



AGENDA ITEM: 13
DATE OF MEETING: April 24, 2014
ACTION: X
INFORMATION:

CARES PLUS, ROUND 1, EVALUATION FINDINGS UPDATE

SUMMARY

First 5 California and participating Lead Agencies launched the first round of Comprehensive Approaches to Raising Educational Standards Plus, or CARES Plus, for the three-year period beginning in Fiscal Year (FY) 2010-11 through FY 2012-13. Evaluation of CARES Plus, Round 1, consists of three views of the program involving different sources of information: 1) the participant view based on online surveys with participants; 2) assessment of the quality of teacher-child interactions for participants using a validated observation instrument; and 3) the Lead Agency view about operational aspects of running the program locally, based on information provided by Lead Agency administrators. This agenda item addresses the second view of the program evaluation and includes a summary of participant demographics and analyses of data collected by observations with the *Classroom Assessment Scoring System™ (CLASS™)* instrument.

With regard to the participant view, participants rated the program highly and found the training provided in multiple components (or tracks) offered by the program to be very useful. With regard to observational assessment of the quality of teacher-child interaction for participants, analyses of data collected with *CLASS* demonstrate that the two program components providing coursework in Early Childhood Education/Child Development (ECE/CD) supported improvement in the domains of Emotional Support and Classroom Organization. However, significant gains in Instructional Support were made only by participants in the *My Teaching Partner™ (MTP™)* track. *MTP*, as a professional growth and coaching model, may hold the most promise for improving the quality of interaction between teachers and young children.

BACKGROUND

In April 2010, the State Commission approved funding for three years (FY 2010-11 through FY 2012-13) to support the CARES Plus program to further the work of its predecessor program, CARES. The Commission directed that these funds be used to increase the quality of early learning programs for children ages 0-5 and their families by supporting the education and preparation of an effective, well-compensated, and diverse early care and education workforce (First 5 California, 2010). During CARES Plus, Round 1, four program components were available to participants: Component A, 21 hours of evidenced-based training approved by the California Department of Education; Component B, a minimum of six units of higher education toward a degree in ECE/CD; Component C, serving as a local

CARES Plus advisor; and Component D, a one-on-one professional growth coaching model called *MTP*. Additionally, first year participants were required to complete three CORE online courses: *Introduction to the CLASS™*, *Looking at CLASSrooms™*, and *Kids and Smoke Don't Mix*. Annually, each participant was required to meet twice with a CARES Plus Advisor, develop a Professional Growth Plan, and select an elective program component (A, B, C, or D).

EVALUATION AND DATA COLLECTION

Evaluation of the CARES Plus program is comprised of three views of the program involving different sources of information:

- **Participant View:** During FYs 2011-12 and 2012-13, First 5 California conducted online surveys with program participants. The purpose of the surveys was to assess areas of satisfaction, success, or challenge from the participants' point of view. For Round 1, survey responses were most recently presented to the Commission on October 23, 2013.
- **Research-Based Assessment View:** Using observations with *CLASS*, a validated research instrument, the quality of teacher-child interaction was assessed for participants in three of the program components of CARES Plus. This agenda item describes findings for these *CLASS* data analyses.
- **Lead Agency View:** The Quality Performance Report (QPR) gathered information from Lead Agencies about institutional and operational aspects of running the program to assess program successes and challenges from the Lead Agency point of view. QPR information was collected by telephone interview or in writing from Round 1 Lead Agencies and is currently undergoing content analysis by First 5 California. Summary information from the Round 1 QPR will be presented at a future commission meeting.

During the first year of CARES Plus, Round 1 (FY 2010-11), no data were collected—the first year was spent on program preparation activities. First 5 California collected evaluation data during the second and third years of the program, FYs 2011-12 and 2012-13, including program participant demographic data, two participant surveys, and analyses of classroom observations collected with the *CLASS* instrument to assess quality of teacher-child interaction.

FINDINGS

Key findings of the CARES Plus, Round 1, program evaluation to date relate to participant characteristics and experience, and analyses of *CLASS* data.

Program Participant Findings

- 1) **The CARES Plus program served a diverse cross-section of California's early care and education workforce.** Among the 10,910 participants enrolled in FYs 2011-12 and 2012-13, key demographic characteristics were the following: 89% or more were female; by race/ethnic category, 40% were Hispanic/Latina, 24% White, 9% Asian, 8% African American, 6% Other, 2% Alaska Native or American Indian, and less than 1% Pacific Islander (11% did not indicate race/ethnicity); levels of education ranged from less than high school to doctorate, with 73% of participants having attained less than a BA degree (Table 1). Participants enrolled from 33 counties throughout California (Table 2). Many participants have worked in the field of early care and education for a long time—51% for more than 10 years (CARES Plus Survey, FY 2012-13).
- 2) **Initial enrollments experienced a 25% dropout rate.** For FYs 2011-12 and 2012-13 combined, approximately 25% (2,693) of initial enrollees withdrew, while 75% (8,217) were able to complete the program (n=10,910). This somewhat high dropout rate appeared to occur soon after initial enrollment as participants attempted to sign up for the program components, and as Lead Agencies worked to approve enrollments. This initial churn and dropout in enrollments made random sampling of program participants for observation with *CLASS* somewhat difficult.
- 3) **Respondents to the two participant surveys expressed high satisfaction with the program.** In the most recent and comprehensive survey (FY 2012-13), 80 percent of respondents reported the CARES Plus program was very useful for their professional development, would enable them to stay in the field of early childhood education, and would have a positive impact on the children in their care. Key features the program respondents found helpful were online training (72%), a monetary stipend in support of participant training (69%), and access to an advisor who could help participants with a professional development plan (47%). Survey respondents suggested the program could be improved with regard to training of advisors, access to advisors and online training, and better communication between Lead Agencies (counties) and participants. Following the two participant surveys, First 5 California program staff addressed these concerns with special trainings for advisors in Lead Agencies.

CLASS Observational Assessment Findings

Methods

Quality of interaction was assessed with the Pre-K version of the *CLASS* instrument developed at the University of Virginia (Pianta et al. 2008). In published research, high quality of classroom interaction between teachers and children, as assessed by the *CLASS* instrument, have been linked to improved child outcomes in the domains of social-emotional, language, and mathematics development (Mashburn et al. 2008, Burchinal et al. 2010, Sabol et al. 2013). The Pre-K *CLASS* instrument addresses three domains of

teacher-child interaction: Emotional Support, Classroom Organization, and Instructional Support. Scores for each of the three domains are constructed based on the quality of interaction in underlying dimensions: Emotional Support (dimensions: Positive Climate, Negative Climate, Teacher Sensitivity, Regard for Student Perspectives), Classroom Organization (dimensions: Behavior Management, Productivity, Instructional Learning Formats), and Instructional Support (dimensions: Concept Development, Quality of Feedback, Language Modeling). Scoring is completed at the dimension level using a 7-point scale with ranges considered as low (1-2), middle (3-5), and high (6-7) (Hamre et al. 2009). For CARES Plus, observations were coded for interaction of the individual program participant with children in the classroom, rather than the standard use of CLASS to code interaction of all teacher/caregiver adults with children in the classroom.

For this evaluation, certified observers, hired through the Child Development Training Consortium, used the *CLASS* instrument to code teacher-child interactions in three domains: Emotional Support, Classroom Organization, and Instructional Support. For CARES Plus, the *CLASS* instrument was used to code observations of the focal program participant in a pre-post design: pre observations were to be made in the fall of each program year, and post observations were to be made in the spring of each program year. To decrease costs associated with travel by in-person observers, all observations were made by self-recorded video, then mailed to *CLASS* coders. Participants in three program components of CARES Plus were assessed using *CLASS*: for Component A, a statewide random sample was observed; for Component B, a statewide random sample was observed; and for Component D, all participants were observed. For FYs 2011-12 and 2012-13 combined, usable observations with complete pre-post observation data were collected for 88 participants in Component A, 211 participants in Component B, and 315 participants in Component D.

During the first year of data collection, FY 2011-12, logistical difficulties in implementing the program and its evaluation produced small sample sizes for each program component and created a short timeframe between pre- and post-intervention observations (approximately two to three months, mostly during spring 2012). During the second year of data collection, FY 2012-13, the process of program enrollment and sampling for *CLASS* observations for participants in program components A and B went more smoothly. As a result, during the second year, sample sizes were larger and the time window between pre- and post-intervention observations was approximately three to six months.

For the purpose of analyses presented here, statistical significance is held at the 95% confidence level ($p < .05$) using a paired t-test for pre- and post-observation scores in each *CLASS* domain (Table 3). Because statistical tests of significance are often driven by sample size, effect sizes also were computed to assess the magnitude of the shift in pre- and post-observation scores (Ellis 2010, Grissom and Kim 2005, Morris and DeShon 2002). During FY 2012-13, effect sizes for statistically significant improvements in *CLASS* scores ranged from 0.20 to 0.44—well within a reasonable range of effect sizes published for other evaluations of education-related interventions (Hill et al. 2007, Slavin and Smith 2008). For shift in means, conventional interpretation of computed effect size is small at 0.2, medium at 0.5, and large at 0.8 (Cohen 1988, 1992). Thresholds, or cut-points, for percentage shifts in *CLASS* scores were based on the Tiered Quality Rating and

Improvement System (TQRIS) implementation guide for California's Race to the Top-Early Learning Challenge, using the 4-point value for *CLASS* scores in the "Effective Teacher-Child Interactions" element (California Department of Education 2014). Given available evidence, *CLASS* scores of 5 in Emotional Support, 5 in Classroom Organization, and 3 in Instructional Support are likely thresholds for improved child outcomes. Because both pre- and post-observations shared the same denominator of participants, McNemar's test (McNemar 1947) was used to assess significance of shifts in the percentage of participants meeting thresholds (Table 4).

Quality of teacher-child interaction improved in domains assessed by *CLASS*, but improvement differed by program component. Program Components A and B supported improvement in scores for Emotional Support and Classroom Organization, but only Component D improved scores for Instructional Support.

For the first year of data collection, statistically significant improvements in *CLASS* scores were only detected for Component D in the domains of Classroom Organization and Instructional Support. During the second year of data, program and evaluation efforts were better organized so sample sizes were larger for each program component and pre- and post-intervention observations were separated by three to six months--likely making significant shifts in score changes more detectable by allowing a more reasonable time for teaching skills to improve.

For the second year of data collection, statistically significant improvements were found for Component A in the Emotional Support and Classroom Organization domains; Component B in the Emotional Support and Classroom Organization domains; and Component D in the Classroom Organization and Instructional Support domains (Table 3). Of note, teachers in Component D generally scored high in the pre-observation of the Emotional Support domain, so this may explain why observed improvement did not reach statistical significance: at pre-observation, 70% met a score of 5 or higher (recommended by *Teachstone*[®] as a reasonable level of quality), followed by 77% meeting 5 or higher at post-observation (Table 4).

One instance of significant decline in scores was found: for Component B participants in FY 2011-12, Instructional Support declined. This decline may possibly reflect the broad content of coursework offered for this group as well as logistical difficulties experienced in making videos for *CLASS* coding during the first year of data collection.

CONCLUSION

To conclude, evaluation of CARES Plus, Round 1, shows the program has been useful for improving the skills of program participants from California's early care and education workforce. Participants found the training to be useful and rated the program highly. With regard to observational assessments with the *CLASS* instrument, Component D, because of its intensive one-on-one coaching model, may hold the most promise for directly improving the quality of interaction between teachers and young children. Components A

and B also provide useful training, though they may not improve quality of interaction in the domain of Instructional Support.

With regard to quality of interaction assessed by *CLASS*, future analyses of data currently being collected for CARES Plus, Round 2, may provide additional information about the relationship between *CLASS* score improvement and teachers' level of educational attainment, prior ECE/CD education, and specific coursework provided in CARES Plus.

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ATTACHMENTS

Data Tables:

Table 1 - Enrolled Participant Demographics

Table 2 - Number of Enrolled Participants by Lead Agency

Table 3 - Shifts in Mean Scores by Program Component and CLASS Domain

Table 4 - Shifts in Percent of Participants Meeting TQRIS Standards by Program Component and CLASS Domain

PowerPoint Presentation

Table 1 - Enrolled Participant Demographics: Gender, Race/Ethnicity, and Education Level
FYs 2011-12 and 2012-13

Category	Number Enrolled			Percent
	2011-12	2012-13	Total	
Total number of participants who enrolled by program	4,774	6,136	10,910	100.0
Total number of participants who completed by program	3,790	4,427	8,217	75.3
Total number of participants who withdrew by program	984	1,709	2,693	24.7
Percent withdrew from program	20.6%	27.9%	24.7%	

Gender	Number Enrolled			Percent
	2011-12	2012-13	Total	
Female	4,298	5,456	9,754	89.4%
Male	70	100	170	1.6%
Decline to State	16	32	48	0.4%
Blank	390	548	938	8.6%
Total	4,774	6,136	10,910	100.0%

Race/Ethnicity	Number Enrolled			Percent
	2011-12	2012-13	Total	
Alaska Native or American Indian	79	81	160	1.5%
Asian	416	572	988	9.1%
Black or African American	349	501	850	7.8%
Hispanic or Latino	1,810	2,506	4,316	39.6%
Pacific Islander	24	35	59	0.5%
White	1,245	1,422	2,667	24.4%
Blank	476	592	1,068	9.8%
Other	294	341	635	5.8%
Decline to State	81	86	167	1.5%
Total	4,774	6,136	10,910	100.0%

Education Level	Number Enrolled			Percent
	2011-12	2012-13	Total	
Graduate Degree	168	251	419	3.8%
Bachelor's Degree	905	1,478	2,383	21.8%
Associate Degree	1,664	1,403	3,067	28.1%
Some College	1,299	2,028	3,327	30.5%
High School Diploma or GED	448	664	1,112	10.2%
Less than High School	132	268	400	3.7%
Blank	158	44	202	1.9%
Total	4,774	6,136	10,910	100.0%

**Table 2 - Number of Enrolled Participants by Lead Agency
FYs 2011-12 and 2012-13**

Lead Agency or County	Number Enrolled			
	2011-12	2012-13	Total	Percent
Alameda	197	201	398	3.6
Amador	28	na	28	0.3
Colusa	4	12	16	0.1
Contra Costa	181	202	383	3.5
Del Norte	45	34	79	0.7
El Dorado	74	106	180	1.6
Fresno	171	247	418	3.8
Humboldt	109	69	178	1.6
Lake	35	56	91	0.8
Los Angeles	733	1,165	1,898	17.4
Madera	7	7	14	0.1
Marin	91	74	165	1.5
Mendocino	60	72	132	1.2
Merced	108	138	246	2.3
Modoc	26	35	61	0.6
Mono	28	36	64	0.6
Napa	59	66	125	1.1
Orange	223	265	488	4.5
Riverside	255	447	702	6.4
Sacramento	119	135	254	2.3
San Benito	37	34	71	0.7
San Bernardino	306	493	799	7.3
San Francisco	34	97	131	1.2
Santa Barbara	232	192	424	3.9
Santa Clara	879	1,131	2,010	18.4
Shasta	82	93	175	1.6
Siskiyou	20	26	46	0.4
Solano	145	147	292	2.7
Sonoma	113	131	244	2.2
Stanislaus	72	132	204	1.9
Tehama	35	34	69	0.6
Ventura	153	176	329	3.0
Yolo	113	83	196	1.8
Total	4,774	6,136	10,910	100.0

**Table 3 - Shifts in Mean Scores by Program Component and CLASS Domain
FYs 2011-12 and 2012-13**

FY 2011-12							FY 2012-13							Combined FY 2011-12 and 2012-13						
Group ¹	CLASS Domain	Pre	Post	Diff.	t-test p value	Effect size ²	Group ¹	CLASS Domain	Pre	Post	Diff.	t-test p value	Effect size ²	Group ¹	CLASS Domain	Pre	Post	Diff.	t-test p value	Effect size ²
A 36	ES	5.6	5.5	-0.1	n.s.	-0.14	A 52	ES	5.4	5.7	0.3	0.03	0.38	A 88	ES	5.5	5.6	0.1	n.s.	0.13
	CO	5.2	5.1	-0.1	n.s.	-0.10		CO	4.9	5.3	0.4	0.01	0.44		CO	5	5.2	0.2	n.s.	0.20
	IS	2.4	2.3	-0.1	n.s.	-0.10		IS	2.3	2.5	0.2	n.s.	0.20		IS	2.3	2.4	0.1	n.s.	0.10
B 95	ES	5.7	5.6	-0.1	n.s.	-0.13	B 116	ES	5.4	5.6	0.2	0.057	0.29	B 211	ES	5.5	5.6	0.01	n.s.	0.13
	CO	5.3	5.3	0	n.s.	0.00		CO	5	5.3	0.3	0.006	0.33		CO	5.1	5.3	0.2	0.023	0.22
	IS	2.7	2.2	-0.5	0.001	-0.42		IS	2.3	2.3	0.1	n.s.	0.00		IS	2.5	2.3	-0.2	n.s.	-0.18
D 131	ES	5.4	5.4	0	n.s.	0.00	D 184	ES	5.4	5.5	0.1	n.s.	0.13	D 315	ES	5.4	5.5	0.1	n.s.	0.11
	CO	5	5.1	0.1	0.0317	0.09		CO	5	5.2	0.2	0.032	0.20		CO	5	5.2	0.2	0.011	0.20
	IS	2.4	2.5	0.1	0.0146	0.09		IS	2.2	2.4	0.2	0.015	0.22		IS	2.3	2.5	0.2	0.013	0.20

¹ Group A: Participants in CORE + A, CORE + A + B, A, A/C .

Group B: Participants in CORE + B, B, Los Angeles CORE+3 categorized as CORE + B.

Group D: Participants in CORE + A + C + D, CORE + A + D, CORE + B + D, CORE + C + D, CORE + D, A/D, B/D, C/D, D.

² Effect Size: (Post-Pre)/SD_{pre}.

Table 4 - Shifts in the Percent of Participants Meeting TQRIS Standards by Program Component and CLASS Domain FYs 2011-12 and 2012-13¹

FY 2011-12						FY 2012-13						Combined FY 2011-12 and FY 2012-13					
Group ²	Domain	Pre	Post	Diff	McNemar's Test ³ p<.05	Group ²	Domain	Pre	Post	Diff	McNemar's Test ³ p<.05	Group ²	Domain	Pre	Post	Diff	McNemar's Test ³ p<.05
A 36	ES	31	27	-4	n.s.	A 52	ES	39	46	7	0.071	A 88	ES	70	73	3	n.s.
		86.1%	75.0%	-11.1%				75.0%	88.5%	13.5%				79.5%	83.0%	3.4%	
	CO	26	22	-4	n.s.		CO	28	40	12	0.019		CO	54	62	8	n.s.
		72.2%	61.1%	-11.1%				53.8%	76.9%	23.1%				61.4%	70.5%	9.1%	
	IS	7	6	0	n.s.	IS	13	15	2	n.s.	IS	20	21	2	n.s.		
		19.4%	16.7%	0.0%			25.0%	25.0%	25.0%				22.7%	23.9%	2.3%		
B 95	ES	76	79	3	n.s.	B 116	ES	84	97	13	0.033	B 211	ES	160	176	16	0.039
		80.0%	83.2%	3.2%				72.4%	83.6%	7.2%				75.8%	83.4%	7.6%	
	CO	65	67	2	n.s.		CO	66	82	16	0.01		CO	131	149	18	0.031
		68.4%	70.5%	2.1%				56.9%	70.7%	13.8%				62.1%	70.6%	8.5%	
	IS	35	19	-16	0.006	IS	25	24	-1	n.s.	IS	60	43	-17	0.044		
		36.8%	20.0%	-16.8%			21.6%	20.7%	-0.9%				28.4%	20.4%	-8.1%		
D 131	ES	89	99	10	n.s.	D 184	ES	128	141	13	n.s.	D 315	ES	217	240	23	0.023
		67.9%	75.6%	7.6%				69.6%	76.6%	7.1%				68.9%	76.2%	7.3%	
	CO	77	83	6	n.s.		CO	115	117	2	n.s.		CO	192	200	8	n.s.
		58.8%	63.4%	4.6%				62.5%	63.6%	1.1%				61.0%	63.5%	2.5%	
	IS	34	36	2	n.s.	IS	37	56	19	0.01	IS	71	92	21	0.042		
		26.0%	27.5%	1.5%			20.1%	30.4%	10.3%				22.5%	29.2%	6.7%		

¹ TQRIS Standards for Race to the Top/Early Learning Challenge: ES (5), CO (5), and IS (3).

² Group A: Participants in CORE + A, CORE + A + B, A, A/C .

Group B: Participants in CORE + B, B, Los Angeles CORE+3 categorized as CORE + B.

Group D: Participants in CORE + A + C + D, CORE + A + D, CORE + B + D, CORE + C + D, CORE + D, A/D, B/D, C/D, D.

³ McNemar's Test (McNemar, 1947).

**CARES Plus, Round 1:
Evaluation Findings Update
Including Analyses of CLASS™
Assessment Data**

**Children and Families Commission Meeting
April 24, 2014**

CARES Plus, Round 1, Evaluation Findings Update Outline

- Summary of Findings
- Background
- Evaluation and Data Collection
- Program Participant Findings
- *CLASS* Observational Assessment Findings
- Conclusion
- Acknowledgments

Summary of Findings

Comprehensive Approaches to Raising Educational Standards (CARES) Plus

Round 1 (FYs 2010-11 – 2012-13):

- The program was useful for improving the quality of teacher-child interaction for program participants.
- Participants found the training to be useful and rated the program highly.
- Components A and B supported improvements in the *CLASS* domains of Emotional Support and Classroom Organization but not improvement in Instructional Support.
- Component D, (*My Teaching Partner*TM), supported improvement in the quality of interaction between teachers and children in the *CLASS* domains of Classroom Organization and Instructional Support.

Background

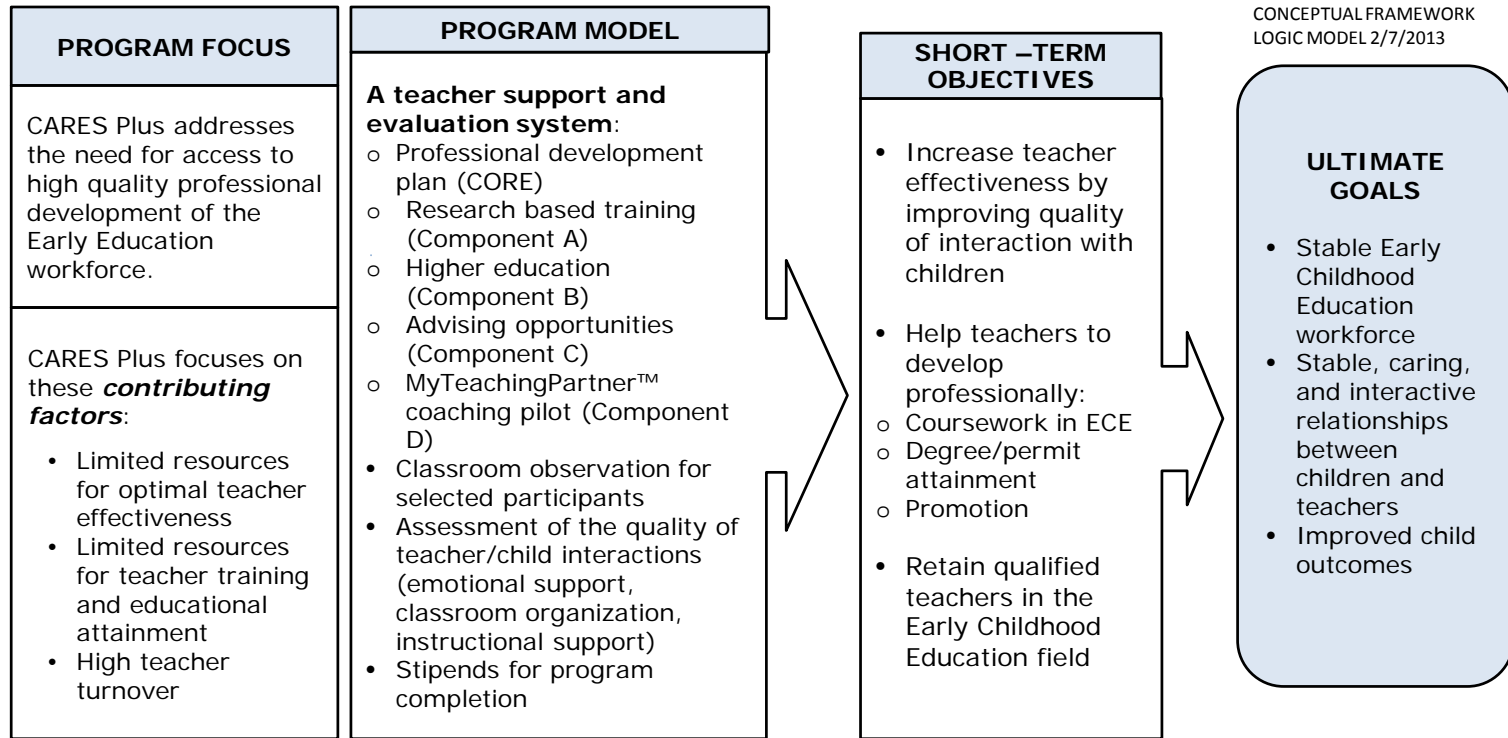
April 2014



CARES Plus Logic Model

Comprehensive Approaches to Raising Educational Standards (CARES) Plus

*Promoting high quality interaction between teachers and children in pre-school**



GUIDING PRINCIPLES

- Interventions based on research and scientific theory (developmental psychology, neuropsychology).
 - Curriculum meeting standards of California Department of Education: *California Infant/Toddler and Preschool Learning Foundations* and *California Preschool Curriculum Framework*
 - First 5 Principles on Equity*: Inclusive governance and participation, access to services, legislative and regulatory mandates, results-based accountability.
 - Cost-effective quality improvement of preschool learning environments.
- * Teacher effectiveness is one of the most important factors for quality of early learning programs. "The relationship a child has with a teacher or caregiver...is the central most critical component of child care quality" (US Department of Education).

What is the CARES Plus Program?

Requirements: CORE and One Component or More

CORE (New participants)	<ul style="list-style-type: none">• <i>Introduction to the CLASS™</i>• <i>Looking at CLASSrooms™</i>• CARES Plus Tobacco Training: <i>Kids and Smoke Don't Mix</i>
Annually (All participants)	<ul style="list-style-type: none">• Annual meeting with a CARES Plus Advisor, completion of a Professional Growth Plan, approved component requirements (elective, identified below), and completion of an annual participant survey
Component A	<ul style="list-style-type: none">• Minimum of 21 hours of California Department of Education-approved professional growth training• <i>CLASS</i> observation (if randomly selected)
Component B	<ul style="list-style-type: none">• Minimum of six units of higher education towards a degree in Early Childhood Education/Child Development (ECE/CD) or related field• <i>CLASS</i> observation (if randomly selected)
Component C	<ul style="list-style-type: none">• Serve as CARES Plus Advisor
Component D	<ul style="list-style-type: none">• <i>My Teaching Partner™ (MTP™)</i> one-on-one professional growth coaching• Required to participate in <i>CLASS</i> observation

Evaluation and Data Collection

April 2014



CARES Plus Program Evaluation: Three Views of the Program

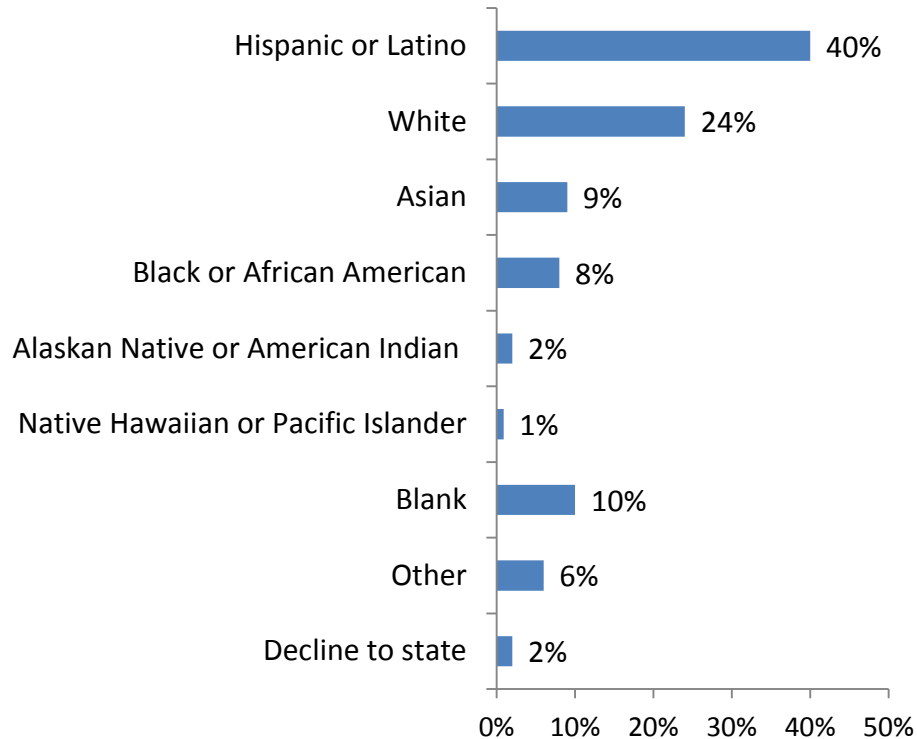
- Participant View: Online Survey
 - Purpose: Quantitative and qualitative assessment of satisfaction, successes, and challenges of the program from participants' point of view.
 - Presented at Commission meeting October 23, 2013.
- Research-Based Assessment View: Observations with Classroom Assessment Scoring System (*CLASS™*)
 - Purpose: Structured observation to assess quality of teacher-child interaction (validated instrument).
 - Presented at Commission meeting April 24, 2014.
- Lead Agency View: Quality Performance Report (QPR)
 - Purpose: Qualitative assessment of program successes and challenges from the Lead Agency point of view
 - To be presented at a future Commission meeting.

Program Participant Findings

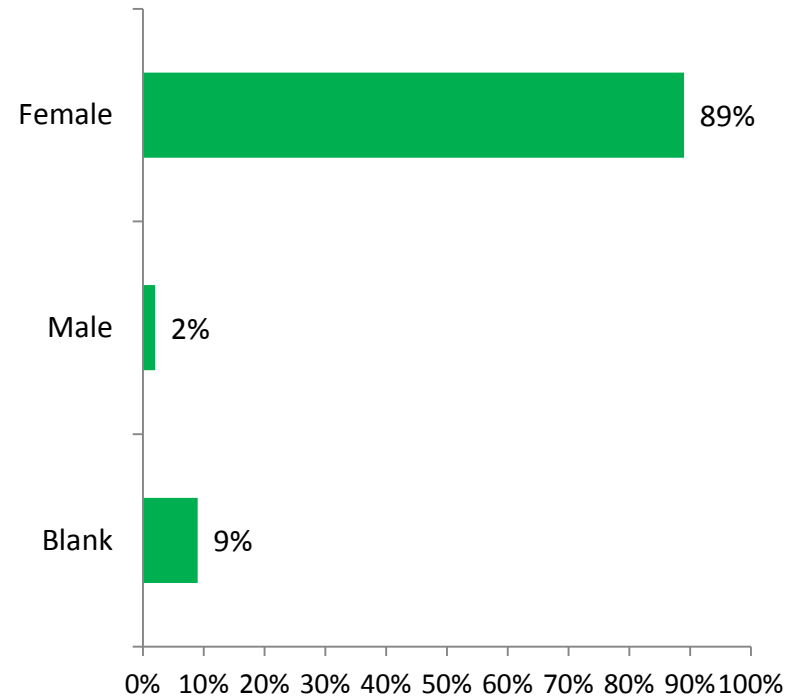
- Diverse cross-section served
 - Gender: Female 89% or more
 - Race/Ethnicity: 40% Hispanic or Latina, 24% White, 9% Asian, 8% African American
 - Educational Attainment: Range from less than a high school diploma to doctorate; 73% of participants obtained less than a BA degree
 - 33 lead agencies (counties) participated
- 25 percent dropout rate by participants after initial enrollment
 - Most dropouts occurred soon after initial enrollment during the approval process by Lead Agencies. Participant reasons for program withdrawal included: schedule conflicts, family concerns, or lack of access to internet or community colleges.
- Program participants reported high satisfaction with program
 - CARES Plus Survey: 80% responded that the program was very useful for their professional development, would enable them to stay in the early childhood education field, and would have a positive impact on the children in their care.
 - Key helpful features included: Online training, financial stipend, and access to an advisor who could help with a professional development plan.
 - Improvement suggestions included: Training of advisors, access to advisors and online training, and better communication between Lead Agencies and participants.

CARES Plus, Round 1, Combined FYs 2011-12 and 2012-13

Race/Ethnicity



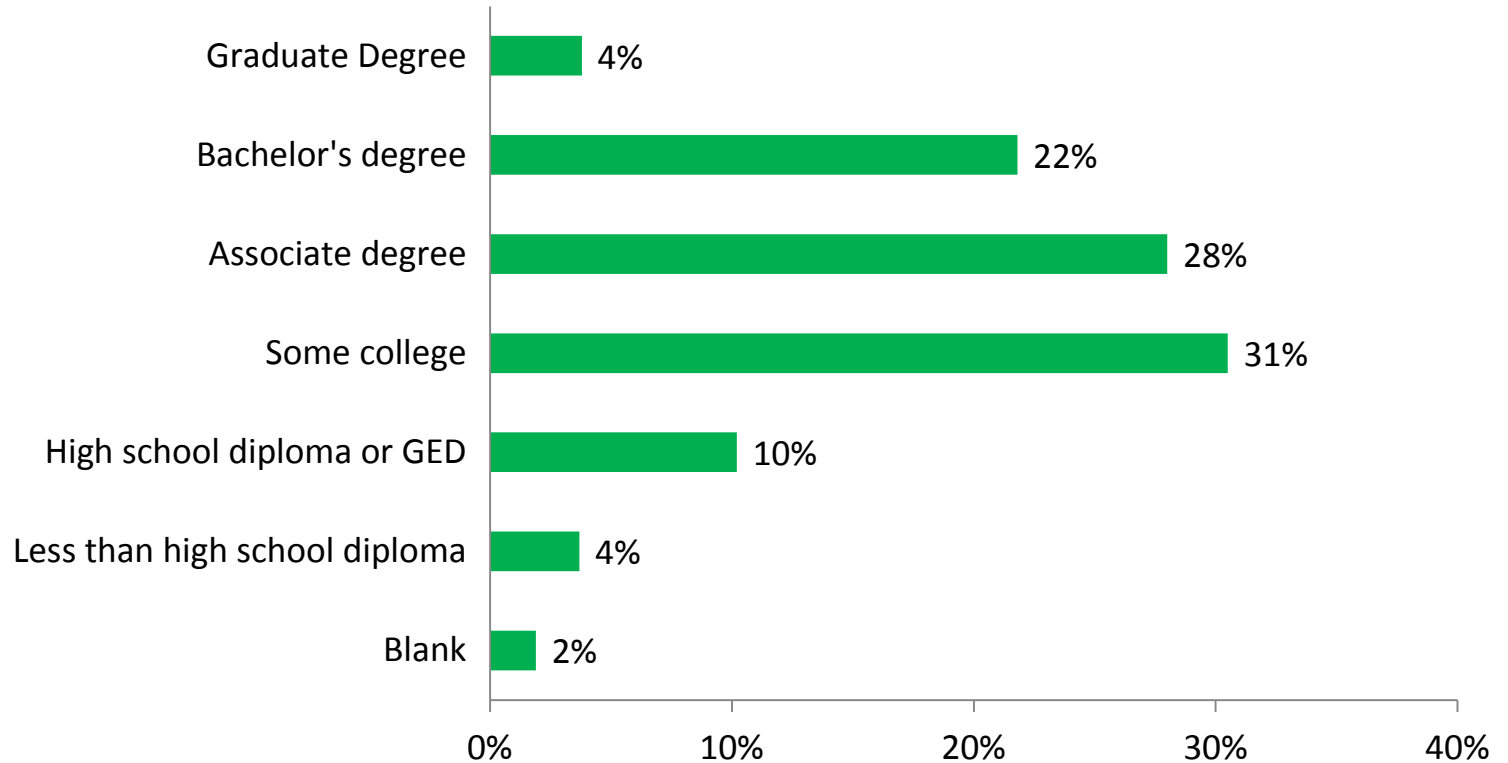
Gender



Enrolled Participants n=10,910

CARES Plus, Round 1, Combined FYs 2011-12 and 2012-13

Level of Education

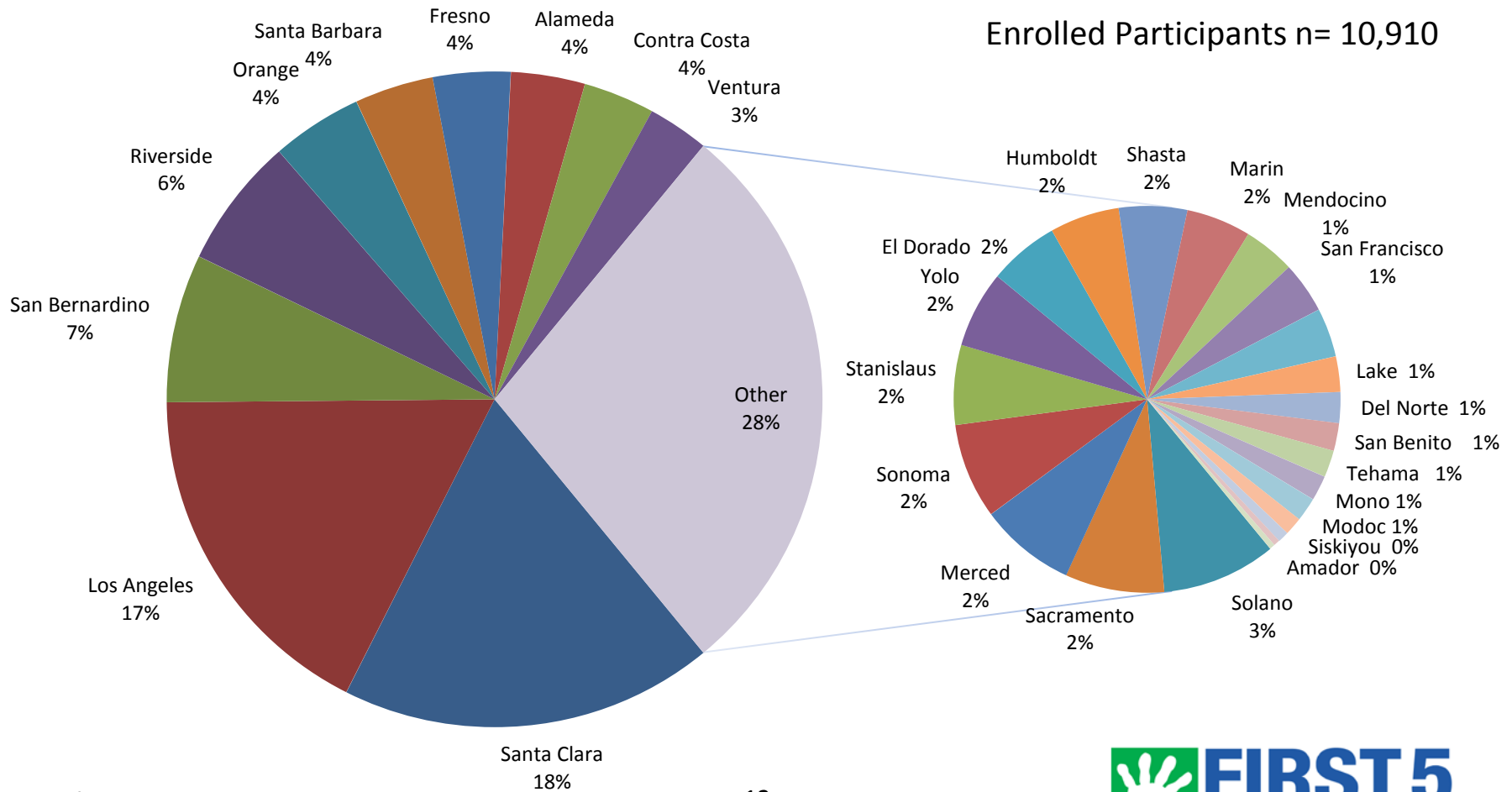


Enrolled Participants n=10,910

CARES Plus, Round 1

Combined FYs 2011-12 and 2012-13

Percent of Enrolled Participants by Lead Agency



CLASS Observational Assessment Findings

April 2014

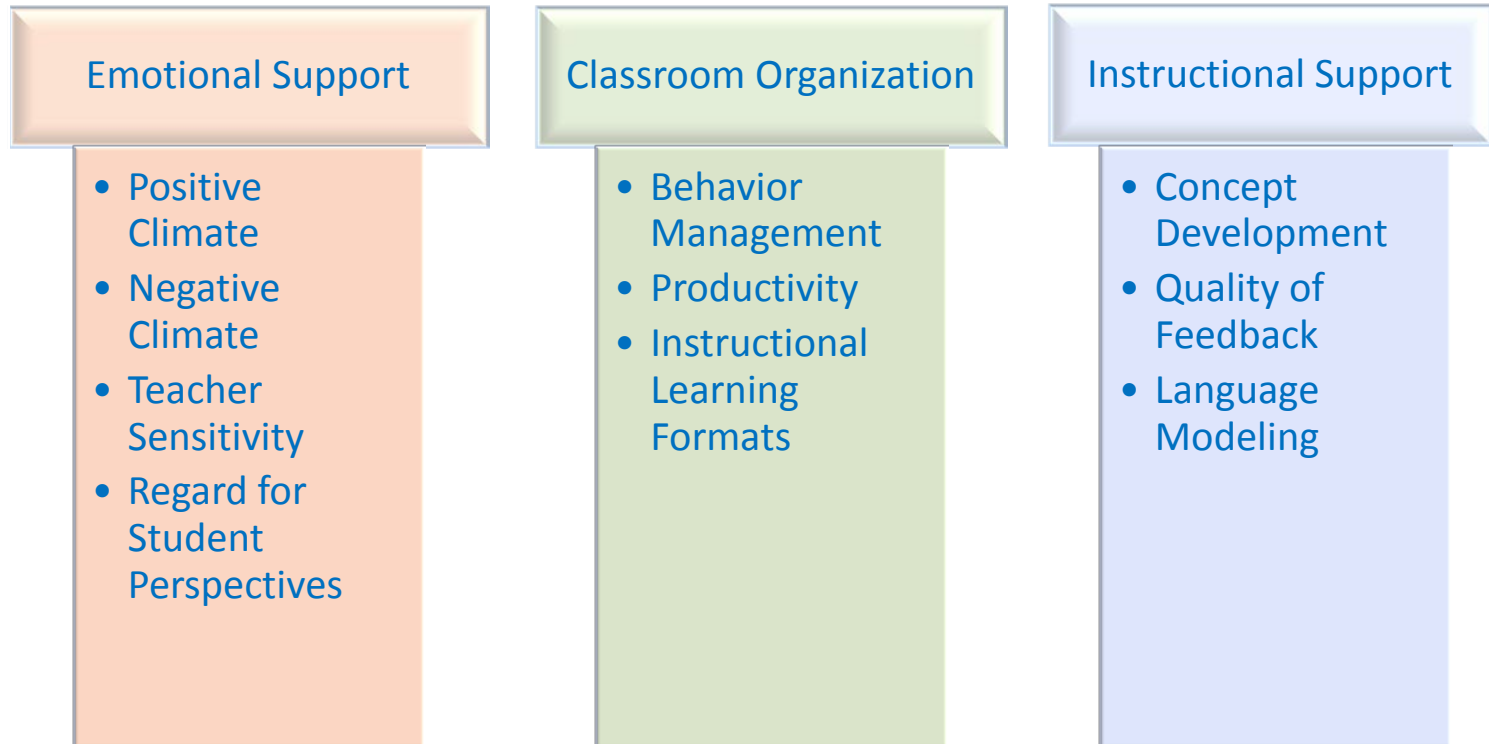


CLASS Observation Methods

- The Pre-K CLASS instrument was used to assess quality of interaction (Pianta, et al. 2008).
- CLASS Pre-K was used to code video observations in a pre-post design (fall, spring) for each of two years (FYs 2011-12 and 2012-13).
- Participants in three program components were assessed:
 - Component A: 21 hours of CDE-approved professional growth training. Statewide random sample.
 - Component B: Minimum of 6 units of higher education toward ECE, CD, or related field. Statewide random sample.
 - Component D (*My Teaching Partner*™): One-on-one professional growth coaching. One hundred percent sample for the component.
- The Pre-K CLASS instrument addresses three domains summarizing 10 dimensions of teacher-child interaction:
 - Emotional Support
 - Classroom Organization
 - Instructional Support

Classroom Assessment Scoring System (CLASS)

Domains and Dimensions for Observational Assessment of Quality of Interaction

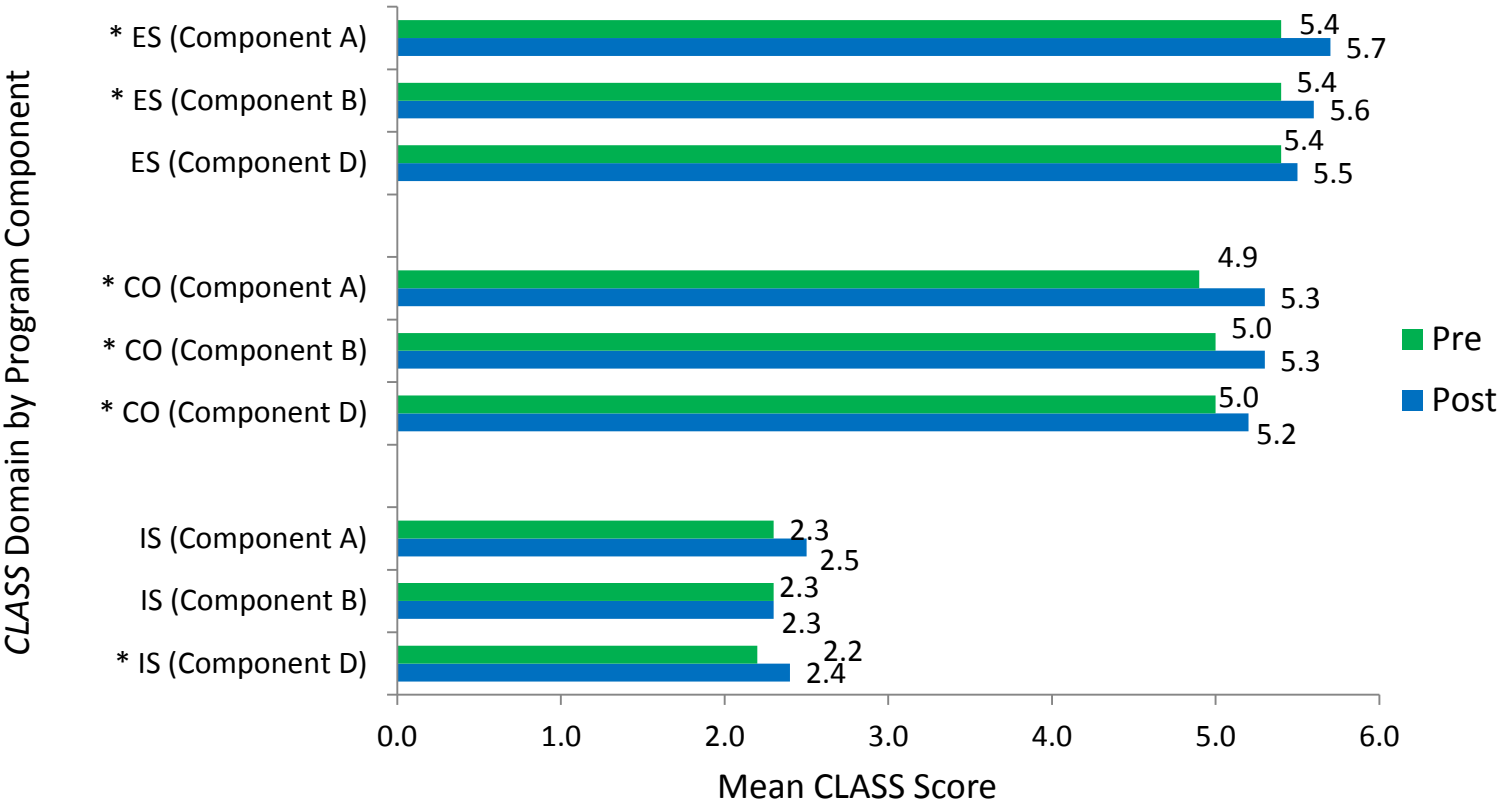


CLASS Observational Assessment Findings

- Let's review for each Program Component, A, B, and D findings for the second year of data (FY 2012-13):
 - Shifts in mean scores by *CLASS* domain
 - Percent of participants by *CLASS* domain at or above Tiered Quality Rating Information Systems (TQRIS) thresholds adopted for California's Race to the Top/Early Learning Challenge.
 - Effect sizes for shifts in *CLASS* domain scores
- The first year of data collection (FY 2011-12) involved program implementation challenges and contracting issues, using the PROOF data system, and collecting coded *CLASS* observations by video
- The second year of data collection (FY 2012-13) was more stable with:
 - More timely enrollment
 - Larger sample sizes for *CLASS* observations
 - Better defined time window between pre- and post-observations (3 to 6 months)

CARES Plus, Round 1 FY 2012-13

Mean Scores by CLASS Domain and Program Component



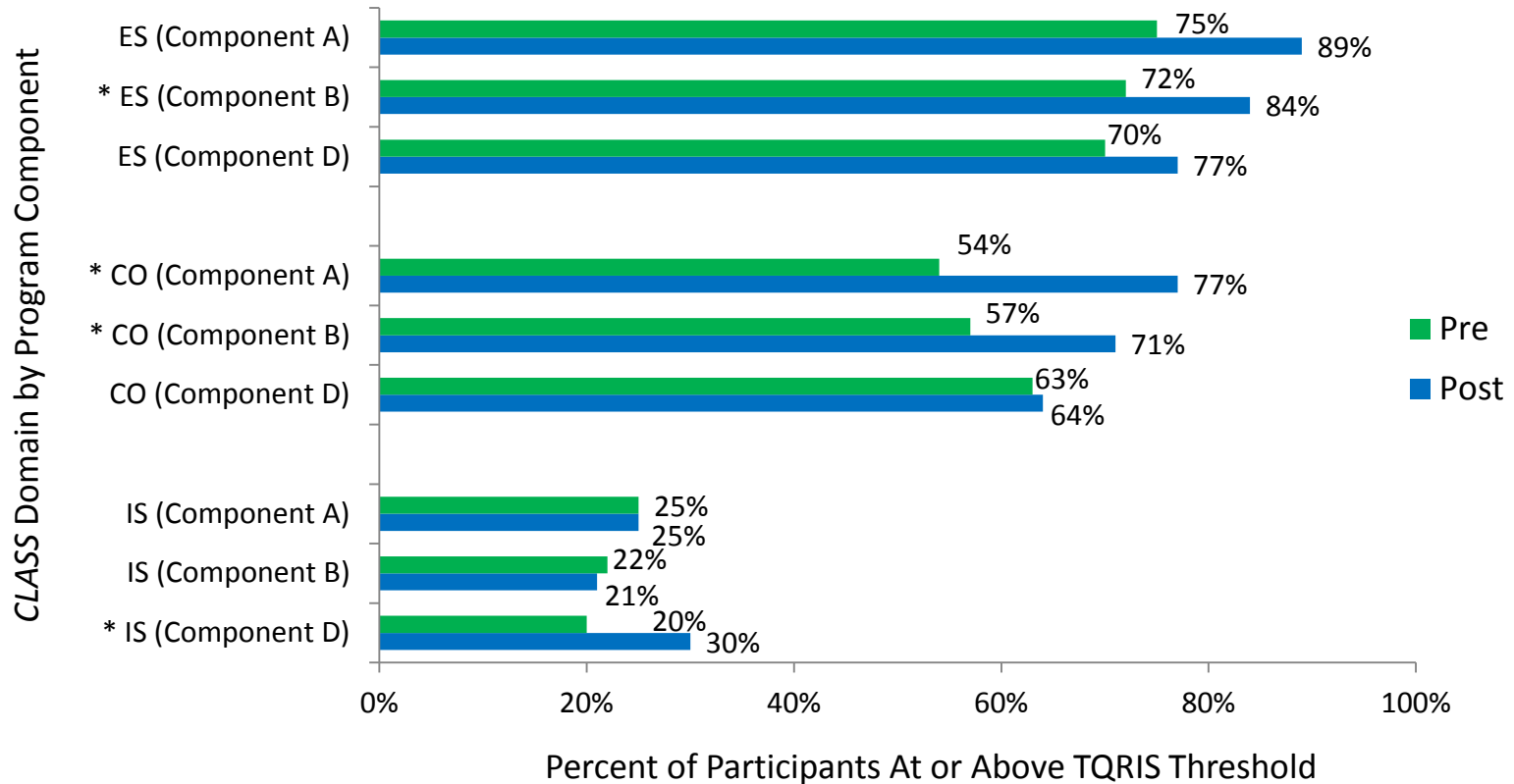
Domain Codes: ES = Emotional Support CO = Classroom Organization IS = Instructional Support

*Significant at p<.05 (t-test)



CARES Plus, Round 1, FY 2012-13

Percent of Participants At or Above TQRIS Thresholds¹ by CLASS Domain and Program Component



Domain Codes: ES = Emotional Support CO = Classroom Organization IS = Instructional Support

¹ TQRIS Thresholds: ES (5) CO (5) IS (3) * Significant at p<.05 (McNemar's Test)

What is an Effect Size?

- “An effect size refers to the magnitude of the result as it occurs, or would be found, in the population” (Paul Ellis, 2010, *The Essential Guide to Effect Sizes*, Cambridge University Press, p. 4).
- Effect size helps to assess the meaningfulness of changes observed in a study sample beyond null hypothesis significance tests.
- Common families of measures for effect sizes:
 - Difference d (example, standardized mean difference, Cohen’s d)
 - Correlation r (example, Pearson’s r)
- How to interpret? For a standardized difference in means, Cohen (1988) suggests:
 - 0.20 small effect
 - 0.50 medium effect
 - 0.80 large effect
- What are typical effect sizes for education interventions?
 - Typically 0.20 to 0.40 (Hill et al. 2007, Slavin and Smith 2008)

CARES Plus, Round 1, FY 2012-13

Effect Size by Program Component and CLASS Domain

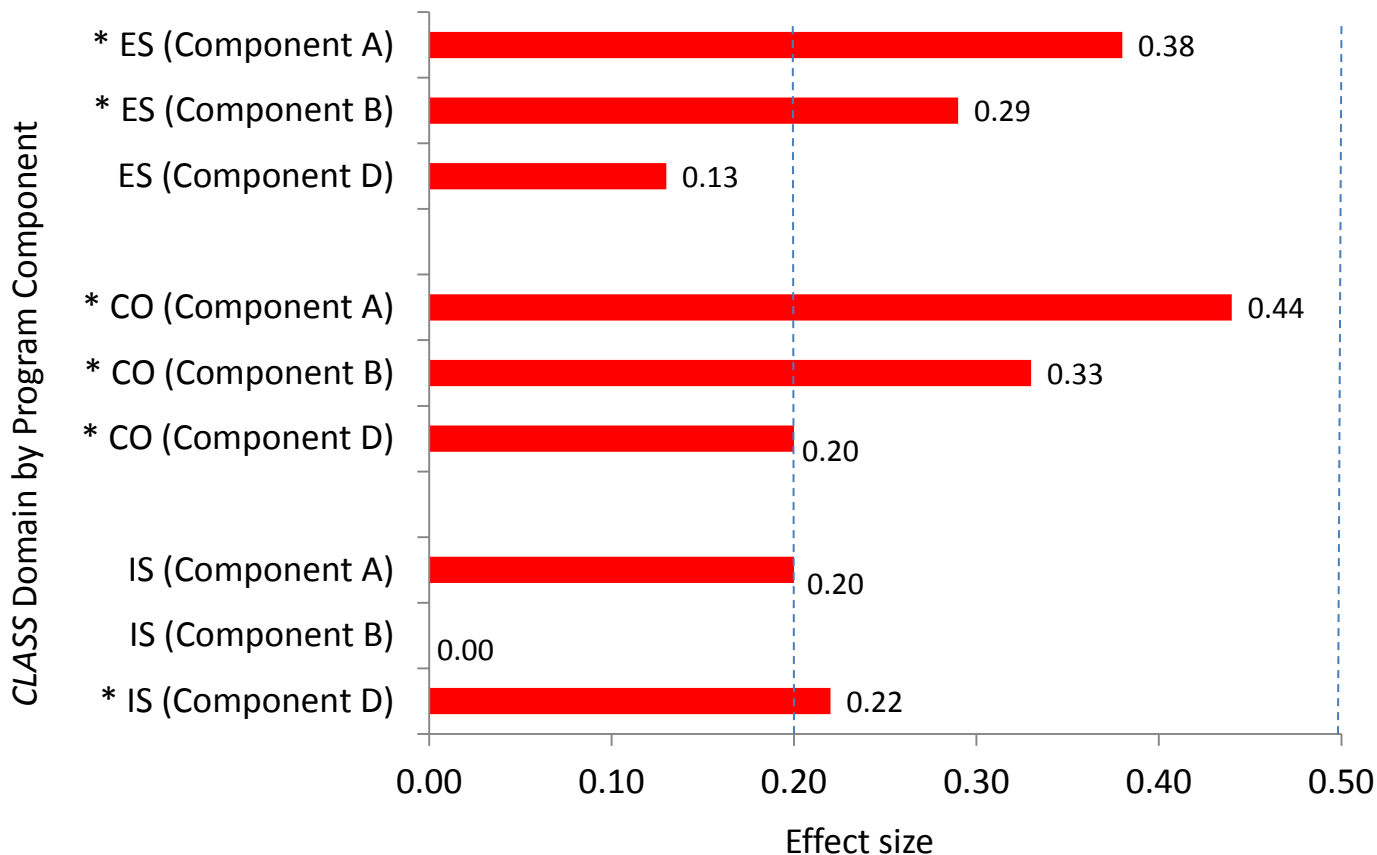
CARES Plus Program Component	CLASS Domain	Effect Size*	Significant Change? **
A: 21 Hours CDE-Approved Training	Emotional Support	0.38	Yes
	Classroom Organization	0.44	Yes
	Instructional Support	0.20	No
B: 6 Units Higher Education Toward ECE/CD	Emotional Support	0.29	Yes
	Classroom Organization	0.33	Yes
	Instructional Support	0	No
D: <i>My Teaching Partner</i> One-on-One Coaching	Emotional Support	0.13	No
	Classroom Organization	0.20	Yes
	Instructional Support	0.22	Yes

*Effect Size = (Post-Pre) / SD Pre

**Significant at p<.05 (t-test)

CARES Plus, Round 1, FY 2012-13

Effect Size by CLASS Domain and Program Component



Domain Codes: ES = Emotional Support CO = Classroom Organization IS = Instructional Support

* Significant at $p < .05$ (t-test)

Conclusion

Summary

- During CARES Plus, Round 1:
 - The program was useful for improving the quality of teacher-child interaction for program participants.
 - Participants found the training to be useful and rated the program highly.
 - Components A and B supported improvements in the *CLASS* domains of Emotional Support and Classroom Organization but not improvement in Instructional Support.
 - Component D resulted in a greater improvement in quality of interaction between teachers and children in the *CLASS* domains of Classroom Organization and Instructional Support.

Looking to the Future

- Future analyses in CARES Plus might address relationships between *CLASS* score improvement and:
 - Teacher's level of educational attainment
 - Prior Early Childhood/Child Development education
 - Specific coursework provided in CARES Plus
- These possible analyses will depend on data aggregated across multiple program year to achieve sufficient sample size.

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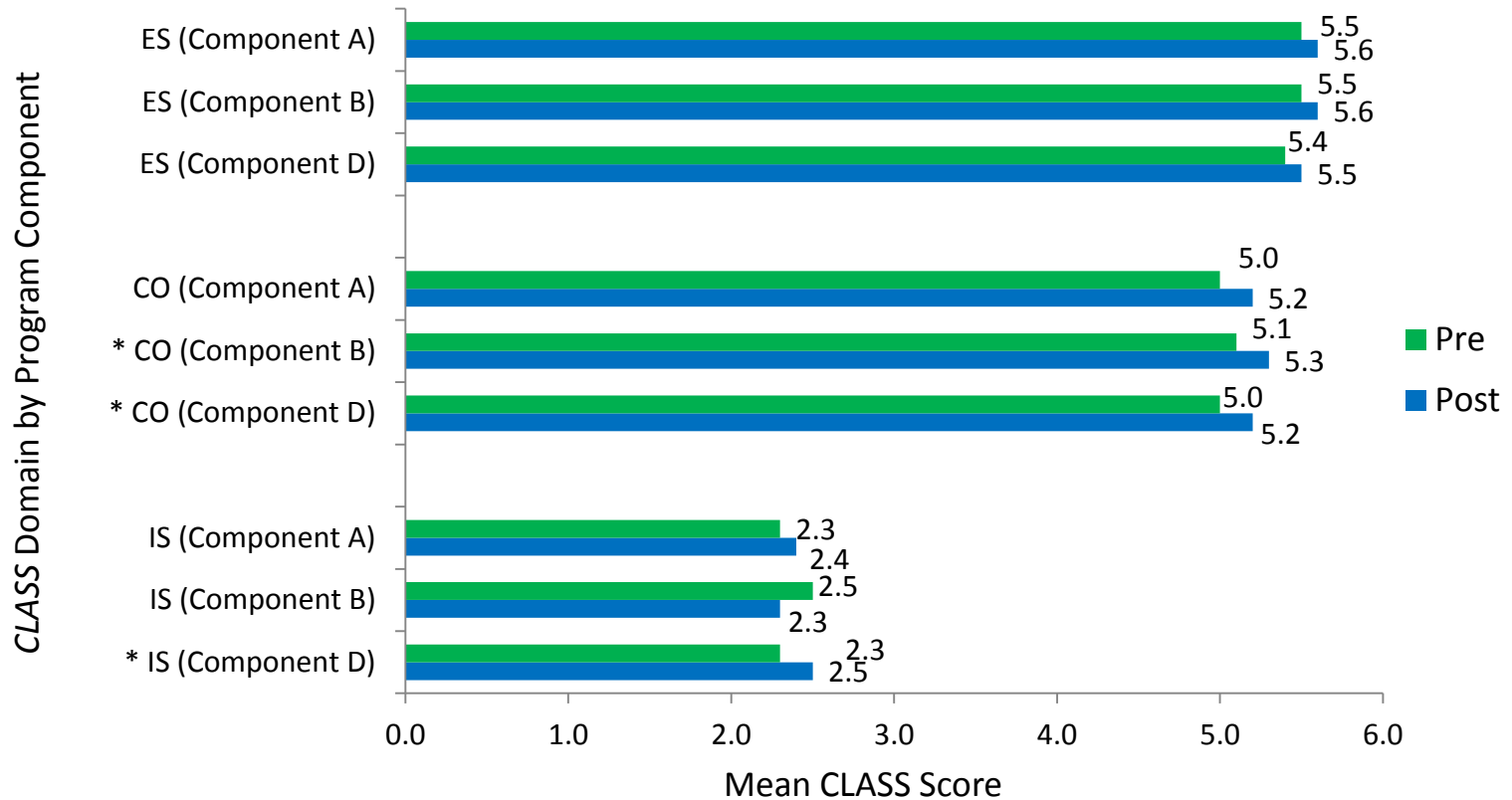
Camille Maben

**Appendix:
CLASS Data Analyses,
Combined FYs 2011-12 and 2012-13**

CARES Plus, Round 1

Combined FYs 2011-12 and 2012-13

Mean Scores by CLASS Domain and Program Component



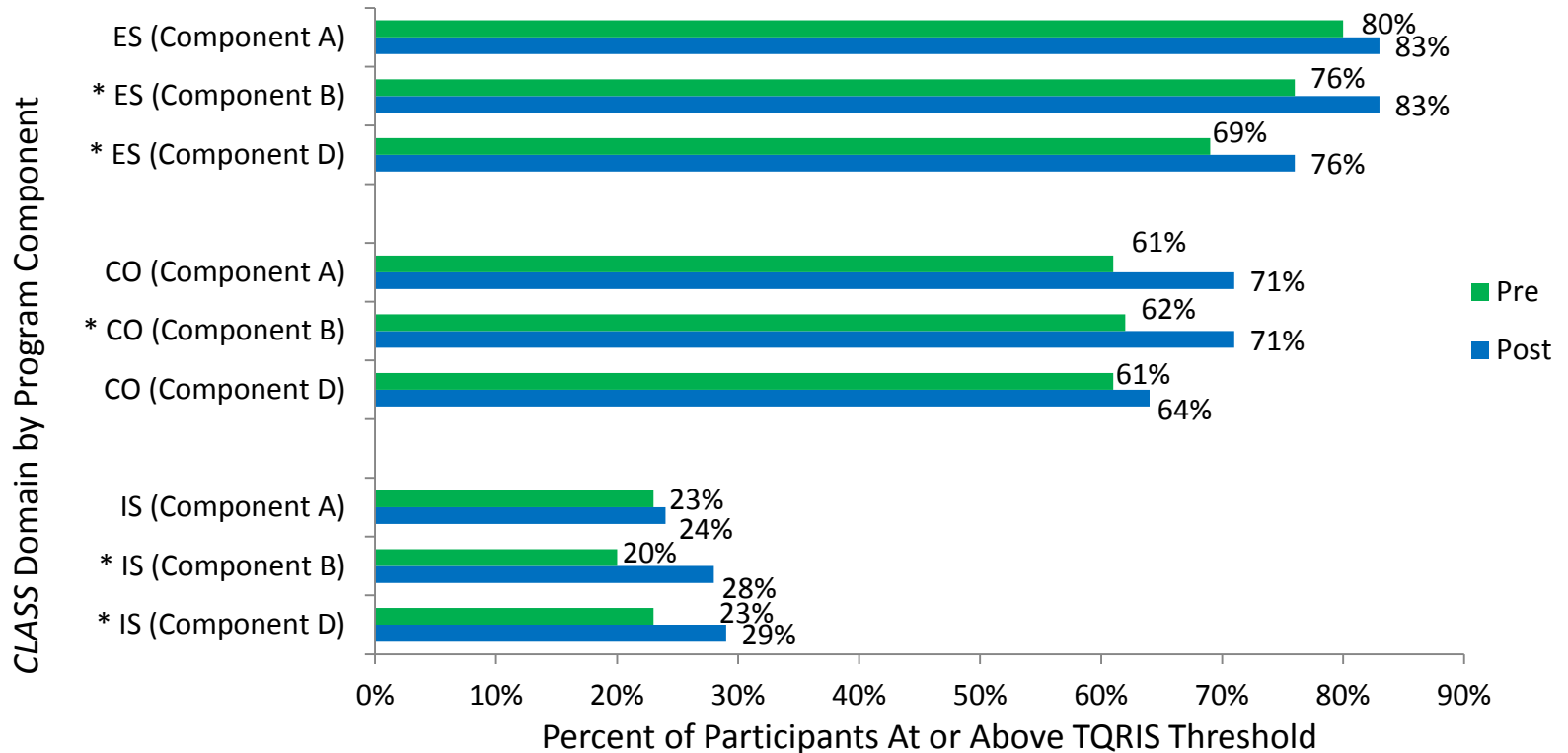
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CARES Plus, Round 1

Combined FYs 2011-12 and 2012-13

Percent of Participants At or Above TQRIS Thresholds¹ by CLASS Domain and Program Component



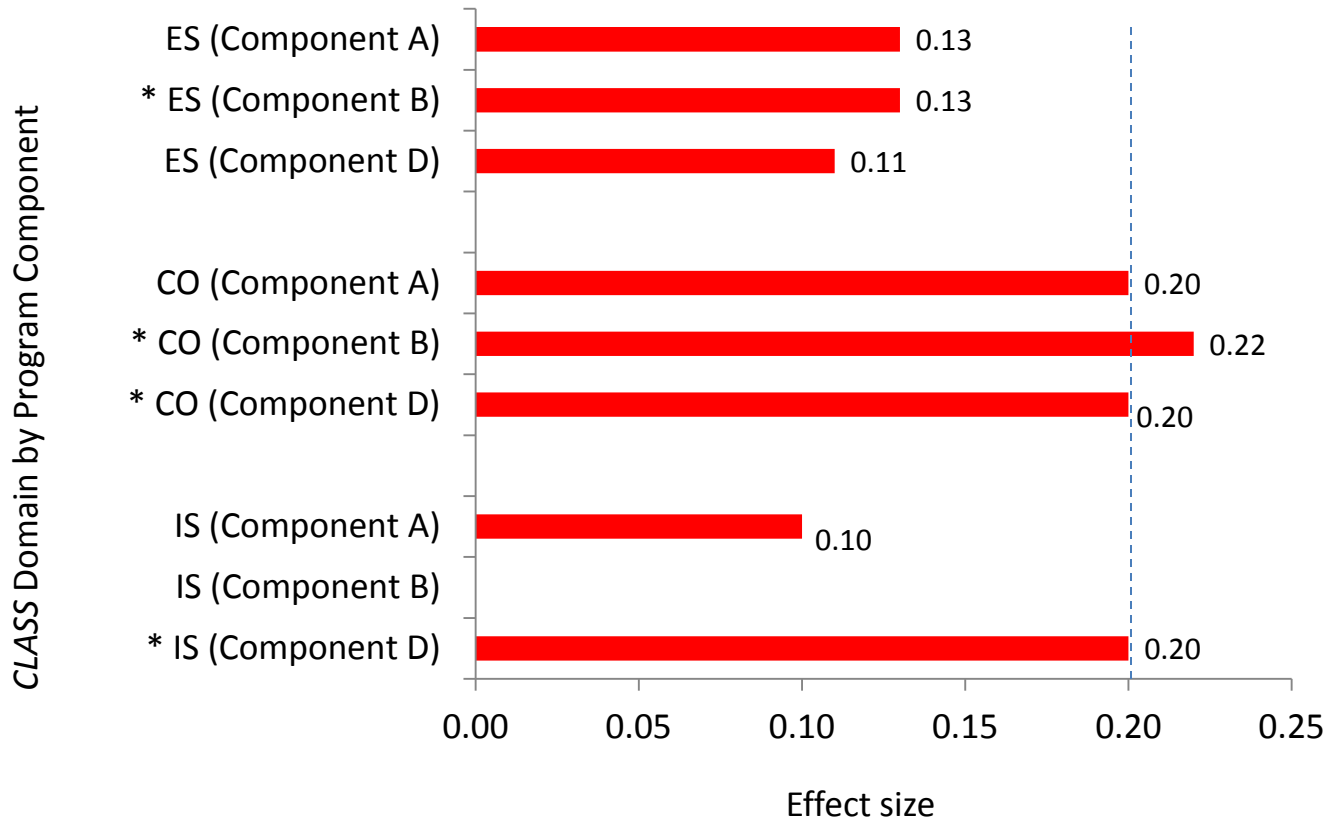
Domain Codes: ES = Emotional Support CO = Classroom Organization IS = Instructional Support

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CARES Plus, Round 1

Combined FY 2011-12 and 2012-13

Effect Size by CLASS Domain and Program Component



Domain Codes: ES = Emotional Support CO = Classroom Organization IS = Instructional Support

* Significant at $p < .05$ (t-test)