	0.3%	4	0.3%
Migrant Head Start	0	0%	1	0.1%	1	0.1%

Note: Classrooms may have more than one funding source.

API is a measure of student achievement in school catchment areas. For program development of CSP 1, areas with API scores in the bottom three deciles were defined as "low performing areas." API deciles are collected for all CSP sites and correspond to the API of the public school catchment area where the site is located.

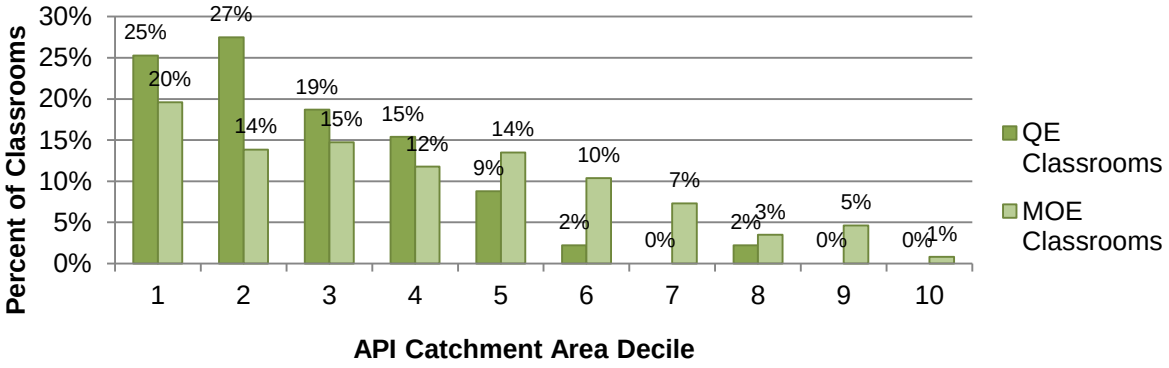
Table 2 shows counts and percentages of classrooms by API decile (1-10) across the two classroom quality levels and for the program overall. Figure 1 presents the same information graphically. Seventy-one percent of QE classrooms are located in school catchment areas scoring in the bottom three deciles of API, compared to 48 percent of

MOE classrooms. QE classrooms are more likely to serve low-decile API areas than MOE classrooms.

Table 2. Classrooms by API Catchment Area Decile and Classroom Quality Type

API Decile	QE Classrooms (*N* = 91)		MOE Classrooms (*N* = 1,148)		All Classrooms (*N* = 1,239)	
1	23	25%	225	20%	248	20%
2	25	28%	159	14%	184	15%
3	17	19%	169	15%	186	15%
4	14	15%	135	12%	149	12%
5	8	8.8%	155	14%	163	13%
6	2	2.2%	119	10%	121	9.8%
7	0	0.0%	84	7.3%	84	6.8%
8	2	2.2%	40	3.5%	42	3.4%
9	0	0.0%	53	4.6%	53	4.3%
10	0	0.0%	9	0.8%	9	0.7%
All	91	100%	1,148	100%	1,239	100%

Figure 1. CSP 1 Classrooms by API Catchment Area Deciles and Classroom Quality Level



Note: N = 91 for QE classrooms; N = 1,148 for MOE classrooms

Although the majority of CSP 1 classrooms serve low-income families from low-decile API catchment areas, a minority of classrooms do not. This pattern is likely explained by the "grandfathering" of classrooms from PoP into CSP 1. A requirement of CSP was for classrooms to continue to serve at least 90 percent of children in the same targeted areas from PoP. To ensure continuity of support services, former PoP classrooms with higher decile scores also were allowed to participate in CSP 1. To this end, First 5 Program Management Division designed CSP to include QE and MOE quality levels. QE classrooms met all the PoP Maintenance of Effort (MOE) Quality Program Requirements, agreed to implement the three Essential Elements, and hire Essential Staff. MOE classrooms either were unable to meet CSP match fund requirements or were ineligible to become a QE classroom because they did not meet all QE program requirements.

Classroom and Child Characteristics

CSP 1 served over 23,700 children during the 2012–13 school year. Of these children, 97 percent were preschoolers (3-5 year-olds), under two percent were toddlers (18-35 months), and less than a tenth of one percent were infants (0-17 months). MOE classrooms served about 92 percent, and QE classrooms about eight percent, of all children participating in CSP 1. Table 3 shows counts of children served by age group and classroom quality level, and Table 4 shows counts of CSP 1 sites and classrooms by county.

Table 3. Children Served by Age Group and Classroom Quality Type

	Preschoolers		Infants/toddlers		All Age Groups	
	Count	Percent	Count	Percent	Count	Percent
QE	1,710	7%	103	20%	1,813	8%
MOE	21,388	93%	412	80%	21,956	92%
All	23,098	97%	515	2%	23,769	

Note: Total count of children by age group (N = 23,613) differs from total count of children.

Table 4. CSP 1 Sites and Classrooms by County

	CSP Sites		QE Classrooms		MOE Classrooms		Total CSP Classrooms	
County	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Los Angeles	218	40%	32	32%	416	35%	448	34%
Merced	24	4%	20	20%	40	3%	60	5%
San Diego	107	20%	14	14%	344	29%	358	28%
San Francisco	133	24%	7	7%	285	24%	292	22%
San Joaquin	23	4%	6	6%	30	2%	36	3%
Santa Clara	10	2%	8	8%	41	3%	49	4%
Ventura	13	2%	1	1%	27	2%	28	2%
Yolo	17	3%	11	11%	19	2%	30	2%
Total	545	100%	99	100%	1,202	100%	1,301	100%

Classroom Ratios and Group Size

According to CSP program criteria, all CSP classrooms are to maintain teacher or provider-child ratios of 1:8 for preschoolers (or 1:10 with appropriate teacher qualifications), 1:4 for toddlers (or 1:6 with appropriate toddler license), and for infants, 1:3 (Title 5 of the California Code of Regulations) or 1:4 (Early Head Start). Family child care homes (FCC) participating in CSP are to follow licensing requirements defined in Title 22 of the California Code of Regulations. It is important to note that larger classroom ratios should only be possible when additional teacher or provider qualifications are met (see Attachment A1 of RFA 1). Table 5 shows mean teacher-child and provider-child ratios across MOE and QE quality levels. All mean teacher or

provider-child ratios in CSP fall within the acceptable limits of CSP classroom ratio quality criteria based on Head Start, Title 5, and Title 22 guidelines.[2]

Table 5. Ratios by Classroom Quality Type

	Teacher(s)					
	Preschoolers		Toddlers		Infants	
	Mean Ratio	*N*	Mean Ratio	*N*	Mean Ratio	*N*
QE	1:9	85	1:4	8	1:3	7
MOE	1:8	1,116	1:3	20	1:3	16
All	1:8	1,201	1:3	28	1:3	23
	Provider(s)					
	Preschoolers		Toddlers		Infants	
	Mean Ratio	*N*	Mean Ratio	*N*	Mean Ratio	*N*
QE	1:5	10	1:3	4	1:3	2
MOE	1:7	356	1:3	20	1:3	20
All	1:7	366	1:3	24	1:3	22

Note: Mean ratios are rounded to the nearest whole number.

In terms of classroom group sizes, CSP program standards require both QE and MOE classrooms maintain a maximum of 20 preschoolers in Head Start classrooms and 24 preschoolers in Title 5 classrooms; 12 toddlers per classroom across all classrooms; and 8 infants per classroom or 12 infants per classroom for Early Head Start classrooms. It is important to note here that larger group sizes or classroom ratios (i.e., 24 preschoolers for Title 5 classrooms) should only be possible in classrooms that meet both teacher or provider-child ratio and teacher or provider qualifications criteria (First 5 California 2012). These three classroom quality criteria are interdependent. Classrooms with group sizes or ratios above the lower limit must employ teachers who meet qualifications, and only teachers who meet qualifications can be counted in classroom ratios. Table 6 shows that all average classroom group sizes fall within the acceptable limits of CSP group size criteria based on Head Start, Title 5, and Title 22 guidelines.

[2] A more complete analysis of ratio data could involve calculation of the percentage of classrooms meeting teacher or provider-child ratio and classroom group size quality criteria. However, these data are difficult to categorize for analysis because of the complexity of interacting quality criteria and program standards. Licensing, location of the classroom, local policy, funding sources, education and qualifications of teaching staff, program type, etc., all influence the ratio and group size standards CSP classrooms must meet. Mean ratio and group sizes, on the other hand, are useful because they show how much CSP classrooms *tend to meet* the range of standards.

Table 6. Mean Classroom Group Sizes by Classroom Quality Type and Age Groups

	Preschoolers		Toddlers		Infants		Total Children	
	Mean Group Size	*N*	Mean Group Size	*N*	Mean Group Size	*N*	Mean Group Size	*N*
QE	19.66	87	7.09	11	5.00	5	18.69	97
MOE	18.73	1,142	6.53	55	4.82	11	18.81	1,167
All	18.79	1,229	6.62	66	4.88	16	18.80	1,264

Race and Ethnicity

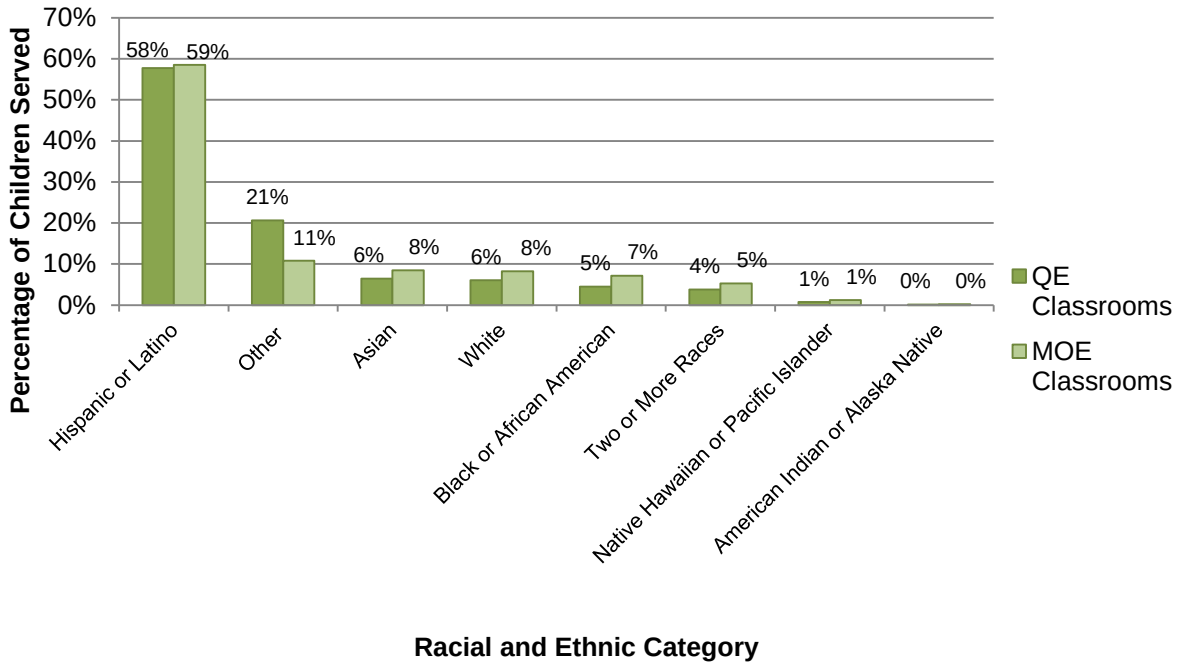
In terms of ethnicity, CSP 1 classrooms served a total of 13,161 children of Hispanic or Latino ethnicity, 58 percent of total children served—the largest ethnic group receiving services through CSP 1. Other or Unknown racial or ethnic category composed 12 percent of children in CSP 1, followed by Asian at eight percent, White at eight percent, and Black or African American at seven percent. MOE classrooms tend to serve higher percentages of Asians and Whites (8 percent as compared to 6 percent), and African American (7 percent to four point five percent). Table 7 provides counts and percentages of the largest racial and ethnic groups served by CSP 1 across the two classroom quality levels of the program and for the program as a whole. Figure 2 presents similar information graphically.

Table 7. Children Served by Racial and Ethnic Category and Classroom Quality Type

	QE		MOE		All	
	Count	Percent of Total Children Served	Count	Percent of Total Children Served	Count	Percent of Total Children Served
Hispanic or Latino	950	58%	12,211	59%	13,161	58%
Other or Unknown	339	21%	2,253	11%	2,592	12%
Asian	106	6.4%	1,774	8.4%	1,880	8.3%
White	99	6.0%	1,726	8.2%	1,825	8.1%
Black or African American	74	4.5%	1,496	7.2%	1,570	7.0%
Two or More Races	62	3.8%	1,104	5.3%	1,166	5.2%
Native Hawaiian or Pacific Islander	12	0.7%	256	1.2%	268	1.2%
American Indian or Alaska Native	2	<0.1%	52	0.2%	54	0.2%
All	1,644	100%	20,872	100%	22,516	100%

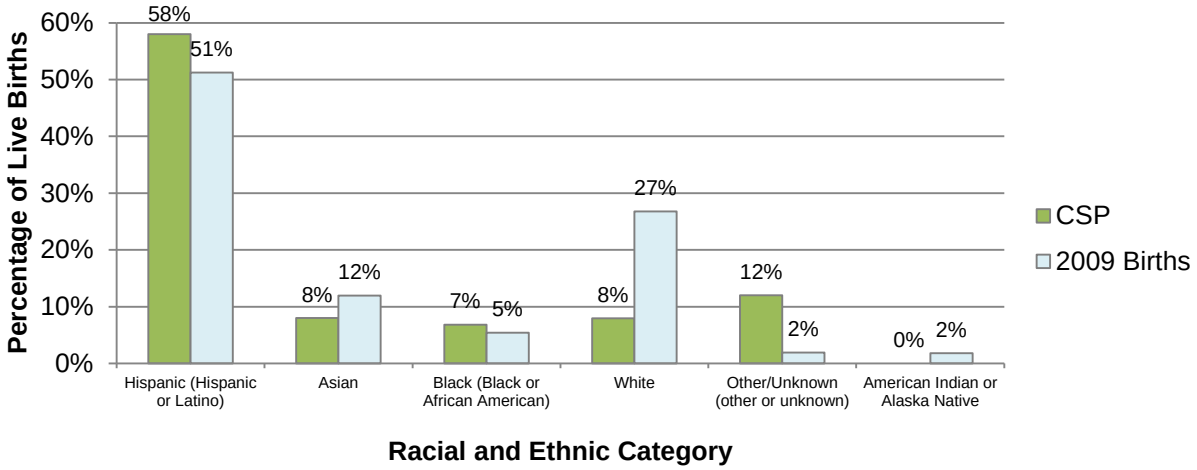
Note: Percentages based on N = 22,516 race and ethnicity records for N = 23,769 total children.

Figure 2. Children Served by Racial and Ethnic Category and Classroom Quality Type



How do the race and ethnicity of children in CSP 1 compare to California's population? California Department of Public Health birth records from 2009 show that children of Hispanic or Latino ancestry and Other or Unknown race may be over-represented in the program, whereas White, Asian, and American Indian or Alaska Native children may be underrepresented in the program (Figure 3). This likely reflects common disparities in socio-economic status across racial and ethnic groups in California because CSP is designed to serve children at risk for school failure in socio-economically challenged areas. Birth records from 2009 were used for this comparison because they provide an approximation of the population of 3-year-olds in California who could participate in CSP for the 2012–13 school year.

Figure 3. CSP 1 Children Compared to Total Live Births by Racial and Ethnic Group in California, 2009



Special Target Populations

CSP 1 served a total of 13,165 DLLs, 982 children with SN, and 106 children of seasonal migrants during the 2012–13 school year. QE classrooms served eight percent of DLL children and seven percent of children with SN; MOE classrooms served 92 percent of DLLs and 93 percent of children with SN. It is important to note that, although CSP 1 MOE classrooms serve significantly more children, both quality levels of the program serve about the same proportions of DLLs (56 and 55 percent) and children with SN (4 percent). MOE classrooms served 100 percent of all children identified as children of seasonal migrants, while QE classrooms did not serve any children who were identified as children of seasonal migrants. Table 8 depicts counts and percentages of these three groups across classroom quality levels and also the proportion of children that these groups represent within each quality level and in the program overall.

Table 8. Special Populations Served by Classroom Quality Level

	DLL			Children With SN			Children of Seasonal Migrants		
	Count	Percent of Total children	Percent of Group	Count	Percent of Total Children	Percent of Group	Count	Percent of Total Children	Percent of Group
QE	1,023	56%	8%	68	4%	7%	0	0%	0%
MOE	12,142	55%	92%	914	4%	93%	106	0.5%	100%
All	13,165	55%		982	4%		106	0.4%	

Note: N = 23,769 total children served (21,956 in MOE classrooms and 1,813 in QE classrooms).

Table 9 lists counts and percentages of DLLs, among all DLLs and all children served during the 2012–13 school year by primary language spoken at home. Spanish speaking DLL children account for 82 percent of all DLLs served, and over half of all

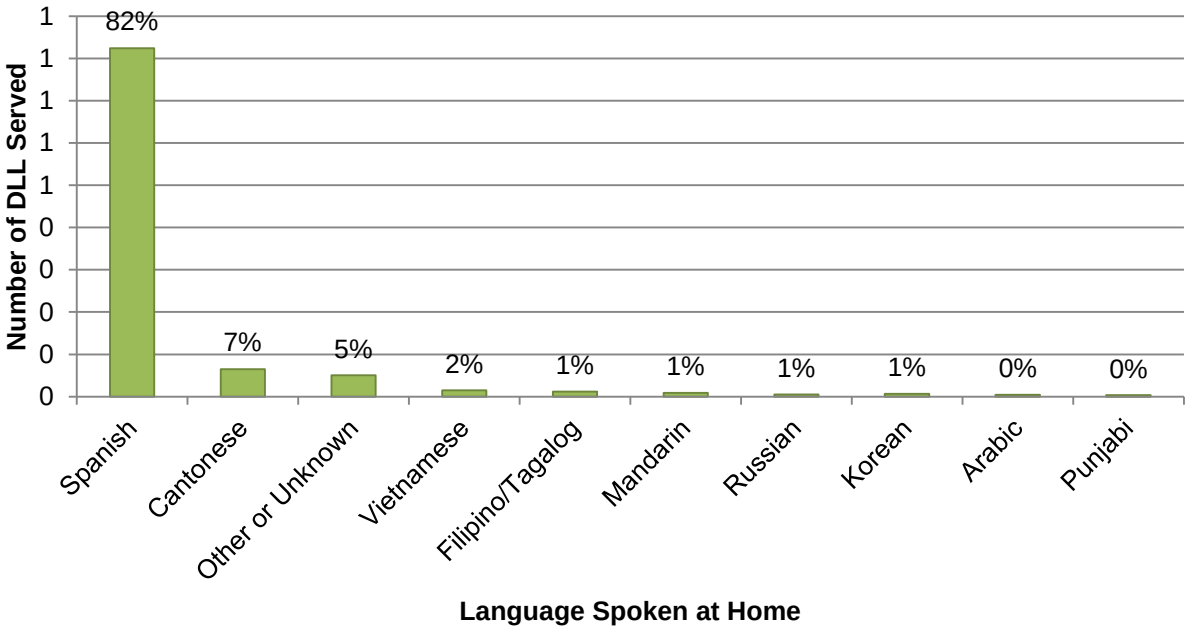
children served followed by Cantonese at four percent; Vietnamese at one percent; and Mandarin, Korean, Russian, Arabic, Punjabi, Japanese, Hmong and Armenian all at under one percent. The third largest group of DLLs falls in the "Other/Unknown" category, meaning the language these children primarily speak at home could not be identified. These data highlight the diversity of children served in CSP 1 classrooms. Figure 4 presents the same information graphically, but focuses on the 10 largest DLL groups.

Table 9. Primary Language of DLL Served

Language	Count	Percent of All DLL[a]	Percent of All Children Served[b]
Spanish	12,440	82%	52%
Cantonese	982	6.5%	4.1%
Other or Unknown	762	5.0%	3.2%
Vietnamese	228	1.5%	1.0%
Filipino/Tagalog	184	1.2%	0.7%
Mandarin	131	0.9%	0.6%
Korean	100	0.7%	0.4%
Russian	82	0.5%	0.3%
Arabic	68	0.5%	0.3%
Punjabi	52	0.3%	0.2%
Japanese	27	0.2%	0.1%
Hmong	19	0.1%	0.1%
Armenian	17	0.1%	0.1%
Total DLL	15,092[c]	100%	63%

a. Percentages based on N = 15,092 DLL records for N = 13,165 total DLLs.
b. Percentages based on N = 23,769 total children served
c. Total DLL calculated from counts of DLL by language differs from total DLL reported in aggregate for Table 8.

Figure 4. DLL Served by Language Spoken at Home



Classroom Teaching Staff Characteristics

Qualifications

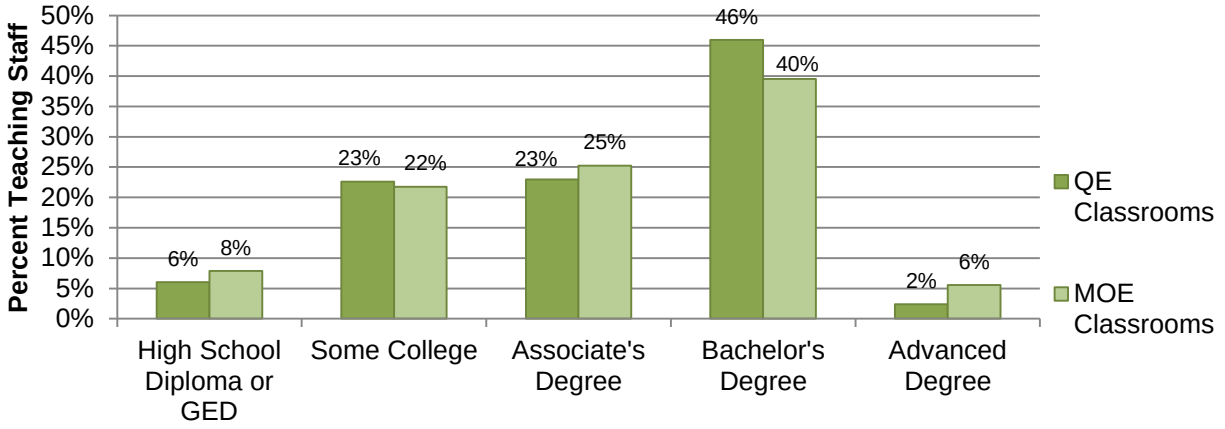
For 2012–13, classroom teaching staff are defined as "all staff working in the classroom." Lead teachers, assistant teachers, teachers' aides, and classroom volunteers are included under this definition; QES are not included in this definition. Percentages calculated from teaching staff records suggest 25 percent of teaching staff hold Associate's degrees, 45 percent hold at least a Bachelor's degree, and five percent hold an advanced degree. Table 10 provides more detail by highest level of education and classroom quality type, and across the program. Figure 5 presents similar information graphically. Of note, a larger percentage of teaching staff in QE classrooms hold Bachelor's degrees (46 percent as compared to 40 percent) than do teaching staff in MOE classrooms. Figure 6 shows the distribution of unduplicated teaching staff by highest level of education.

Table 10. Highest Level of Education and Classroom Quality Type

	QE		MOE		All Classrooms	
	Count	Percent	Count	Percent	Count	Percent
Teaching Staff with High School Diploma or GED	15	6%	217	8%	232	8%
Teaching Staff with Some College	56	23%	598	22%	654	22%
Teaching Staff with Associate's Degrees	57	23%	694	25%	751	25%
Teaching Staff with Bachelor's Degrees	114	46%	1,087	40%	1,201	40%
Teaching Staff with Advanced Degrees	6	2%	153	6%	159	5%
Total	248	100%	2,749	100%	2,997	100%

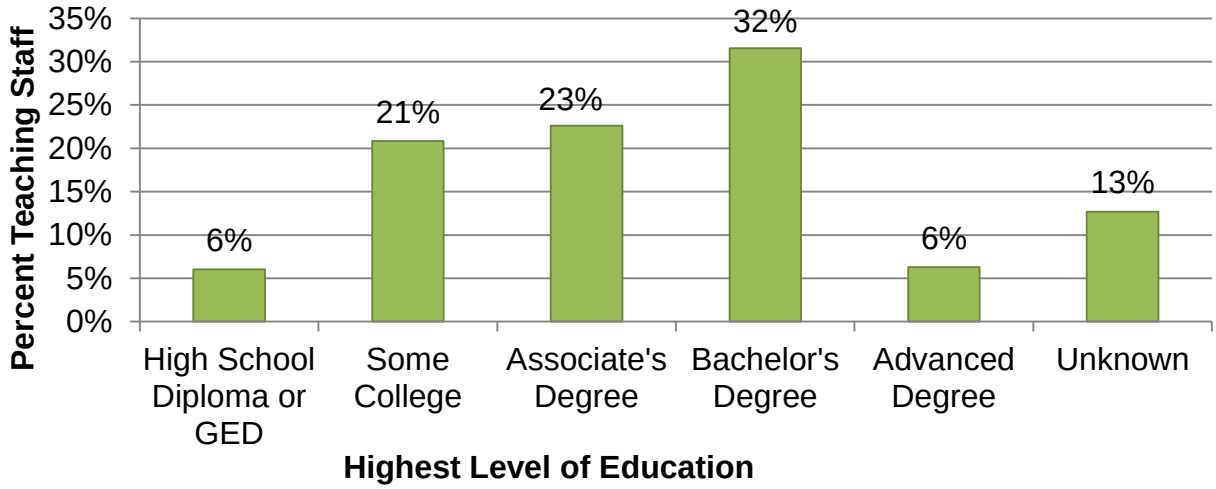
Note: CSP teaching staff can work in multiple classrooms; data used to create this table were collected from classroom level data. As a result, teaching staff profiles may be duplicated in the data. Percentages are based on N = 2,997 teaching staff records with data on education level for an approximate N = 1,671 teaching staff.

Figure 5. Highest Level of Education and Classroom Quality Type



Note: Percentages are based on N = 2,997 teaching staff records for an approximate N = 1,671 teaching staff.

Figure 6. Teaching Staff by Highest Level of Education



Note: Percentages are based on an approximate N = 1,671 teaching staff across CSP classroom quality levels.

Table 11 focuses specifically on ECE and child development (CD) degrees and ECE or CD units completed by CSP 1 teaching staff. QE classrooms tend to employ teachers with more ECE or CD units. The average number of pooled ECE or CD units held by teaching staff per classroom is higher for QE classrooms (76 units compared to 57 units). Twenty-four percent of teaching staff in QE classrooms hold ECE-or CD-related Bachelor's degrees, as opposed to only 15 percent in MOE classrooms. Table 11 summarizes these data. Figure 7 shows a distribution of teaching staff by highest level of education and classroom quality type.

Table 11. Teaching Staff ECE or CD Degrees by Classroom Quality Type

	QE	MOE	All Classrooms
Mean ECE or CD Units per Classroom[a]	76.40	56.90	58.38
Count of ECE or CD Degrees	121	1,221	1,342
Estimated Percent of Teaching Staff with ECE or CD Associate's Degrees[b]	14%	17%	17%
Estimated Percent of Teaching Staff with ECE or CD Bachelor's Degrees	24%	15%	16%
Estimated Percent of Teaching Staff with ECE or CD Master's Degrees	1%	2%	2%
Estimated Percent of Teaching Staff with ECE or CD Degrees[c]	39%	35%	35%

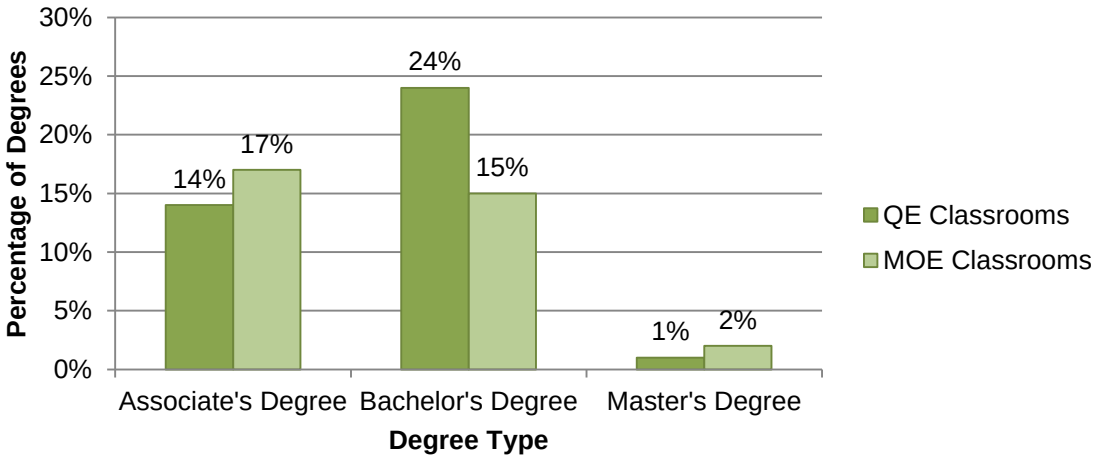
Note: Data presented here differ from data presented to CCFC in October, 2014.

a. N = 1,301 classrooms (MOE = 1,202, QE = 99).

b. N = 3,818 teaching staff records (MOE = 3,511, QE = 307). Teachers may be duplicated across classroom quality type.

c. Percentages based N = 3,818 teaching staff records for an approximated N = 1,671 teaching staff working across CSP classroom quality levels.

Figure 7: Estimated Percent of Teaching Staff with ECE or CD Degrees by Classroom Quality Type



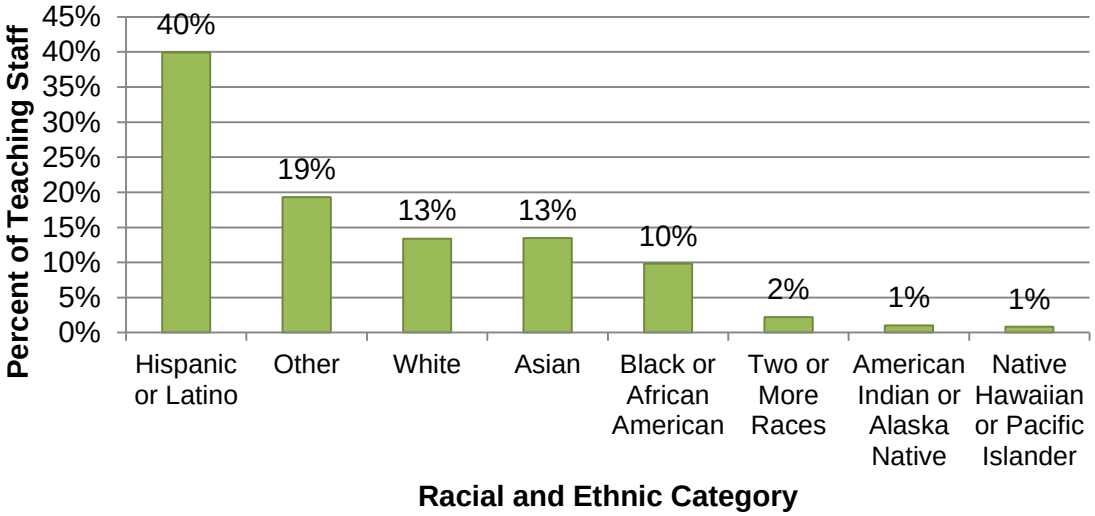
Note: Percentages are based on N = 3,818 teaching staff records (3,511 MOE, 307 QE) for an approximated N = 1,671 teaching staff.

Race and Ethnicity

In terms of race and ethnicity, CSP 1 classroom teaching staff are diverse. Figure 8 shows 40 percent of CSP teaching staff are Hispanic or Latino, followed by Other at 19 percent; White and Asian at 13 percent; Black or African American at 10 percent; multiracial at 2 percent; and American Indian or Alaska Native, and Native Hawaiian or

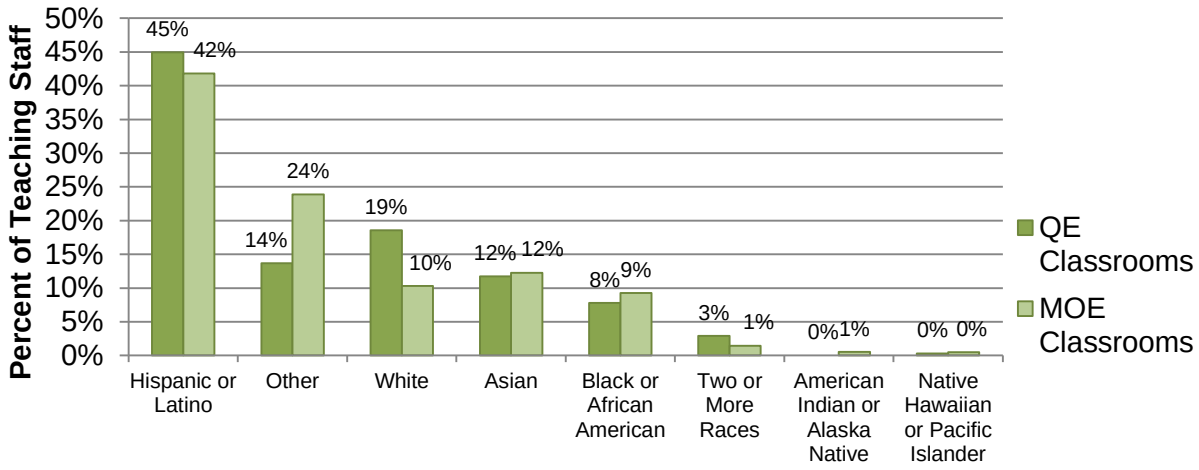
Pacific Islander at one percent. Figure 9 shows the distribution of classroom teaching staff by race and ethnicity over QE and MOE quality levels of the program.

Figure 8. Classroom Teaching Staff by Racial and Ethnic Category



Note: Percentages are based on an approximate N = 1,671 teaching staff.

Figure 9. Racial and Ethnicity and Classroom Quality Type



Note: Percentages based on N = 3,818 teaching staff records (MOE = 3,511, QE = 307).

Language

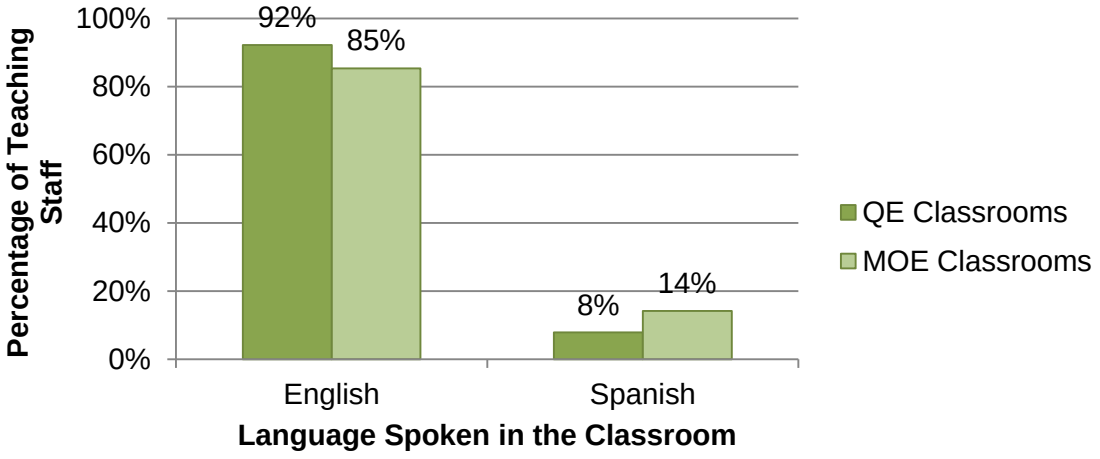
Table 12 depicts teaching staff by language used most often in the classroom and by classroom quality level. CSP 1 teaching staff primarily use English in the classroom. QE classrooms may be less linguistically diverse when considering the languages used by teaching staff. Only 8 percent of teaching staff in QE classrooms use Spanish compared to 14 percent of teaching staff in MOE classrooms. Additionally, English and Spanish are the only two languages used in QE classrooms, whereas in MOE classrooms, Russian or Arabic, for example, may be used. Figure 10 compares the prevalence of Spanish and English across the two classroom quality levels and in the program as a whole.

Table 12. Primary Language Used in the Classroom by Classroom Quality Type

	QE		MOE		All Classrooms	
	Count	Percent	Count	Percent	Count	Percent
English	283	92%	2,995	85%	3,278	86%
Spanish	24	8%	498	14%	522	14%
Russian	0	0%	6	0.2%	6	0.2%
Arabic	0	0%	4	0.1%	4	0.1%
Filipino (Tagalog)	0	0%	4	0.1%	4	0.1%
Unknown	0	0%	3	.01%	3	0.1%
Other	0	0%	1	<.01%	1	<0.1%
Total	307	100%	3,511	100%	3,818	100%

Note: Percentages based on N = 3,818 teaching staff records.

Figure 10. Primary Language Spoken by Teaching Staff in the Classroom by Classroom Quality Type



Note: Percentages based on N = 3,818 teaching staff records.

Classroom Quality

Environment Rating Scales

Environment Rating Scales (ERS) are designed to assess the quality of early care and education environments by observing activities of children, teachers, other staff, and parents and their interactions with the environment (Cryer, Harms and Riley 2003). CSP makes use of three different ERS instruments to measure the quality of early care and education environments: ECERS, appropriate for children from 2 to 5 years old; ITERS, appropriate for children from birth to 2 years and 6 months old; and FCCERS, appropriate for FCC homes. Each ERS is separated into seven subscales. Each subscale is associated with a number of items that serve as dimensions of the subscale and each item is associated with a number of indicators for that dimension. Specific indicators for each item in each dimension of each subscale differ by the specific instrument for each target age group or setting. Ratings for each item can range from one to seven. Assessors average item level scores to produce subscale scores. Taking the average of these subscale scores produces a global ERS score for the classroom.

All classrooms participating in CSP are required to maintain a global ERS score of 5 or better (i.e., a "good" level of quality) (Harms, Clifford, and Cryer 2005). Additionally, all CSP classrooms are required to complete age and setting appropriate ERS assessments, with reliable outside raters,[3] at least once every other year[4] (First 5 California 2012). For the 2012–13 school year, staff in participating counties collected ERS global scores from CSP classrooms at various times throughout the year and entered those scores into the CSP Profile and Evaluation Data system.

Table 13 shows mean global scores,[5] standard deviations, minimum scores, maximum scores, and number of classrooms reporting by ERS assessment. Most data come from center-based preschool classrooms receiving ECERS assessments. On average, classroom environments in CSP are at a "good" level of quality (i.e., ERS of 5 or above).

[3] A reliable outside rater is a trained ERS assessor who does not work in or for the classroom being assessed or the program in which the classroom is located, and has attained 85 percent agreement with a master anchor or the tool's author within the last 12 months (i.e., 85 percent of the assessor's ratings are within one point of the anchor or author). See Clifford and Reszka (2010) for more information on additional reliability measures for ERS.

[4] Some classrooms will have different requirements for ERS if selected to be evaluation classrooms. Evaluation classrooms are to be assessed in the fall, by a reliable outside rater, and are required to report the resulting item level scores during the fall reporting cycle. All other CSP classrooms are required to report ERS global scores for ERS assessments at least every other year.

[5] Some classrooms completed multiple ERS assessments over spring and fall cycles. These scores were averaged to produce mean global scores.

Table 13. Global Score by Environment Rating Scale Instrument

	Mean	SD	Min	Max	N
ECERS	5.63	0.62	2.90	7.00	1,228
ITERS	5.66	0.61	4.10	6.50	38
FCCERS	5.15	0.54	4.0	6.10	24

Table 14 shows percentages of classrooms meeting ERS global score requirements by classroom quality level and ERS type. The majority of classrooms meet ERS global score requirements. Over 86 percent of preschool classrooms and over 84 percent of infant/toddler classrooms achieved ERS global scores of 5 or above. The majority of FCC classrooms (63 percent) meet ERS global score requirements, although the proportion of good quality classroom environments, as measured by FCCERS, is lower than that of other classroom environments. A high proportion of both QE (99 percent) and MOE (85 percent) preschool classrooms meet or exceed a good level of quality as measured by ECERS. Eighty percent (80 percent) of infant/toddler MOE and 92 percent of infant/toddler QE classrooms also meet ERS global score requirements. One-hundred percent (100%) of FCC QE classrooms achieve a good level of quality, but only 57 percent of MOE FCC-based classrooms are at that same level. It is important to note that ITERS and FCCERS results should be interpreted with caution due to small numbers of infant/toddler and FCC classrooms.

Table 14. Distribution of Classrooms Meeting CSP 1 Standards

	QE Score			MOE Score			All Classrooms Score		
	<5	≥5	N	<5	≥5	N	<5	≥5	N
ECERS	1%	99%	88	15%	85%	1,140	14%	86%	1,228
ITERS	8%	92%	13	20%	80%	25	16%	84%	38
FCCERS	0%	100%	3	43%	57%	21	38%	63%	24

A statistically significant difference in ECERS global scores was found between QE and MOE classrooms (Table 15). These data show that, although classroom quality is good across all classrooms, quality as measured by ERS is higher in QE classrooms. ITERS and FCCERS scores were not statistically different, possibly a result of small numbers of infant/toddler and FCC classrooms reporting ERS global scores. Cohen's *d* for effect size across classroom quality level is 0.614 (medium) for ECERS, 0.098 for ITERS (negligible), and is not computed for FCCERS because of too few QE classrooms.[6] On average, mean ECERS global scores for QE classrooms are 0.36 points higher than MOE classrooms. However, there are limitations to interpreting these results: 1) for ECERS, it is unclear whether or not higher scores derive from quality enhancements or from programmatic requirements that already differentiate QE and MOE classrooms; 2)

[6] Effect size measures the magnitude of change observed in a study sample and contextualizes findings of the null hypothesis significance test. Cohen's d, the standardized difference in means, is a common measure of effect size. Conventional interpretation of Cohen's d is small at 0.2, medium at 0.5, and large at 0.8 (Cohen 1988).

ERS assessments were conducted throughout the 2012–13 school year, so it is difficult to judge whether or not there was enough time for intervention effects to appear in a physical classroom environment; and 3) ERS global scores do not provide detail about the elements of quality that may be different between QE and MOE classrooms.

Table 15. Mean ERS Global Scores by Classroom Quality Level

	QE			MOE				*t*-test		
	Mean	SD	*N*	Mean	SD	*N*	Difference in Means	*t*	*p*-Value	Cohen's *d*
ECERS	5.96	0.55	88	5.60	0.62	1,140	0.36	5.28	<.0001	0.614
ITERS	5.62	0.60	13	5.68	0.62	25	0.06	0.31	.76	0.098
FCCERS	5.40	0.17	3	5.11	0.56	21	0.29	0.86	.39	NA

Classroom Assessment Scoring System®

During the spring of the 2012–13 school year, local CSP staff assessed the quality of classroom interaction in all CSP 1 preschool evaluation classrooms with the CLASS®. CLASS is an observation-based assessment instrument designed to measure classroom quality by scoring interactions between children and teachers in classrooms as well as the teachers use of the classroom environment (i.e., materials in the classroom) (Pianta, Paro and Hamre 2008). CLASS differs from ERS because observers using the CLASS focus specifically on interactions between children and teachers and how teachers use the physical classroom environment to teach.

The CLASS instrument assesses quality of interaction by way of three domains: Emotional Support, or activities that support children's social-emotional functioning; Classroom Organization, or organization of student's activities and behavior within the classroom; and Instructional Support, the way teachers implement curriculum to stimulate cognitive development and language skills (Pianta, Paro and Hamre 2008). Each domain is associated with a number of dimensions that serve as measures of the domain. For instance, the Emotional Support domain includes the dimensions Positive Climate, Negative Climate, Teacher Sensitivity, and Regard for Student Perspectives. Each dimension is associated with a number of indicators of the dimension of quality, specific observable behaviors, activities, and interactions that indicate the absence or presence of the dimension. For example, indicators for the Positive Affect dimension are smiling, laughter, and enthusiasm. CLASS observers look for these behaviors in order to score the quality of classroom interaction. CLASS dimension scores can range from one to seven. To obtain a CLASS domain score, assessors calculate the mean of the dimension level scores taken across multiple cycles of classroom observation.

According to CSP quality criteria, both QE and MOE classrooms are required to maintain CLASS domain scores of 5 for Emotional Support, 3 for Classroom Organization, and 2.75 for Instructional Support. Table 16 lists mean CLASS domain scores, standard deviations, minimum and maximum domain scores, and sample sizes for both classroom quality levels and for the program overall. These data show, on average, CSP 1 classrooms are meeting CSP classroom quality criteria. However,

means hide variation in scores. Not all CSP 1 classrooms meet the criteria as evidenced by minimum CLASS scores.

Table 16. Mean CLASS® Domain Scores by Classroom Quality Type and Overall

	Domain	Mean	SD	Min	Max	*N*
QE	Emotional Support	6.07	0.42	5.00	7.00	79
	Classroom Organization	5.56	0.66	3.33	6.83	79
	Instructional Support	3.01	0.92	1.16	5.63	79
MOE	Emotional Support	6.04	0.50	4.50	7.00	97
	Classroom Organization	5.54	0.62	3.33	6.83	97
	Instructional Support	3.11	0.92	1.16	6.00	97
All	Emotional Support	6.05	0.47	4.50	7.00	176
	Classroom Organization	5.55	0.64	3.33	6.83	176
	Instructional Support	3.06	0.92	1.16	6.00	176

Figures 11 and 12 depict percentages of CSP 1 evaluation classrooms at or above CLASS domain threshold scores for CSP and Race to the Top-Early Learning Challenge (RTT-ELC) by classroom quality type. These data show the majority of CSP 1 classrooms meet CLASS threshold score standards for CSP. The majority of CSP 1 classrooms also meet the more ambitious RTT-ELC Quality Rating and Improvement System (QRIS) point value 4 standards for Emotional Support and Classroom Organization, but not for Instructional Support.[7]

Percentages of QE and MOE classrooms scoring above either CSP or RTT-ELC standards were not statistically different, meaning classroom quality type does not seem to have an effect on whether or not classrooms meet CSP or RTT-ELC standards. Possible differences in CLASS domain scores between the two classroom quality levels of CSP 1 were assessed by t-tests, Kruskal-Wallis, and Wilcoxon tests. None yielded statistically significant results. MOE and QE classrooms are similar in terms of the quality of classroom interactions as measured by CLASS.

[7] Along the 5-point QRIS rating scale, point-value 4 standards are CLASS domain scores of 5 for Emotional Support, 5 for Classroom Organization, and 3 for Instructional Support (CDE 2013).

Figure 11. Evaluation Classrooms Above CSP CLASS® Domain Standards

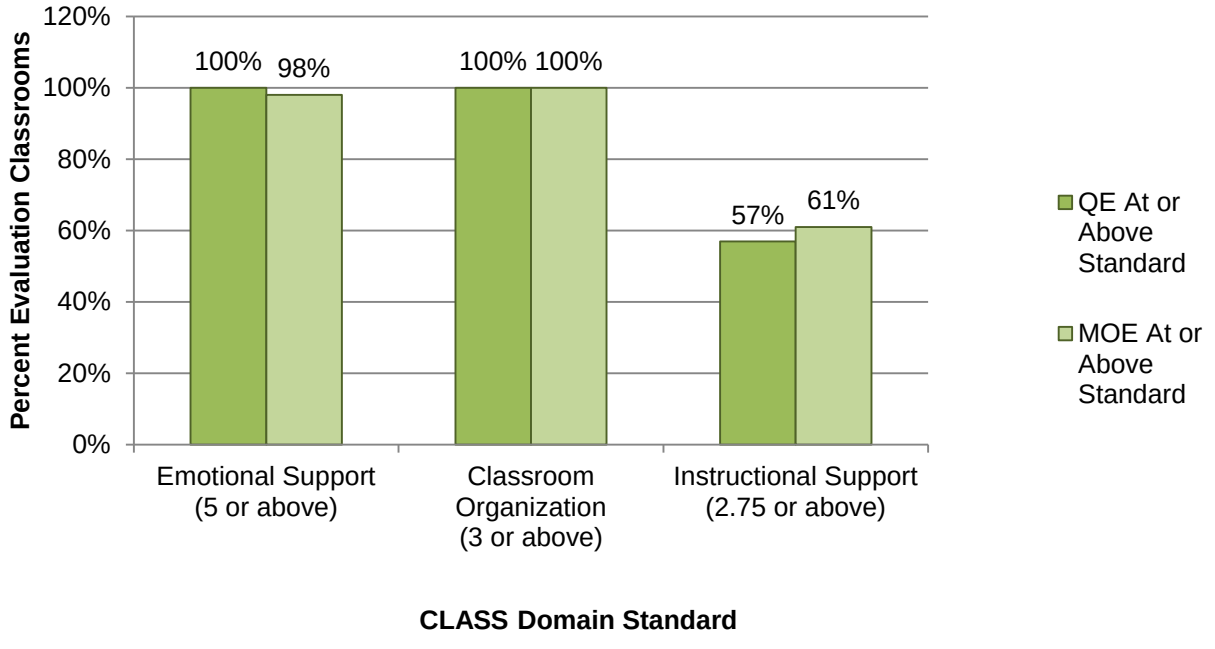
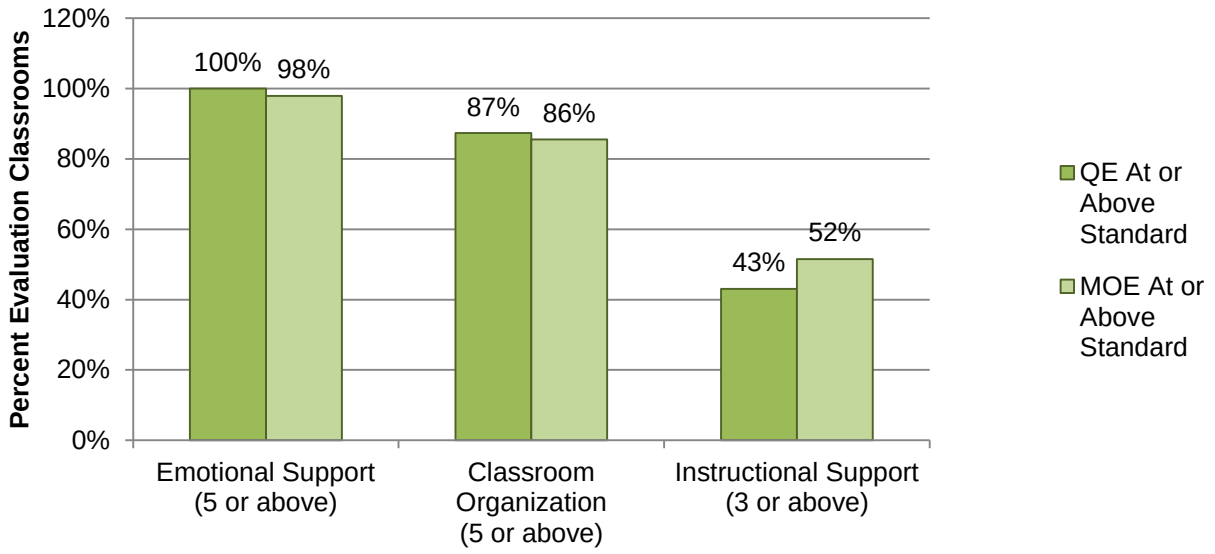


Figure 12. Evaluation Classrooms Above RTT-ELC QRIS Tier 4 CLASS Domain Standards



How do CSP CLASS® scores compare with scores from similar programs? To provide context, Figure 13 compares mean CLASS domain scores from CSP 1 QE and MOE classrooms with mean CLASS domain scores obtained from the Frank Porter Graham Child Development Institute's (FPG) study of Educare centers (UNC 2012); Brown, Jones, LaRusso, and Aber's (2010) study of the effects of the 4Rs social-emotional learning and literacy program in New York City; and AIR's (2010) evaluation of San Francisco County's Preschool for All (PFA) program. These data show CSP 1 classrooms are similar to Educare centers and PFA classrooms in the domains of Emotional Support and Classroom Organization, but fall behind Educare, PFA, and New York City preschools in the domain of Instructional Support. The emphasis on Emotional Support in the 4Rs program may help to explain why CSP 1 classrooms scored lower in Emotional Support than the classrooms in New York City (see Brown et al. 2010). Please note that apparent differences in mean CLASS domain scores between CSP 1 classrooms and classrooms assessed in these studies are not able to be tested for statistical significance based only on means published for these studies.

Figure 13. Mean CLASS Domain Scores for CSP 1 QE and MOE Classrooms Compared to Mean CLASS Domain Scores Obtained From Three Other Studies

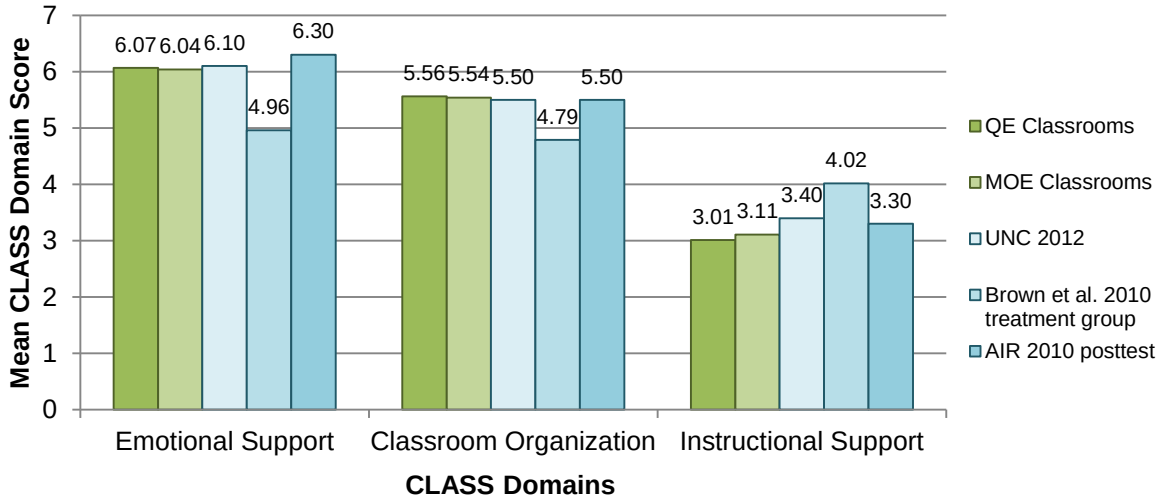


Table 17 depicts results of bivariate regression analysis for the number of early ECE or CD units held by staff across the two classroom quality levels of the program.

Table 17. Relationships Between Total ECE or CD Units Held by Teaching Staff in the Classroom and CLASS® Domain Scores by Classroom Quality Type

	Domain	R^2	*F*-test *p*-value
QE	Emotional Support	0.053	0.040*
	Classroom Organization	0.018	0.133
	Instructional Support	0.134	<0.001***
MOE	Emotional Support	0.120	<0.001***
	Classroom Organization	0.061	0.015*
	Instructional Support	0.118	<0.001***
All	Emotional Support	0.090	<0.001*
	Classroom Organization	0.038	0.010**
	Instructional Support	0.121	<0.001***

*p<.05 **p<.01 ***p<.001
R^2 is the proportion of variance in the dependent variable explained by independent variable

CLASS domain scores are positively associated with the pooled number of ECE or CD units held by classroom teaching staff. In QE classrooms, about 5 percent of the variation in Emotional Support and over 13 percent of the variation in Instructional Support can be explained by the number of ECE or CD units held by teaching staff. In MOE classrooms, the number of ECE or CD units held by teaching staff explains around 12 percent of the variation in Emotional Support, six percent of the variation in Classroom Organization, and almost 12 percent of the variation in Instructional Support. Including all classrooms in the analyses, statistically significant positive relationships are found between total number of ECE or CD units held by teaching staff and all CLASS domain scores. Nine percent of the variation in Emotional Support, four percent of the variation in Classroom Organization, and 12 percent of the variation in Instructional Support can be explained by the total number of ECE or CD units held by teaching staff in the classroom.

Child Development

The DRDP instruments (DRDP 2010, DRDP-IT, and DRDP *access*) are the primary components of CDE's DR system. DR seeks to improve the quality of education programs provided to children from birth to age 12 across California (CDE 2010). DRDP instruments are authentic observational assessments based on naturalistic and participant observation methodology and designed to guide teachers through the process of observing and documenting the development of children across a developmental continuum (McLean, Edelman, and Salcedo 2011, CDE 2010). The DRDP 2010 for preschool age children is divided into seven developmental domains. Each developmental domain is further separated into a number of measures. Each measure of each domain is associated with a continuum of four successive developmental levels: exploring, developing, building, and integrating. The observer (or teacher) is required to rate the development of each child in terms of these developmental levels by observing and documenting specific evidence that the child has reached a particular developmental level.[8]

DRDP fall and spring aggregate data collected from CSP 1 evaluation classrooms were utilized as a quasi-outcome measure to explore effects of CSP quality enhancements on children's development. Local Evaluators collected DRDP aggregated results at the classroom level. These data consisted of counts of children at each developmental level of each measure of each domain on the DRDP instrument. DRDP results are interpreted here as quasi-outcomes for the following reasons: 1) DRDP is a formative assessment tool that works to produce results that are most useful for informing classroom instruction, interaction, and processes at the classroom level. However, for this evaluation, DRDP was utilized as a summative assessment to measure and gauge how children are developing in CSP classrooms at a programmatic level.[9] Individual children's progress through the developmental levels was not analyzed. Rather, DRDP aggregated data were used to produce a type of developmental distribution of DRDP ratings for the classroom. 2) Teachers in CSP are not independent assessors. Teachers as observers are personally invested in the development of the children in their classrooms and may possibly inflate or deflate DRDP ratings for various reasons. 3) Teachers possess various levels of understanding of the DRDP assessment instrument and procedures so child development may not be assessed the same way or with the same attention to detail across all CSP classrooms. DRDP data may be less reliable and consistent than other assessment methods using independent observers and other child development assessment instruments.

The aggregate and ordinal structure of DRDP data require appropriate strategies for analysis. The first strategy was to dichotomize the data by collapsing five DRDP developmental levels into two. Two variables were created: a high fall and a high spring

[8] For more information about DRDP, see CDE 2011.

[9] Formative means that assessment results are used to shape classroom instruction. The goal is to monitor child progress as feedback to inform classroom instruction. Summative implies outcomes to measure child development for purposes of comparison (i.e., to compare to some standard of development or to the development of some other group of children).

count of ratings in the top two developmental levels of each measure and of each domain before and after the intervention of CSP classroom activities. These two constructed variables enabled analyses of the difference in proportions of DRDP ratings at the top two developmental levels across classroom quality levels (i.e., *Z*-test).

The second strategy is the use of a dominance statistic known as Cliff's Delta. Measure-level and domain-level effect sizes were calculated for all evaluation classrooms (see Grissom and Kim 2012). These effect sizes enabled analysis of DRDP aggregate data in two ways: 1) effect sizes as continuous within a range of -1 to 1 for correlational and regression analyses; and 2) mean effect sizes for exploration of differences in development between various groupings of the data. For more information on this methodology, see Kromrey and Hogarty (1998); Rosal, San Luis, and Sanchez-Bruno (2003); Hess and Kromrey (2004); Kromrey et al. (2005); Hogarty et al. 2005, Grissom and Kim (2012).

Table 18 lists results of proportions tests comparing fall and spring percentages of ratings in the top two developmental levels across all measures of each developmental domain between the two classroom quality levels.[10] Statistically significant relationships were found for classroom quality and percentages of spring ratings at the top two developmental levels for all seven DRDP developmental domains. All relationships were highly significant ($p<.001$). An important finding is that QE classrooms started the school year with higher percentages of ratings at the lower DRDP developmental levels, but ended with higher percentages of ratings at the top two developmental levels for five out of seven DRDP domains. QE classrooms tended to have a more positive effect on the development of children (i.e., more higher ratings) as measured by DRDP than MOE classrooms, despite QE classrooms starting with more lower DRDP ratings. This suggests QE CSP 1 classrooms may have a greater effect on reducing the achievement gap than MOE classrooms.

[10] Percentages do not reflect percentages of children, but rather percentages of DRDP ratings. Children are rated across multiple measures and multiple dimensions when they are assessed using DRDP. The activities of one child will generate ratings at different developmental levels across multiple measures of multiple DRDP dimensions. Since the unit of analyses for the evaluation of CSP is the classroom and not individual children, the development of children is best understood as a constellation of DRDP ratings. The aggregate DRDP data collected does not differentiate between individual children, but rather utilizes the collective ratings of the children in the classroom in order to develop a developmental distribution of ratings for the classroom.

Table 18. Percentages of Ratings at the Top Two DRDP Developmental Levels at Fall and Spring by Classroom Quality Type and DRDP Developmental Domain

		Percent Ratings at Top Two Developmental Levels		Percent Difference (QE – MOE)		*N* Ratings	
	Classroom Type	Fall	Spring	Fall	Spring	Fall	Spring
Self and Social Development	QE	31%	86%	-3%***	14%***	11,408	13,277
	MOE	33%	72%			13,724	14,883
Language and Literacy Development	QE	24%	83%	<-1%	18%***	9,481	11,076
	MOE	24%	66%			11,166	12,569
English Language Development	QE	33%	84%	-2%	14%***	2,612	2,973
	MOE	35%	70%			2,597	2,949
Cognitive Development	QE	31%	85%	<1%	14%***	4,717	5,470
	MOE	30%	71%			5,569	6,284
Mathematical Development	QE	21%	84%	-2%**	16%***	5,687	6,627
	MOE	24%	68%			6,698	7,512
Physical Development	QE	57%	94%	<-1%	7%***	2,846	3,312
	MOE	58%	87%			3,307	3,760
Health	QE	42%	90%	4%***	12%***	2,989	3,312
	MOE	38%	77%			3,338	3,744

Note: N = number of ratings, not children. Some DRDP dimensions will have more possible ratings because those dimensions also have more measures.
Difference of proportions test significance levels: * $p<.05$, ** $p<.01$, *** $p<.001$

Cliff's Delta is an effect size measure quantifying how much the distributions of fall and spring DRDP ratings diverge or overlap (see Cliff 1996). A zero represents complete overlap (i.e., the distributions are not different) and a 1 or -1 one indicates perfect divergence (i.e., distributions are completely different). The statistic was calculated, in this case, by taking the proportion of ratings in the fall sample that are higher along the DRDP developmental continuum than the ratings in the spring sample minus the proportion of the opposite. All fall ratings are compared with all spring ratings, and the

comparison is scored as either 1, -1, or 0 depending on which rating is ranked higher.[11] Cliff's Deltas of 0.147, 0.33, and 0.474 correspond with Cohen's *d* effect sizes of 0.2 (small), 0.5 (medium), and 0.8 (large) (Cohen 1988 and Romano et al. 2006).

For each DRDP developmental domain, Table 19 lists mean Cliff's Delta effect sizes, standard deviations, group size by classroom quality level, and a calculation of the difference in effect sizes between classroom quality levels. T-tests detected statistically significant differences in mean effect size between classroom quality levels across all DRDP developmental domains. All effect sizes calculated from QE classroom DRDP results were large, ranging from 0.63 to 0.75. All effect sizes calculated from MOE classroom DRDP results also were large, ranging from 0.47 to 0.57. The differences in effect sizes between QE and MOE classrooms range from 0.16 to 0.18, and can be considered small, yet relevant, effect sizes. These data show that QE classrooms produce more developmental effects as measured by DRDP beyond the already notable developmental effects detected in MOE classrooms. On average, children experience healthy development in CSP 1 classrooms and this development appears to be enhanced within QE classrooms.

[11] When spring measures rank higher than fall, the comparison is scored as a +1, in the opposite case as -1, and when there is a tie, the comparison is scored as 0. These ratings are then averaged to calculate *d*. The formula to calculate Cliff's Delta is as follows (Cliff 1996:125):

$$d = \frac{\#(x_i > x_j) - \#(x_i < x_j)}{mn}$$

Table 19. DRDP Developmental Domains: Mean Cliff's Delta Effect Size (*d*) and Effect Size Difference Across Classroom Quality Types

	QE			MOE				
DRDP Domain	Mean Cliff's *d* Effect size	SD	*N*	Mean Cliff's *d* Effect Size	SD	*N*	Difference in Effect Size	*t*-Test *p*-Value
Self and Social Development	0.73 (large)	0.24	63	0.55 (large)	0.28	65	0.18	<.0001**
Language and Literacy Development	0.71 (large)	0.26	62	0.53 (large)	0.28	63	0.18	.0002**
English Language Development	0.63 (large)	0.25	57	0.47 (large)	0.31	63	0.16	.0035*
Cognitive Development	0.71 (large)	0.32	61	0.54 (large)	0.28	63	0.17	.0021*
Mathematical Development	0.75 (large)	0.27	62	0.57 (large)	0.27	63	0.18	.0003**
Physical Development	0.66 (large)	0.32	62	0.49 (large)	0.31	62	0.17	.0025*
Health	0.72 (large)	0.29	62	0.56 (large)	0.33	63	0.16	.0039*

Note: N of QE and MOE classrooms compared is for those with complete DRDP data available among the total of 214 evaluation classrooms.
*p<.01, **p<.001

Parent Involvement

Outreach and Support Activities Provided to Parents

Another goal of CSP is to "increase parent's knowledge, interest, involvement, and ability to advocate for their child's early learning and later success in school" (First 5 California 2012:16). Towards that goal, CSP strives to provide parents with information about their child's growth and development, optimal health, and wellbeing; to promote the parent/child relationship; and to encourage parents' involvement and advocacy in their children's early education (First 5 California 2012:16). These types of quality enhancements are developed and implemented through the work of local QES, specifically the FSS. With the help of FSS, CSP counties are to develop and implement a plan to support diverse parent and family partnerships and parent involvement in all aspects of the program, including leadership in program design participation, implementation and evaluation; promote and support the development of emerging parent and community leaders; and hold a minimum of two individual parent conferences per year (First 5 California 2012:20).

Parents participate in different types of parent engagement and support activities such as advisory boards, parent teacher conferences, classroom volunteering opportunities, education to support parenting and child development, and other social support activities. Table 20 provides percentages of active parents[12] participating, participation rates per CSP classroom, and percentages of children with participating parents, by parent engagement and support activity. Parent-teacher conferences draw the most parent participation at 16,792 participants (79 percent of active parents), followed by educational opportunities at 2,137 participants (10 percent of active parents), classroom volunteer opportunities at 1,147 participants (five percent of active parents), social support activities at 871 participants (four percent of active parents), and advisory board participation at 356 participants (one percent of active parents). However, across all 1,301 classrooms, participation rates per classroom (active parents per classroom in advisory boards, volunteering opportunities, educational opportunities, or social support activities) seem low at under two active parents per classroom. The third column in Table 20 lists percentages of children with active parents in terms of the various types of engagement and support activities. These data also reflect low participation rates across the four activities previously mentioned. Survey data show 71 percent of children had parents who attended a parent teacher conference.

[12] Active parents are parents that participate in parent engagement and support activities.

Table 20. Parent Participation by Outreach and Support Activity Type

Parent Engagement and Support Activity Type	Total Parents Participating	Percent of Active Parents Participating	Parents Participating per CSP Classroom (*N* = 1,301)	Estimated Percent of Children With a Participating Parent (*N* = 23,769)
Parent-teacher Conferences	16,792	79%	12.9	71%
Educational Opportunities	2,137	10%	1.6	9%
Classroom Volunteer Activities	1,147	5%	0.9	5%
Social Support Activities	871	4%	0.7	4%
Advisory Board	356	2%	0.3	1%
All Parent Engagement and Support Activities	21,303	100%	16.37	90%

Note: Active parents are parents who have participated in one or more parent engagement activities. Parents who are more active may participate across multiple engagement and support activities and may be duplicated in this total. Additionally, parents may have multiple children enrolled at the site, and some of these children may or may not be in CSP classrooms. N = 21,303 active parents.

DR Parent Survey Results

The DR Parent Survey was developed by the California Department of Education (CDE) as part of the DR system. CDE's Child Development Division (CDD) designed the tool to help programs and schools collect information from parents to gauge progress toward family-specific desired results. The survey is anonymous and is usually distributed to parents towards the end of the school year. CSP sites were encouraged through CSP RFA 1 and the *CSP Data Collection Guidebook* to make use of this survey as a tool to plan strategies for increasing levels of parental involvement and satisfaction (First 5 California 2012; 2013). The DR Parent Survey includes 30 Likert-style, 18 "Yes" or "No," and two narrative items gauging various aspects of parental involvement and satisfaction. Local county staff collected aggregate results of two subsets of questions on the survey. The informed subset consists of DRDP Parent Survey questions 3a through 3k, and the satisfaction subset consists of question 1 and questions 6a through 6q of the original survey. The informed subset was used to gauge parents' knowledge about the site and also as an outcome measure of parent engagement activities, and

the satisfaction subset as a measure of overall parent satisfaction and also as a measure of satisfaction with specific aspects of the program (CDE CDD 2003).

Parents of children at CSP sites are well informed about many aspects of their child's program. For instance, 97 percent of parents indicate they received information about how their child was doing in the program, 95 percent indicate they had received information about how their child was growing and developing, and 96 percent indicate they had received information about what they could do to help their child learn and develop. Table 21 shows counts of parents indicating they received information, percentage of total "Yes" responses, and total responses by parent outreach and support activity type. Percentages of "Yes" responses for each DRDP Parent Survey question from the informed subset are all above 80 percent highlighting the effectiveness of parent engagement and information sharing strategies and activity at CSP sites.

Parents of children at CSP sites also are highly satisfied with specific aspects of their child's program and with their child's program over all. The majority of parents surveyed were very satisfied with each aspect of their child's program (Table 22). Over 98 percent of all possible ratings were positive when "Satisfied" and "Very Satisfied" levels of satisfaction were combined. Table 23 presents numbers and percentages of parents for overall satisfaction (Question 1 on DR Parent Survey). Over 99 percent of parents are satisfied with the overall quality of their child's program.

Table 21. Parents Indicating "Yes" by DRDP Parent Survey Question from Informed Subset

Received Information about:	Number of Parents Indicating "Yes"	Total Responses	Percent of Total Responses
How Children Develop at Different Ages?	8,422	9,306	91%
How Your Child is Growing and Developing?	8,896	9,359	95%
How Your Child is Doing in the Program?	9,130	9,388	97%
Schedule of Daily Activities?	8,753	9,318	94%
What You Can Do to Help Your Child Learn and Develop?	8,926	9,351	96%
Parenting Skills?	8,133	9,249	88%
How to Find Other Services in the Community?	7,539	9,275	81%
Where to Report Health or Safety Concerns and Complaints?	7,885	9,260	85%
Experience and Training of Program Staff?	8,094	9,250	88%
Discipline Procedures?	8,350	9,350	89%
How You Can Get Involved With Your Child's Program?	8,733	9,272	94%

Table 22. Parents at Each Level of Satisfaction by Specific Aspects of their Child's Program

	Very Satisfied		Satisfied		Not Satisfied	
	Count	Percent	Count	Percent	Count	Percent
Hours of Operation	6,973	72%	2,543	26%	163	1.7%
Location of Program	6,905	75%	2,266	24%	101	1.1%
Number of Adults Working With Children	7,464	77%	2,126	22%	131	1.3%
Background and Experience of Staff	6,742	73%	2,241	24%	205	2.2%
Languages Spoken by Staff	7,441	77%	2,103	22%	184	1.9%
How Program Staff Communicate With You	6,934	75%	2,076	23%	233	2.5%
Meeting the Individual Needs of Your Child	7,271	75%	2,181	23%	245	2.5%
Interaction Between Staff and Children	7,065	76%	2,064	22%	182	2.0%
Interaction With Other Parents	6,067	63%	3,162	33%	336	3.5%
Parent Involvement	5,860	63%	3,090	33%	309	3.3%
Equipment and Materials	7,092	74%	2,384	25%	77	0.8%
Cultural Activities	6,398	69%	2,735	29%	195	2.1%
Daily Activities	6,346	73%	2,286	26%	114	1.3%
Environment	6,933	75%	2,269	24%	82	0.9%
Nutrition	6,898	71%	2,564	27%	231	2.4%
Health and Safety Policies and Procedures	6,917	74%	2,264	24%	121	1.3%
How the Program Promotes Your Child's Learning and Development	7,441	77%	2,108	22%	111	1.1%

Table 23. Parent Satisfaction for Question 1 of the DRDP Parent Survey: "How satisfied are you with the overall quality of this program?"

Very Satisfied		Satisfied		Not Satisfied		Total	
Count	Percent	Count	Percent	Count	Percent	Count	Percent
6,878	78%	1,947	22 %	34	0.4%	8,859	100%

Summary and Conclusions

The 2012–13 school year is the first year of implementation for CSP 1. This evaluation report covers data related to program targeting (i.e., classroom funding sources and API catchment areas), classroom and child characteristics, teaching staff characteristics, assessment results (i.e., ERS and CLASS®), child development (DRDP), and parent engagement and support. A primary goal of this evaluation report is to establish baseline data for exploring trends in the quality of CSP classrooms and sites over the life of the program. Data collected from QE classrooms was compared with data collected from MOE classrooms to highlight similarities and differences between the two classroom quality levels.

To summarize, CSP classrooms are of high quality. CSP 1 classrooms, on average, meet most quality criteria established in attachments A, A2, and A3 of CSP RFA 1 (First 5 California 2012). CSP 1 classrooms are ethnically diverse among both children and teaching staff, and teaching staff are well qualified. Although CSP serves many DLLs, children may not be served in their primary language. English is the primary language used by most teaching staff. Parents of children participating in CSP are highly satisfied with and are receiving information about their child's program. In terms of development, children are developing across all domains of DRDP 2010, and this development appears to be enhanced in QE classrooms.

CSP classrooms are of high quality as evidenced by data for classroom ratios, classroom group sizes, qualifications of teaching staff, and ERS and CLASS scores. The majority of classrooms across both quality levels are at a "good" level of quality as measured by ERS (Harms, Clifford and Cryer 2005) and, on average, ERS global scores across all classrooms meet or exceed a score of 5. In terms of classroom ratios and group sizes, on average, classrooms meet CSP quality criteria, but a minority of classrooms participating in the program do not fully meet program standards. CSP classrooms are similar in dimensions of quality as measured by the CLASS (classroom interaction) but differ in dimensions of quality as measured by ERS (classroom environment). Mean CLASS domain scores are not statistically different across the two classroom quality levels (MOE vs. QE). However, mean ECERS global scores are significantly different. On average, QE classrooms receive higher ERS global scores than do MOE classrooms, indicating there is some difference in classroom environments between the two classroom quality levels.

CSP 1 primarily served children of low-income families or children living in low-performing catchment areas of the API. Low family income and low API deciles serve as proxy measures for identifying children who may be at risk of school failure.

CSP classrooms are diverse by ethnicity and race. The majority of children served (58 percent) are of Hispanic/Latino ethnicity, followed by Other at 12 percent, Asian and White at eight percent, and Black or African American at seven percent. CSP 1 teaching staff are almost as ethnically diverse as the population they serve. Over 40 percent are Hispanic or Latino, followed by other at 19 percent, White and Asian at 13, and Black or

African American at 10 percent. In terms of language, CSP 1 served a total of 13,165 DLLs during the 2012–13 school year, and 82 percent of all DLLs served in CSP 1 primarily speak Spanish. Most commonly, teaching staff use English in the classroom. Eighty six percent use English, followed by Spanish at 14 percent. CSP children are more linguistically diverse than CSP teaching staff. In addition to English and Spanish, DLL children speak Cantonese, Vietnamese, Filipino or Tagalog, Mandarin, Russian, Korean, Arabic, Punjabi, Japanese, and Hmong.

CSP classroom teaching staff are well-qualified, and teaching staff working in QE classrooms are the most qualified. Forty-five percent of all teaching staff across the program hold at least a Bachelor's degree, and a larger proportion of teaching staff in QE classrooms hold Bachelor's degrees than do teaching staff in MOE classrooms. Additionally, QE classrooms tend to employ teachers with more ECE or CD units. The average number of pooled ECE or CD units held by teaching staff per classroom is higher for QE classrooms, a higher percentage of teaching staff in QE classrooms hold ECE or CD related Bachelor's degrees, and 60 percent of ECE or CD Bachelor's degrees are held by teachers working in QE classrooms.

Parent-teacher conferences draw the most parent participation at 79 percent of active parents. Parents of children at CSP sites are well informed about many aspects of their child's program. Over 97 percent of parents indicate they received information about how their child was doing in the program, and 95 percent indicate they received information about how their child was growing and developing. Parent participation in advisory boards, volunteering opportunities, educational opportunities, or social support activities across all 1,301 classrooms appears to be low at under two active parents per classroom, but at about 13 parents per classroom when parent-teacher conference participation rates are included in the analysis. Percentages of "Yes" responses for each DRDP Parent Survey question from the informed subset are all above 80 percent, highlighting the effectiveness of parent engagement and information sharing strategies and activity at CSP sites. Parents of children at CSP sites also are highly satisfied with specific aspects of their child's program, and with their child's program overall.

Children are developing well in CSP classrooms across all developmental domains of DRDP-PS. Statistically significant differences were found between proportions of DRDP ratings at the top two developmental levels of DRDP-PS across all developmental domains. Though QE classrooms started with higher percentages of child ratings at the lower DRDP developmental levels in the fall, they ended with higher percentages of ratings at the top two levels in the spring. Statistically significant differences in mean effect sizes between classroom quality levels were found across all developmental domains. All effect sizes calculated from QE and MOE classroom DRDP results were large. Children are developing in CSP classrooms, and this development appears to be enhanced in QE classrooms.

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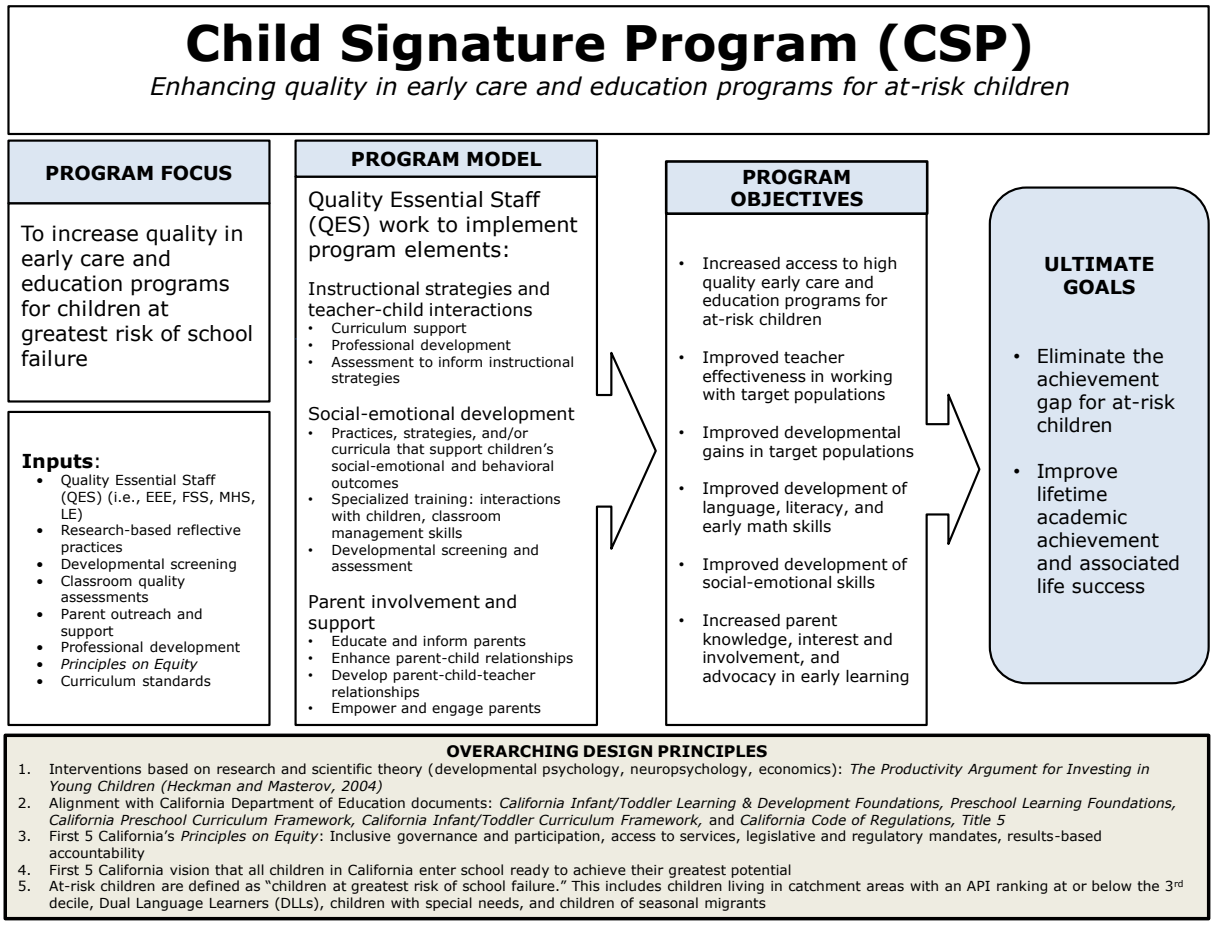
Appendix A: CSP Logic Model



Appendix B: Evaluation Questions Matrix

		Program Year		
Outcome Questions		2012–13	2013–14	2014–15
O.1.	Are classroom environments in CSP sites improving and meeting target quality criteria?	✓	✓	✓
O.2.	Are teachers in CSP classrooms using effective teaching and classroom interaction strategies?	✓	✓	✓
O.3.	Are high-risk young children who participate in CSP demonstrating improvement in their readiness to succeed at kindergarten entry?		✓	✓
O.4.	Is the developmental status of high risk young children who participate in CSP programs improving over time?		✓	✓
O.5.	Are children with special needs, Dual Language Learners (DLLs), and migrant children who attend CSP programs making developmental gains?	✓	✓	✓
O.6.	Are parents included in and satisfied with CSP?	✓	✓	✓
Process Questions		2012–13	2013–14	2014–15
P.1.	Are conditions that lead to and support quality early care and education increasing among programs that participate in CSP?		✓	✓
P.2.	What strategies and services most effectively promote positive outcomes for children?			✓
P.3.	Are some strategies more effective for DLLs or children with special needs?			✓
P.4.	Are children with special needs being identified and receiving services as appropriate?	✓	✓	✓
P.5.	What are the most effective outreach strategies for parents?			✓

Note: Because some evaluation questions imply analysis of trends, only a subset of questions can be answered for the first program year. Questions about trends will be addressed with data collected during the second and third years of the program.