Evaluation of the Child Signature Program: 2013–14 School Year

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Summary of Findings

This report updates the Child Signature Program (CSP) evaluation with data collected during the 2013–14 school year. Key findings focus on program targeting; characteristics of children served, including dual language learners (DLL), children with special needs, and migrant children; classroom teaching staff characteristics; classroom quality; parent participation, and child development.

Program Targeting

- CSP 1 and 3 serve 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 are considered at risk.

- The majority of CSP classrooms serve children of families that meet either state or federal income eligibility standards and are low-income. With regard to low-income households, 79 percent of CSP 1 and 3 classrooms were either State Preschool or Head Start classrooms. Both State Preschool and Head Start programs enroll children based on program-specific income-eligibility requirements.

- Sixty-four percent of Quality Enhanced (QE) classrooms and half of Maintenance of Effort (MOE) classrooms were located in school catchment areas scoring in the bottom three deciles of the API.

Children Served

- A total of 24,955 children were served by CSP 1 and 3 during 2013–14.

- Preschool-age children (3 to 5 years old) accounted for 96 percent of children in CSP. Infants and toddlers accounted for four percent of children served.

- Fifty-two percent of children served were of Hispanic or Latino ethnicity.

Dual Language Learners, Children with Special Needs, and Children of Seasonal Migrants

- DLLs made up 57 percent of children in CSP 1 and 3 classrooms.

- Spanish speaking DLLs accounted for 82 percent of all DLLs served, followed by Chinese at 7 percent; and Filipino/Tagalog, Vietnamese, Korean, Arabic, Russian, Japanese, Punjabi, Hmong, and Armenian all at under 1 percent.

- Children with special needs made up three percent of all children served.

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

- CSP 1 and 3 served 1,186 additional children, and 1,014 additional DLLs during the 2013–14 school year compared to the prior school year.

Classroom Teaching Staff

- Classroom teaching staff were well qualified. Nineteen percent held associate's degrees and 47 percent held at least a Bachelor's degree. Teaching staff include lead teachers, assistant teachers, and teacher aides.

- The percent of teaching staff with Bachelor's degrees increased 13 percent since the 2012–13 school year.

- During the 2013–14 school year, an estimated 54 percent of teaching staff in QE classrooms held Early Childhood Education (ECE)- or Child Development (CD)-related degrees, as opposed to 29 percent in MOE classrooms. This can be compared to data from 2012–13 that show 39 percent of teaching staff in QE classrooms and 35 percent in MOE held ECE or CD degrees.

- During the 2013–14 school year, the average number of pooled ECE or CD units held by teaching staff per classroom was higher for QE classrooms compared to MOE classrooms (77 units versus 55 units).

- CSP 1 and 3 classroom teaching staff were diverse in terms of race and ethnicity but not in terms of gender. Forty-nine percent of CSP teaching staff were Hispanic or Latino, followed by Other at 16 percent; White at 15 percent; Asian at 11 percent; Black or African American at eight percent; Multiracial at one percent; and American Indian or Alaska Native, and Native Hawaiian or Pacific Islander at less than one percent. Ninety-six percent of teachers in CSP 1 and 3 were female.

Classroom Quality

- On average, classroom environments in CSP 1 and 3 were above a "good" level of quality with a global score of 5 or above for Environment Rating Scale (ERS) family of instruments. Eighty-six percent of preschool classrooms and 87 percent of infant/toddler classrooms achieved ERS global scores of 5 or above.

- On average, mean Early Childhood Environment Rating Scale (ECERS) global scores for MOE classrooms were a quarter of a point higher than QE classrooms. However, mean ECERS subscale scores were not statistically different across classroom quality levels.

- The majority of CSP 1 and 3 evaluation classrooms met CSP standards for Classroom Assessment Scoring System® (CLASS®) of 5 for Emotional Support, 3 for Classroom Organization, and 2.75 for Instructional Support domains. Ninety-six percent of CSP 1 and 3 preschool classrooms met CLASS Emotional Support domain score standards, 100 percent met Classroom Organization standards, and 59 percent met Instructional Support standards.

- Fifty-eight percent of evaluation classrooms met all CSP domain standards for CLASS scores.

- CLASS Instructional Support domain scores were positively associated with the pooled number of ECE or CD units held by classroom teaching staff.

Child Development

- Teachers assess children's development using an observational assessment tool, the Desired Results Developmental Profile (DRDP).

- In QE classrooms, teachers report more ratings in the highest two developmental levels of DRDP at the end of the year as compared to MOE classrooms.

Parent Involvement

- The total number of participating parents (active parents) increased from 21,303 to 31,823 during the 2013–14 school year—a 49 percent increase in parent participation compared to the prior year.

- Participation rates per classroom (active parents per classroom) for educational opportunities, classroom volunteer activities, and social support activities all increased during the 2013–14 school year, but participation rates for advisory boards and parent teacher conferences decreased slightly.

- Overall, parents participated more on site and in classroom activities.

Program Overview

As described in the preceding CSP evaluation report (First 5 California 2014), 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 (EOP 2014, Duncan and Magnuson 2013). Research also shows that high-quality preschool can produce positive effects later in life such as improved adult health outcomes (Campbell et al. 2014), less involvement with the criminal justice system, or need for remedial education (Heckman and Masterov 2007; Schweinhart 2007). Additionally, cost-benefit analyses demonstrate investments in high-quality preschool generate substantial social and economic payoffs by reducing a range of social costs such as unemployment, drug or alcohol abuse, and crime (Rees, Chai and Anthony 2012; Schweinhart et al. 2005; Heckman and Masterov 2007; EOP 2014; Duncan and Magnuson 2013; Yoshikawa et al. 2013).

In California, a major obstacle experienced by underprivileged groups is access to high-quality ECE. In 2007, approximately half of California's disadvantaged and at-risk 3- and 4-year-olds did not attend preschool, and even fewer attended high-quality preschool (Karoly et al. 2007). To address the scarcity of high-quality early care and education programs in California, First 5 California (F5CA) allocated funding to improve the quality of ECE classrooms in low-performing school catchment areas throughout California. The funding was allocated through 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 CSP Request for Application 1 (CSP 1) during the 2012–13 school year. [1] In 2013, classrooms from two additional counties, San Mateo and Orange, joined CSP through CSP Request for Application 3 (CSP 3) after first completing an extensive readiness assessment under CSP Request for Application 2 (CSP 2).

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 ECE environments across California, but specifically in catchment areas associated with low-performing schools as measured by API scores. Two 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 for California's youngest children (see Appendix A: CSP Logic Model).

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

CSP 1 was implemented with two classroom quality levels (First 5 California 2012a).[2] MOE classrooms continue to provide quality and services similar to the F5CA's 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, QE classrooms are supported by a group of Quality Essential Staff (QES) (i.e., program coordinator [PC], local evaluator [LE], 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.

[2] CSP 3 does not include the MOE quality level. All classrooms participating under CSP 3 are QE classrooms.

Evaluation Design

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 2012a) 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 (DLLs, children with special needs, 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.

This report is the result of analyses conducted using data collected during the 2013–14 school year and covers classrooms participating in CSP under RFA 1 and RFA 3. This report compares 2012–13 data to 2013–14 data whenever appropriate or useful to explore change within the program. *Appendix B* of this report provides more information about when the evaluation of CSP may have longitudinal data useful to address process and outcome questions for analyses of trends over multiple school years. Table 1 provides counts of classrooms by quality level and status as evaluation or non-evaluation classrooms (see First 5 California 2014 for details).

Table 1. CSP 1 and 3 Evaluation Design: Evaluation Classrooms by Classroom Quality Level

Classroom Quality Level	Evaluation Classrooms	Non-Evaluation Classrooms	Total
QE	138	0	138
MOE	124	1,027	1,151
Total	262	1,027	1,289

Program Targeting

Table 2 summarizes classrooms by funding source. Classrooms can have more than one funding source; the total of a classroom's funding sources makes up its funding stream. Table 2 shows 67 percent of CSP preschool classrooms also are California State Preschool Programs (CSPP) and 47 percent are federal Head Start. Combined, 79 percent of CSP 1 and 3 classrooms received CSPP or Head Start funding. Federal Head Start and CSPP work to serve low-income children. 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. Figure 1 shows the change in numbers of classrooms funded for the top three funding sources for the 2013–14 school year compared to the prior school year. Ninety fewer classrooms were funded through Head Start and 23 fewer classrooms through First 5 county commissions in 2013–14.

Table 2. CSP 1 and 3 Classrooms by Funding Source

Funding Source	QE Classrooms Funded (*N* = 138)	Percent	MOE Classrooms Funded (*N* = 1,151)	Percent	Total Classrooms Funded (*N* = 1,289)	Percent
State Preschool	99	72%	760	66%	859	67%
Head Start	50	36%	556	48%	606	47%
Local Proposition 10	69	50%	452	39%	521	40%
State Proposition 10	63	46%	439	38%	502	39%
Local Government	21	15%	301	26%	322	25%
State General Childcare	19	14%	106	9%	125	10%
Federal Other	14	10%	149	13%	163	13%
Local Other	7	5%	9	1%	16	1%
Early Head Start	6	4%	4	0%	10	1%
State Alternative Payment	5	4%	69	6%	74	6%
External Gifts or Donations	5	4%	11	1%	16	1%
Other	2	1%	130	11%	132	10%
External Foundation	2	1%	4	0%	6	0%
State Other	0	0%	5	0%	5	0%

Note: Classrooms may have more than one funding source.

Figure 1. Change in Total Classrooms Funded by Top Funding Sources

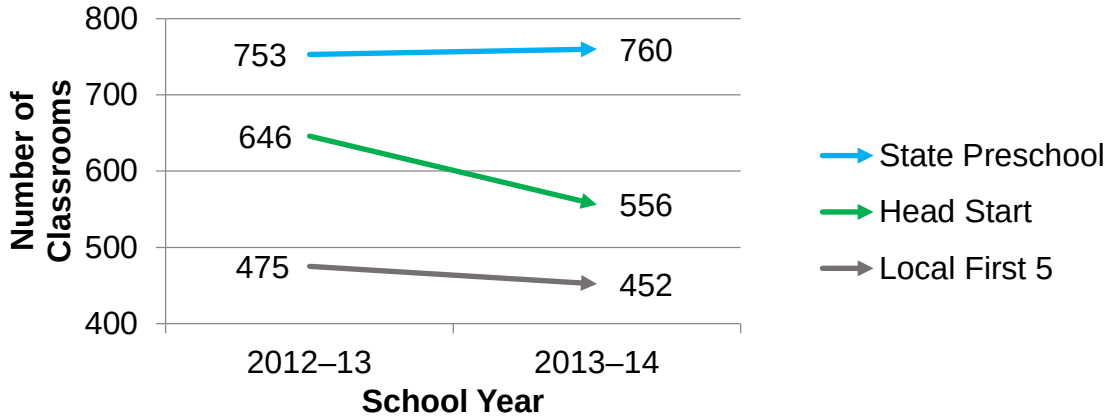


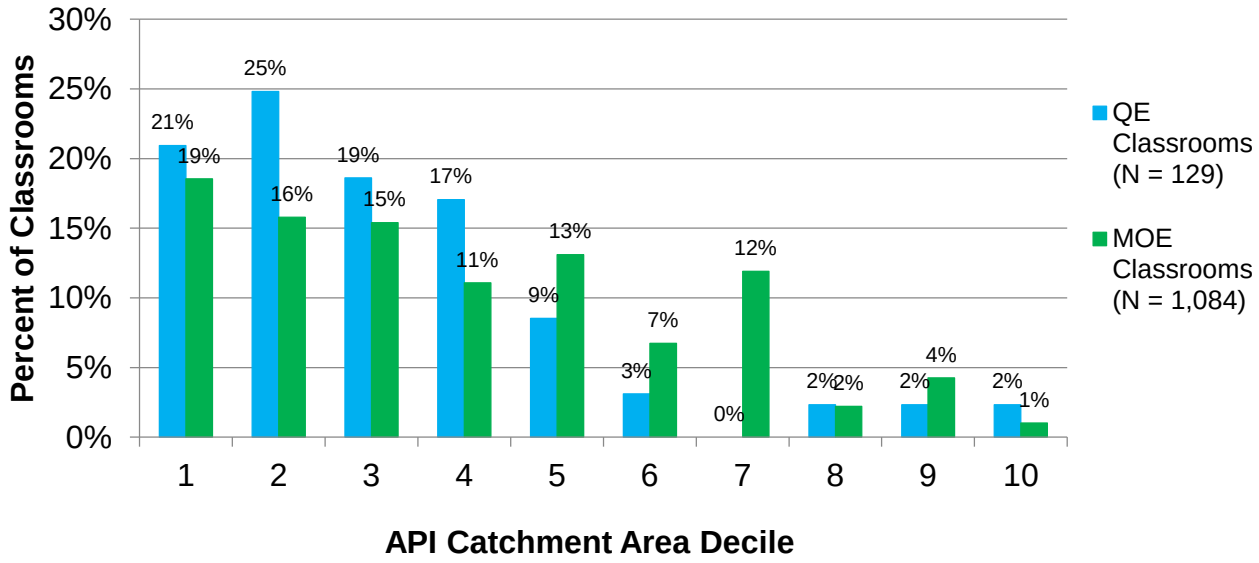
Table 3 summarizes classrooms by API decile (1-10) across MOE and QE classroom quality levels and for the program overall. For program development of CSP, areas with API scores in the bottom three deciles were defined as “low-performing areas.” API deciles are collected for all CSP sites and correspond to the API of the public school catchment area where the site is located.

Figure 2 presents the same information graphically showing 64 percent of QE classrooms. Half of MOE classrooms are located in school catchment areas scoring in the bottom three deciles of API.

Table 3. CSP 1 and 3 Classrooms by API Catchment Area Decile and Classroom Quality Type

API Decile	QE Classrooms (*N* = 129)		MOE Classrooms (*N* = 1,084)		All classrooms (*N* = 1,213)	
1	27	21%	201	19%	228	19%
2	32	25%	171	16%	203	17%
3	24	19%	167	15%	191	16%
4	22	17%	120	11%	142	12%
5	11	9%	142	13%	153	13%
6	4	3%	73	7%	77	6%
7	0	0%	129	12%	129	11%
8	3	2%	24	2%	27	2%
9	3	2%	46	4%	49	4%
10	3	2%	11	1%	14	1%
Any	129	100%	1,084	100%	1,213	100%

Figure 2. CSP 1 and 3 Classrooms by API Catchment Area Deciles and Classroom Quality Level



Special Target Populations

CSP 1 and 3 served a total of 14,179 children who are DLLs, 859 children with special needs, and 100 children of seasonal migrants during the 2013–14 school year. QE classrooms served 12 percent of DLLs and 19 percent of children with special needs; MOE classrooms served 88 percent of DLLs and 81 percent of children with special needs. Table 4 describes these three groups across classroom quality levels and the proportion of children these groups represent within each quality level and the program overall. QE classrooms served higher proportions of DLLs (63 percent compared to 56 percent) and children with special needs (6 percent compared to 3 percent). MOE classrooms served 97 percent of all children identified as children of seasonal migrants.

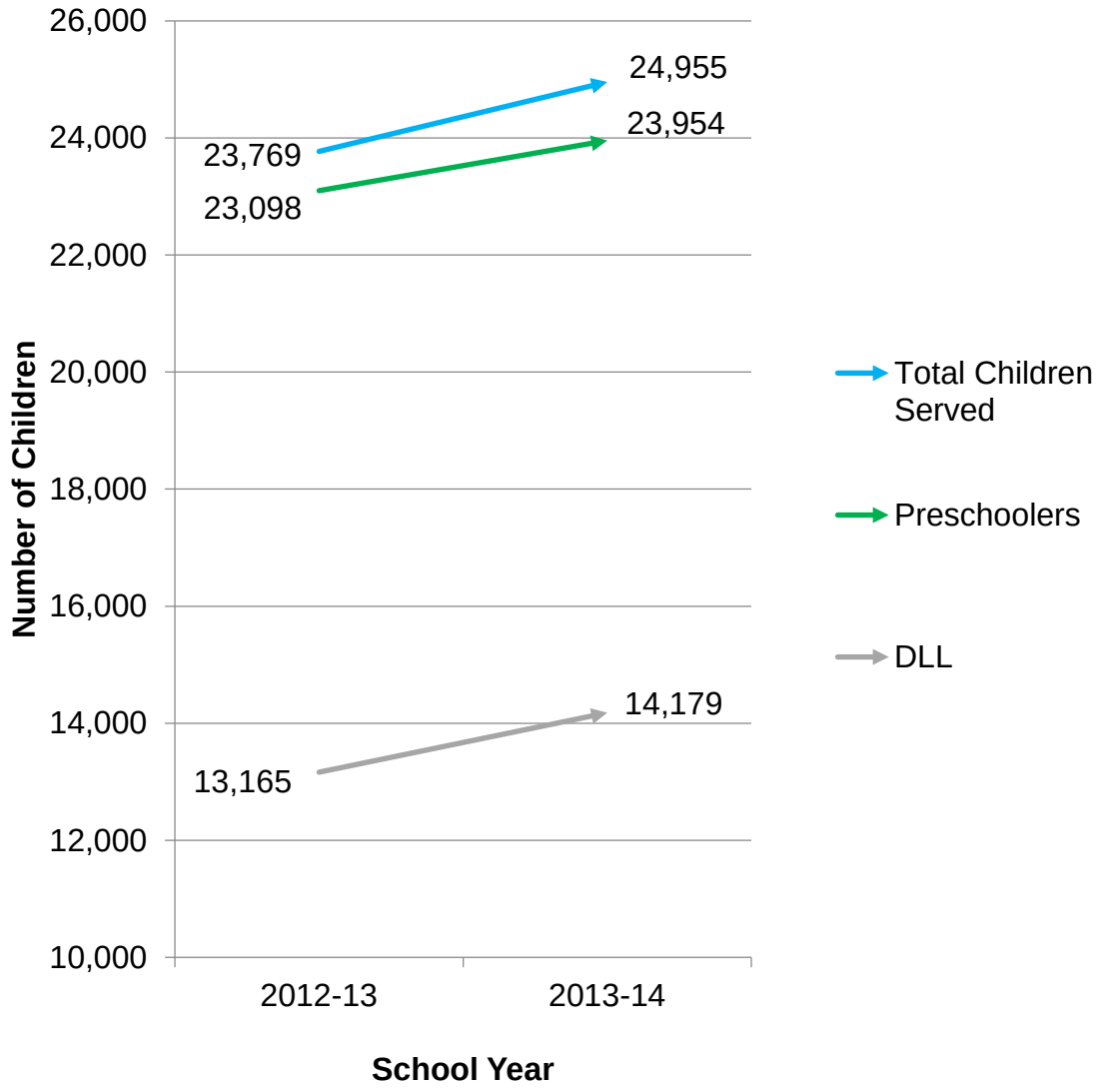
Table 4. Special Populations Served by Classroom Quality Level

	DLL			Children with Special Needs			Children of Seasonal Migrant Families		
	Number	Percent of Total Children Within Quality Level	Percent of Group	Number	Percent of Total Children Within Quality Level	Percent of Group	Number	Percent of Total Children Within Quality Level	Percent of Group
QE	1,660	63%	12%	160	6%	19%	3	<1%	3%
MOE	12,519	56%	88%	699	3%	81%	97	<1%	97%
All	14,179	57%	100%	859	3%	100%	100	<1%	100%

Note: N = 24,955 total children served, N = 22,316 children served through MOE, and N = 2,639 children served through QE classrooms

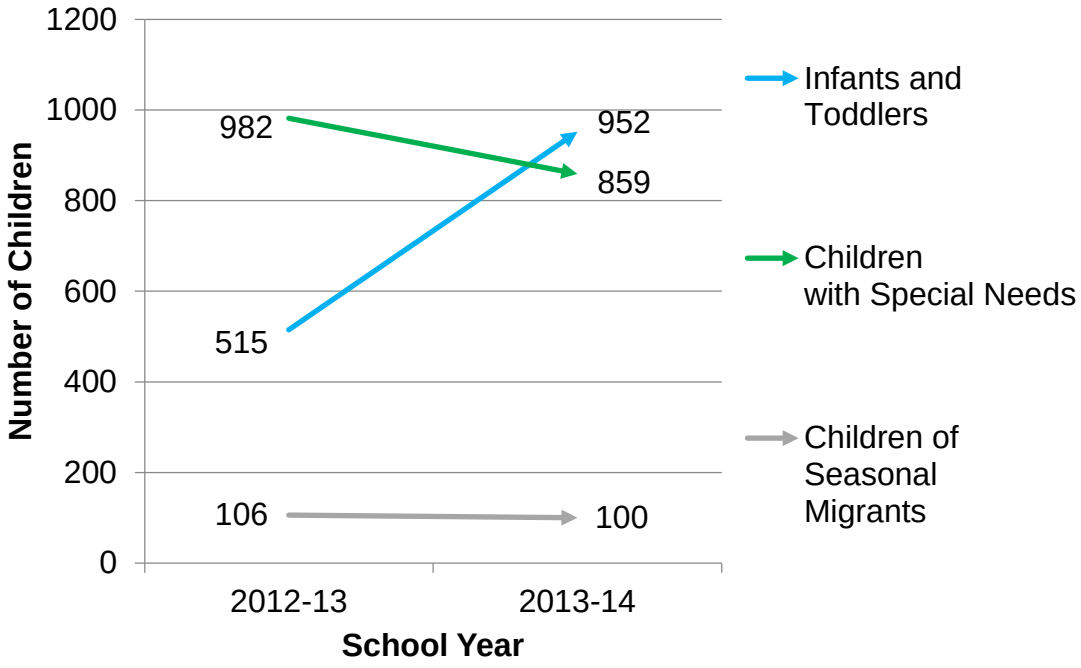
Figures 3 and 4 show change in total counts of children served from special target populations since 2012–13. Figure 3 focuses on target groups represented in CSP by 10,000 children or more. Figure 4 presents similar data but focuses on target groups represented by 1,000 children or less. Figure 3 shows CSP served more than 1,000 additional children and more than 1,000 additional DLLs during the 2013–14 school year. Figure 4 shows CSP served more infants and toddlers (more than 400 additional), but less children with special needs in 2013–14.

Figure 3. Change in Total Children, Preschoolers, and DLLs Served across School Years



Note: Graph includes groupings of 10,000 children or more

Figure 4. Change in Total Children Served Across School Years



Note: Graph includes target groups of 1,000 children or less.

Classroom and Child Characteristics

CSP 1 and 3 served almost 25,000 children during the 2013–14 school year. Of these children, 96 percent were preschoolers (3 to 5 year-olds), and 4 percent were infants and toddlers (0 to 35 months). MOE classrooms served about 89 percent, and QE classrooms served 11 percent, of all children participating in CSP 1 and 3. Table 5 shows counts of children served by age group and classroom quality level. Table 6 shows counts of CSP 1 and 3 sites and classrooms by county.

Table 5. Children Served by Age Group and Classroom Quality Type

	Preschoolers		Infants/toddlers		Total Children Served	
	Number	Percent	Number	Percent	Number	Percent
QE	2,382	10%	239	1%	2,621	11%
MOE	21,572	87%	713	3%	22,285	89%
All Classrooms	23,954	96%	952	4%	24,906	

Note: Percents are for N = 24,906 children reported by age group and N = 24,955 total children served.

Table 6. Sites and Classrooms by County

County	CSP Sites	QE Classrooms	MOE Classrooms	Total CSP Classrooms
Los Angeles	211	34	391	425
Merced	24	22	41	63
Orange	29	33	0	33
San Diego	99	14	313	327
San Francisco	135	8	290	298
San Joaquin	22	6	30	36
San Mateo	1	1	0	1
Santa Clara	10	7	41	48
Ventura	13	1	27	28
Yolo	16	12	18	30
All	560	138	1,151	1,289

Ratios and Group Size

Table 7 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.[3] Table 8 shows that average classroom group sizes also fall within the

[3] A more complete analysis of ratio data could involve calculation of the percent 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.

acceptable limits of CSP group size criteria based on Head Start, Title 5, and Title 22 guidelines.

Table 7. Teacher and Provider to Student Ratios by Classroom Quality Type

	Teacher(s)					
	Preschoolers		Toddlers		Infants	
	Mean Ratio	*N*	Mean Ratio	*N*	Mean Ratio	*N*
QE	1:7	117	1:4	18	1:3	15
MOE	1:6	1099	1:3	29	1:3	23
All	1:6	1216	1:3	47	1:3	38

	Provider(s)					
	Preschoolers		Toddlers		Infants	
	Mean Ratio	*N*	Mean Ratio	*N*	Mean Ratio	*N*
QE	1:7	31	1:3	6	1:3	5
MOE	1:7	378	1:3	28	1:3	26
All	1:7	409	1:3	34	1:3	31

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

Table 8. Mean Classroom Group Sizes by Classroom Quality Type and Age Groups

	Preschoolers		Toddlers		Infants		Total Children Served	
	Mean Group Size	*N*	Mean Group Size	*N*	Mean Group Size	*N*	Mean Group Size	*N*
QE	20.36	117	8.61	18	7	12	19.12	138
MOE	20.12	1,072	5.02	101	5.72	29	20.36	1,096
All	20.15	1,189	5.56	119	6.10	41	20.22	1,234

Race and Ethnicity

During the 2013–14 school year, CSP 1 and 3 classrooms served a total of 10,792 children of Hispanic or Latino ethnicity, which is 52 percent of total children served. This is the largest ethnic group receiving services through CSP. Other or Unknown racial or ethnic category composed 17 percent of children, followed by White at 10 percent, Asian at 8 percent, and Black or African American at 7 percent. Table 9 provides counts and percents of the largest racial and ethnic groups served by CSP 1 and 3 across the two classroom quality levels of the program and for the program as a whole. Figure 5 presents similar information graphically.

Table 9. Children Served by Racial and Ethnic Category and Classroom Quality Type

	QE		MOE		All	
	Number	Percent of Total Children Served	Number	Percent of Total Children Served	Number	Percent of Total Children Served
Hispanic/Latino	1,498	65%	9,294	50%	10,792	52%
Other or Unknown	200	9%	3,235	18%	3,435	17%
White	219	10%	1,767	10%	1,986	10%
Asian	135	6%	1,490	8%	1,625	8%
Black or African American	108	5%	1,297	7%	1,405	7%
Two or More Races	92	4%	1,144	6%	1,236	6%
Native Hawaiian or Pacific Islander	32	<1%	140	<1%	172	<1%
American Indian or Alaska Native	8	<1%	59	<1%	67	<1%
All	2,292	100%	18,426	100%	20,718	100%

Note: Percents are for N = 20,718 children reported by race or ethnic category and N = 24,955 total children served.

Figure 5. Children Served by Racial and Ethnic Category and Classroom Quality Type

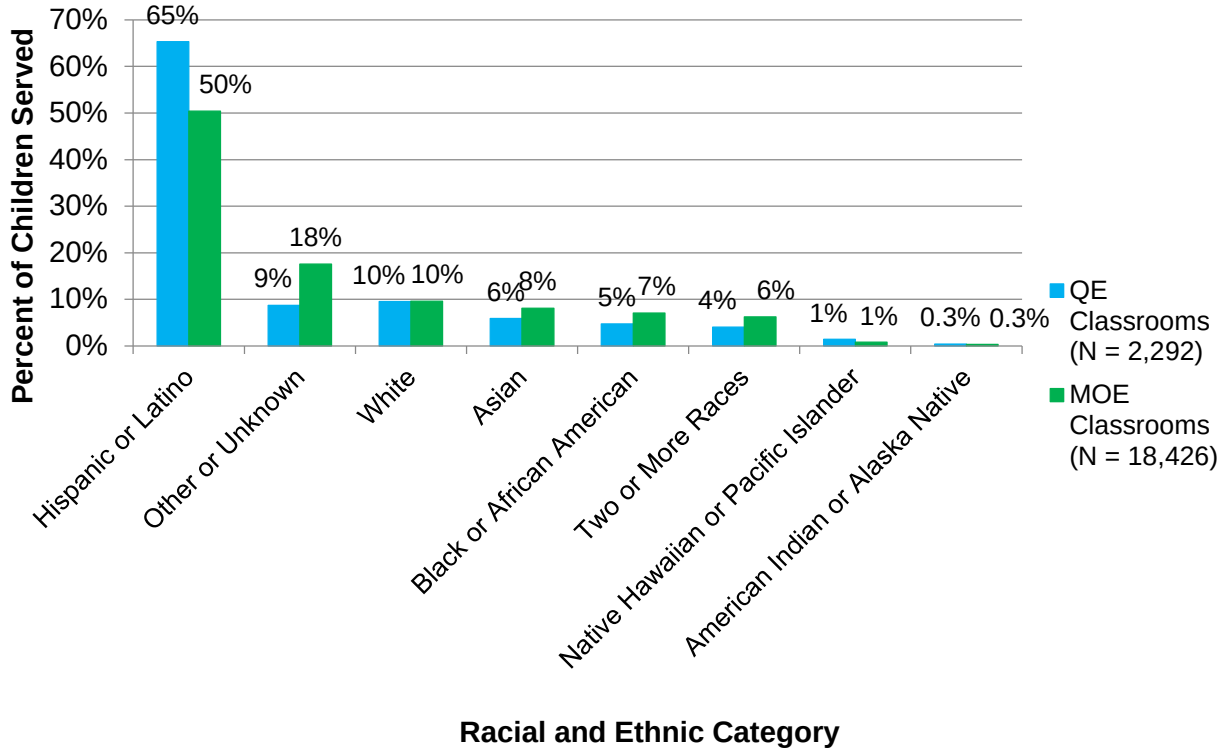


Figure 6 compares the distributions of CSP 1 and 3 children by race and ethnicity with California birth data for 2010. Birth data for 2010 were used for this comparison to provide an approximation of the population of 3-year-olds in California who could participate in CSP for the 2013–14 school year. The data show CSP 1 and 3 serve Hispanics or Latinos and Blacks or African Americans in close proportion to live births for these same populations in 2010. The data also show Whites and Asians to be underrepresented in the program, as was the case in 2012–13.

Figure 6. CSP 1 and 3 Children Compared to Total Live Births by Racial and Ethnic Group in California, 2010

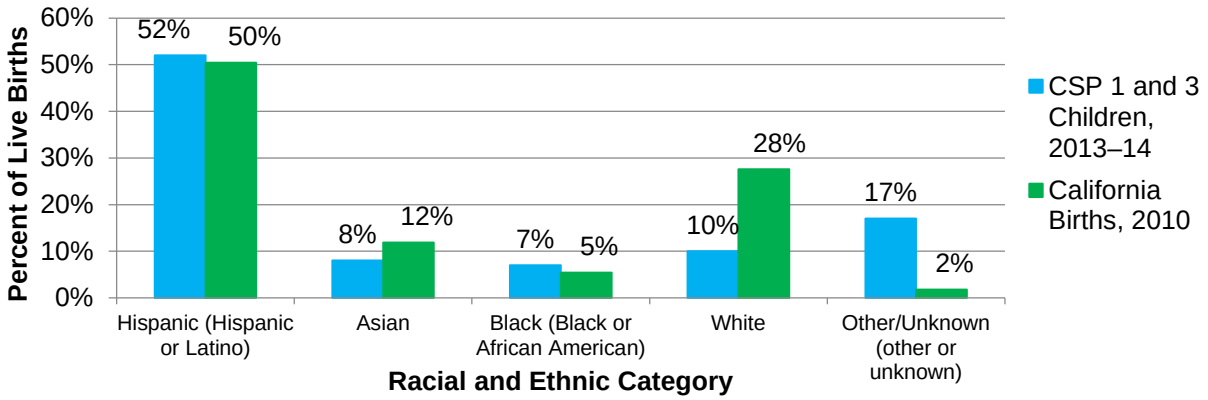


Table 10 describes DLLs served during the 2013–14 school year by primary language spoken at home. Spanish speaking DLL children account for 82 percent of all DLLs served, and almost half of all children served followed by Chinese at 7 percent; and Filipino/Tagalog, Vietnamese, Korean, Arabic, Russian, Japanese, Punjabi, Hmong, and Armenian all at under 1 percent. The second and third largest groups of DLLs fall in the Other and Unknown categories.

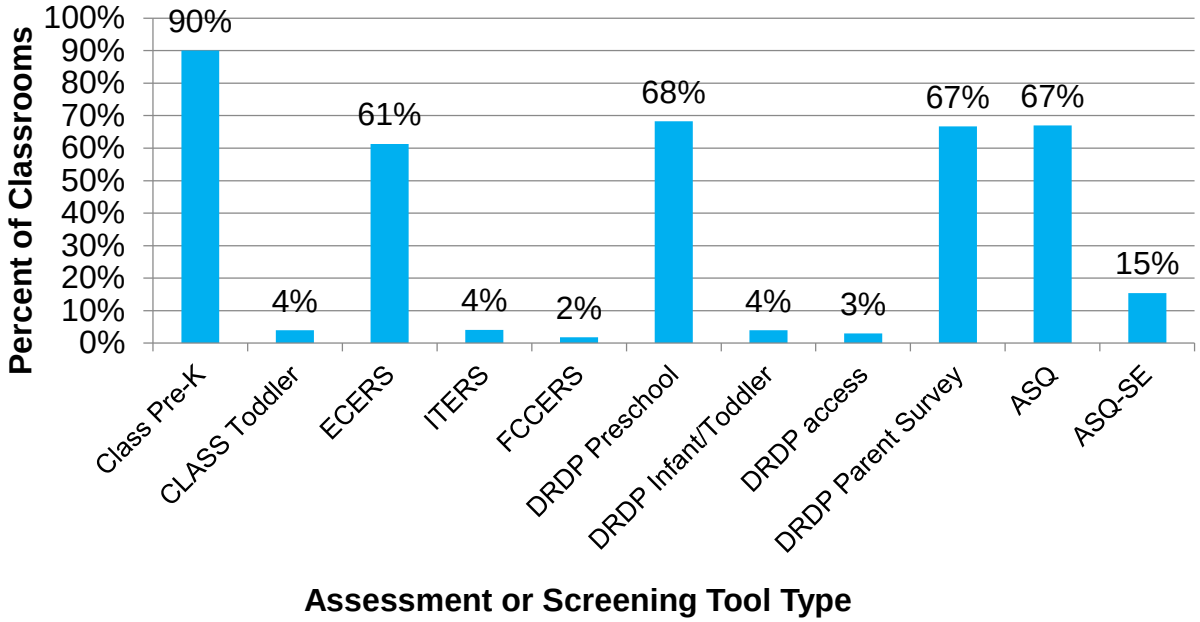
Table 10. Primary Language of DLL Served

Language	Number	Percent of DLL (N = 14,607)	Percent of all Children Served (N = 24,955)
Spanish	11,953	82%	48%
Chinese	1,065	7%	4%
Unknown	450	3%	2%
Other	354	2%	1%
Filipino/Tagalog	179	1%	0.7%
Vietnamese	166	1%	0.7%
Korean	113	0.8%	0.5%
Arabic	111	0.8%	0.4%
Russian	76	0.5%	0.3%
Japanese	50	0.3%	0.2%
Punjabi	34	0.2%	0.1%
Hmong	33	0.2%	0.1%
Armenian	23	0.2%	<0.1%
Total DLL	14,607	100%	57%

Developmental Screening and Assessment

CSP 1 and 3 classrooms employ a variety of assessments to measure child development and classroom quality. In 2013–14, 90 percent of these classrooms used the CLASS® PreK instrument, and 61 percent used ECERS, to measure aspects of classroom quality. Sixty-seven percent of these classrooms used Ages and Stages Questionnaire (ASQ), and 68 percent used Desired Results Developmental Profile (DRDP 2010) to measure child development and to inform classroom instruction.

Figure 7. Percent Classrooms by Assessment or Screening Tool Used



Note: The first two assessments in the graph are Ages and Stages Questionnaire (ASQ), and Ages and Stages Questionnaire–Social Emotional (ASQ-SE). Percents are for N = 1,289 total classrooms.

Classroom Teaching Staff Characteristics

Qualifications

CSP teachers are well qualified. For 2013–14, teaching staff records show 19 percent of teaching staff held Associate's degrees, 47 percent held at least a Bachelor's degree, and three percent held an advanced degree. Table 11 provides more detail by highest level of education and classroom quality type, and across the program.

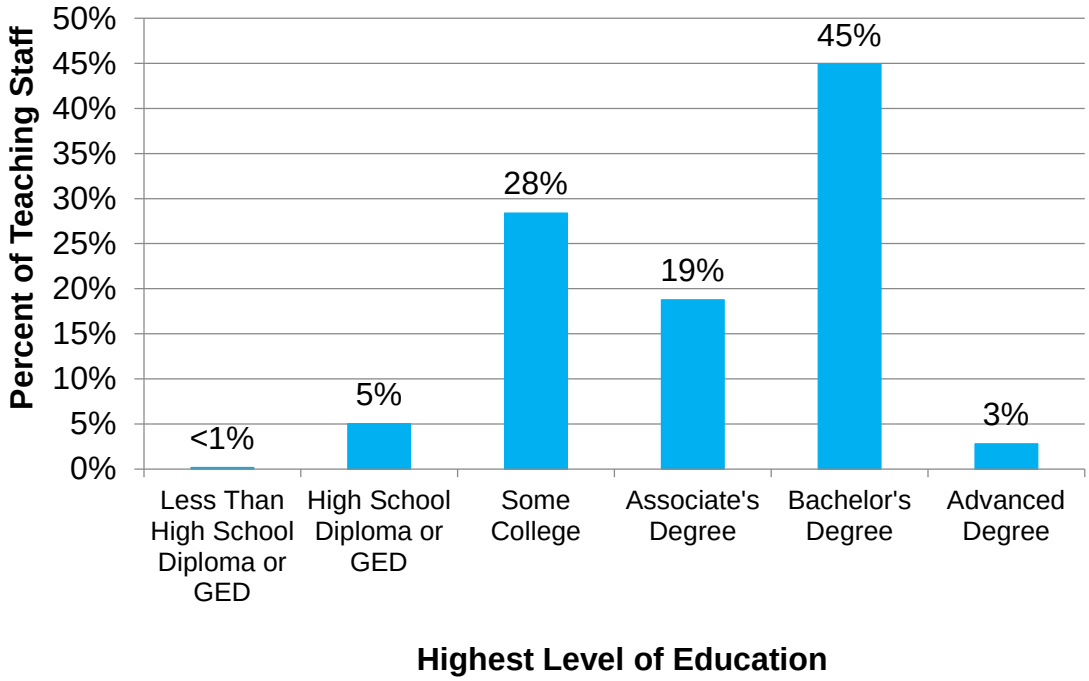
Table 11. Teaching Staff by Highest Level of Education and Classroom Quality Type

	QE		MOE		Across Classrooms	
	Number	Percent	Number	Percent	Number	Percent
Teaching Staff With Less Than High School Diploma or GED	3	1%	4	<1%	7	<1%
Teaching Staff With High School Diploma or GED	20	6%	129	5%	149	5%
Teaching Staff With Some College	70	22%	759	29%	829	29%
Teaching Staff With Associate's Degrees	69	22%	485	19%	554	19%
Teaching Staff With Bachelor's Degrees	139	44%	1,118	43%	1,257	43%
Teaching Staff With Advanced Degrees	18	6%	79	3%	97	3%
Total	319	0%	2,574	0%	2,893	0%

Note: CSP teaching staff can work in multiple classrooms. Data used to create this table were collected as classroom-level data. Percents are based on N = 2,893 teaching staff records with data on highest level of education for approximate N = 1,949 teaching staff.

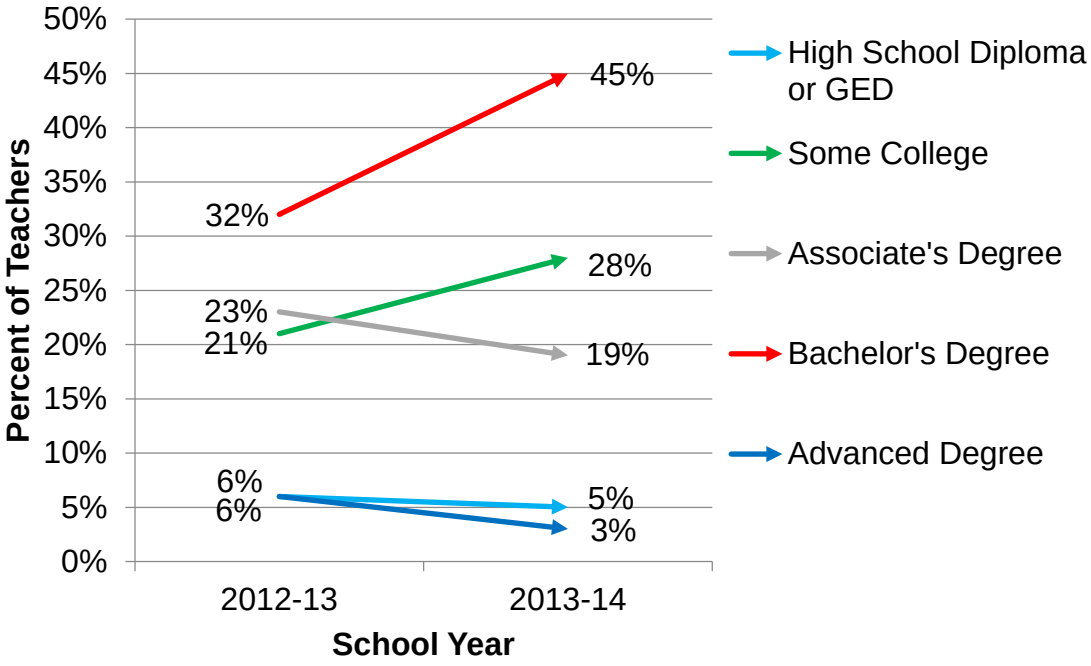
Figure 8 shows the distribution of unduplicated teaching staff by highest level of education and Figure 9 shows changes in these percentages from the 2012–13 school year. These graphs show the percent of teaching staff with Bachelor's degrees increased 13 percentage points (to 45 percent), teaching staff with some college increased 9 percentage points, and teaching staff with associate's degrees decreased 4 percentage points in 2013–14.

Figure 8. Teaching Staff by Highest Level of Education



Note: Percents are for N = 1,945 teachers with data on highest level of education.

Figure 9. Change in Percent of Teaching Staff by Highest Level of Education



Note: Percents are for approximate N = 1,949 teaching staff. In 2012–13, highest level of education was not reported for 13% of teaching staff.

Table 12 focuses specifically on ECE and CD degrees and ECE or CD units completed by CSP 1 and 3 teaching staff. QE classrooms employ teachers with more ECE or CD units, and the difference is statistically significant. The average number of pooled ECE or CD units held by teaching staff per classroom was higher for QE classrooms (77 units compared to 55 units). An estimated 54 percent of teaching staff in QE classrooms held ECE- or CD-related Bachelor's degrees, as opposed to 29 percent in MOE classrooms.

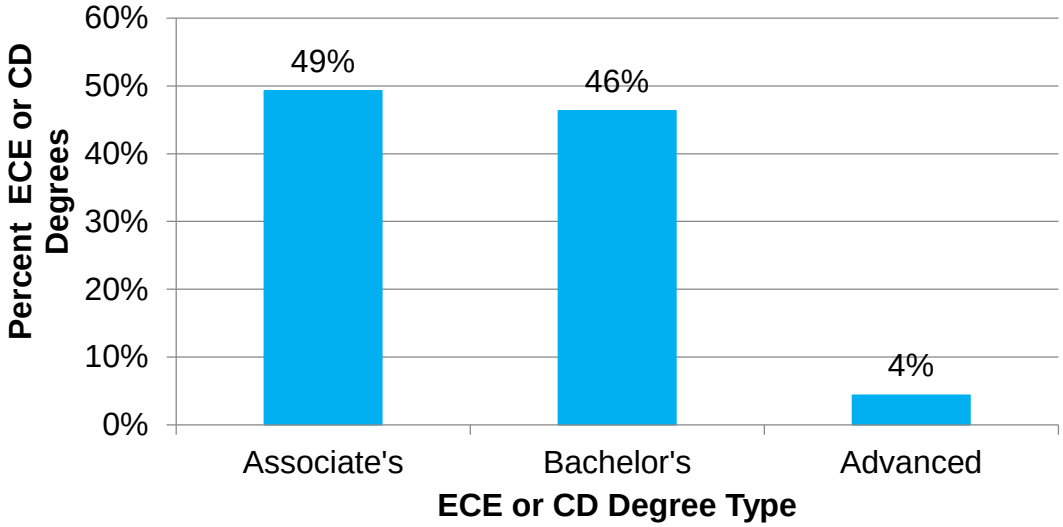
Table 12. ECE or CD Degrees by Classroom Quality Type

	QE	MOE	All Classrooms
Mean ECE or CD Units Per Classroom[a]	77.13	55.05	46.74
Number of ECE or CD Degrees	172	758	930
Estimated Percent ECE or CD Associate's Degrees[b]	38%	52%	49%
Estimated Percent ECE or CD Bachelor's Degrees	53%	45%	46%
Estimated Percent ECE or CD Master's Degrees	8%	4%	4%
Estimated Percent of Teaching Staff with ECE or CD Degrees[c]	54%	29%	32%

a. N = 1,149 classrooms (MOE = 1,023, QE = 126) with data on ECE units held by teaching staff. Difference in mean ECE or CD units between QE and MOE is statistically significant at the p<.0001 level.
b. N = 2,901 teaching staff records (MOE = 2,582, QE = 319). Teachers may be duplicated across classroom quality levels.
c. Percents based on N = 2,901 teaching staff records for approximate N = 1,949 teaching staff working across CSP classroom quality levels.

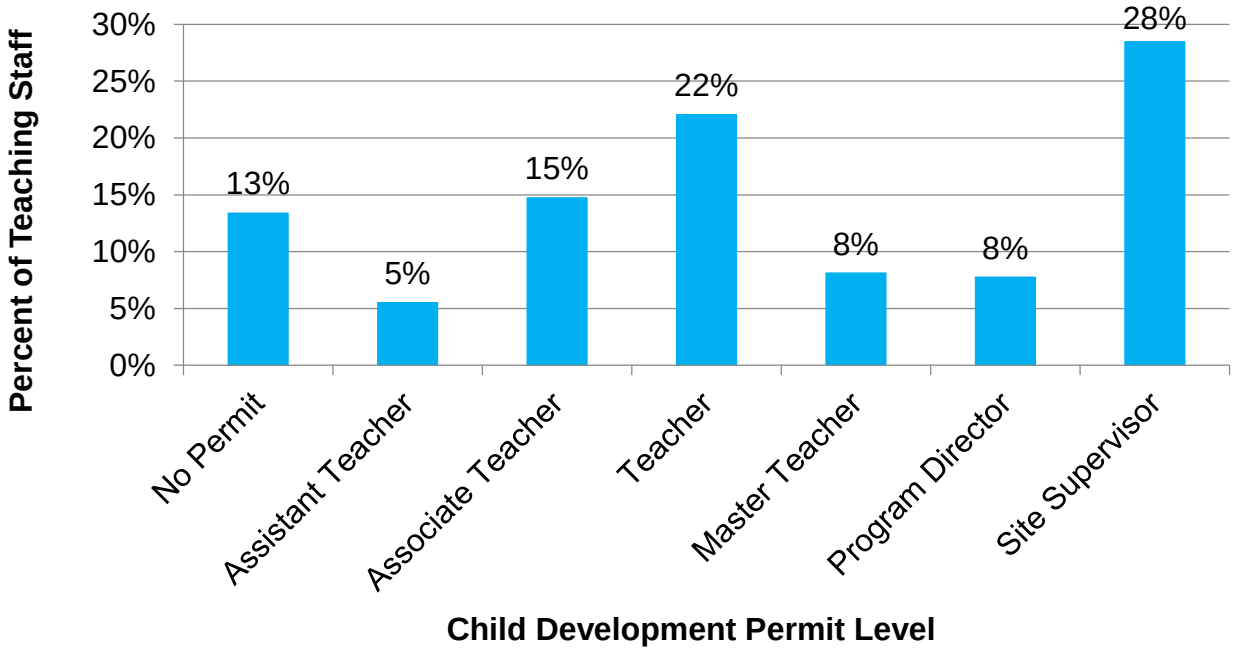
Figure 10 displays percents of ECE or CD degrees by degree type and shows there are slightly more ECE- or CD-related Associate's degrees in the program. Figure 11 shows percentages of teachers by child development permit level. Half of teachers in CSP have attained either the Teacher (22 percent) or Site Supervisor (28 percent) child development permits. Five percent of CSP teachers also participated in CARES Plus in 2013–14.

Figure 10: ECE or CD Degrees by Degree Type



Note: Percents are for N = 930 ECE or CD degrees held by classroom teaching staff.

Figure 11: Teaching Staff by Child Development Permit Level

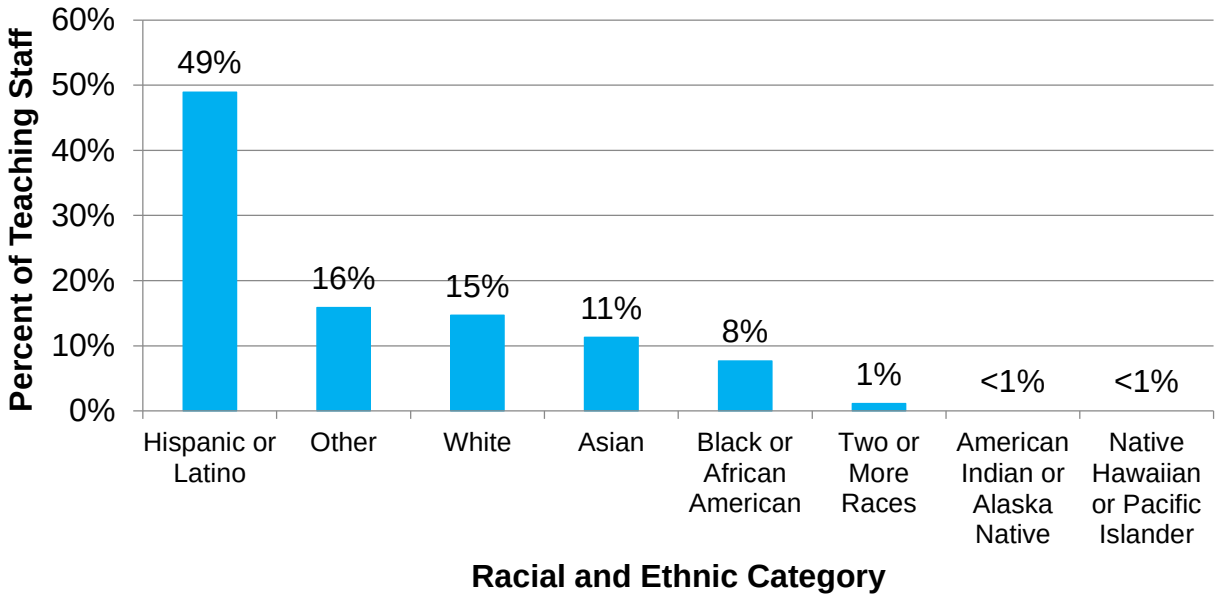


Note: Percents are based on approximate N = 1,949 teaching staff.

Race, Ethnicity, and Gender

CSP 1 and 3 classroom teaching staff are diverse in terms of race and ethnicity but not in terms of gender. Figure 12 shows 49 percent of CSP teaching staff are Hispanic or Latino, followed by Other at 16 percent; White at 15 percent; Asian at 11 percent; Black or African American at 8 percent; multiracial at 1 percent; and American Indian or Alaska Native, and Native Hawaiian or Pacific Islander at less than 1 percent. Ninety-six percent of teachers in CSP 1 and 3 are female.

Figure 12. Classroom Teaching Staff by Racial and Ethnic Category

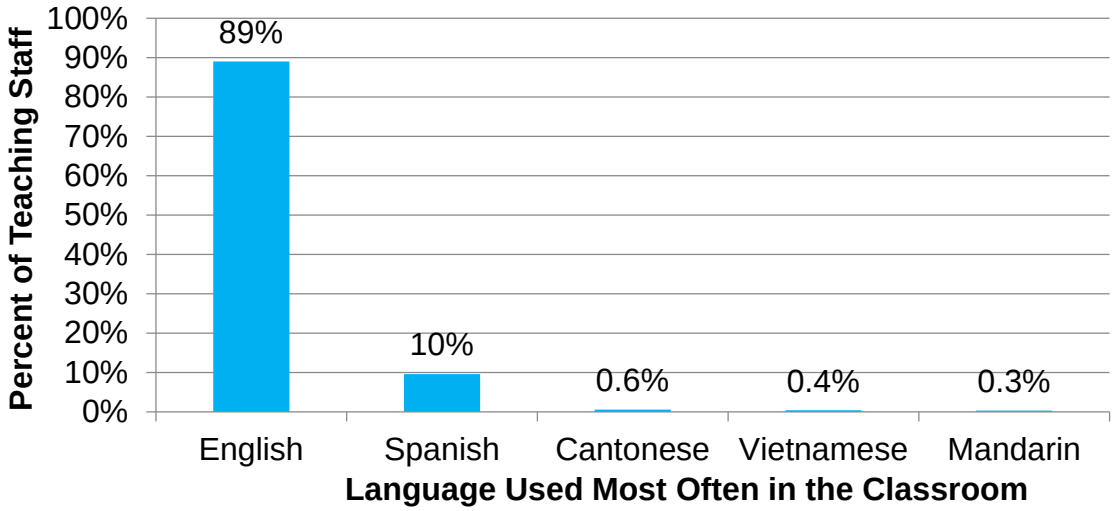


Note: Percents are based on an approximate N = 1,949 teaching staff.

Language

Figure 13 depicts teaching staff by language used most often in the classroom. CSP 1 teaching staff primarily used English in the classroom. Eighty-nine percent of teaching staff used primarily English and 10 percent used primarily Spanish for instruction.

Figure 13. Teaching Staff by Language Used Most Often in the Classroom



Note: Percents are based on an approximate N = 1,949 teaching staff.

Classroom Quality

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; Infant/Toddler Environment Rating Scale (ITERS), appropriate for children from birth to 2 years and 6 months old; and Family Child Care Environment Rating Scale (FCCERS), appropriate for FCC homes.

Table 14 shows percentages of evaluation classrooms meeting ERS global score requirements by classroom quality level and ERS type. The majority of evaluation classrooms met ERS global score requirements. Eighty-six percent of preschool classrooms and 87 percent of infant/toddler classrooms achieved ERS global scores of 5 or above. A high proportion of both QE (84 percent) and MOE (90 percent) preschool classrooms met or exceeded a good level of quality as measured by ECERS. Eighty-seven percent of infant/toddler classrooms also met ERS global score requirements.

Table 14. Distribution of Evaluation Classrooms Meeting ERS Global Score Standards

	QE			MOE			All Classrooms		
	≥5	<5	N	≥5	<5	N	≥5	<5	N
ECERS	84%	16%	82	90%	10%	49	86%	14%	131
ITERS	83%	17%	12	100%	0%	3	87%	13%	15
FCCERS	100%	0%	2	50%	50%	2	75%	25%	4

Table 15 compares ERS global scores across age groups and quality levels for evaluation classrooms. *T*-tests detected statistically significant differences in mean global scores between QE and MOE classrooms for evaluation classrooms assessed with ECERS and FCCERS, but not ITERS. Cohen's *d* for the *t*-test on ECERS global scores indicate the effect is not in the expected direction, meaning that MOE classrooms outperformed QE classrooms in terms of classroom quality during 2013–14. On average, mean ECERS global scores for MOE classrooms were a quarter of a point higher than QE classrooms. No significant difference was found for ITERS. Results for FCCERS should be interpreted with caution due to small sample size.

Table 15. Mean ERS Global Scores by Evaluation Classroom Quality Level

	QE			MOE			QE - MOE	*t*-test		
	Mean	SD	*N*	Mean	SD	*N*	Difference in Means	*t*	*p*-Value	Cohen's *d*
ECERS	5.39	0.59	82	5.63	0.56	49	0.24	2.35	0.0205*	-0.43
ITERS	5.48	0.76	12	5.63	0.25	3	0.15	0.33	0.7466	-0.27
FCCERS	6.30	0	2	5.05	0.21	2	1.25	8.33	0.0141*	8.33

Note: Cohen's *d* effect sizes: 0.20 (small), 0.5 (medium), 0.80 (large). Effect size for ITERS and FCCERS should be interpreted with caution due to small sample size.
* $p < .05$

Table 16 compares mean ECERS subscale scores across evaluation classroom quality levels for all classrooms reporting subscale scores for the 2013–14 school year. Mean ECERS subscale scores were not statistically different at the $p<.05$ level. These data show classroom quality, as measured by ECERS, was similar across classroom quality levels. These data also show that classroom quality is high across all ECERS subscales with the exception of personal care routines.

Table 16. Mean ECERS Subscale Scores by Evaluation Classroom Quality Type

	QE (N = 43)		MOE (N = 73)		*t*-Test	
	Mean	SD	Mean	SD	*p*-Value	Cohen's *d*
Space and furnishings	5.31	1.03	5.27	0.88	0.81	0.04
Personal care routines	3.73	1.22	3.75	1.25	0.95	-0.02
Language reasoning	5.35	1.04	5.45	0.95	0.60	-0.10
Activities	5.82	0.89	5.92	0.10	0.55	-0.16
Interaction	6.03	1.14	6.14	0.83	0.57	-0.11
Program structure	6.10	0.82	5.87	1.06	0.22	0.24
Parents and staff	5.95	0.84	6.08	0.98	0.44	-0.14

Note: Mean subscale scores between classroom quality levels are not statistically different.

Table 17 compares mean ITERS subscale scores across evaluation classroom quality levels. Mean ITERS subscale scores for "Listening and Talking" and "Parents and Staff" were both statistically different across classroom quality levels. Cohen's *d* effect sizes for these differences are large (i.e., over 0.8), but should be interpreted with caution due to small sample size and large standard deviations.

Table 17. Mean ITERS Subscale Scores by Evaluation Classroom Quality Type

	QE (N = 7)		MOE (N = 6)		Wilcoxon	
	Mean	SD	Mean	SD	*p*-Value	Cohen's *d*
Space and Furnishings	4.91	1.63	5.60	0.44	0.24	-0.58
Personal Care Routines	3.98	1.79	3.47	1.00	0.26	0.35
Listening and Talking	5.10	0.83	5.94	0.74	0.04*	-1.07
Activities	4.70	1.20	5.55	0.44	0.13	-0.94
Interaction	5.50	1.65	6.50	0.18	0.07	-0.85
Program Structure	5.17	1.94	6.58	0.66	0.08	-0.97
Parents and Staff	5.47	0.78	6.67	0.31	0.004**	-2.02

Note: Results should be interpreted with caution due to small sample size.
*p<.05 **p<.01

Table 18 compares mean FCCERS subscale scores across evaluation classroom quality levels. Subscale scores for "Listening and Talking" and "Activities" were both statistically different across classroom quality levels at the p<.05 level. As with ITERS results, Cohen's *d* effect sizes for these differences are large (i.e., over 0.8) and should be interpreted with caution due to small sample size.

Table 18. Mean FCCERS Subscale Scores by Evaluation Classroom Quality Type

	QE (N = 3)		MOE (N = 8)		Wilcoxon	
	Mean	SD	Mean	SD	*p*-Value	Cohen's *d*
Space and Furnishings	5.06	0.10	4.85	1.37	0.30	0.21
Personal Care Routines	2.27	0.46	3.59	1.51	0.11	-1.18
Listening and Talking	6.44	0.38	4.88	1.40	0.05*	1.52
Activities	5.74	0.07	4.64	1.32	0.04*	1.17
Interaction	5.50	0.87	5.75	1.87	0.13	-0.17
Program Structure	5.33	0.58	5.15	1.34	0.38	0.17
Parents and Staff	6.67	0.14	6.16	1.13	0.26	0.63

Note: Results should be interpreted with caution due to small sample size.
*p<.05

Classroom Assessment Scoring System®

CLASS® is an observation-based assessment instrument designed to measure classroom process 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.

Table 19 lists percentages of CSP 1 and 3 evaluation classrooms meeting CLASS domain score standards. Ninety-seven percent of QE and 96 percent of MOE classrooms met standards for Emotional Support; 100 percent of classrooms, regardless of classroom quality level, met standards for Classroom Organization; and 62 percent of QE and 57 percent of MOE classrooms met standards for Instructional

Support. Sixty-one percent of QE and 55 percent of MOE classrooms (58 percent of all classrooms) met standards for all three CLASS® domains. Figure 14 presents the same information graphically. These data show the majority of CSP 1 and 3 classrooms met CLASS threshold score standards regardless of classroom quality level.

Table 19. Percent of Evaluation Classrooms Meeting CLASS PreK Domain Standards

	QE (N = 94)	MOE (N = 111)	Total (N = 205)
Emotional Support (≥5)	97%	96%	96%
Classroom Organization (≥3)	100%	100%	100%
Instructional Support (≥2.75)	62%	57%	59%
All Domains	61%	55%	58%

Figure 14. Evaluation Classrooms by CLASS PreK Domain Standards

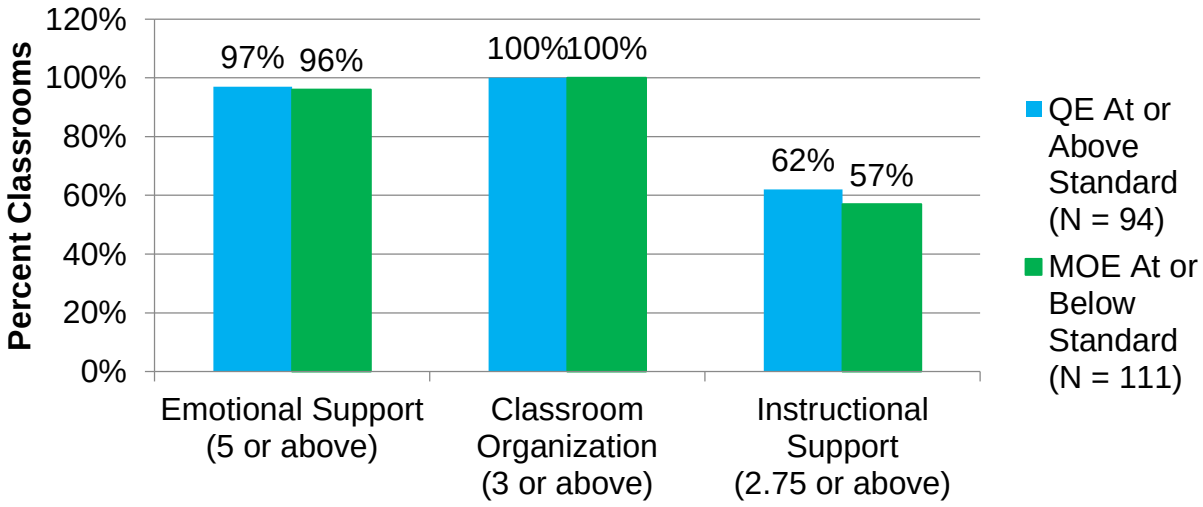


Table 20 lists mean scores for CLASS PreK domains and dimensions, and results of *t*-tests across evaluation classroom quality levels. These data show that mean CLASS dimension and domain scores are not statistically different across classroom quality levels, meaning that classrooms are similar in terms of the quality of classroom interaction regardless of classroom quality level.

Table 20. Mean CLASS® PreK Domain and Dimension Scores by Evaluation Classroom Quality Level

	QE (N = 94)		MOE (N = 111)		QE - MOE	*t*-test		
	Mean	SD	Mean	SD	Difference in Means[a]	*t*	*p*-Value[a]	Cohen's *d*[b]
Emotional Support	6.06	0.52	6.04	0.57	0.02	0.23	0.82	0.036
Positive Climate	6.23	0.64	6.16	0.69	0.07	0.76	0.45	0.105
Negative Climate	6.72	1.17	6.84	0.82	-0.12	0.84	0.40	0.119
Teacher Sensitivity	5.85	0.79	5.73	0.81	0.12	1.07	0.29	0.150
Regard for Student Perspectives	5.44	0.70	5.48	0.80	-0.04	1.05	0.97	0.053
Classroom Organization	5.54	0.68	5.53	0.62	0.01	0.09	0.93	0.015
Behavior Management	5.90	0.88	5.82	0.80	0.08	0.71	0.48	0.095
Productivity	5.91	0.68	5.97	0.66	-0.06	0.62	0.53	0.090
Instructional Learning Formats	4.81	0.96	4.81	0.92	0.00	0.01	1.00	0.000
Instructional Support	3.03	0.85	3.01	1.07	0.02	0.14	0.89	0.021
Concept Development	2.54	1.02	2.64	1.16	-0.10	0.66	0.51	0.046
Quality of Feedback	3.07	1.06	2.88	1.20	0.19	1.22	0.22	0.084
Language Modeling	3.49	0.95	3.53	1.13	-0.04	0.24	0.81	0.038

a. Mean dimension and domain scores between classroom quality levels are not statistically different.
b. Cohen's *d* effect sizes: .20 (small), .50 (medium), .80 (large).

Table 21 lists mean score for CLASS® Toddler domains and dimensions, and results of *t*-tests across classroom quality levels. Neither mean dimension nor mean domain scores were statistically different across classroom quality levels. However, mean scores were generally high (all above 5.5) for Emotional and Behavioral Support. These data suggest the quality of classroom interactions in infant/toddler classrooms, as measured by CLASS Toddler, were consistent throughout the program. However, these results should be interpreted with caution due to small sample size. It is interesting to note most effects are not in the expected direction: MOE infant/toddler classrooms may exhibit higher quality classroom interaction as measured by CLASS Toddler.

Table 21. Mean CLASS® Toddler Domain and Dimension Scores by Evaluation Classroom Quality Level

	QE (N = 12)		MOE (N = 13)		QE-MOE	*t*-test		
	Mean	SD	Mean	SD	Difference in Means	*t*	*p*-Value[a]	Cohen's *d*[b]
Emotional and Behavioral Support	6.12	0.60	6.23	0.43	-0.11	0.56	0.58	-0.211
Positive Climate	6.35	0.61	6.69	0.36	-0.34	1.72	0.10	-0.240
Negative Climate	6.79	0.35	6.67	0.56	0.12	0.63	0.54	0.257
Teacher Sensitivity	6.04	0.90	6.25	0.61	-0.21	0.68	0.50	-0.273
Regard for Student Perspectives	5.84	0.82	5.63	0.68	0.21	0.68	0.51	0.279
Behavior Guidance	5.56	0.79	5.92	0.73	-0.36	1.18	0.25	-0.473
Engaged Support for Learning	3.79	0.55	4.03	0.58	-0.24	1.08	0.29	-0.425
Facilitation of Learning and Development	4.15	0.79	4.46	0.63	-0.31	1.11	0.28	-0.434
Quality of Feedback	3.46	0.59	3.71	0.83	-0.25	0.87	0.39	-0.347
Language Modeling	3.75	0.60	3.92	0.70	-0.17	0.64	0.53	-0.261

a. Mean dimension and domain scores between classroom quality levels are not statistically different.
b. Cohen's *d* effect sizes: .20 (small), .50 (medium), .80 (large).

Table 22. Relationships Between Total ECE or CD Units Held by Teaching Staff in the Classroom and CLASS® Domain Scores by Classroom Quality Type

	Domain	R^{2a}	*p*-value
QE (n = 86)	Emotional Support	0.001	0.750
	Classroom Organization	0.061	0.821
	Instructional Support	0.123	<0.001
MOE (N = 99)	Emotional Support	0.100	0.321
	Classroom Organization	<0.001	0.778
	Instructional Support	0.122	<0.001
All (N = 185)	Emotional Support	<0.001	0.879
	Classroom Organization	<0.001	0.801
	Instructional Support	0.108	<0.001

Note: Data are for evaluation classrooms only
a. R^2 is the proportion of variance in the dependent variable explained by independent variable

Table 22 shows results of bivariate regression analysis for the number of early ECE or CD units held by staff across the two classroom quality levels and CLASS domain scores. As during the 2012–13 school year, CLASS Instructional Support domain scores were positively associated with the pooled number of ECE or CD units held by classroom teaching staff. Across all evaluation classrooms, about 11 percent of the variation in Instructional Support can be explained by the number of ECE or CD units held by teaching staff. In QE classrooms, about 12 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 Instructional Support.

Child Development

Table 23 compares fall and spring percentages of DRDP ratings in the top two developmental levels across all measures of each developmental domain and across evaluation classroom quality levels.[4] Statistically significant relationships were found for classroom quality and percentages of spring ratings at the top two developmental levels for six out of seven DRDP developmental domains. 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 three out of seven DRDP domains (i.e., Self and Social, Cognitive, and Health).

These data show that QE classrooms tended to have a more positive effect on the development of children as assessed by teachers using DRDP. Compared to MOE classrooms, QE classrooms started the school year with a higher percent of low DRDP ratings in some domains of development. This suggests QE CSP 1 and 3 classrooms had a greater effect on reducing the achievement gap than MOE classrooms for DRDP developmental domains. Of special note is the difference in percentage of ratings in the top two developmental levels for English Language Development (a difference of 10 percentage points).

[4] Percents do not reflect percents of children, but rather percents 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 23. Percents of Ratings at the Top Two DRDP Developmental Levels at Fall and Spring by Evaluation Classroom Quality Type

		Percent Ratings At Top Two Developmental Levels		Percent Difference (QE – MOE)		*N* Ratings	
Developmental Domain	Classroom Type	Fall	Spring	Fall	Spring	Fall	Spring
Self and Social Development	QE	29%	79%	-1%***	1%	24,313	17,127
	MOE	30%	78%			24,073	21,827
Language and Literacy Development	QE	24%	72%	-1%*	-1%*	20,052	14,231
	MOE	25%	73%			20,007	18,118
English Language Development	QE	34%	71%	6%***	10%***	6,532	4,371
	MOE	28%	61%			5,855	5,334
Cognitive Development	QE	29%	79%	< -1%	3%***	10,010	7,125
	MOE	29%	76%			10,043	9,085
Mathematical Development	QE	25%	73%	1%	2%***	12,176	8,499
	MOE	25%	71%			11,957	10,886
Physical Development	QE	53%	92%	1%	5%***	6,123	4,242
	MOE	52%	86%			6,013	5,440
Health	QE	35%	85%	-2%*	3%***	6,063	4,224
	MOE	37%	82%			5,907	5,462

Note: N = number of *ratings*, not children. Some DRDP dimensions will have more possible ratings because those dimensions also have more measures.

Proportions test significance levels: * $p<.05$, ** $p<.01$, *** $p<.001$

Parent Involvement

Outreach and Support Activities Provided to Parents

Parents participate in different 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 24 provides total counts of parents participating, percentages of active parents[5] participating, participation rates per CSP classroom, and percentages of children with participating parents, by parent engagement and support activity.

The number of active parents increased from 21,303 to 31,823 during the 2013–14 school year—a 49 percent increase in parent participation. Parent-teacher conferences drew the most parent participation at 18,889 participants (59 percent of active parents), followed by educational opportunities at 5,198 participants (16 percent of active parents), classroom volunteer opportunities at 3,252 participants (10 percent of active parents), social support activities at 4,043 participants (13 percent of active parents), and advisory board participation at 441 participants (1 percent of active parents).

Participation rates per classroom (active parents per classroom) for educational opportunities, classroom volunteer activities, and social support activities all increased during the 2013–14 school year, but participation rates for advisory boards and parent teacher conferences decreased slightly. The fourth column in Table 23 lists percentages of children with active parents in terms of the various types of engagement and support activities. The estimated percentage of children with participating parents increased for all five activities.

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

Table 24. Parent Participation by Outreach and Support Activity Type

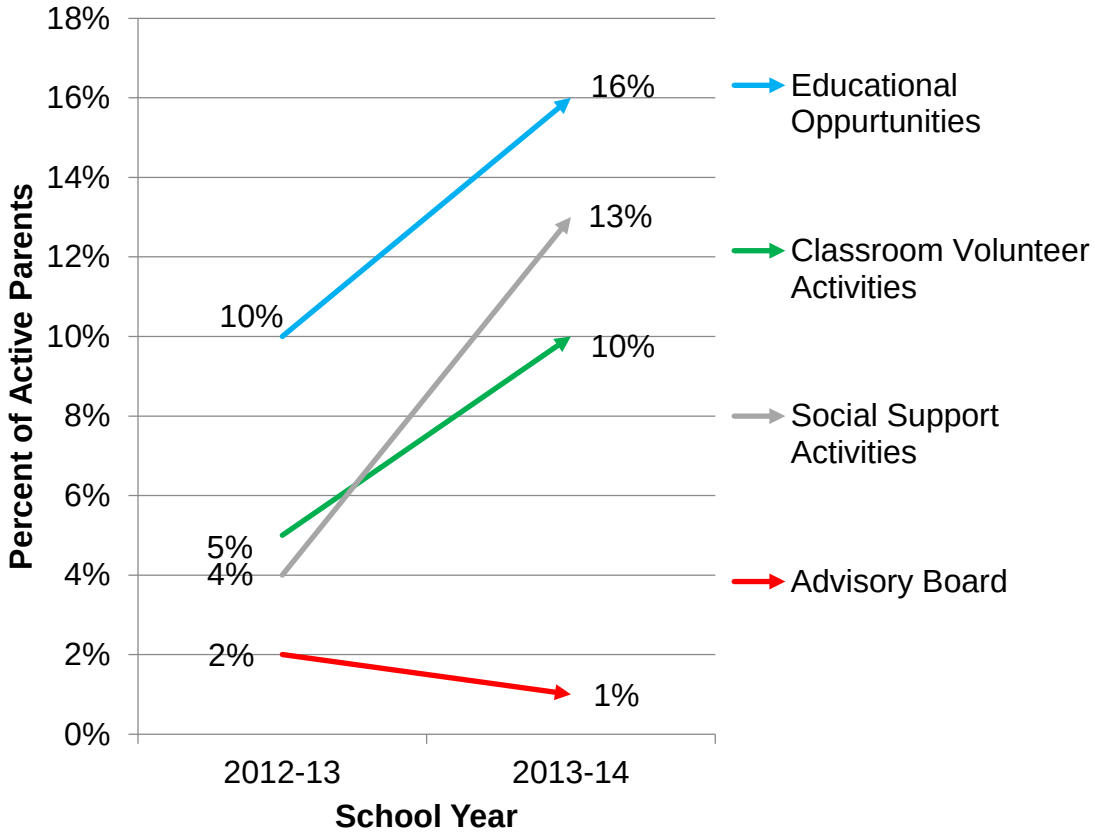
Parent Engagement and Support Activity Type	Total Parents Participating	Percent of Active Parents Participating	Parents Participating Per CSP Classroom (*N* = 1,289)	Estimated Percent of Children With a Participating Parent (*N* = 24,955)
Parent-teacher Conferences	18,889	59%	15	76%
Educational Opportunities	5,198	16%	4	21%
Classroom Volunteer Activities	3,252	10%	3	13%
Social Support Activities	4,043	13%	3	16%
Advisory Board	441	1%	>1	2%
All Parent Engagement and Support Activities	31,823	100%	25	130%[a]

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 = 31,823 active parents.

a. Percentage points over 100 indicate the percent of children who may have multiple parents participating in parent engagement and support activities. However, these results should be interpreted with caution because active parents may be participating across multiple engagement and support activities (i.e., highly active parents may be duplicated in these data).

Figure 15 shows change in the percentage of active parents by parent engagement and support activity type since 2012–13. The percentage of active parents participating in educational opportunities increased from 10 to 16 percent, participation in classroom volunteer activities increased from 5 to 10 percent, and participation in social support activities increased from 4 to 13 percent. Participation in parent-teacher conferences fell from 79 percent to 59 percent of active parents. However, this is a 12 percent *increase* in the total number of parents participating in parent-teacher conferences from the prior school year. Advisory board participation fell by one percentage point to one percent.

Figure 15. Change in Percents of Active Parents by Parent Engagement and Support Activity Type



Note: 2012–13 percents are for N = 21,303 active parents, and 2013–14 percents are for N = 31,823 active parents.

Summary and Conclusions

To summarize, assessments of CSP 1 and 3 evaluation classrooms provide evidence of high quality, both in terms of classroom environments and quality of interactions within those environments; both children and classroom teaching staff are diverse in terms of race and ethnicity; teaching staff are well qualified, but staff in QE classrooms are more qualified; parents participated more than the prior year; and children continued to experience healthy development during the 2013–14 school year.

The majority of CSP classrooms serve children of families that meet either state or federal income eligibility standards and are low-income. Sixty-four percent of QE classrooms and half of MOE classrooms were located in school catchment areas scoring in the bottom three deciles of API. CSP 1 and 3 served more than 1,000 additional children and more than 1,000 additional DLLs during the 2013–14 school year. Infants and toddlers continue to be underserved through the program. Infants and toddlers account for only four percent of children served. Children in CSP 1 and 3 classrooms are diverse. Fifty-two percent of children served were Hispanic or Latino, and DLLs made up 57 percent of children served. Classroom teaching staff were diverse in terms of race and ethnicity, but not in terms of gender—96 percent of teaching staff were female.

Classroom teaching staff are well qualified. Forty-seven percent of all teaching staff held at least a Bachelor's degree during the 2013–14 school year, and teaching staff with Bachelor's degrees increased 13 percentage points to 45 percent. An estimated 54 percent of teaching staff in QE classrooms held ECE- or CD-related degrees, as opposed to 29 percent in MOE classrooms. The average number of pooled ECE or CD units held by teaching staff per classroom was higher for QE classrooms.

On average, classroom environments in CSP 1 and 3 were above a "good" level of quality (i.e., ERS global score of 5 or above), but quality as measured by ECERS was higher in MOE classrooms. On average, mean ECERS *global scores* for MOE classrooms were a quarter of a point higher than QE classrooms. On average, CSP 1 and 3 classrooms also met CLASS® domain standards established in the original RFA (First 5 California 2012a). Ninety-six percent of CSP 1 and 3 preschool classrooms met CLASS Emotional Support domain score standards, 100 percent met Classroom Organization standards, 59 percent met Instructional Support standards, and 58 percent met all three domain standards. QE classrooms appear to have a more positive effect on the development of children (i.e., more higher ratings) as assessed by teachers using the DRDP tool. Additionally, as in 2012–13, CLASS Instructional Support domain scores were positively associated with the pooled number of ECE or CD units held by classroom teaching staff.

Parent participation rates increased by 49 percent, but participation rates for advisory boards and parent teacher conferences decreased slightly.

Human Subjects Protection

Evaluation of CSP 1 and 3 is conducted under review of the State Committee for the Protection of Human Subjects, Protocol ID 12-08-0632.

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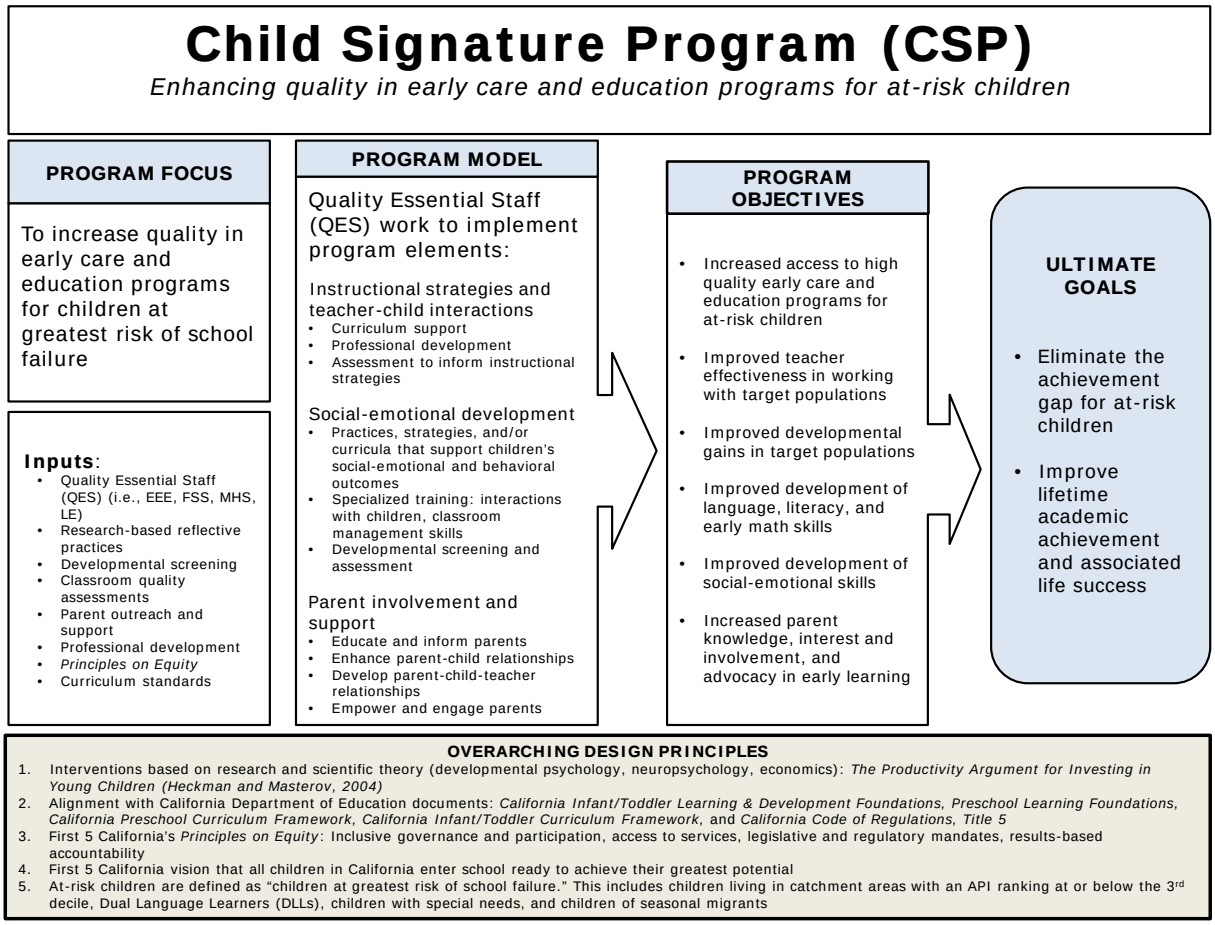
Appendix A: CSP Logic Model



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.

Appendix C: Supplemental Analysis of Classroom Developmental Effect Sizes Using Cliff's Delta

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 and First 5 California 2012b). A zero represents complete overlap (i.e., the distributions are not different) and a 1 or -1 indicates perfect divergence (i.e., distributions are completely different). 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).

This analysis supplements results presented in Table 23 of this report with more detail. Cliff's delta accounts for where each child starts along the DRDP developmental continuum and how that child's position relates to the positons of other children in the classroom. For instance, if a fall rating at the first developmental level moves to the second, analyses of percents of ratings in the top two categories would not be able to detect this movement, but Cliff's delta would. Additionally, analyses using Cliff's delta avoids the pitfall of treating ordinal data as continuous data, a popular procedure that does not account for differences between DRDP developmental levels that may not be equal (i.e., movement from the first level to the second may be more profound than a movement from the second to the fourth). Cliff's delta also produces *relative* effect sizes that work to counteract some bias effects arising from differences in how teachers use DRDP to observe and record child development.

For each DRDP developmental domain, Table 25 lists mean Cliff's Delta effect sizes, standard deviations, group size by classroom quality level, a calculation of the difference in effect sizes between classroom quality levels, and t-test results. T-tests detected three statistically significant differences ($p<.05$) in mean effect size between classroom quality levels for Self and Social Development, Language and Literacy Development, and Cognitive Development, but the effects were not in the expected direction as evidenced by negative differences. These results indicate MOE classrooms outperformed QE classrooms in terms of Self and Social Development, Language and Literacy Development, and Cognitive Development during the 2013–14 school year.

It is important to note negative differences in mean developmental effect sizes appear for all DRDP developmental domains. These results suggest that MOE classrooms may have outperformed QE classrooms in terms of child development across the spectrum of DRDP developmental domains during the 2013–14 school year in terms of developmental effect sizes. However, these differences were larger and in the expected direction (i.e., positive) in 2012–13, meaning QE classrooms outperformed MOE classrooms as expected during that year. 2013–14 results suggest MOE classrooms caught up with, and then slightly surpassed, QE classrooms in terms of developmental effect sizes during the 2013–14 school year. Similar to the 2012–13 school year, consistent medium and large effect sizes (0.65 to 0.40) across classroom quality levels and developmental domains suggest that children experienced healthy development in CSP regardless of classroom quality level in 2013–14.

Table 25. DRDP Developmental Domains: Mean Cliff's Delta Effect Size (*d*) and Effect Size Difference Across Evaluation Classroom Quality Types

	QE			MOE				
DRDP Domain	Fall-to-Spring Mean Cliff's *d* Effect size	SD	*N*	Fall-to-Spring Mean Cliff's *d* Effect Size	SD	*N*	Difference in Effect Size[a]	*t*-Test *p*-Value[b]
Self and Social Development	0.53 (large)	0.40	82	0.64 (large)	0.29	102	-0.11	0.04*
Language and Literacy Development	0.52 (large)	0.38	82	0.63 (large)	0.28	102	-0.11	0.03*
English Language Development	0.40 (medium)	0.41	78	0.46 (medium)	0.30	100	-0.06	0.26
Cognitive Development	0.54 (large)	0.40	82	0.65 (large)	0.29	101	-0.11	0.04*
Mathematical Development	0.54 (large)	0.41	81	0.62 (large)	0.30	101	-0.08	0.11
Physical Development	0.51 (large)	0.41	81	0.55 (large)	0.34	101	-0.04	0.49
Health	0.43 (medium)	0.38	81	0.51 (large)	0.34	100	-0.08	0.14

Note: N of QE and MOE classrooms compared is for those with complete DRDP data. Cliff's Delta effect sizes of 0.147 (small), 0.33 (medium), and 0.474 (large) correspond to Cohen's *d* effect sizes of 0.2 (small), 0.5 (medium), and 0.8 (large).
a. Differences in Cliff's Delta effect sizes are not in the expected direction.
b. *t*-Test significance levels: * $p < .05$.