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Student Achievement and Growth on California's K–12 Assessments

Technical Appendices

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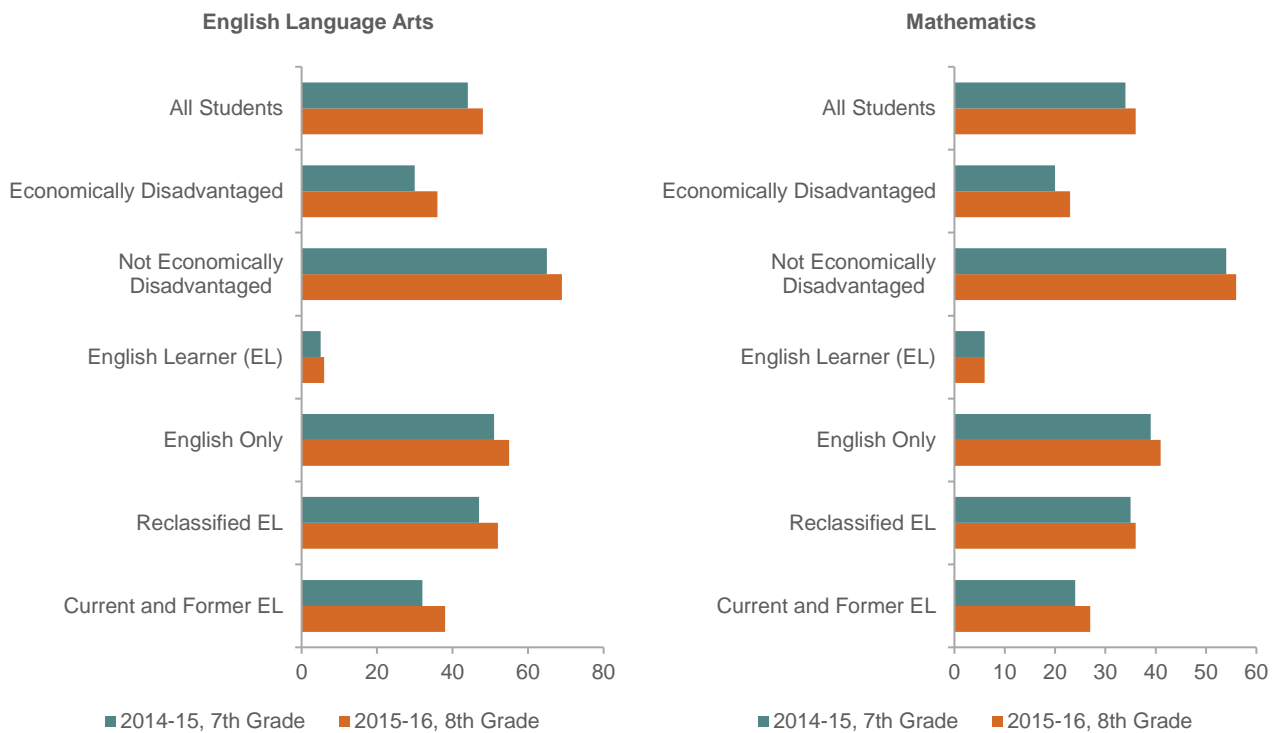
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Supported with funding from the Evelyn and Walter Haas, Jr. Fund

Appendix A: Comparison of Test Results from the 4th–5th Grade Cohort with the 7th–8th Grade Cohort

The results for the 7th–8th grade cohort of students between the 2014–15 and 2015–16 school years are largely the same as the results for the 4th–5th grade cohort. A notable exception is that average scale score growth was much lower for the 7th–8th grade cohort. That is partly due to the structure of the test: while students needed to increase their scale scores by 29 points in English Language Arts between the 4th and 5th grade in order to remain at the same achievement level, they would only need 15 points to do the same between the 7th and 8th grades. Both cohorts showed similar shares of students meeting the standard and the relationship between achievement and growth was about the same as well. Compared to the 4th–5th grade cohort, the 7th–8th grade cohort also had more students in the extremes—where district achievement and growth was above or below average by a significant amount. Only in the high-achievement, high-growth extreme did the 4th–5th grade cohort report more districts.

FIGURE A1
Overall cohort results by demographic group

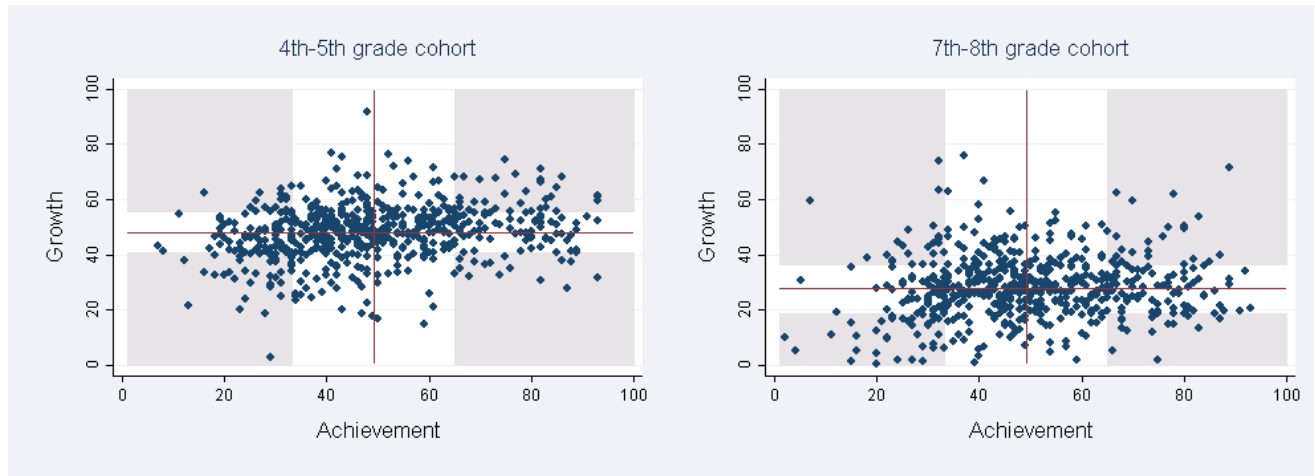


SOURCES: California Department of Education. Author’s calculations.

NOTE: The English Only group consists of students who are only fluent in English—students who speak a language other than English at home are not included in the group. Economically disadvantaged students are typically those that qualify for free or reduced price meals.

FIGURE A2

The relationship between achievement and growth on the English Language Arts test is similar for the 4th–5th and 7th–8th grade cohorts



SOURCES: California Department of Education. Author’s calculations.

NOTES: Achievement refers to the share of students that met the state standard. Growth refers to the difference in scale scores for 5th grade students in the 2015–16 school year and 4th grade students in the 2014–15 school year. Eight districts had negative cohort growth, and one district had cohort growth above 100. Those districts are not shown here.

TABLE 1

Both cohorts saw similar results in English Language Arts, but scale score growth was much lower for the 7th–8th grade

	4th–5th Grade	7th–8th Grade
Share of students meeting the standard	49.2%	49.2%
Average scale score growth	48.0	27.8
Regression coefficient	0.12	0.11
p-value and R ²	0.00, 0.05	0.00, 0.02
Share of students at districts by type		
Low-achievement, low-growth	3.2%	3.7%
Low-achievement, high-growth	1.7%	2.5%
High-achievement, low-growth	0.9%	2.3%
High-achievement, high-growth	2.5%	1.1%

SOURCES: California Department of Education. Author’s calculations.

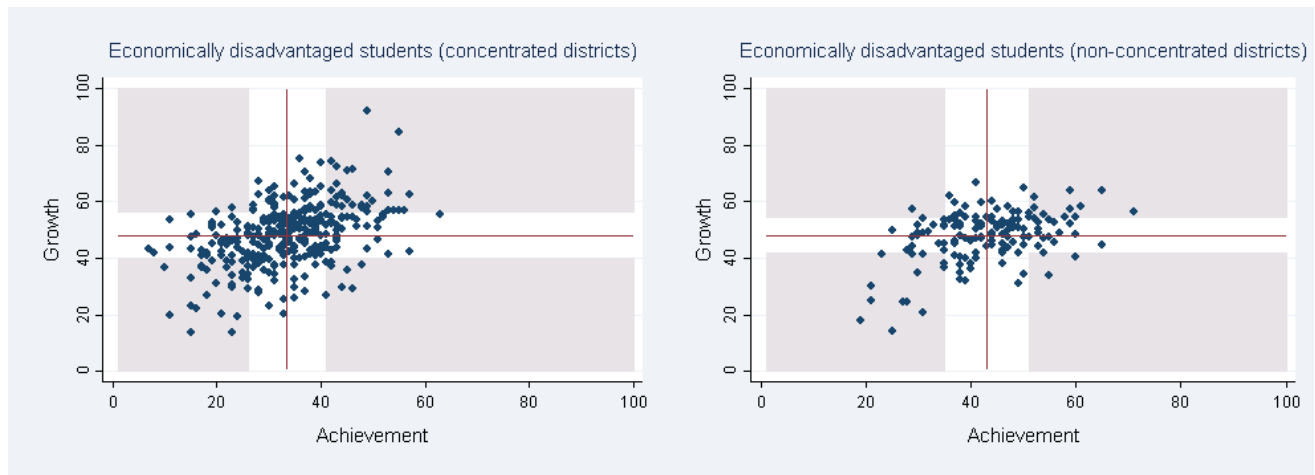
Appendix B: Achievement and Growth for High-Need Students at Concentrated Districts

In Appendix B, we look more closely at the English Language Arts results for high-need students by comparing them for students at districts that receive concentration grants—additional funding for districts that have a high share of high-need students—with those that do not. These results highlight the strong connection between achievement on the state tests and a district’s share of high-need students. For both economically disadvantaged students as well as current and former English Learners, those attending districts with concentration grants had lower levels of average achievement—differences of 10 percent for economically disadvantaged students and 16 percent for current and former English Learners—coupled with similar amounts of scale score growth. Also, the relationship between achievement and growth was stronger for students at concentrated districts. A 10 percentage point increase in the share of students meeting the standard associated with about 13 points more in scale score growth.

Comparing the two groups as a whole—those at concentrated districts and those that are not—these results are somewhat mixed: while the gap in achievement between the students at either kind of district continue to be a problem for educators to address, the similar levels of scale score growth show that, on average, students at concentrated districts are learning new material or adjusting to the new tests at a pace that is fast enough to fall no further behind their peers than they already are. Of course, the gaps between high-need students in general and other students that are not disadvantaged are wider than these, and could be growing larger.

FIGURE B1

Achievement and growth for economically disadvantaged students at concentrated and non-concentrated districts

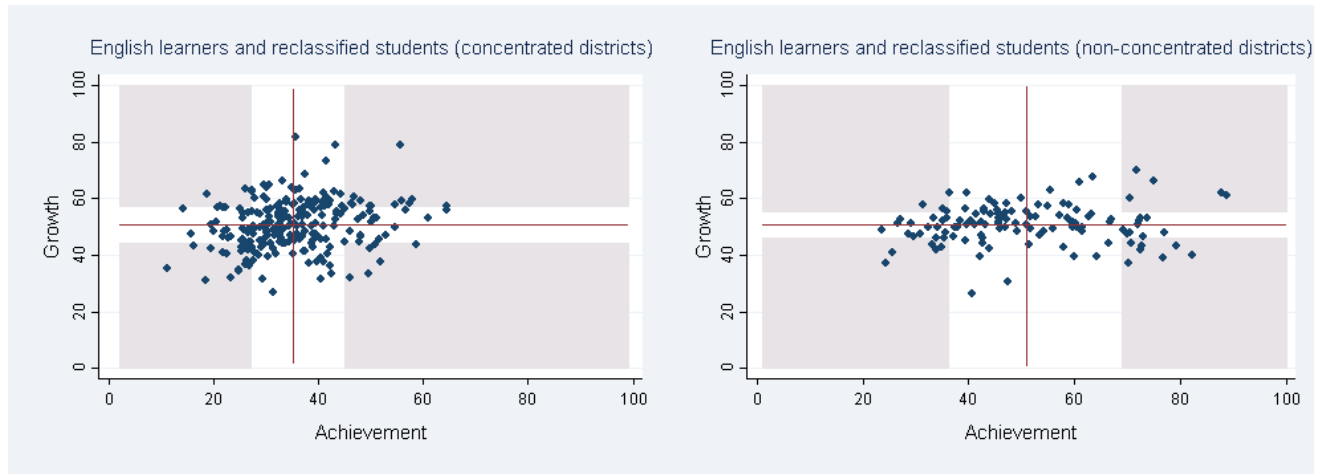


SOURCE: California Department of Education. Author’s calculations based on results from English Language Arts test.

NOTE: Achievement refers to the share of students that met the state standard. Growth refers to the difference in scale scores for 5th grade students in the 2015–16 school year and 4th grade students in the 2014–15 school year. Sample limited to the 583 districts that serve at least 50 students in the 5th grade. For concentrated districts, the coefficient from the regression of share meeting the standard on growth is 0.51, meaning that a 10 percentage point increase in achievement is associated with a 5.1 point increase in the average scale score. The p-value and R^2 of the regression are 0.00 and 0.20 respectively. For non-concentrated districts, the coefficient from the regression of share meeting the standard on growth is 0.39, meaning that a 10 percentage point increase in achievement is associated with a 3.9 point increase in the average scale score. The p-value and R^2 of the regression are 0.00 and 0.17 respectively.

FIGURE B2

Achievement and growth for current and former English Learners at concentrated and non-concentrated districts



SOURCE: California Department of Education. Author’s calculations based on results from English Language Arts test.

NOTE: Achievement refers to the share of students that met the state standard. Growth refers to the difference in scale scores for 5th grade students in the 2015–16 school year and 4th grade students in the 2014–15 school year. Sample limited to the 583 districts that serve at least 50 students in the 5th grade. For concentrated districts, the coefficient from the regression of share meeting the standard on growth is 0.19, meaning that a 10 percentage point increase in achievement is associated with a 1.9 point increase in the average scale score. The p-value and R² of the regression are 0.00 and 0.04 respectively. For non-concentrated districts, the coefficient from the regression of share meeting the standard on growth is 0.05, meaning that a 10 percentage point increase in achievement is associated with a 0.5 point increase in the average scale score. The p-value and R² of the regression are 0.25 and 0.01 respectively.

TABLE B1

Share of students at extremes of achievement and growth

	Low-achievement, Low-growth	Low-achievement, High-growth	High-achievement, Low-growth	High-achievement, High-growth
Economically disadvantaged				
Concentrated District	4.0%	0.1%	2.1%	4.3%
Non-concentrated District	5.1%	0.3%	0.8%	4.5%
Current and Former English Learner				
Concentrated District	2.4%	1.4%	5.8%	1.4%
Non-concentrated District	4.4%	0.3%	1.4%	3.5%

SOURCE: California Department of Education. Author’s calculations based on results from English Language Arts test.

Appendix C: Top and Bottom 20 Outlier Districts

TABLE C1

Top 20 district outliers in performance

County	District	Color	Share of high-need students	Predicted share of high-need students
Los Angeles	Rosemead Elementary School District**	Blue	86%	23%
Orange	Savanna Elementary School District	Blue	77%	23%
Tulare	Palo Verde Union Elementary School District	Green	98%	46%
Imperial	Heber Elementary School District**	Green	94%	46%
Merced	Winton School District	Green	93%	46%
Nevada	Nevada County Office Of Education	Blue	66%	23%
Orange	Centralia Elementary School District	Blue	66%	23%
Butte	Gridley Unified	Blue	65%	23%
Los Angeles	Lawndale Elementary*	Green	83%	46%
El Dorado	Mother Lode Union Elementary School District	Blue	57%	23%
Sonoma	Wright Elementary School District	Green	79%	46%
San Bernardino	Silver Valley Unified	Blue	56%	23%
Los Angeles	East Whittier City Elementary School District	Blue	55%	23%
Fresno	Fowler Unified	Green	78%	46%
Los Angeles	Hacienda La Puente Unified	Green	78%	46%
Orange	Westminster School District*	Green	77%	46%
San Diego	San Ysidro Elementary	Orange	100%	69%
Orange	Garden Grove Unified	Green	75%	46%
Tulare	Pixley Union Elementary	Orange	97%	69%
Los Angeles	Little Lake City Elementary School District*	Green	74%	46%

* Districts that were in the top 20 in 2014–15 and 2015–16

** Districts that were in the top 20 in 2012–13, 2014–15 and 2015–16

SOURCES: California Department of Education. Based on proposed academic indicator presented by CDE at January 2017 meeting of the State Board of Education and author’s calculations.

NOTES: Performance levels are calculated based only on 5th grade results in English Language Arts, not the entire district or school. Predicted share of high-need students based on simple linear regression of district performance level on share of high-need students.

TABLE C2

Bottom 20 district outliers in performance

County	District	Color	Share of high-need students	Predicted share of high-need students
San Diego	Rancho Santa Fe Elementary School District	Yellow	5%	74%
Monterey	Spreckels Union Elementary School District**	Orange	15%	69%
Sonoma	Waugh Elementary School District	Yellow	22%	74%
Monterey	Pacific Grove Unified	Yellow	24%	74%
San Mateo	Pacifica	Yellow	25%	74%
Yolo	Davis Joint Unified	Yellow	25%	74%
Alameda	Livermore Valley Joint Unified	Yellow	28%	74%
Contra Costa	Byron Union Elementary School District	Yellow	29%	74%
Nevada	Union Hill Elementary*	Orange	25%	69%
Alameda	Piedmont City Unified	Green	3%	46%
Kern	Muroc Joint Unified**	Yellow	32%	74%
Nevada	Pleasant Ridge Union Elementary School District	Orange	27%	69%
Contra Costa	Martinez Unified	Yellow	34%	74%
Los Angeles	Castaic Union	Orange	30%	69%
El Dorado	Gold Trail Union Elementary School District	Orange	31%	69%
Kings	Island Union Elementary School District	Yellow	37%	74%
Stanislaus	Hickman Community Charter School District	Yellow	37%	74%
Sacramento	Folsom-Cordova Unified	Yellow	37%	74%
Shasta	Columbia Elementary	Red	38%	74%
Merced	Mcswain Union Elementary School District	Red	38%	74%

* Districts that were in the bottom 20 in 2014–15 and 2015–16

** Districts that were in the bottom 20 in 2012–13, 2014–15, and 2015–16

SOURCES: California Department of Education. Based on proposed academic indicator presented by CDE at January 2017 meeting of the State Board of Education and author's calculations.

NOTES: Performance levels are calculated based only on 5th grade results in English Language Arts, not the entire district or school. Predicted share of high-need students based on simple linear regression of district performance level on share of high-need students.

Appendix D: Top and Bottom 50 Outlier Schools

TABLE D1

Top 50 school outliers in performance

County	School (District)	Color	Share of high-need students	Predicted share of high-need students
Fresno	Sheridan Elementary (Kings Canyon Joint Unified)	Blue	98%	34%
Orange	Willmore Elementary (Westminster)	Blue	96%	34%
San Diego	Sherman Elementary (San Diego Unified)	Blue	95%	34%
Merced	Winfield Elementary (Winton)	Blue	94%	34%
Los Angeles	Anderson Elementary (Compton Unified)	Blue	94%	34%
Los Angeles	O'melveny Elementary (Los Angeles Unified)	Blue	94%	34%
Riverside	Martin Van Buren Elementary (Desert Sands Unified)	Blue	94%	34%
San Bernardino	Crestmore Elementary (Colton Joint Unified)	Blue	93%	34%
Los Angeles	Columbia Elementary (El Monte City School District)	Blue	93%	34%
Merced	Frank Sparkes Elementary (Winton)	Blue	93%	34%
Los Angeles	Kenmore Elementary (Baldwin Park Unified)	Blue	92%	34%
San Francisco	Chin (John Yehall) Elementary (San Francisco Unified)	Blue	91%	34%
Santa Clara	Robert F. Kennedy Elementary (Franklin-Mckinley Elementary)	Blue	90%	34%
San Diego	Loma Verde Elementary (Chula Vista Elementary)	Blue	90%	34%
Los Angeles	Dr. J. Michael Mcgrath Elementary (Newhall)	Blue	90%	34%
San Diego	Oak Park Elementary (San Diego Unified)	Blue	89%	34%
Los Angeles	Mildred B. Janson Elementary (Rosemead Elementary School District)	Blue	89%	34%
Ventura	Glenwood Elementary (Conejo Valley Unified)	Blue	88%	34%
San Bernardino	Hillside Elementary (San Bernardino City Unified)	Blue	88%	34%
Los Angeles	Savannah Elementary (Rosemead Elementary School District)	Blue	88%	34%
Los Angeles	Castelar Street Elementary (Los Angeles Unified)	Blue	88%	34%
Sacramento	Camellia Elementary (Sacramento City Unified)	Blue	87%	34%
Fresno	Silas Bartsch (Kings Canyon Joint Unified)	Blue	87%	34%
San Bernardino	Franklin Elementary (Redlands Unified)	Blue	87%	34%
Los Angeles	Eshelman Avenue Elementary (Los Angeles Unified)	Blue	87%	34%
Orange	Fryberger Elementary (Westminster)	Blue	86%	34%

County	School (District)	Color	Share of high-need students	Predicted share of high-need students
Merced	Westside Union Elementary (Los Banos Unified)	Blue	86%	34%
Los Angeles	Chapman Elementary (Los Angeles Unified)	Blue	85%	34%
San Diego	Cook (Hazel Goes) Elementary (Chula Vista Elementary)	Blue	85%	34%
Los Angeles	Mid-City's Prescott School Of Enriched S (Los Angeles Unified)	Blue	85%	34%
Los Angeles	Emma W. Shuey Elementary (Rosemead Elementary School District)	Blue	84%	34%
Santa Clara	Stonegate Elementary (Franklin-Mckinley Elementary)	Blue	84%	34%
Los Angeles	Julia B. Morrison Elementary (Norwalk-La Mirada Unified)	Blue	84%	34%
Orange	Hansen Elementary (Savanna Elementary School District)	Blue	84%	34%
Fresno	Miramonte Elementary (Clovis Unified)	Blue	84%	34%
Los Angeles	Burbank Boulevard Elementary (Los Angeles Unified)	Blue	84%	34%
Orange	Excelsior Elementary (Garden Grove Unified)	Blue	84%	34%
San Diego	Ocean View Hills (San Ysidro Elementary)	Green	100%	51%
San Bernardino	Trapp Elementary (Rialto Unified)	Blue	83%	34%
Los Angeles	Muir K-8 (Long Beach Unified)	Blue	83%	34%
Kern	Berkshire Elementary (Panama-Buena Vista Union)	Blue	83%	34%
San Diego	Marshall Elementary (San Diego Unified)	Green	99%	51%
Tulare	Palo Verde Elementary (Palo Verde Union Elementary School District)	Green	98%	51%
Los Angeles	Ferguson (Venn W.) Elementary (ABC Unified)	Green	98%	51%
Riverside	Rancho Mirage Elementary (Palm Springs Unified)	Blue	82%	34%
Los Angeles	Vena Avenue Elementary (Los Angeles Unified)	Blue	81%	34%
San Diego	Edison Elementary (San Diego Unified)	Green	98%	51%
Los Angeles	Bryson Avenue Elementary (Los Angeles Unified)	Blue	81%	34%
Orange	Twila Reid Elementary (Savanna Elementary School District)	Blue	81%	34%
Santa Clara	Washington Elementary (San Jose Unified)	Green	97%	51%

SOURCES: California Department of Education. Based on proposed academic indicator presented by CDE at January 2017 meeting of the State Board of Education and author's calculations.

NOTES: Performance levels are calculated based only on 5th grade results in English Language Arts, not the entire district or school. Predicted share of high-need students based on simple linear regression of district performance level on share of high-need students.

TABLE D2

Bottom 50 school outliers in performance

County	School (District)	Color	Share of high-need students	Predicted share of high-need students
San Diego	Ocean Air (Del Mar Union Elementary)	Yellow	3%	80%
Contra Costa	Vista Grande Elementary (San Ramon Valley Unified)	Yellow	3%	80%
Alameda	Beach Elementary (Piedmont City Unified)	Yellow	4%	80%
Ventura	Sycamore Canyon (Conejo Valley Unified)	Yellow	4%	80%
Los Angeles	Opal Robinson Elementary (Manhattan Beach Unified)	Yellow	4%	80%
San Diego	R. Roger Rowe Elementary (Rancho Santa Fe Elementary School District)	Yellow	6%	80%
Orange	Wagon Wheel Elementary (Capistrano Unified)	Yellow	7%	80%
Los Angeles	Willow Elementary (Las Virgenes Unified)	Yellow	7%	80%
Kern	Veterans Elementary (Norris Elementary)	Yellow	9%	80%
Marin	Hidden Valley Elementary (Ross Valley Elementary)	Yellow	10%	80%
Contra Costa	Mt. Diablo Elementary (Mt. Diablo Unified)	Yellow	11%	80%
Santa Clara	Stevens Creek Elementary (Cupertino Union)	Yellow	11%	80%
Orange	Portola Hills Elementary (Saddleback Valley Unified)	Yellow	11%	80%
San Mateo	Roy Cloud Elementary (Redwood City Elementary School District)	Yellow	12%	80%
Orange	Travis Ranch (Placentia-Yorba Linda Unified)	Yellow	12%	80%
Contra Costa	Walt Disney Elementary (San Ramon Valley Unified)	Yellow	12%	80%
Sonoma	Sequoia Elementary (Rincon Valley Union Elementary)	Yellow	13%	80%
Sacramento	Sandra J. Gallardo Elementary (Folsom-Cordova Unified)	Yellow	14%	80%
Orange	Nohl Canyon Elementary (Orange Unified)	Yellow	14%	80%
Los Angeles	Beverly Vista Elementary (Beverly Hills Unified)	Yellow	14%	80%
Marin	Dixie Elementary (Dixie Elementary School District)	Orange	10%	75%
Sacramento	Cosumnes River Elementary (Elk Grove Unified)	Yellow	15%	80%
Orange	Robinson Elementary (Saddleback Valley Unified)	Yellow	15%	80%
Los Angeles	Lowell Elementary (Long Beach Unified)	Yellow	16%	80%
Contra Costa	John Swett Elementary (Martinez Unified)	Yellow	16%	80%
Los Angeles	Mar Vista Elementary (Los Angeles Unified)	Yellow	16%	80%
Solano	Joe Henderson Elementary (Benicia Unified)	Yellow	16%	80%
Orange	Running Springs Elementary (Orange Unified)	Yellow	17%	80%
Los Angeles	Charles Helmers Elementary (Saugus Union)	Yellow	17%	80%

County	School (District)	Color	Share of high-need students	Predicted share of high-need students
Kern	William B. Bimat Elementary (Norris Elementary)	Orange	13%	75%
Riverside	Helen Hunt Jackson Elementary (Temecula Valley Unified)	Yellow	17%	80%
Sacramento	Natoma Station Elementary (Folsom-Cordova Unified)	Yellow	17%	80%
Los Angeles	James Foster Elementary (Saugus Union)	Yellow	17%	80%
Alameda	Harold William Kolb (Dublin Unified)	Yellow	18%	80%
Sacramento	Green Oaks Fundamental Elementary (San Juan Unified)	Yellow	18%	80%
San Mateo	Cabrillo Elementary (Pacifica)	Orange	14%	75%
Placer	Diamond Creek Elementary (Roseville City Elementary)	Yellow	18%	80%
Alameda	Montclair Elementary (Oakland Unified)	Yellow	19%	80%
Placer	Lincoln Crossing Elementary (Western Placer Unified)	Yellow	19%	80%
Sacramento	Del Dayo Elementary (San Juan Unified)	Orange	15%	75%
Sacramento	Carl H. Sundahl Elementary (Folsom-Cordova Unified)	Orange	15%	75%
Contra Costa	Morello Park Elementary (Martinez Unified)	Yellow	20%	80%
Placer	Breen Elementary (Rocklin Unified)	Orange	16%	75%
Santa Clara	Marshall Lane Elementary (Campbell Union School District)	Yellow	21%	80%
Monterey	Spreckels Elementary (Spreckels Union Elementary School District)	Orange	17%	75%
San Diego	Park Dale Lane Elementary (Encinitas Union Elementary School District)	Yellow	21%	80%
San Luis Obispo	Los Ranchos Elementary (San Luis Coastal Unified)	Orange	17%	75%
Sacramento	Crocker/Riverside Elementary (Sacramento City Unified)	Yellow	21%	80%
Los Angeles	Wilbur Charter For Enriched Academics (Los Angeles Unified)	Yellow	21%	80%
Los Angeles	North Park Elementary (Saugus Union)	Yellow	21%	80%

SOURCES: California Department of Education. Based on proposed academic indicator presented by CDE at January 2017 meeting of the State Board of Education and author's calculations.

NOTES: Performance levels are calculated based only on 5th grade results in English Language Arts, not the entire district or school. Predicted share of high-need students based on simple linear regression of district performance level on share of high-need students.



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