



# GETTING DOWN — TO FACTS II —

Technical Report

## A Portrait of Educational Outcomes in California

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September 2018

**About:** The *Getting Down to Facts* project seeks to create a common evidence base for understanding the current state of California school systems and lay the foundation for substantive conversations about what education policies should be sustained and what might be improved to ensure increased opportunity and success for all students in California in the decades ahead. *Getting Down to Facts II* follows approximately a decade after the first *Getting Down to Facts* effort in 2007. This technical report is one of 36 in the set of *Getting Down to Facts II* studies that cover four main areas related to state education policy: student success, governance, personnel, and funding.

Stanford  
University

 **PACE**  
Policy Analysis for California Education

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## Introduction

How are California's students doing? And are all groups of students receiving the same opportunities for educational success? How do patterns of educational outcomes in California compare to those in other states, and how have they changed in the last decade?

In this study, we seek to provide a portrait of the state of educational outcomes in California. Any effort to improve educational opportunities in the State must begin with a clear-eyed assessment of where and for whom the State's schools are more or less successful. To do so, we examine data on three key indicators of the performance of the educational system: performance on standardized tests of reading and mathematics, rates of exclusionary discipline such as in- and out-of-school suspensions and expulsions, and high school graduation rates.

Though the individual measures are imperfect, and do not fully capture all outcomes of interest even in combination, each provides an important piece of evidence on an aspect of California's educational system. Performance on standardized tests is the most common way to measure the academic skills that students have acquired through the course of their schooling. Graduation rates complement standardized test measures because they also capture all requirements for graduation, both academic and non-academic. Rates of exclusionary discipline provide a slightly different perspective because they are deeply related to educational opportunity. Students cannot learn and reap the benefits of an education if they are not in the classroom. Triangulating these three measures and perspectives provides a more nuanced view of the educational system than any one measure in isolation.

To give a comprehensive analysis of student outcomes we begin with simple analyses of trends both in California and in the nation as a whole. This provides a starting point for understanding where California stands relative to the nation. Where the data allow, we augment that analysis by investigating how outcomes, in both California and nation, differ by race/ethnicity and the socioeconomic status of the students the district serves.

The latter set of analyses is especially important in understanding how the state compares to the nation because California has a unique demographic profile. California is geographically the third largest state in the country behind Alaska and Texas (Census, 2010) and the largest state by population (Census, 2017). It is home to the second largest school district in the nation, the Los Angeles Unified School District, but large swaths of the state also serve rural communities. The California student body is also relatively unique in that it is majority minority: 54 percent of students were classified as Hispanic, 24 percent white, 9 percent Asian, and 5 percent black in the 2016-2017 school year (California Department of Education, 2017b). To a much larger extent than other states, California grapples with difficult and urgent questions like how to best serve English Language Learners, who composed 21 percent of the student population in the fall of 2016 (California Department of Education, 2017a). Simple comparisons of California achievement measures to those of the nation can be misleading because inequities in the distribution of wealth and resources fall along geographic, economic, and racial/ethnic lines. Educational inputs, and therefore outputs, are in turn correlated with the demographics

of students.

The results we present here paint a complex picture. By all measures, California's students have been performing better over time. Test scores and graduation rates have been increasing, while disciplinary events have been decreasing. Compared to the rest of the nation, however, California continues to lag on a number of dimensions. Though the gap has shrunk, California lags the nation in achievement in reading and math, and overall, graduation rates are lower in California. With the exception of graduation rates, these gaps persist, even when accounting for the SES and racial/ethnic groups that compose the state. California as a whole also expels more students than the nation, but many of its districts, especially those that serve low SES children, suspend fewer students than comparable districts nationwide. While the picture of education California has therefore improved, that rate of improvement must accelerate if students are to compare more favorably to their peers elsewhere in the US.

### **Literature Review**

Measuring the educational success of all students in an entire state is a complex endeavor. Ideally, multiple measures might be used, including performance on standardized tests, graduation rates, grade retention, rates of exclusionary discipline, rates of special education classification, performance on assessments of social-emotional skills, and college enrollment and completion rates. Together, such measures may provide a portrait of the skills that students are learning and the progress they are making in the educational system. While looking at these variety of measures may be feasible when studying a school or school district, tracking the education system of an entire state is more challenging because data must be available across all schools and districts. Comparing the performance of a state to the nation as a whole further requires that data be available for all schools and districts in the nation. Given these constraints, we identify three widely available measures that, in combination, provide a nuanced picture of the state of California education: standardized tests, rates of exclusionary discipline, and graduation rates.

### **Standardized Test Scores**

Student performance on standardized assessments of reading and mathematics are among the most widely researched and publicized measures of student achievement. Though imperfect, test scores are useful for comparing student content knowledge across contexts because all students who take a standardized test are evaluated by the same criteria whereas other achievement measures like grades vary from teacher to teacher. Test scores are widely used to assess not only students, but also to evaluate teachers and schools; they are a crucial determinant of how individuals are categorized, sorted, and treated (Domina, Penner, & Penner, 2017). More generally, however, average test scores within schools, districts, or groups of students can be thought of as measures of the sum total of a population's educational opportunities, opportunities that children experience in their homes, neighborhoods, early childhood environments, preschools, and K-12 schools.

Disparities in test scores—between schools, districts, or student groups—therefore

reflect differences in educational opportunities that may arise from differences in either school-based learning opportunities or out-of-school opportunities dependent upon family resources, preschool experiences, or neighborhood contexts. These gaps in performance – whether among states or among subgroups – can translate to real differences in adult outcomes. Test scores predict later outcomes including adolescent risky behaviors, future educational attainment, and adult income and employment (Heckman, Stixrud, & Urzua, 2006). In particular, they predict college completion, which plays a strong role in shaping later-life earnings (Murnane et al, 2000). Among males in the National Longitudinal Survey of the High School Class of 1972, white-black differences in achievement at the end of high school explained more than 90 percent of the white-black earnings gap at age 31 (Murnane et al, 2000). Importantly, these disparities begin accumulating in early childhood, when environments have the most impacts on development (Heckman, 2006).

Throughout the United States, districts with more affluent students have consistently higher math and reading achievement (Reardon, 2016). Even among districts with similar average SES, race/ethnic disparities are large and this is only partially explained by within-district differences in SES between the subgroups (Reardon, 2016). However, the regularity of these achievement gaps belies substantial variation among districts. At a given level of district SES, the top 5 percent of districts have mean test scores about two grade levels higher than the bottom 5 percent (Reardon, 2016) while racial/ethnic achievement scores range from nearly 0 to 1.2 standard deviations (roughly twice their average size) (Reardon, Kalogrides, & Shores, 2017).

At the time of the original *Getting Down To Facts* project in 2005, California’s academic performance was well below the national average. The state was ranked 44<sup>th</sup> in eighth grade math and 49<sup>th</sup> in eighth grade reading when compared to all 50 states and the District of Columbia on the National Assessment of Educational Progress (NAEP) (Loeb, Bryk, & Hanushek, 2008). In this study we examine whether California’s relative position has changed; we also compare the academic performance of California students to demographically similar students and students in similar districts across the US.

## **Exclusionary Discipline**

Rates of exclusionary discipline—suspensions and expulsions—are important complementary measures to achievement on standardized tests. We focus on three commonly used types of exclusionary discipline: in-school suspensions, out-of-school suspensions, and expulsions.<sup>1</sup> Broadly, in- and out-of-school suspensions are used with similar frequency, while expulsions are rare (Noltemeyer, Ward, and Mcloughlin, 2015; Skiba et al., 2014). These differences in rates of exclusionary discipline arise because the type of discipline is often correlated with the severity of the infraction, with more serious behaviors likely to end in out-

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<sup>1</sup> The Office of Civil Rights defines an in-school suspension as removal from the classroom for at least half a day while remaining in the school setting. Out-of-school suspensions include removal for at least half a day to another non-school environment. Expulsion includes removal from the school for the remainder of the year. (CRDC, n.d.)

of-school suspension or expulsion (Skiba et al., 2014).

On one level, patterns of discipline provide a measure of educational opportunity: students cannot learn if they are not present in the classroom. Disparities in exclusionary discipline therefore represent disparities in access to educational opportunities. Further, these disparities often are not dependent solely on the behavior of the student and may partly reflect systematic biases against minorities. For example, teachers are more likely to think that repeated offenses by black students are part of a deviant pattern and recommend more severe discipline in response, as compared to the same repeated offenses by white students (Okonofua & Eberhardt, 2015). Schools with larger black populations are more likely to have zero-tolerance or harsh disciplinary policies that result in automatic punishments or charging students with criminal violations (Welch & Payne, 2010).

The long-term effects of exclusionary discipline policies can be large and deleterious. Students excluded from the classroom through out-of-school suspension or expulsion are more likely to be involved with the criminal justice system (Costenbader & Markson, 1998), drop out of school, and struggle academically (Arcia 2006; Morris and Perry, 2016). Excess reliance on exclusionary discipline can also lower levels of academic achievement among non-suspended students (Morris and Perry, 2014). Exclusionary discipline also has detrimental impacts on families, as parents often need to re-arrange childcare and work schedules to be home with students sent out of school and attend to disciplinary meetings (Kupchik, 2016). Nationally, the cost of dropouts due to out-of-school suspensions is an estimated \$11 billion in lost tax revenue and \$35 billion in social costs that result from lower wages, higher crime rates, increased welfare burdens, and worse adult health (Rumberger & Losen, 2016). In California alone, out-of-school suspensions lead to an estimated \$1.88 billion in lost tax revenue and an additional \$6.2 billion in social costs (Rumberger & Losen, 2016).

Little work has explicitly examined whether the negative effects of exclusionary discipline vary by discipline type,<sup>2</sup> but there is reason to believe that in-school suspensions may be less deleterious to students. While both in- and out-of-school suspensions have significant negative impacts on achievement, the negative impact of in-school suspensions is less severe (Noltemeyer et al., 2015), perhaps because students are present in the school building and may receive some educational resources. In-school suspensions may also be less burdensome on families, given that they require less rearranging of work schedules for parents. Of course, in-school suspension is still detrimental to student achievement. While students may work during in-school suspensions, they often do not receive help or feedback (Allman and Slate, 2011).

Despite these concerns, there is evidence that disruptive students can have both short- and long-term negative impacts on the achievement of their peers, and their removal may benefit the other children in the classroom (Carrell, Hoekstra, and Kuka 2016; Kristoffersen et al. 2015). Moreover, there are instances where students engage in severe acts that put others at risk. As such, it is not clear that schools should never utilize exclusionary discipline. However,

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<sup>2</sup> Noltemeyer et al. (2015) highlight the relative lack of research on impacts of in-school suspensions, compared to research on out-of-school suspensions.

even non-suspended students' achievement was harmed by high suspension rates (Morris and Perry, 2014), which suggests that schools may be overly reliant on exclusionary discipline and may be suspending students for minor infractions that would not have disrupted peers' achievement had they remained in the classroom. Given its negative impact on students, families, schools, and society, the use of exclusionary discipline should be examined carefully.

California has been on the leading edge of school discipline reform in recent years (The Council of State Governments Justice Center, 2017; ACLU of Northern California, 2014; Public Counsel, 2014; Romo, 2014). Many large districts, including Los Angeles Unified, have adopted policies that prohibit the suspension of students for "willful defiance" since 2013 (Watanabe, 2013). Willful defiance is a broad category that covers most nonviolent misbehavior and usually refers to the challenging of school personnel's authority.<sup>3</sup> Similar measures became state-wide law in 2014 with the passage of AB 420.

## **Graduation Rates**

The third educational outcome measure we use is the high school graduation rate. Graduation rates provide a summative measure of educational attainment and an indicator of college and career readiness. A high school diploma is particularly important for students' future employment opportunities. Students with high school degrees typically earn more in the labor market compared to students who never graduated high school, and the wage gap has been widening in the past few decades (Heckman, Lochner, & Todd, 2008; Autor, Katz, & Kearney, 2005; Tyler, Murnane, & Willett, 2000; Jaeger & Page, 1996). In 2015, only 12% of 35-44 year-old full-time workers with a high school diploma earned less than \$20,000, compared to 26% of high school dropouts (Ma, Pender, & Welch, 2016). GED recipients also tend to have lower earnings compared to diploma holders despite demonstrating similar levels of cognitive ability. This gap has been attributed to GED recipients' relatively low levels of non-cognitive skills (e.g. motivation and perseverance) that are key to school and life success (Heckman, Stixrud, & Urzua, 2006; Heckman & Rubinstein, 2001). Again, between-group or between-district disparities in graduation rates may translate to large differences in adult outcomes.

Schools, districts, and states typically report graduation rates using one or more of the following measures: the number of graduates as a percentage of students who attended 12<sup>th</sup> grade; the number of graduates as a percentage of the average of 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup> grade enrollment three, four, and five years earlier; and the number of graduates as a percentage of 9<sup>th</sup> grade enrollment four years earlier. Different states also have different criteria for including students in the numerator based on the type of diploma or certificate awarded. Comparisons across states and over time are challenging due to the variety of measures (Murnane, 2013; Heckman & LaFontaine, 2010). Between 2000 and 2010, graduation rates have increased significantly, especially for Black and Hispanic students; however, substantial race- and income-based gaps still exist (Murnane, 2013).

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<sup>3</sup> Behaviors that led to a suspension for willful defiance include: "refusing to take off a hat, turn off a cellphone, or failing to wear a school uniform" (Watanabe 2013)

## Data and Methods

For each outcome, our goal is to examine trends and performance by race/ethnicity, and conditional on the SES of the students the district serves. We use data from several sources to provide as complete a picture as possible, though data limitations prevent us from conducting all analyses for all outcomes. Table 1 summarizes each data source, the years the data are available, and for which subgroups the data are available.

**Table 1.** Data sources

Outcome	Source	Years Available	Subgroups
State Standardized Tests of Reading and Mathematics, Grades 3-8	Stanford Education Data Archive (SEDA)	2009-2015	Black, Hispanic, White, Asian, and All Students
Standardized Tests of Reading and Mathematics, Grades 4 and 8	National Assessment of Educational Progress (NAEP)	1998-2017	All Students
English Language Learner Achievement in Reading and Mathematics	California Assessment of Student Performance and Progress (CASPP) System	2015-2017	English Language Learners
Kindergarten Assessments of Reading and Math	Early Childhood Longitudinal Study, Kindergarten Class of 2011 (ECLS-K:2011)	2011	All Students
In-and Out-of-School Suspensions and Expulsions	California Department of Education	2012-2017	Black, Hispanic, White, Asian, English Language Learners, and All Students
In-and Out-of-School Suspensions and Expulsions	Civil Rights Data Collection (CRDC)	2014	Black, Hispanic, White, and All Students
High School Graduation Rates	ED Data Express	2011-2017	Black, Hispanic, White, Asian, English Language Learners, Low Income, and All Students
Composite SES	American Community Survey Education Demographic and Geographic Estimates (EDGE)	2006-2010	Black, Hispanic, White, Asian, and All Students

*Note:* Composite SES is composed of median income, percent of adults age 25 and older with a bachelor's degree or higher, poverty rate for households with children ages 5-17, SNAP receipt rate, single mother head of household rate, and employment rate for adults ages 24-64.

We pull from four sources of data to characterize achievement on standardized tests of reading and mathematics. Our primary dataset is the Stanford Education Data Archive (SEDA), which contains standardized third through eighth grade math and reading assessments from 2009 through 2015 for all districts in the nation (Reardon et al., 2017). The No Child Left Behind Act greatly expanded access to comparable evaluations of student content knowledge by requiring districts to administer and report statewide standardized tests. While attention to test scores increased substantially in response to these new opportunities for comparing places and policies, the usefulness of these evaluations had been hampered by differences between tests across states. In creating SEDA, all state tests' scales were linked to a common scale to enable comparisons of school districts across the country. *EDFacts* data were used to estimate average standardized test scores for each district, grade, and year from the percent of children in each proficiency category. These estimated average scores were then transformed into a common scale by linking the state test scale in each state to the National Assessment of Educational Progress (NAEP) scale. A series of validation tests indicated that results were valid for making district comparisons across states. (Reardon, Kalogrides, & Ho, 2017).<sup>4</sup> We use SEDA's pooled average test scores (which pool math and ELA test scores across grades three to eight and across 2009 to 2015), as our measure of districts' overall achievement levels. We lose minimal information by combining math and ELA scores rather than assessing math and ELA patterns separately because district average scores in math and ELA are highly correlated (see p.20 in Reardon, Kalogrides, & Shores, 2017). We also use SEDA's grade slope measures to describe the average rate at which students learn math and reading skills from grade three to eight in each district.

We supplement state test score data from SEDA with fourth and eighth grade math and reading scores from the NAEP. The NAEP is the same test given to a sample of students that is representative of each state and the nation (U.S. Department of Education, 1998-2017), enabling us to make long-term comparisons on a test that is not connected to accountability measures.

To analyze the achievement of English Language Learners from 2015 to 2017, we use the California Assessment of Student Performance and Progress (CAASPP) System data (CAASPP, 2015-2017). In our analyses using this data, we compare the average test scores of students who have never been classified as English Learners (English Only and Initially-Fluent English Proficient students) to those of students who are or were formerly classified as English Learners (current English Learner students and Reclassified-Fluent English Proficient students). We pool math and ELA achievement scores across grades and years to get a simplified measure of each district's overall achievement levels for these two groups of students. We also create grade slope measures of growth rates using models of each district's pattern of achievement growth as cohorts progressed through the grades.

Finally, we assess students' academic skills at kindergarten entry using data from the Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011), which

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<sup>4</sup> For more detail on the SEDA data and their construction, see the technical documentation and papers at [seda.stanford.edu](http://seda.stanford.edu).

includes math and reading assessment scores for a nationally representative sample of students who entered kindergarten in the Fall of 2010 (Tourangeau, Nord, Le, Sorongon, Hagedorn, Daly, & Najarian, 2015). We use these data to compare the school readiness and academic skills of California kindergarteners to those of their peers through the US. In conjunction with the SEDA data, they allow us to describe when the academic achievement gaps evident in grades three to eight first emerge.

We obtain data on exclusionary discipline rates from both state and national sources. Data from the California Department of Education (CDE) provide state-level suspension and expulsion rates based on data from all schools in California. Each rate is calculated by dividing the unduplicated number of students disciplined by the number of students enrolled.<sup>5</sup> CDE data are available for school years 2011-12 through 2016-17 and is useful for looking at trends for overall discipline rates in the state. We supplement the CDE data with discipline rates from the Civil Rights Data Collection (CRDC) biennial survey administered by the Office of Civil Rights (OCR) to every public school in the nation. The most recent survey available was administered in the 2013-14 school year. As with the CDE, the CRDC reports the unduplicated count of students disciplined and the number of students enrolled. Rates derived from the CRDC are similar to those from CDE. Though the timing of the CRDC does not allow for comparisons over time, we use the CRDC to compare discipline rates of California to the nation and to disaggregate discipline rates by subgroup.<sup>6</sup>

To examine graduation rates at the state and national level we use data from the Department of Education's ED Data Express. The federal government reports four-year Adjusted Cohort Graduation Rates (ACGR). The ACGR is calculated by dividing the number of students who graduated from high school in four years with a regular diploma by the "adjusted" number of students in the graduating class cohort. The cohort is adjusted by taking the entering number of ninth grades, adding students who transfer into the cohort over the subsequent four years, and then subtracting students who transfer out of the cohort, emigrate, or pass away during this time. These data enable us to make state and national comparisons by subgroup.

The ED Data Express data provide a state-level comparison of graduation rates, but do not provide district-level estimates. Unfortunately, reliable district-level ACGR data for California are unavailable. Though the US Department of Education's *EDFacts* system contains graduation rates at the district level for all districts in the US, there appear to be systematic errors in the California graduation data in *EDFacts*. Our conversations with *EDFacts* staff suggest that this is due to late reporting of ACGR data by CDE to the federal government; because the California data were reported late, they were not checked for quality and consistency to the

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<sup>5</sup> If a student is suspended or expelled multiple times, she or he is counted only once for each discipline type.

<sup>6</sup> One disadvantage of the CRDC data is that it does not report discipline rates by race/ethnicity for students with a 504 disability. As a result, we must estimate the number of students with 504 plans who were suspended or expelled in each racial/ethnic group in order to calculate overall suspension and expulsion rates by race/ethnicity. Since 504 student enrollment is generally very small (1.8 percent of our sample), we do not expect this estimation changes any of the overall trends reported.

same extent that they were in other states. As shown in Appendix Table 1, California ACGR rates estimated from *EDFacts* data are substantially higher in each year from 2011 to 2015 than the rates obtained from ED Data Express. For this reason, we chose not to use *EDFacts* data for our district-level analyses.

Instead, we use graduation rates from California Department of Education (CDE) Cohort Outcomes data. Unfortunately, the definition for graduation rate in CDE data differs from that of the federal government in that in addition to students who receive a regular high school diploma, CDE graduates include students who receive an adult education diploma or pass the California High School Proficiency Exam. As can be seen in Appendix Table 1, CDE graduation rates are not consistent with ED ACGR. We therefore caution readers not to compare graduation rates from different sources. Rather, we use the CDE district-level graduation rates to describe the relationship between socioeconomic status and graduation rates within the California.

We augment each of the above district-level data sets with the SES of the children served by the district. A single, standardized measure of the average socioeconomic status (SES) of the families of the children enrolled in each district is contained in the SEDA data set. This measure was constructed from six variables in the American Community Survey's Education Demographic and Geographic Estimates database: median income, percent of adults age 25 and older with a bachelor's degree or higher, poverty rate for households with children ages 5-17, SNAP receipt rate, single mother head of household rate, and employment rate for adults ages 25-64. These six variables were collapsed into a single measure via principal components analysis (Fahle et al., 2017).

### **Achievement in Reading and Mathematics**

By analyzing racial/ethnic and economic disparities in achievement and achievement growth in recent years and over time, we offer insights into patterns of educational opportunity in California relative to the nation, as well as trends in these patterns. We also compare disparities in achievement growth to disparities in achievement level at school entry and during the school years. This comparison provides evidence that California's low average achievement (relative to the nation) and large socioeconomic achievement gaps appear to emerge early in children's development, before they enter kindergarten.

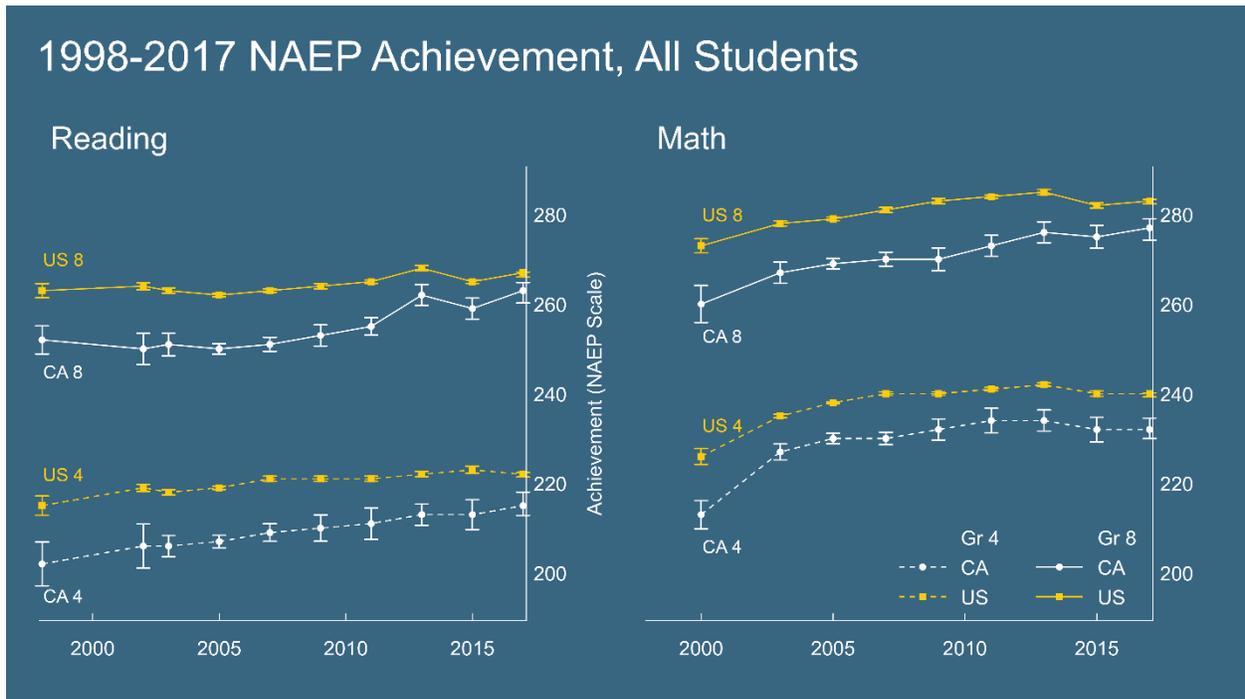
### **Trends in Achievement and Patterns of Achievement Conditional on District SES**

Despite steady progress, California continues to lag the nation substantially. Figure 1 compares the average fourth and eighth grade reading and math scores of California to the nation from 1998 through 2017 using aggregated data from NAEP. California (white line) was far behind – by more than one grade level<sup>7</sup> – the nation (yellow line) two decades ago. Though the difference has steadily declined, the average scores of California's students remained

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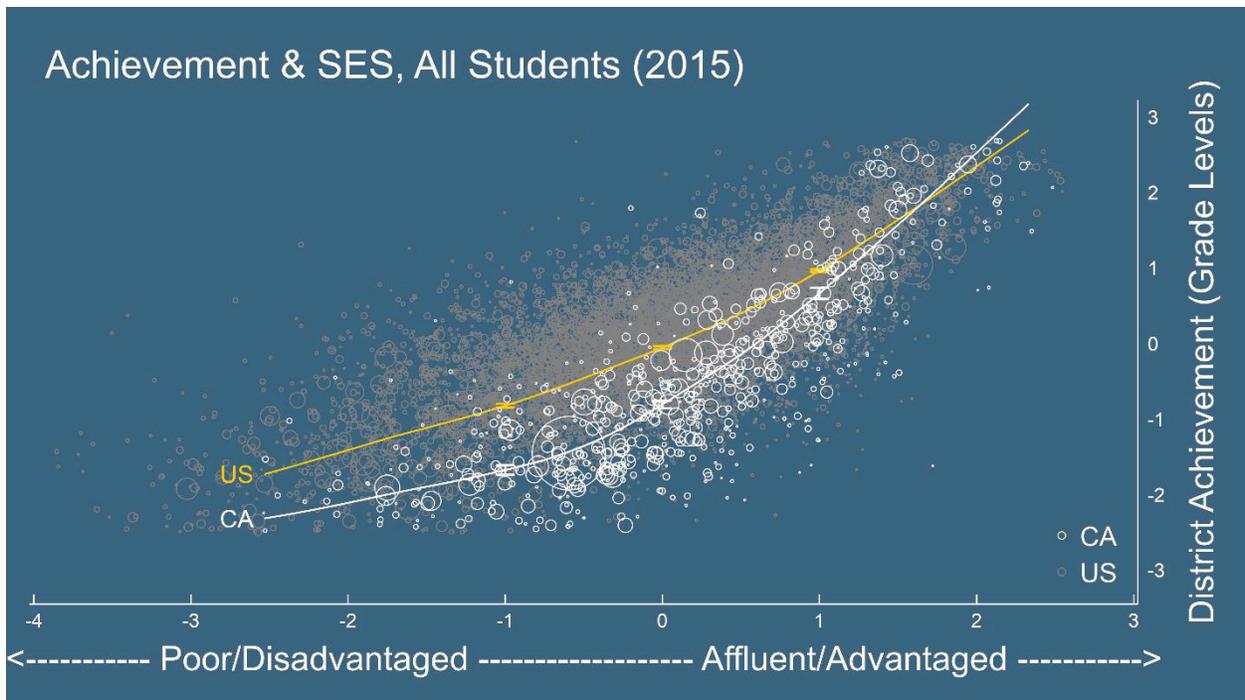
<sup>7</sup> A grade level is roughly equivalent to 11 points on the NAEP scale (Reardon, Kalogrides, & Ho, 2017).

considerably below the national average in 2017.



**Figure 1.** 1998-2017 NAEP achievement, all students

This is not the case for all types of school districts. Figure 2 plots average district achievement in 2015 against SES for all districts in the US, comparing California districts to those of similar SES nationwide. In the figure, districts are represented by hollow circles while the smoothed fitted line captures the average association. A comparison of the lines at the same value of district SES shows that among the affluent districts in the right side of the plot there is little difference between California and the nation. Rather, the disparity between California and the nation is concentrated in average (where SES=0) and disadvantaged districts. Among non-affluent districts, California students score nearly a full grade level behind their national counterparts. These patterns are consistent when the same comparisons are made within each racial/ethnic group (see Appendix Figures 1-3).

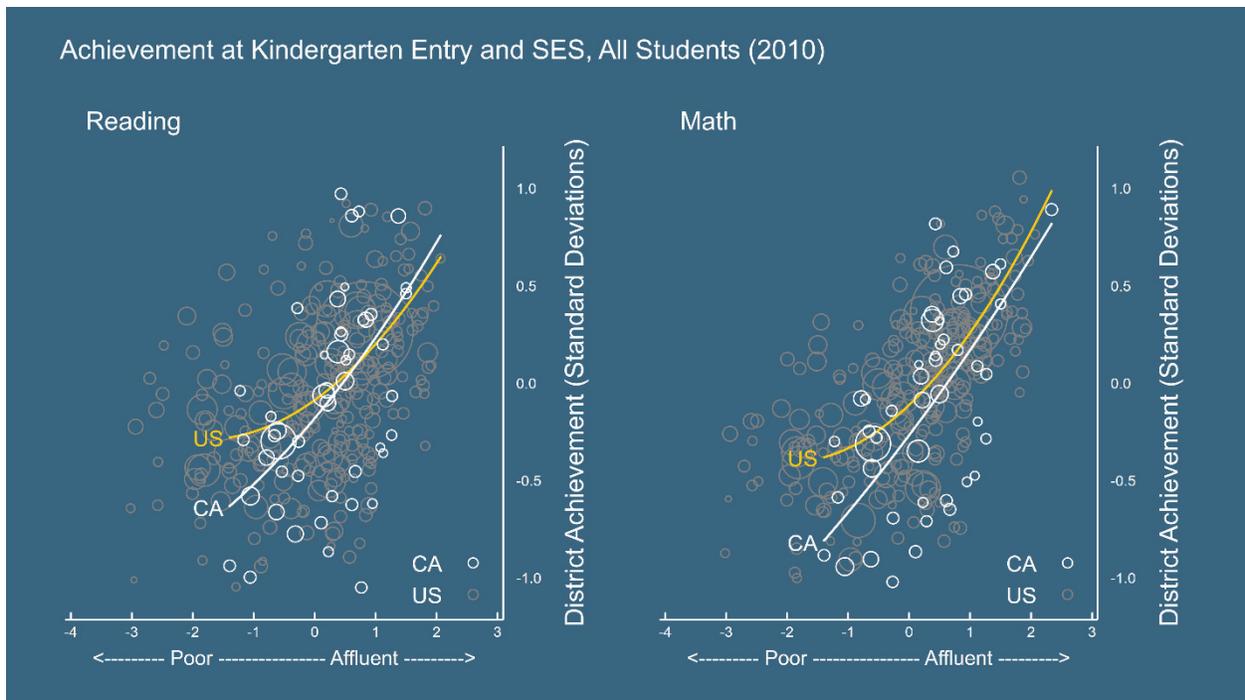


**Figure 2.** Achievement and SES, all students (2015)

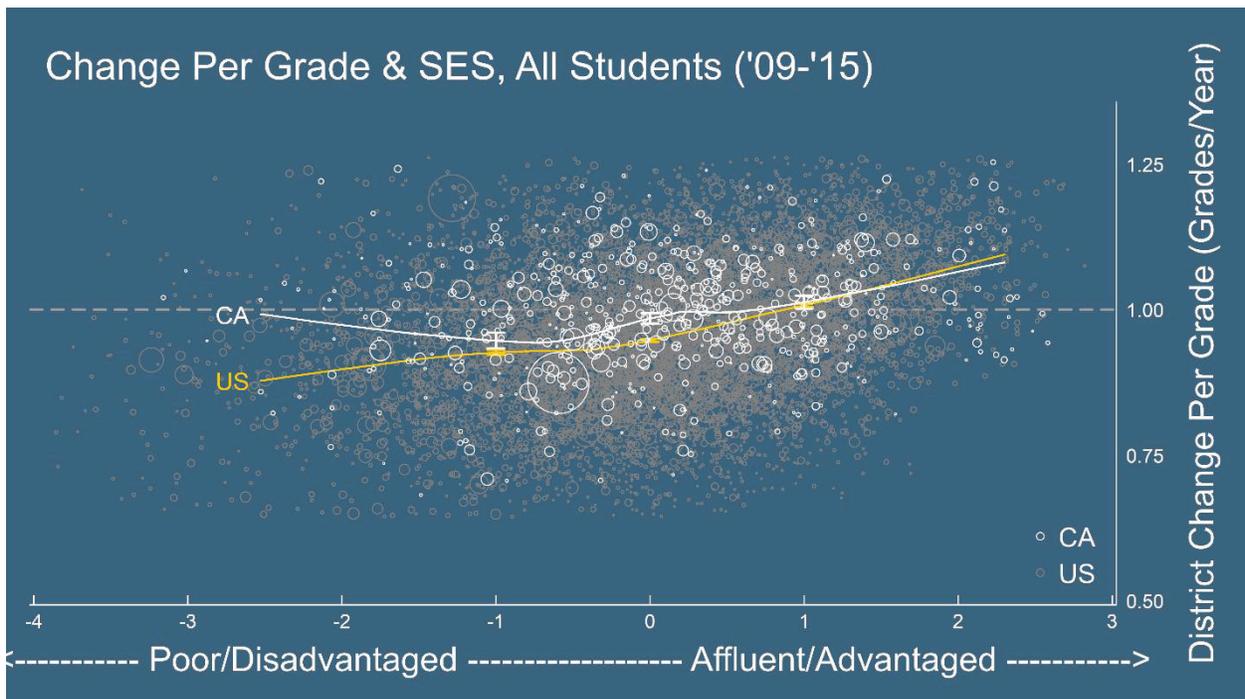
### Gaps at Kindergarten Entry and Through Time

These patterns do not appear to result solely from differences in the quality of California’s schools and those in other states. The same pattern is evident in early childhood. Figure 3 shows similar relationships between achievement and SES using test scores at kindergarten entry. This figure depicts reading and math scores in California and the US by district SES with fitted regression lines capturing the general patterns. Even when they enter kindergarten, CA students in low-income districts lag behind their national peers, indicating that the patterns evident in Figure 2 precede children’s experiences in California’s elementary and middle schools.

Moreover, data from third through eighth grade suggest that, once students begin school, their academic achievement increases slightly faster in California than the average nationwide. Figure 4 shows the rate of improvement in average test scores as children progress through grades three to eight. In these figures, a growth rate of 1.0 represents the national average growth rate (children’s’ scores improve by one grade level per year). Other than in the richest districts, growth rates in California are slightly greater than the nation. Growth rates in California are also more equitably distributed; the California fitted line (white) is nearly horizontal at the national average (the dashed line) whereas the national fitted line curves upward, indicating faster growth rates in more affluent districts. These findings are consistent across racial/ethnic groups (Appendix Figures 4-6).



**Figure 3.** Achievement at kindergarten entry and SES, all students (2010)



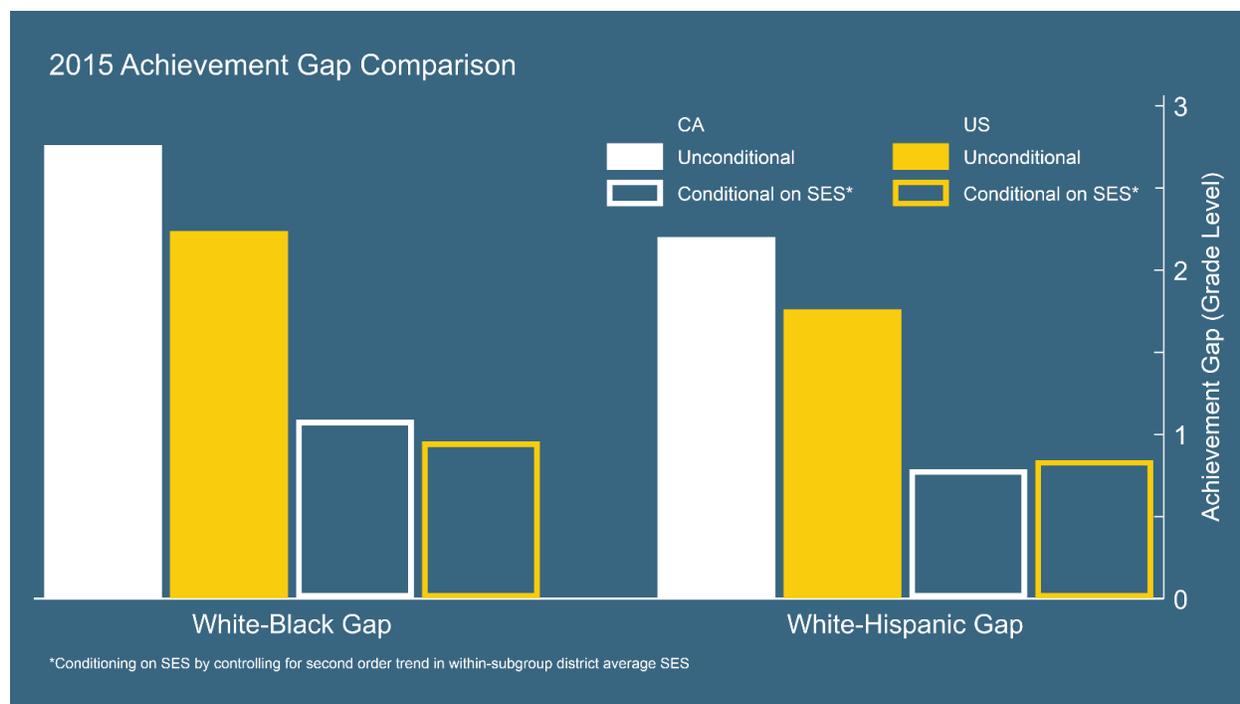
**Figure 4.** Change per grade and SES, all students (2009-2015)

Taken together, Figures 2 through 4 show that both the lower average scores and the greater SES disparities in California relative to the US are present at the start of kindergarten. These disparities narrow slightly in California by 8<sup>th</sup> grade – a result of the fact that learning rates in California’s low-income districts are slightly higher than in similar districts nationwide.

In other words, California’s low-income districts lag behind their national counterparts primarily because of lower school-readiness levels in the California districts, not because learning rates are lower in California’s low-income districts than in similar districts across the US. This is consistent with conclusions from other studies that traced California’s lagging and particularly inequitable test scores back to school readiness (Cannon & Karoly, 2007; Applied Survey Research, 2010) and projected sizable benefits from investing in pre-school expansion and quality improvement in California (Karoly, 2009; Cannon & Karoly, 2007).

### California’s Stronger Association between Achievement and SES

Furthermore, California’s less SES-equitable achievement patterns (see Figure 2) account for its larger racial/ethnic achievement gaps relative to the nation. Figure 5 compares the White-Black and White-Hispanic gaps in California (white) and the US (yellow) when using raw group averages (solid) and when using group averages conditional on district SES (hollow). The solid bar comparisons show that White-Black and White-Hispanic achievement gaps are about half a grade level larger in California. However, the hollow bar comparison shows that California’s racial/ethnic achievement gaps look similar to the nation when comparing districts with similar average SES.

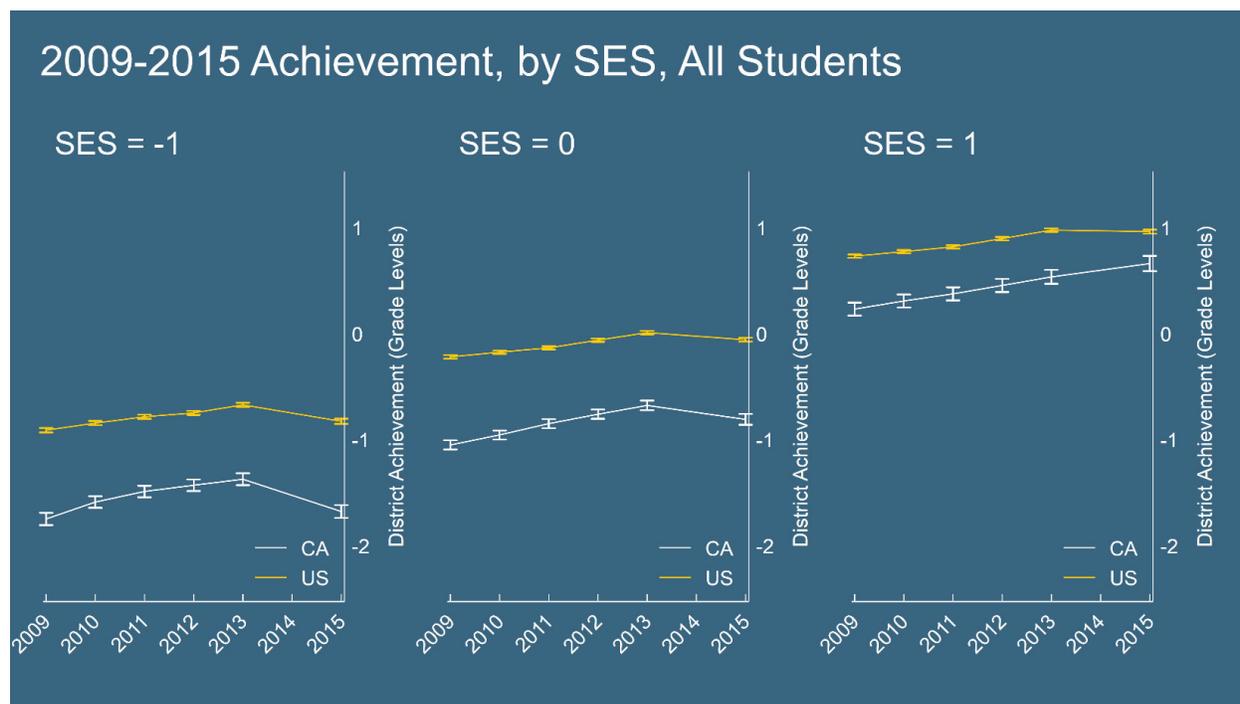


**Figure 5.** Achievement gap comparison

Though California had been catching up to the US among low, average, and high SES districts, the disparity between California and the nation among non-affluent districts—which was already much larger than the California-US disparity among affluent districts—has recently grown substantially. The three panels of Figure 6 compare California and US trends from 2009 through 2015 in the estimated achievement of typical districts with SES a) one standard

deviation below the average, b) at the national average, and c) one standard deviation above the average. These estimates are drawn from the fitted lines shown in Figure 2 and their 95 percent confidence intervals are given by the bars at each observed time point. Though the right panel shows that disparity between California and the nation has continued shrinking among affluent districts, it recently grew among non-affluent districts. This jump from 2013 to 2015 was particularly large among the disadvantaged districts shown in the left panel and was driven by declining achievement in California after years of faster-than-average progress. This pattern holds when we look at specific racial/groups (Appendix Figures 7-9).

In recent preliminary analyses, we find that this pattern is common to states that adopted the PARCC or SBAC tests in 2015 (Reardon and Hinze-Pifer, 2018). The pattern is apparent on NAEP assessments, which are the same for all states, suggesting that this pattern represents a true change in achievement patterns in states that adopted the Common Core State Standards (CCSS). However, it remains unclear whether this was caused by CCSS adoption or other, coinciding changes.



**Figure 6.** 2009-2015 achievement by SES, all students

### Achievement of California’s English Language Learners

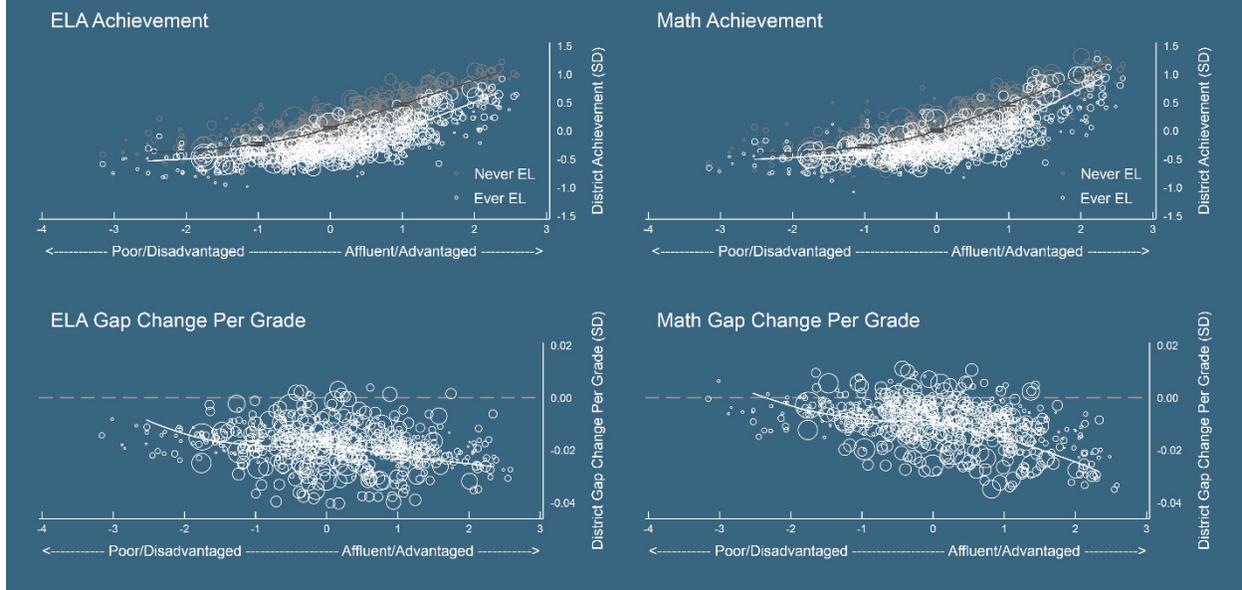
A unique feature of California’s demographic profile is the number of ELL students the state serves. ELLs compose 21 percent of California’s student body, more than any other state (California Department of Education 2017a), with the number continuing to grow. How to best educate ELLs has been the subject of much debate. The latest major policy shift came during the 2016 election when voters passed Proposition 58 to allow public schools to offer bilingual education (Sanchez 2016). Given the unique role ELLs play in California’s education policy

context, we specifically examine academic achievement patterns by English Learner (EL) status among California's third through eighth graders.

The gap between Never ELs (gray) and Ever ELs (white) is larger on ELA tests and among affluent districts than on math tests and in poorer districts. The EL gap declines as students progress through school such that relative to their size EL gaps narrow modestly in affluent districts and substantially in poor districts. The top row of panels in Figure 7 shows districts' average achievement levels among students who were never English Learners and students who were ever English Learners by district SES. The difference between the fitted lines indicates the size of EL gap at the given level of district SES. The bottom row of panels shows how the EL gaps change as cohorts progress through grades by district SES, where 0 indicates no change and negative values indicate that the EL gap decreases as students receive more schooling.

The steep slopes in the fitted lines in the top row of plots indicate that both Ever EL and Never EL students tend to score better in more affluent districts. However, the wider gaps between the fitted lines among affluent districts indicate that EL gaps are larger there, where the average ELA gap in a district with an average SES of 1 is .43 standard deviations as compared to .18 standard deviations in a district with an average SES of -1. The downward-sloping fitted lines in the bottom row of plots shows that these gaps also shrink slightly faster in affluent districts. However, relative to the gap size this is still a modest improvement. The annual decrease in the EL gap in ELA is .022 standard deviations in high-SES districts and .018 standard deviations in low-SES districts. Taken together, this means that 5 years of schooling would shrink the EL gap in ELA by 25 and 50 percent in high and low SES districts, respectively. This is a modest but consequential improvement for affluent districts, bringing the gap in ELA down to .32 standard deviations. It is a substantial improvement for poor districts, where the gap decreases to .09 standard deviations.

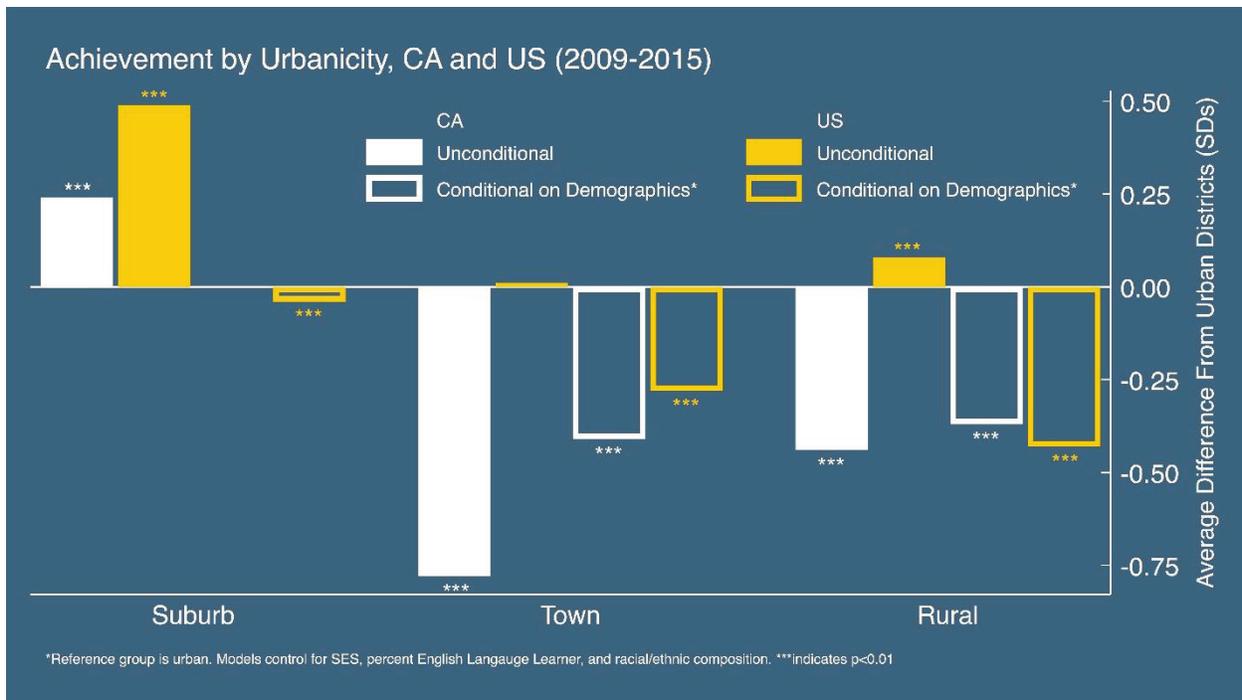
## EL Achievement Gap & SES (CA '15-'17)



**Figure 7.** EL achievement gap and SES (CA 2015-2017)

### Achievement by Urbanicity

Figure 8 presents the unconditional average achievement by urbanicity in California and the nation in solid bars. In the nation, suburbs substantially outperform urban, town, and rural communities. In California, average achievement is similarly highest in suburbs, but districts in rural areas and particularly small towns underperform cities. The hollow bars in the figure are average achievement conditional on district SES, race/ethnicity, and EL rates. The conditional comparisons show that suburban and urban districts perform similarly to one another in California with towns and rural districts lagging them by about 1/3 of a standard deviation. These differences between suburban, urban, town, and rural districts conditioning on demographics are similar to the nation. These results indicate that, like the nation as a whole, educational opportunities are particularly lacking in towns and rural districts. These communities warrant particular attention by education policymakers and stakeholders.



**Figure 8.** Achievement by urbanicity, CA and US (2009-2015)

### Summary

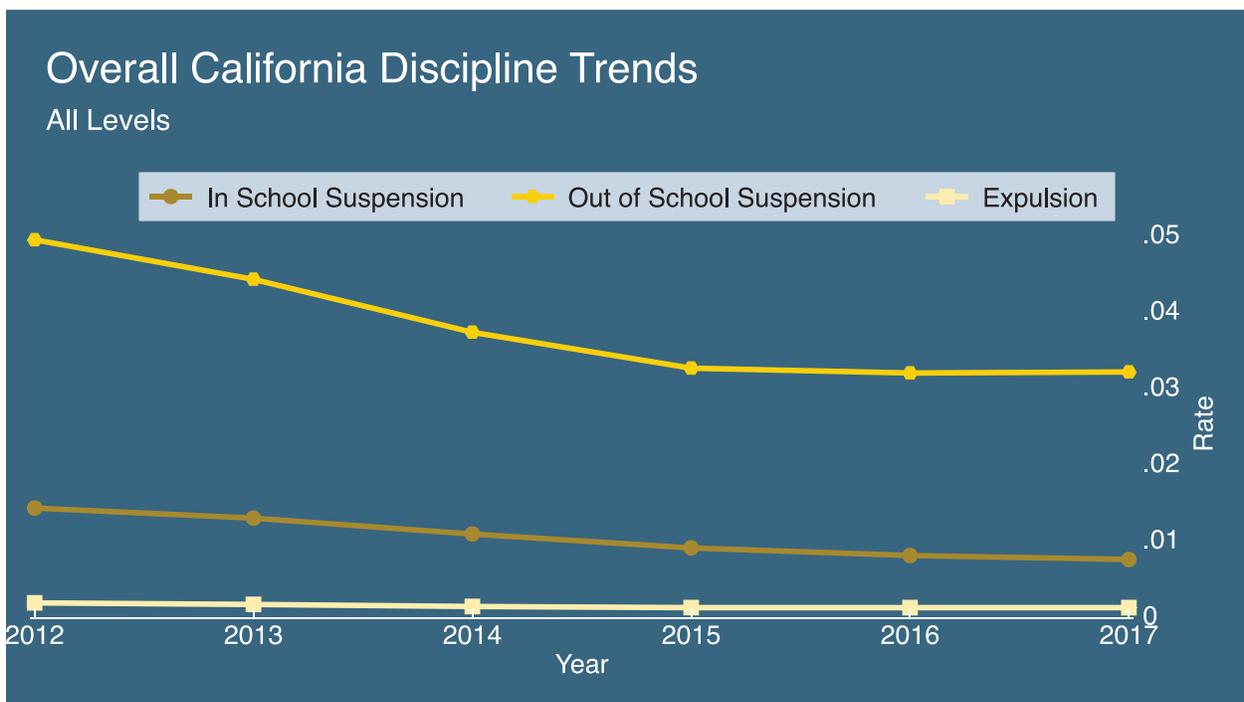
In summary, California continues to perform poorly relative to the country despite two decades of progress. California is particularly behind among poor and middle-class districts; this accounts for the difference between California and the US in White-Black and White-Hispanic achievement gaps. These disparities appear to be partly or largely due to gaps in school readiness; California students appear to learn at the same or a slightly better rate from grade three to eight as other students nationwide. Though California had been making progress in the last decade among low, average, and high SES districts, data from 2015 show a reversal of that progress in poor and middle-class districts from 2013 to 2015. Educational opportunities in small towns and rural communities are particularly lacking.

### Exclusionary Discipline

Gaps in achievement on standardized tests may be, in part, related to disparities in exclusionary discipline because students are unable to learn if they are not present in the classroom. There are well-documented racial disparities in school discipline experiences. Black students have the highest out-of-school suspension rates, are more likely than their white peers to be disciplined for similar behaviors, and are more likely to receive longer suspensions, on average (Edwards, 2016; Kinsler 2011; Losen & Skiba, 2010; Skiba et al., 2016). Some evidence also shows that Latinos are disciplined at higher rates than their misbehavior would suggest (Peguero & Shekarkhar, 2011; Wallace et al., 2008), and that this disproportionality increases as students move from elementary to secondary school (Skiba et al. 2016). These patterns persist, even after comparing students with similar socioeconomic backgrounds.

## Trends in California's Overall Discipline Rates

On this dimension, California generally has lower rates of exclusionary discipline compared to the nation and has reduced its reliance on exclusionary discipline over time. In the past six years, in-school suspension, out-of-school suspension, and expulsion rates have declined. Figure 9 shows the in-school, out-of-school, and expulsion rates in California from the 2011-12 school year through the 2016-17 school year. The most visible decline is in the statewide out-of-school suspension rate, which decreased from 4.9 percent in 2011-12 to 3.2 percent in 2016-17.<sup>8</sup> The in-school suspension rate also declined, though the change is lower in magnitude. In 2011-12, 1.4 percent of California students received at least one in-school suspension. In 2016-17, that number dropped to 0.7 percent of California students. Expulsion rates remain much lower than suspension rates over the six years observed, though they also declined – 0.15% of students were expelled in 2011-12, while only 0.09% were expelled in 2016-17.<sup>9</sup>



**Figure 9.** Overall California discipline trends

The decline in out-of-school suspension rates is evident for all race groups and school

<sup>8</sup> While out-of-school suspension rates have increased dramatically since the 1970s, national rates leveled off in the 2009-10 and 2011-12 school years. Racial gaps also narrowed in these school years (Losen et al., 2015). The Office of Civil rights reports that the national suspension rate for all students was 6.8 percent in the 2011-12 school year and fell to 5.4 percent by 2013-14 (CRDC, n.d b). This suggests that national rates may be declining as well.

<sup>9</sup> While the magnitude of the decline in disciplinary rates was largest for out-of-school suspension rates (down 1.7 percentage points), the in-school suspension rate experienced the largest proportional decline; in-school suspension rates declined by 48% between 2011-12 and 2016-17. Expulsions declined by 42%, and out-of-school suspension rates declined by 35%.

levels. Figure 10 shows race-specific suspension rates in California from the 2011-12 school year through the 2016-17 school year. Trends are shown for both elementary and secondary school.<sup>10</sup> For all groups and levels, there is a noticeable decline in suspension rates, though declines are largest for black students and in secondary school. For example, 7.9 percent of black elementary school students received at least one out-of-school suspension in the 2011-12 school year. This rate declined to 5.9 percent of black elementary school students in 2016-17. For black secondary school students, the decline is even larger, shrinking from 17 percent in 2011-12 to 12 percent in 2016-17. White, Latino, and Asian students similarly experienced a decline in suspension rates, though the decrease was less in magnitude. For example, Latino secondary students experienced a 3.2 percentage point decline between 2011-12 and 2016-17. Overall, out-of-school suspension rates have been decreasing over the past six years in California.

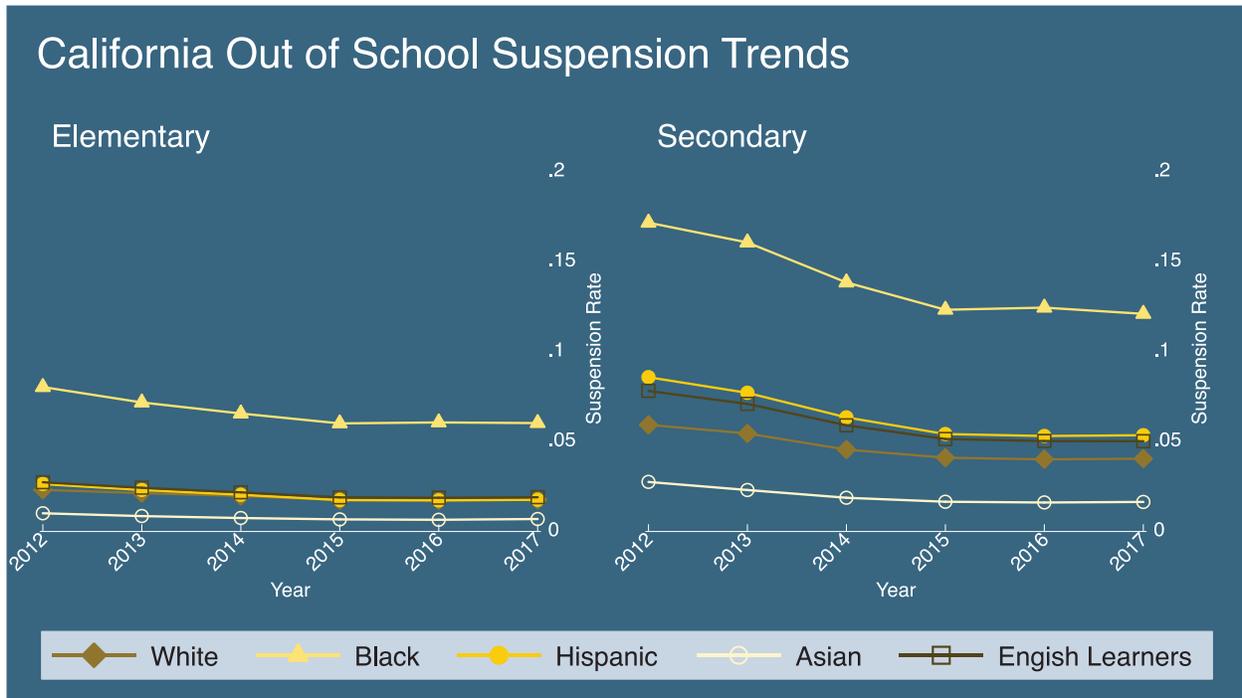
### **Trends in California's Discipline Rates by Race/Ethnicity**

While rates have been decreasing, racial/ethnic gaps between groups analyzed here have also narrowed. Figure 10 shows that throughout all six years, black students have the highest rates and Asian students the lowest.<sup>11</sup> The black-white gap is the largest of all racial/ethnic disparities (when whites are the comparison group), in both elementary and secondary school. For example, black students in secondary school are suspended (out-of-school) at a rate that is 11.2 percentage points higher than whites in 2011-12, whereas Asian students are suspended at a rate that is 3.2 percentage points lower than whites. By the 2014-15 school year, the black-white gap narrows somewhat to 8.2 percentage points. This trend is also evident for Latinos in secondary school, where the gap narrows from 2.6 percentage points in 2011-12 to 1.3 percentage points in 2014-15. Yet despite this modest decrease in gaps, substantial differences remain between racial/ethnic groups over time.

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<sup>10</sup> With state-level data from the California Department of Education, elementary includes grades K-6 and secondary is grades 7-12. For the school-level data from the Civil Rights Data Collection, we used the NCES definition of elementary and secondary schools. Elementary schools are those schools that begin with grade 6 or below and have no grade higher than 8<sup>th</sup>. Secondary schools are those with no grade lower than 7<sup>th</sup> and at least one higher grade. These two definitions correspond fairly well, though in the case of a 6-8 school the 6<sup>th</sup> grade disciplinary outcomes are counted as elementary and the 7<sup>th</sup> and 8<sup>th</sup> as secondary in the CDE, whereas all discipline outcomes for the school are counted as elementary in the CRDC.

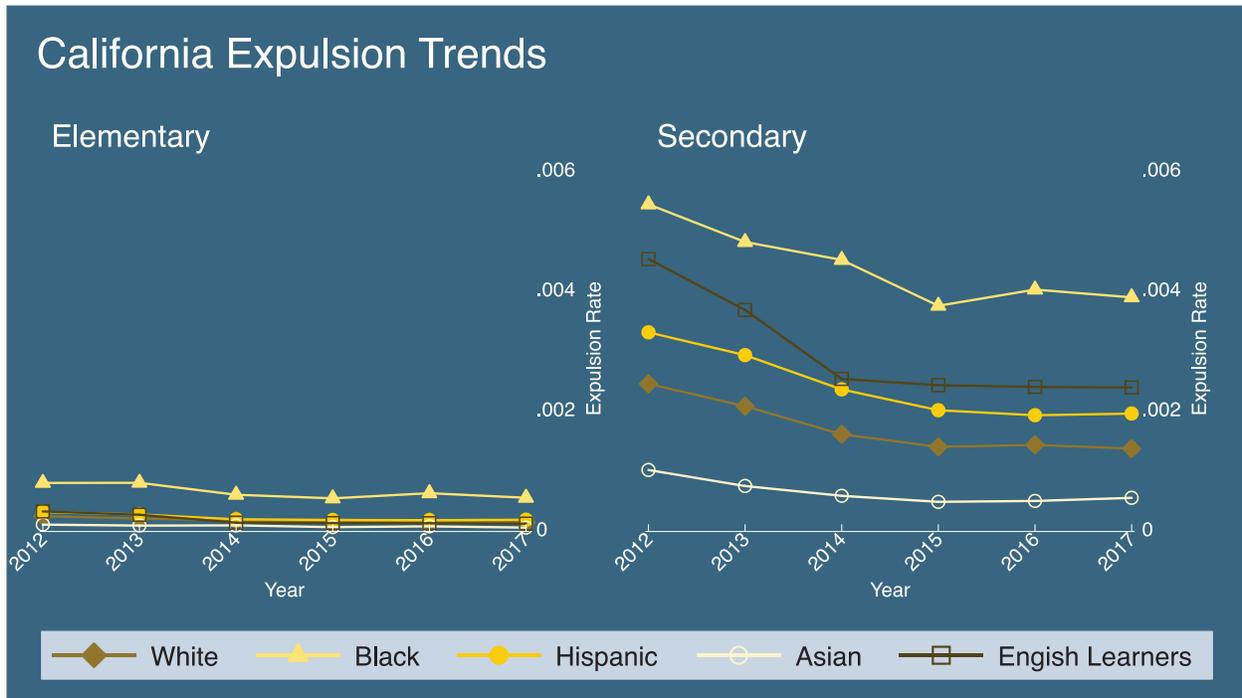
<sup>11</sup> The same pattern holds for in-school suspension (Appendix Figure 10).



**Figure 10.** California out of school suspension trends

There is also a notable decline in expulsion rates when we look at white, black, Latino, and Asian subgroups separately. Figure 11 shows racial/ethnic-specific expulsion rates by grade level. Elementary expulsion rates are very low and relatively stable over the six years of analysis. Secondary school students, are expelled at higher rates, though those rates have been decreasing over time. As with suspension rates, the difference is most visible for black secondary school students who experience a 0.16 percentage point decline from 2011-12 to 2016-17 (see Figure 11). Yet at all time points, black students have the highest expulsion rates of all racial/ethnic subgroups analyzed in both elementary and secondary school. Black students also experienced the smallest proportional decline in expulsion rates.<sup>12</sup> As with out-of-school suspension, Latinos are expelled at similar rates to whites in elementary school but at higher rates in secondary school. Asian students also have the lowest expulsion rates in elementary and secondary school.

<sup>12</sup> Asian students experienced the largest proportional decline in expulsion rates. The rate of expulsions in secondary school for Asian students declined by 48% over this time period. The rates for white, Latino, and black students declined by 45%, 41%, and 29%, respectively.



**Figure 11.** California expulsion trends

### Discipline Rates by SES

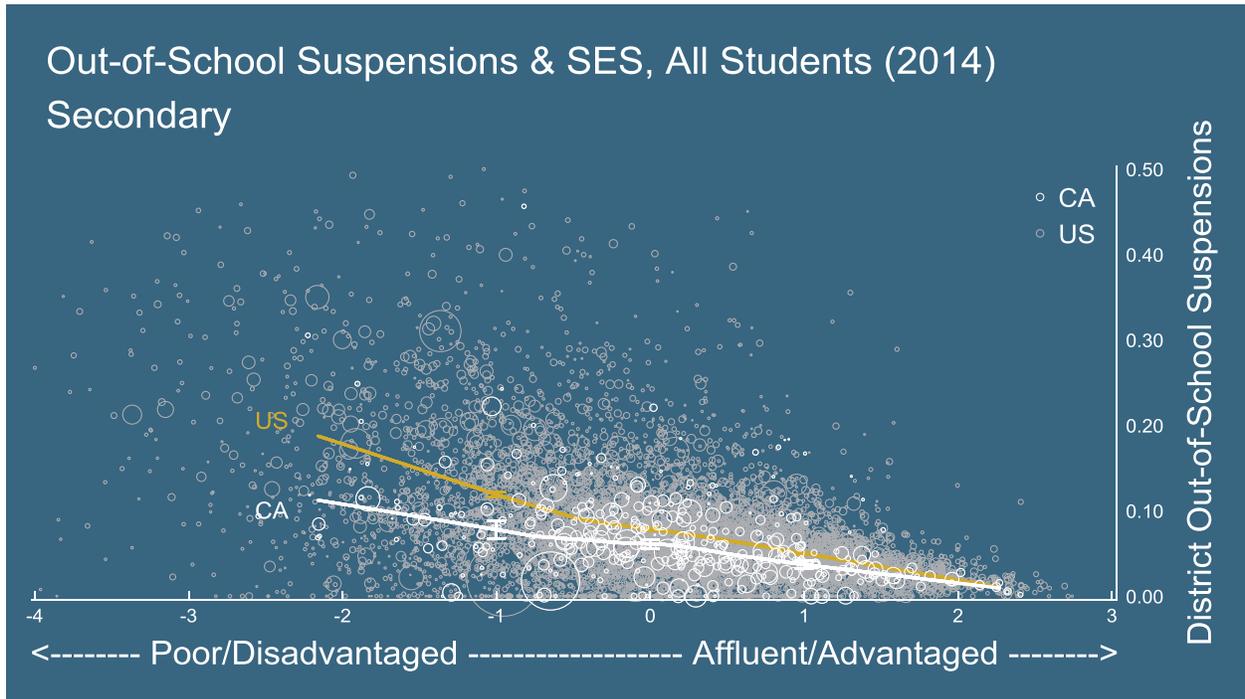
Figure 12 shows district out-of-school suspension rates at different levels of socioeconomic advantage for all traditional<sup>13</sup> secondary school districts in California compared to the nation at a whole. Each circle is a district, while the lines represent average discipline rates across district socioeconomic levels. A value of zero on the socioeconomic status (SES) scale can be interpreted as the socioeconomic status in the average district. Figure 13 shows the same for elementary school districts.

In California, more affluent districts have lower out-of-school suspension rates. This trend is consistent in the districts of elementary and secondary school students. The most disadvantaged districts of secondary students (with an SES of about -2) in California have average suspension rates of about 11 percent. In contrast, the most affluent districts (with an SES of about 2) have average rates of about 2 percent. The relationship between the district advantage and suspension rates is similar in the districts of elementary students.

California out-of-school suspension rates are also lower than suspension rates in the nation, particularly at lower levels of socioeconomic advantage. The gap between California and the nation is greatest in districts that have below average levels of SES (SES<0). In districts that are more affluent than average (SES>0), California suspension rates are similar to or slightly higher than rates in the nation as a whole. Though rates are higher in secondary school districts

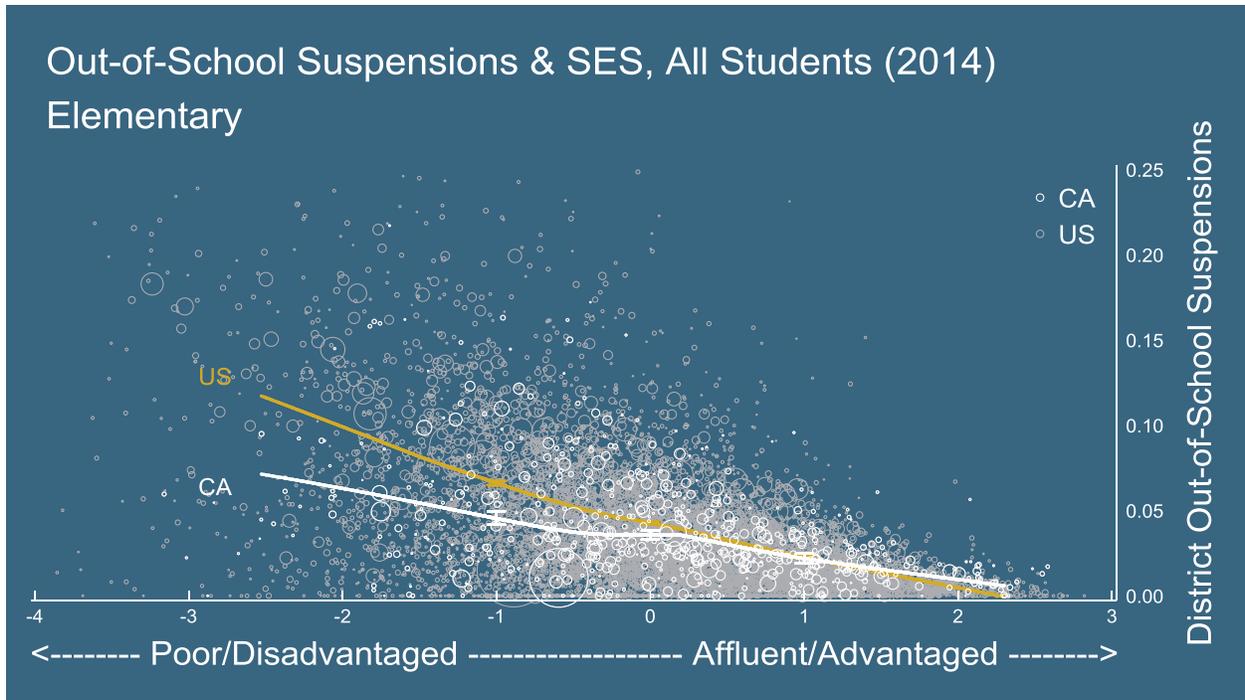
<sup>13</sup> Juvenile justice, alternative, and special education schools are excluded from this analysis, due to their distinct disciplinary and demographic contexts.

relative to elementary school districts, the trends are similar: California suspends a lower proportion of its students than the nation as a whole, especially in districts with low SES.<sup>14</sup>



**Figure 12.** Out-of-school suspensions and SES, all students (2014) secondary

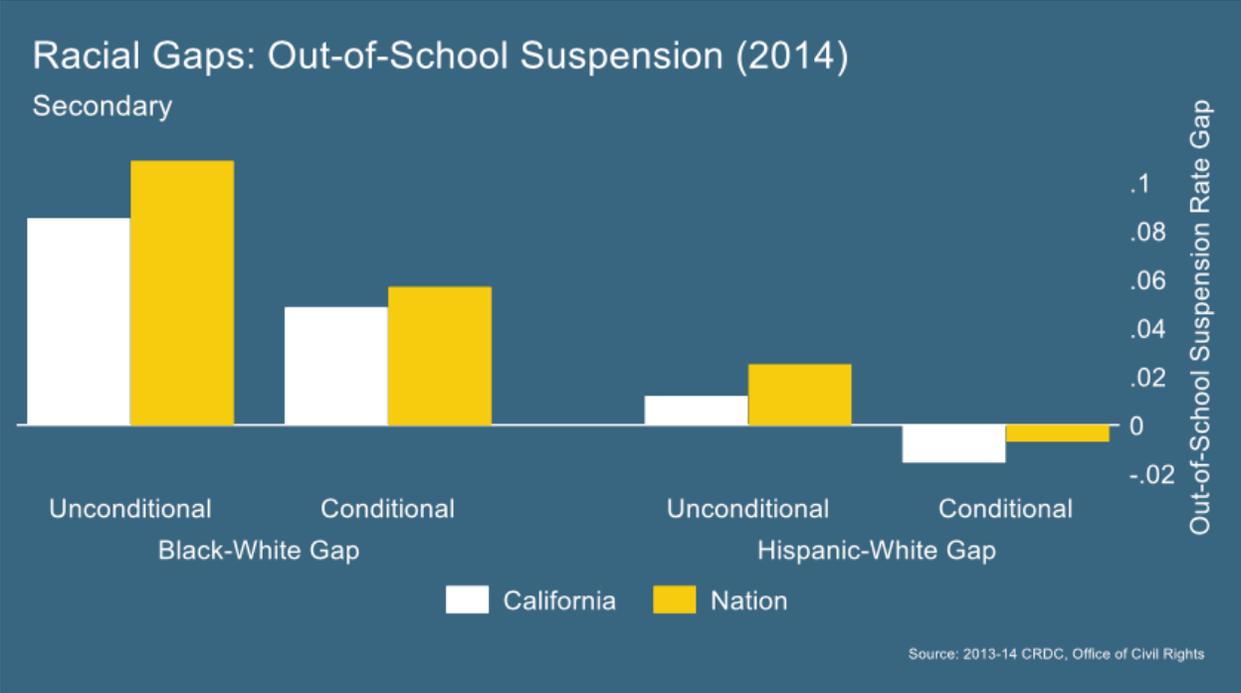
<sup>14</sup> The negative relationship between district affluence and suspension rate exists when we look at race-specific SES and suspension rates for black, Hispanic, and white students in California (Appendix Figures 13-15). Across all levels of advantage, California districts suspend black students at lower rates than comparable districts across the country. The same does not hold for Hispanic and white students. The relationship between SES and suspension rates appears to be stronger in the districts of Hispanic and white secondary students in California than it is for Hispanic and white students in the nation as a whole.



**Figure 13.** Out-of-school suspension and SES, all students (2014) elementary

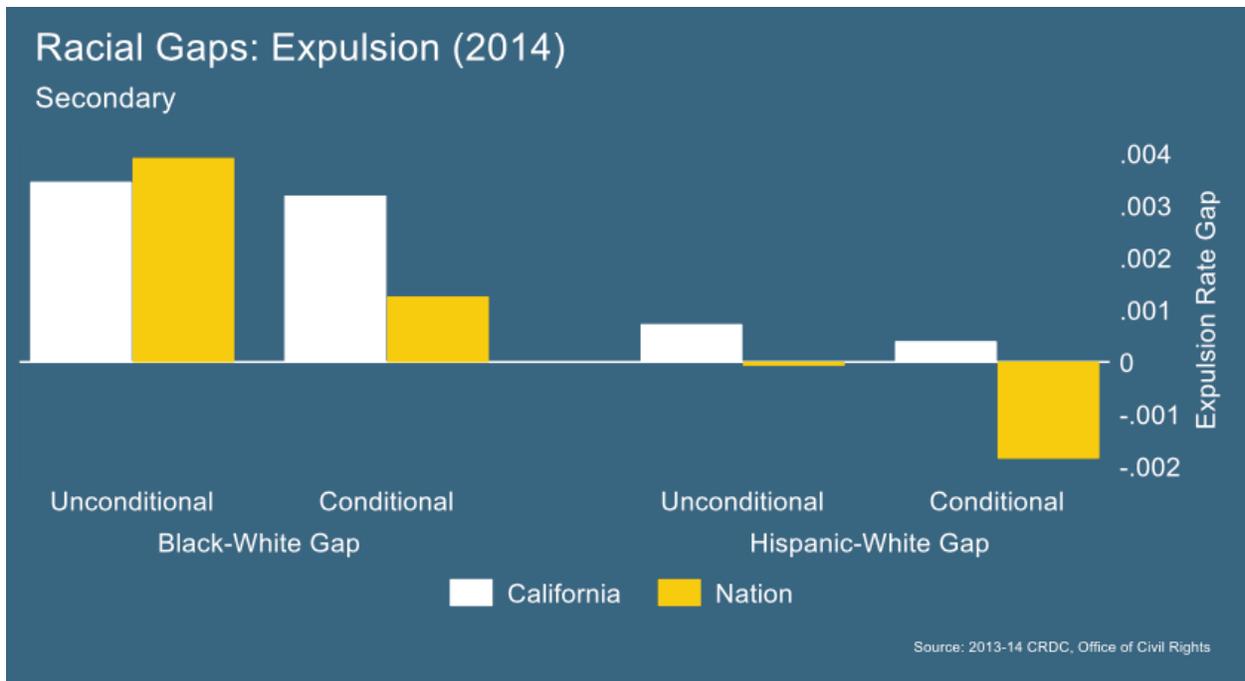
Black-white gaps in suspension rates are smaller in California than in the nation as a whole. Figure 14 shows the black-white and Latino-white gaps in out-of-school suspension rates in secondary school both unconditional and conditional on district socioeconomic status. Black students in California are suspended at a rate that is about 8.5 percentage points higher than whites in California. The black-white gap is larger in the nation as a whole at 10.9 percentage points. When we compare districts with similar levels of socioeconomic disadvantage or affluence, the size of the gap shrinks. The black-white gap conditional on district SES is 4.8 percentage points in California and 5.7 percentage points in the nation as a whole.

Unlike black students, Latino out-of-school suspension rates are lower than white rates when we compare students in districts with similar socioeconomic levels. Conditional on SES, Latinos are suspended at a rate 1.6 percentage points lower than their white peers in California. The gap is smaller in the nation as a whole at 0.7 percentage points. The patterns are comparable in elementary school (not shown), though the magnitude of the gaps is smaller for black students in elementary school and larger for Latinos.



**Figure 14.** Racial gaps: Out-of-school suspension (2014) secondary

In contrast to out-of-school suspensions, the racial/ethnic gaps in expulsion rates are larger in California than in the nation as a whole, once we compare students in districts with similar socioeconomic levels. Figure 15 shows the black-white and Latino-white gaps in expulsion rates. Black students in California are expelled at a rate that is 0.3 percentage points higher than their white peers, in districts with similar socioeconomic levels. In contrast, the black-white expulsion gap in the nation is much lower, at 0.1 percentage points. A similar pattern is found for Latinos. Conditional on district SES, Latinos in California are expelled at a rate that is 0.04 percentage points higher than whites. In contrast, Latinos in the nation as a whole are expelled at a lower rate than whites by nearly 0.2 percentage points. Again, the patterns are similar in elementary school (not shown).



**Figure 15.** Racial gaps: Expulsion (2014) secondary

### Summary

In sum, in-school, out-of-school, and secondary expulsion rates have declined in California in recent years. The largest decreases in rates are for black students, though they are still suspended and expelled at the highest rates. In elementary school, white students and Latino students tend to be disciplined at similar rates. By secondary school, gaps between the two groups grow. Asian students are suspended and expelled at the lowest rates of all racial subgroups. Since discipline rates appear to be trending downward before the adoption of willful defiance laws in 2013 and 2014, it seems unlikely that falling discipline rates are a direct result of these policies (Appendix Figure 11).

California school districts tend to have lower suspension rates than school districts in the nation as a whole. The difference is most pronounced in districts that are less affluent than average. Districts that serve secondary school students tend to have higher overall rates of suspension compared to districts that serve elementary school students. Across all levels, out-of-school suspension rates are lower in more affluent districts.

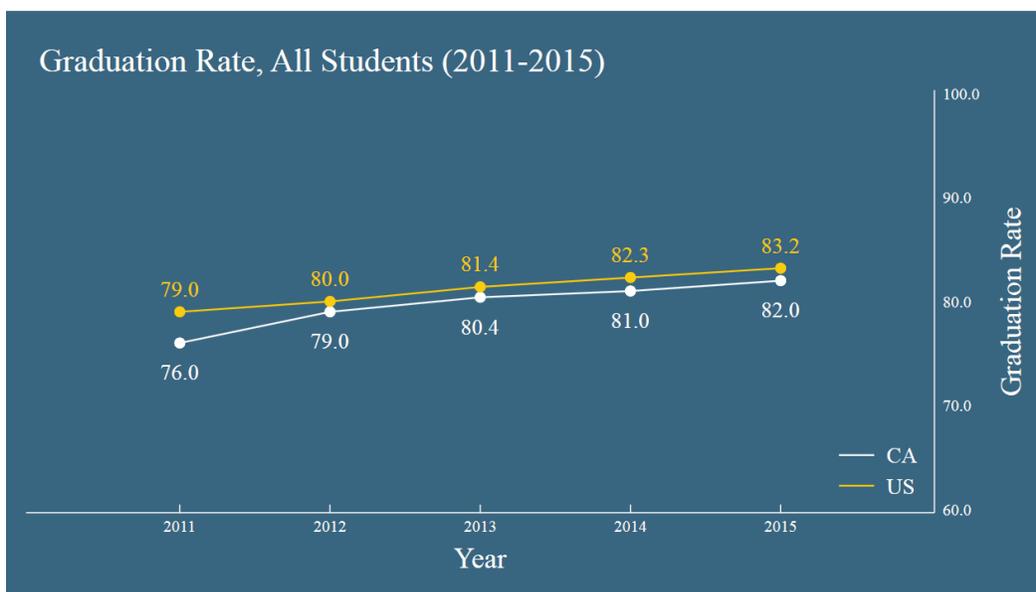
Ethnic/racial gaps in out-of-school suspension rates are generally smaller in California than in the nation as a whole. While differences in district socioeconomic advantage explain a portion of the racial gaps in suspension rates, gaps remain even when comparing districts with similar levels of socioeconomic disadvantage or affluence. The same may be said for expulsion gaps. Notably, ethnic and racial gaps in expulsion are actually larger in California than in the nation as a whole, when we compare students in districts with similar socioeconomic levels.

## Graduation Rates

Achievement on standardized tests, the consequences of exclusionary discipline, and all other inputs of the education system culminate with the decision to graduate a student from high school. Due to limitations on data quality, we are somewhat limited in our analysis along this dimension. We are able to report trends for California and the nation as a whole and for racial/ethnic subgroups but are only able to analyze graduate rates conditional on SES for students in California.

One challenge to comparing graduation rates in California to the nation is the differences among states in course credit and exit exam requirements. In 2013, for instance, California required 3 English Language Arts credits, 2 science credits, and 3 math credits for graduation. The majority of states required more course credits in these subjects. During the time period in which graduation data were available, California and 9 other states required students to pass an exit exam which tested English and math. At the same time, 13 states required students to pass additional subjects (for example, social studies and/or science), one state only required passing math, and 27 states had no exit exam requirement at all (National Center for Education Statistics, 2013). Given that graduation requirements affect graduation rates, these differences between states, and over time, mean graduation rate metrics not strictly comparable. Nevertheless, with these caveats in mind, exploring patterns in this imperfect measure provides some information on the results of the cumulative education inputs students received in the school system.

Figure 16 shows the ACGR trends for all students in California and US from 2011 to 2015. Overall, California graduation rates are slightly lower than US rates. In 2011, California rates were 3.0 percentage points lower than US. Since 2012, however, California rates have been tracking US rates in a steady growth trend of 1 percentage point per year.



**Figure 16.** Graduation rate, all students (2011-2015)

As shown in Table 2, graduation rates have increased from 2011 to 2015 for all subgroups in California and the nation. Graduation rates for all students and Black students have been consistently lower in California than in US; rates for Asian, White, and LEP students have been consistently higher in California than in US. Hispanic students and low-income students graduated at lower rates in California than US in 2011, but by 2015 these two groups in California have surpassed the national average. Between 2012 and 2015, non-Black student subgroups in California graduated at higher rates than the nation, though California's overall rate for all students was lower than the national average. This is due to differences in racial/ethnic composition. California has a larger fraction of Hispanic and LEP students and a smaller fraction of Black students compared to the nation. Although California's Hispanic students graduate at a slightly higher rate than Hispanic students nationwide, their graduation rates are still very low compared to White and Asian students. Because Hispanic students make up a much larger share of California's student population than in the US as a whole, their lower graduation rates result in California having a lower graduation rate than the US as a whole.

The second to last column of Table 2 shows that graduation rates increased in California faster than in the nation for all subgroups of students except White and Asian students. Black student graduation rates in California increased by 8.0 percentage points, compared to 7.6 percentage points nationwide. Hispanic rates increased by 9.0 percentage points in California, compared to 6.6 percentage points nationally. Growth rates in California for LEP and low-income students were 0.9 and 1.9 percentage faster than the nation, respectively (See Appendix Figures 16 to 21 for more detail).

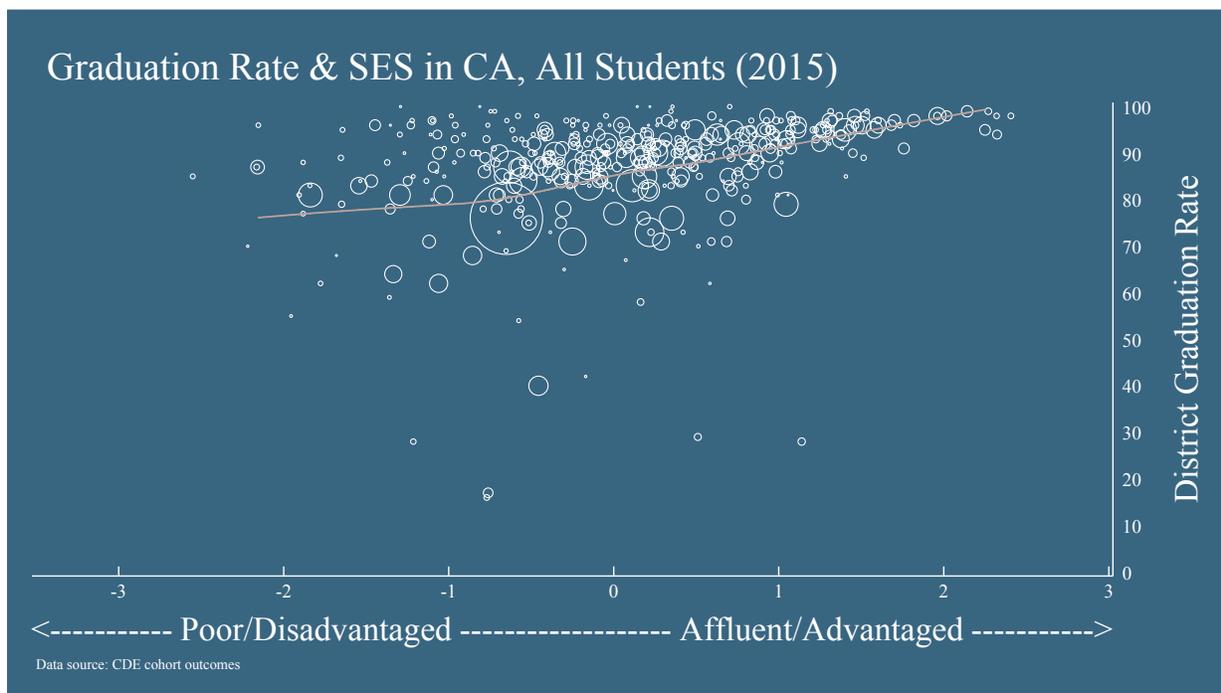
**Table 2.** Changes in ACGR in California and the nation, 2011-2015

		2011	2012	2015	Change 2011-2015	Change 2012-2015
All	CA	76.0%	79.0%	82.0%	<b>+6.0%</b>	+3.0%
	US	79.0%	80.0%	83.2%	+4.2%	+3.2%
Asian	CA	<b>89.0%</b>	<b>90.0%</b>	<b>92.2%</b>	+3.2%	+2.2%
	US	87.0%	88.0%	90.2%	+3.2%	+2.2%
Black	CA	63.0%	66.0%	71.0%	<b>+8.0%</b>	+5.0%
	US	67.0%	69.0%	74.6%	+7.6%	+5.6%
Hispanic	CA	70.0%	<b>74.0%</b>	<b>79.0%</b>	<b>+9.0%</b>	<b>+5.0%</b>
	US	71.0%	73.0%	77.8%	+6.8%	+4.8%
White	CA	<b>85.0%</b>	<b>87.0%</b>	<b>88.0%</b>	+3.0%	+1.0%
	US	84.0%	86.0%	87.6%	+3.6%	+1.6%
LEP	CA	<b>60.0%</b>	<b>62.0%</b>	<b>69.0%</b>	<b>+9.0%</b>	<b>+7.0%</b>
	US	57.0%	59.0%	65.1%	+8.1%	+6.1%
Low Income	CA	70.0%	<b>73.0%</b>	<b>78.0%</b>	<b>+8.0%</b>	<b>+5.0%</b>
	US	70.0%	72.0%	76.1%	+6.1%	+4.1%

*Note:* Data source: ED Data Express; CA rates are boldfaced when higher than US

In 2011, the overall graduation rate for California was 3 percentage points lower than the nation, whereas from 2012 to 2015 the gap between California and the nation was consistently around 1 percentage point. The sharp change in the reported data from 2011 to 2012 may indicate a change in the quality of data. The last column of Table 2 reports changes in graduation rates between 2012 and 2015 as a check to see if the results are consistent with the 2011 to 2015 changes. During these years, Hispanic, LEP, and low-income students' graduation rates in California increased more than their counterparts nationwide. However, the increase in graduation rates for all students and Black students was smaller in California than the nation.

Figure 17 shows the relationship between LEA-level SES and graduation rate for the 2015 cohort in California. Overall, more affluent school districts in California have higher graduation rates than poorer districts. There is also much more variation in graduation rates among poorer districts than richer ones. A similar relationship can be seen between graduation rates and district SES for Black, Hispanic, and White subgroups (see Appendix Figures 22, 23, and 24).



**Figure 17.** Graduation rate and SES in CA, all students (2015)

### Discussion and Conclusion

Our analysis of the academic achievement, exclusionary discipline events, and graduation rates of California’s public school students reveals a complex picture. In some dimensions, the picture is encouraging. Despite a recent dip in achievement scores that coincides with the administration of the new Smarter Balance Assessment Consortium tests, performance on state standardized tests has increased over the last decade. The growth rate of scores from grades three to eight in California are generally higher than the rest of the nation, and conditional on SES, California’s race/ethnic achievement gaps are on par with the nation. All types of exclusionary discipline rates have been declining in California. Compared to the nation, California suspends fewer children and generally has smaller gaps in exclusionary discipline. Finally, Black, Hispanic, low-income, and LEP students in California are graduating at higher rates than their peers across the nation.

At the same time, California significantly lags other states in many dimensions. Children are generally performing worse on standardized tests in California compared to their peers the nation, even controlling for the SES of the children. In those cases, only students in the most affluent districts are keeping pace with the nation. Sizable gaps in achievement by race/ethnicity, language minority, and urbanicity continue to persist, as do gaps in discipline by race/ethnicity. Further, California is graduating students at lower rates than the US overall. Though California contains a unique demographic profile, its demographics cannot fully account for its poorer student outcomes. These results, however, help us identify areas of the California education system on which policymakers should concentrate their improvement efforts.

The skills gap found at kindergarten entry suggest that California’s lag in academic achievement arises before children even enter the schoolhouse door. That is, California students—particularly those in low-income communities—appear to have fewer early childhood educational opportunities and resources to prepare them for school prior to kindergarten than similarly low-income students in other states. This suggests that California K-12 schools may not be the primary source of the low achievement patterns evident in the NAEP tests. Rather socioeconomic disparities in educational success in California emerge early in children’s lives, and are not reduced during the K-12 years.

This suggests that policies and programs that target these differences in early childhood educational experiences may be a particularly effective strategy for improving educational outcomes and reducing socioeconomic disparities in California. There is a substantial body of research showing that quality early childhood prekindergarten programs provide benefits that last through adulthood (Campbell et al., 2012; Puma et al., 2010; Deming, 2009; Heckman, 2006).<sup>15</sup> The fact that the socioeconomic disparities in kindergarten readiness are particularly large in California suggests that such programs might be particularly beneficial here.

The particularly strong relationship between the socio-economic circumstances of children and their achievement in California is also driving many of the gaps in performance we see. Even children of average SES in California lag their peers in the nation on standardized tests. While more research should probe the reasons behind this particularly strong relationship between SES and student outcomes in California, the results suggest that efforts to improve student performance need to extend beyond the poorest and neediest schools. Even schools serving average SES students need support in improving student outcomes. English Language Learners are the one group that bucks this trend. The gaps between English Language Learners and their peers in California are smaller in less affluent districts compared to more affluent district. In all cases, however English Language Learners are performing significantly worse than their English proficient peers, and the smaller gaps in less affluent districts is more a function of the lower performance of English proficient peers, not the higher performance of English Language Learners. Given the number and growth of language minority students in the state, this issue is pressing.

Though California does relatively well compared to the nation in terms of exclusionary discipline, disparities remain. Exclusionary discipline is still correlated to socio-economic status and black and Hispanic students are more likely to get suspended and expelled. Expulsions are particularly problematic, as this is the one category where California performs worse than the nation overall and for minorities. California has worked to reduced discipline rates with the passage of laws such as those prohibiting willful defiance. Policymakers might build on this momentum and continue to pursue other policies that can reduce the disciplinary rate for low-

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<sup>15</sup> While many studies show long-term benefits of quality early childhood programs in adulthood, many studies also show that advantages on test scores tend to fade (Deming, 2009; Elango et al., 2015). Therefore, while these programs generally have a positive return on investment (Heckman 2006), their ability to reduce gaps in standardized test performance is unclear.

income and minority students.

Policymakers must also build on the rise in graduation rates. This is especially true for black students, who continue to lag the nation on this dimension. Though all other subgroups of students are graduating at higher rates than the nation, overall the graduation rate in California continues to lag. In this case, the majority minority profile of California is driving this trend. The majority of the student body in California is Hispanic, who have lower graduation rates than white students throughout the entire nation. Thus, the larger concentration of minority students in California means that overall California graduation rates are lower. This highlights the need to continue to support these students.

The relative dearth of information for graduation rates also highlights the need for California to improve its tracking and reporting along this dimension. Our ability to compare California graduation rates to the nation by district SES were hindered by discrepancies in the California data included in *EDFacts*. Graduation rates also differ substantially based on the source of information. More timely, consistent, and verified data can allow for analyses that provide more nuance in this area.

Few of the above analyses were possible 13 years ago, at the time the first *Getting Down To Facts* report was published. The rapid expansion of state and federal data has made these comparisons possible, illustrating the power of comparable data accessible at the student and district level for all students in the nation. However, even now there is room to grow. This study hinges on the Stanford Education Data Archive, which was constructed by a team of university researchers who were able to link disparate yearly state standardized tests to the NAEP scale in order to facilitate comparisons. Nonetheless, in the end, enough comparable data was available to analyze only three educational outcomes. In the future, efforts should continue to expand the availability of comparable nation-wide data for a larger swath of student outcomes.

Overall, however, the data available shows that California is improving on most dimensions, but remains behind the nation on most measures because the nation is also improving over time. In order to catch up to the nation, and ultimately surpass it, California must accelerate the growth it has seen over the past 5 to 10 years. Moreover, given the particularly large socioeconomic gaps and the large gaps between EL and non-EL students in California, targeting policies and resources to less affluent and EL students is likely to make the greatest difference.

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Appendix

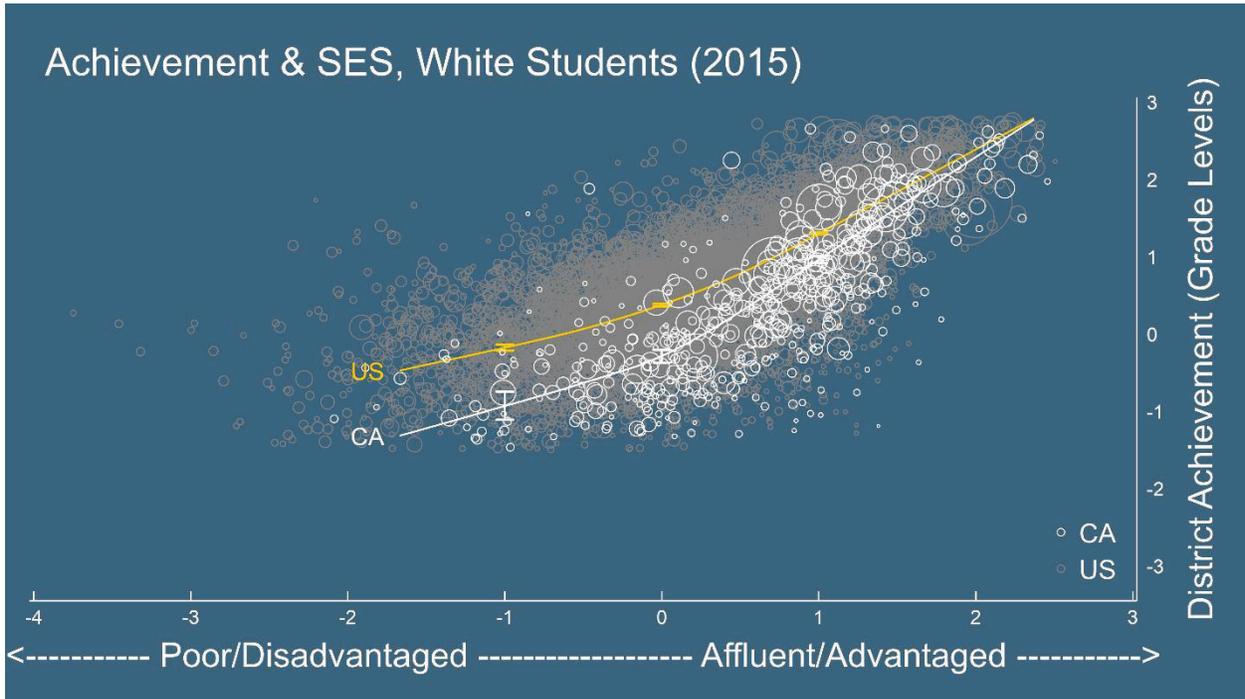


Figure A1. Achievement and SES, white students (2015)

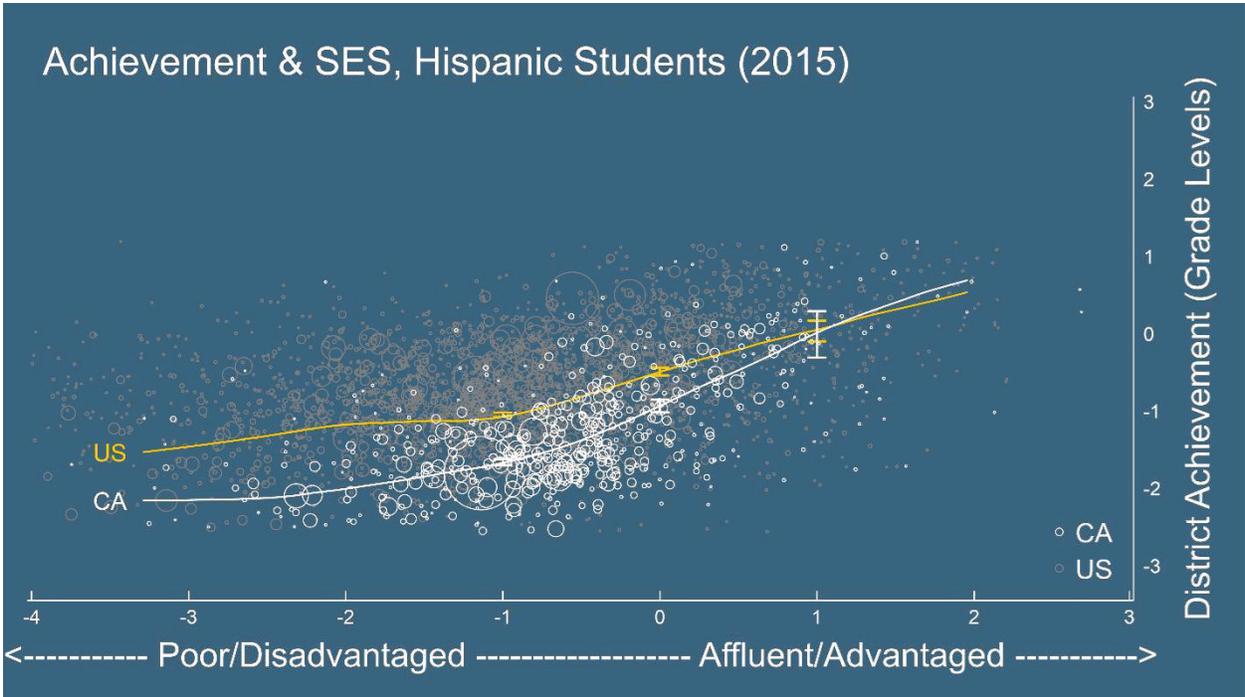
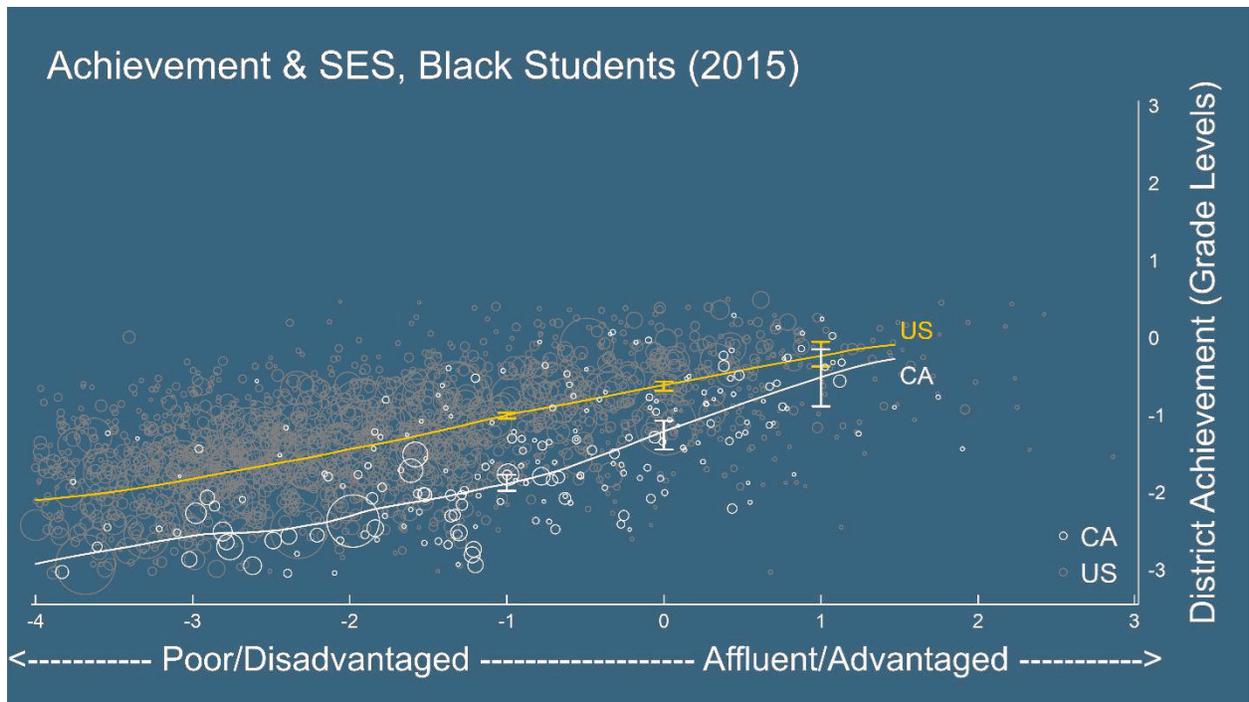
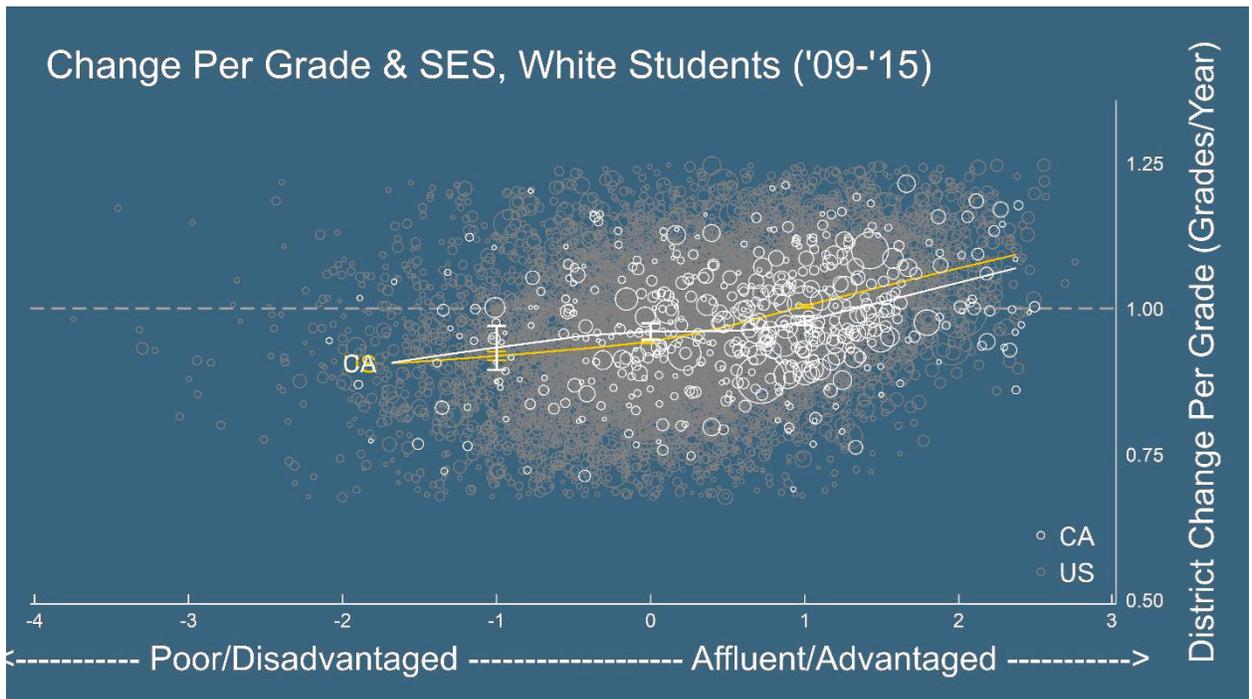


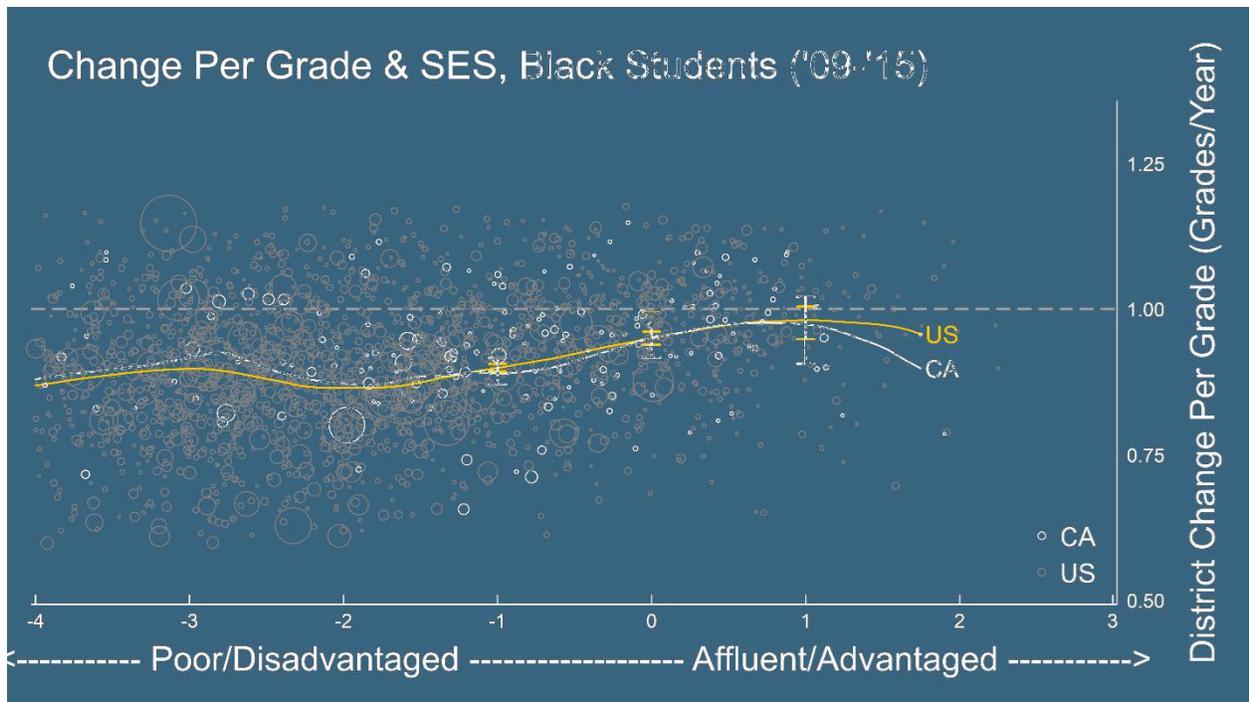
Figure A2. Achievement and SES, Hispanic students (2015)



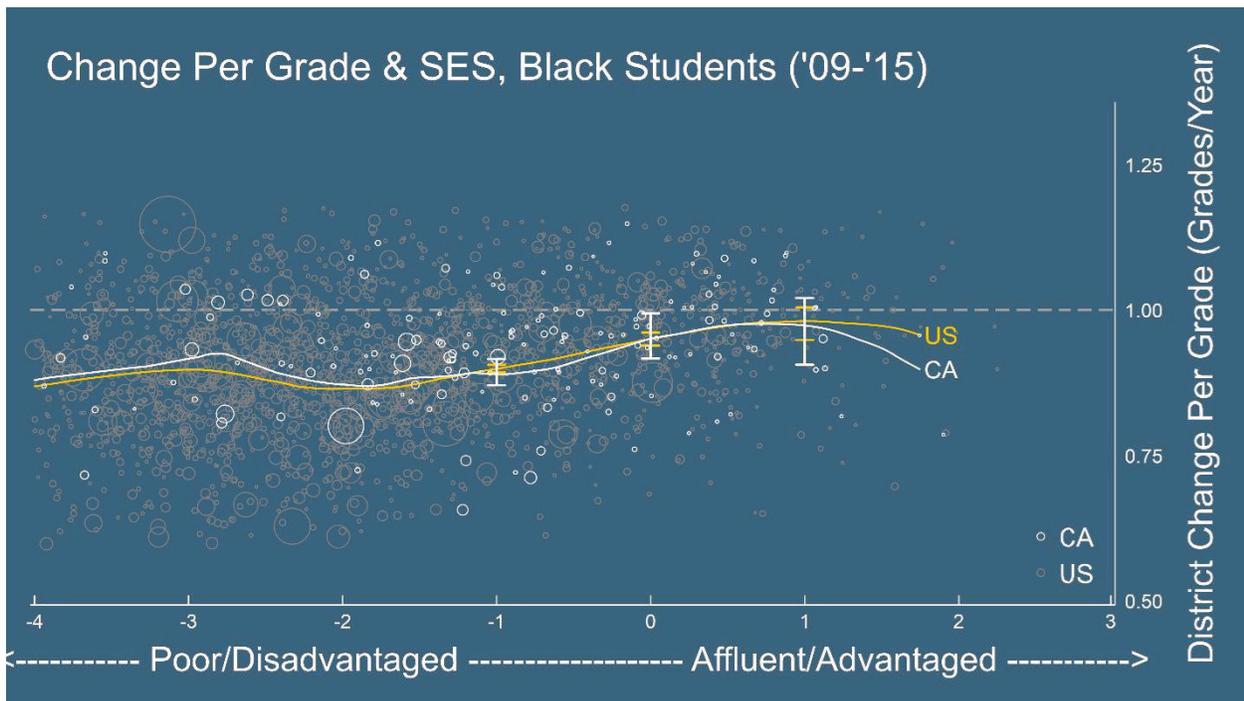
**Figure A3.** Achievement and SES, black students (2015)



**Figure A4.** Change per grade and SES, white students (2009-2015)



**Figure A5.** Change per grade and SES, Hispanic students (2009-2015)



**Figure A6.** Change per grade and SES, black students (2009-2015)

## 2009-2015 Achievement, by SES, White Students

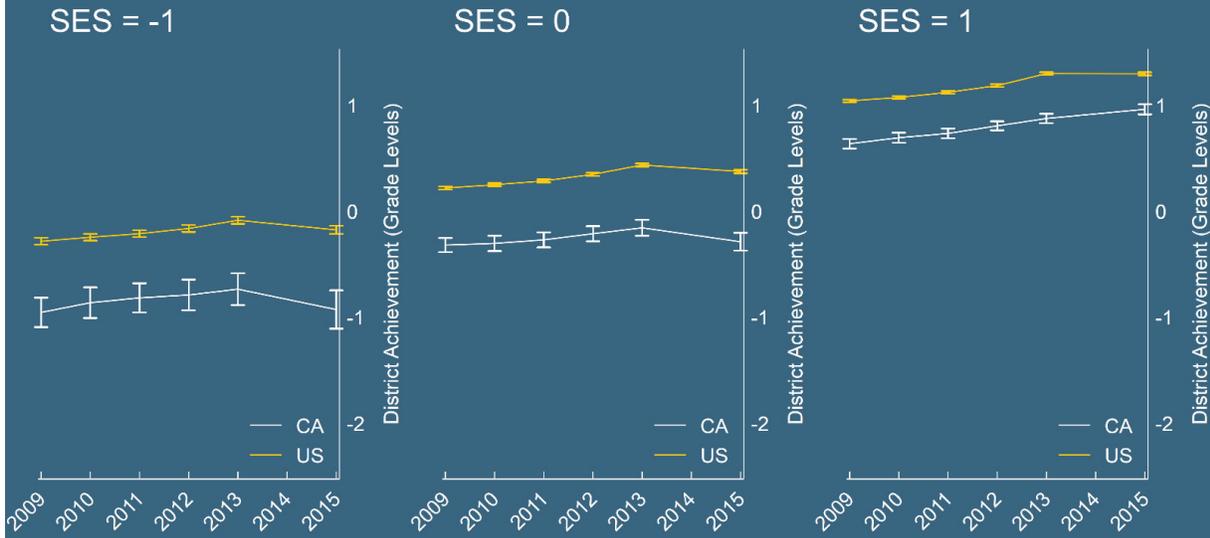


Figure A7. 2009-2015 Achievement by SES, white students

## 2009-2015 Achievement, by SES, Hispanic Students

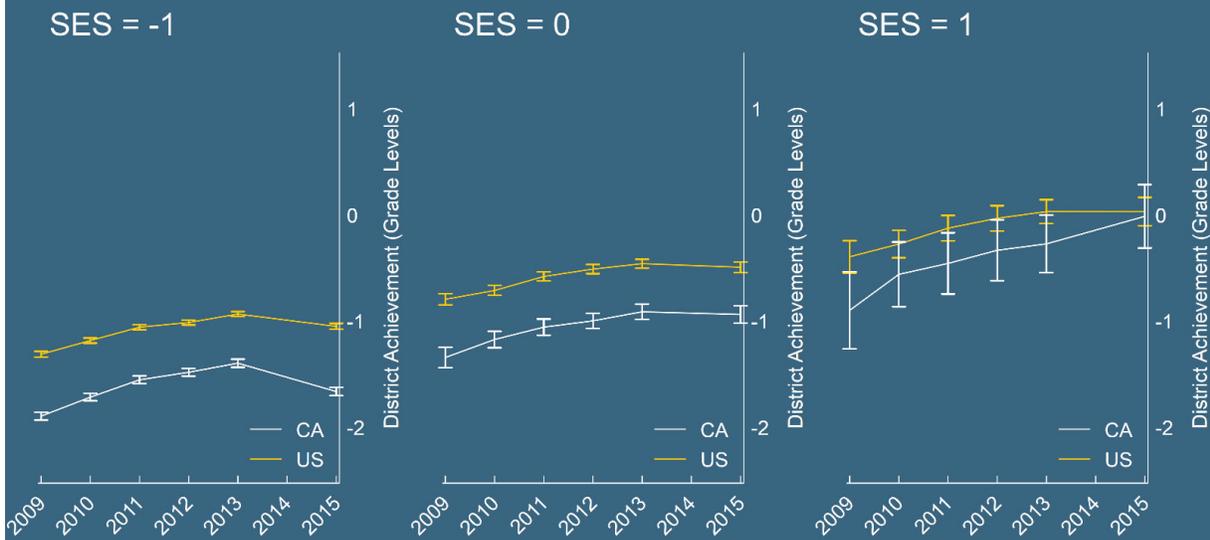


Figure A8. 2009-2015 Achievement by SES, Hispanic students

## 2009-2015 Achievement, by SES, Black Students

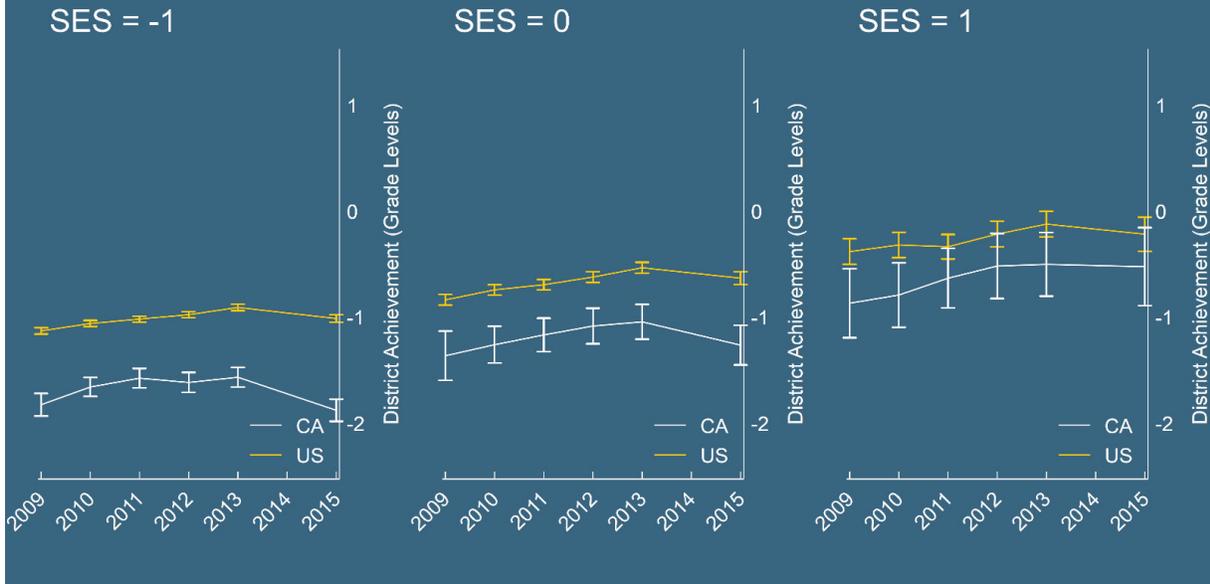


Figure A9. 2009-2015 achievement by SES, black students

## California In School Suspension Trends

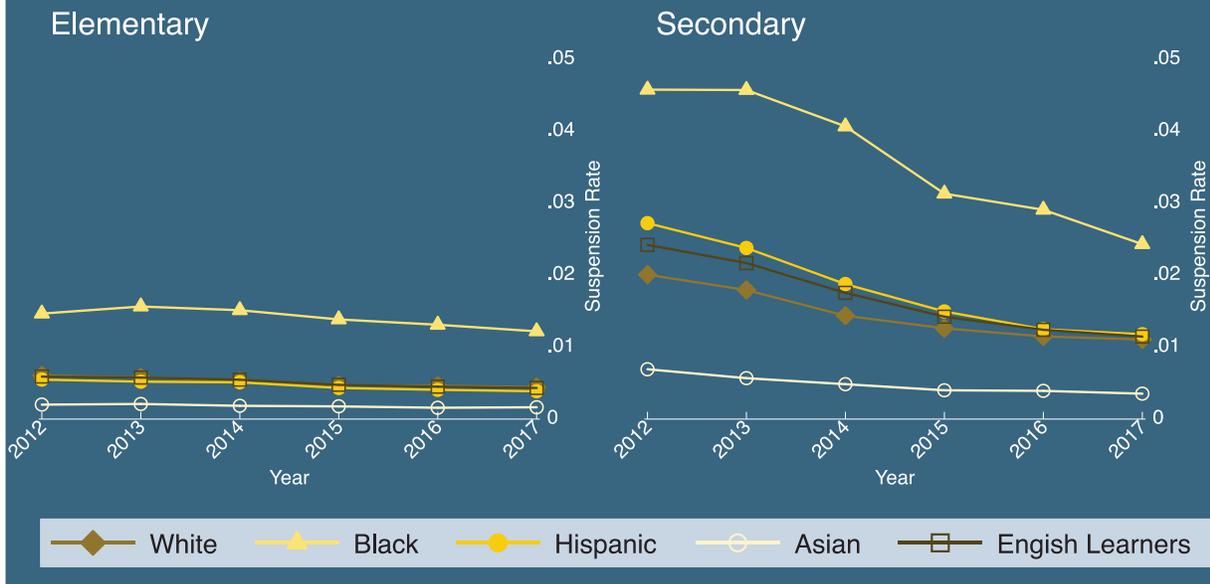
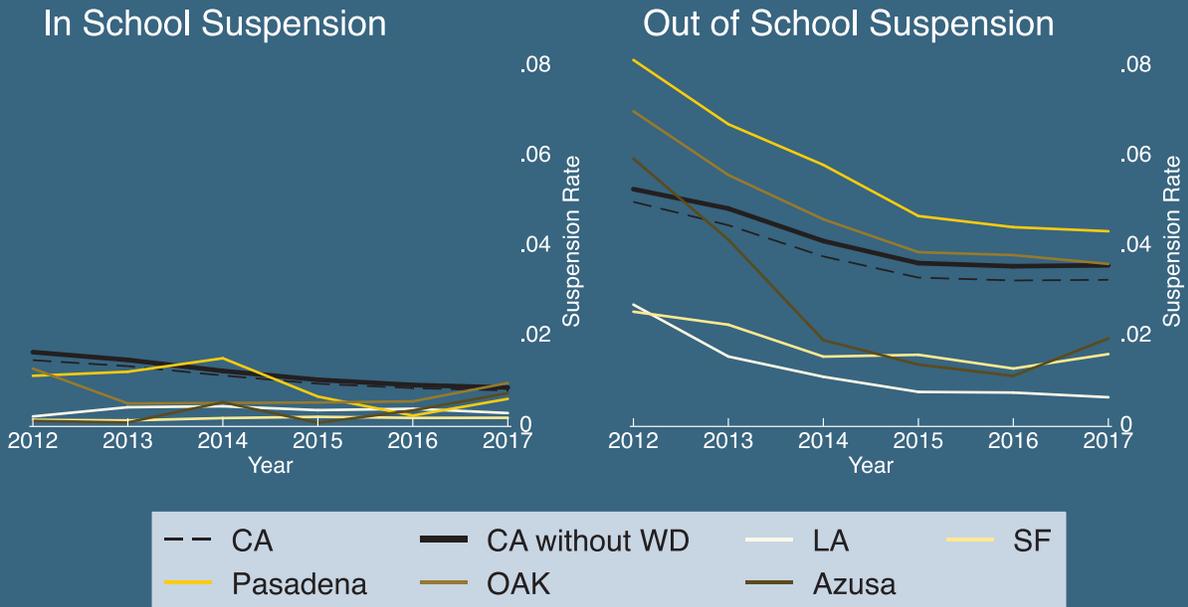


Figure A10: In school suspension over time by race and level (CDE)

# Discipline Before and After Willful Defiance Policies

All Students



LA policy went into effect in 2013-14 school year, SF policy went into effect in SY 2014-15. Pasadena passed policy in Dec. 2014. OAK and Azusa were fully in effect in 2016-17. State policy only prohibited suspension for willful defiance in grades K-3 and went into effect Jan. 1 2015.

*Note:* The state policy prohibits suspension for willful defiance only in grades K-3 (and prohibits expulsion for willful defiance in all grades K-12). The state policy went into effect on January 1, 2015. The other districts shown here adopted policies that went further than the state policy, all prohibiting suspensions for willful defiance in all grades K-12. Some of these policies were enacted prior to the passage of AB 420, the state law. Los Angeles’ policy went into effect in the 2013-14 school year. San Francisco’s policy went into effect in SY 2014-15. Pasadena passed their policy in December 2014. Oakland and Azusa’s policies were fully in effect in 2016-17.

**Figure A11:** Suspension trends, disaggregated for districts that adopted policies regarding discipline for willful defiance (CDE)

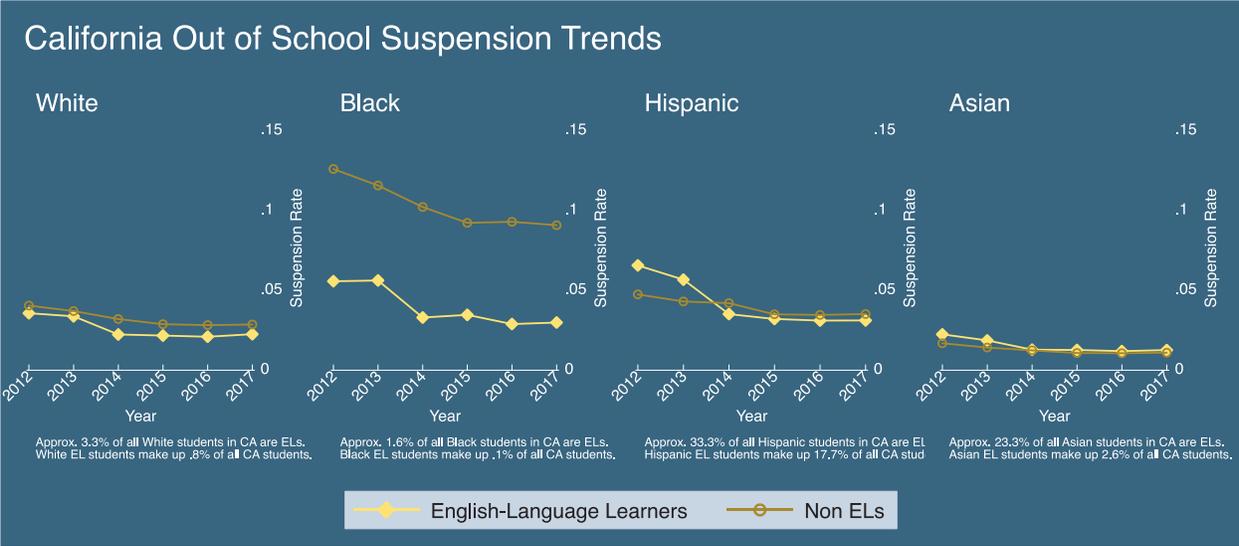


Figure A12: Out of school suspension rate, by race and EL status (CDE)

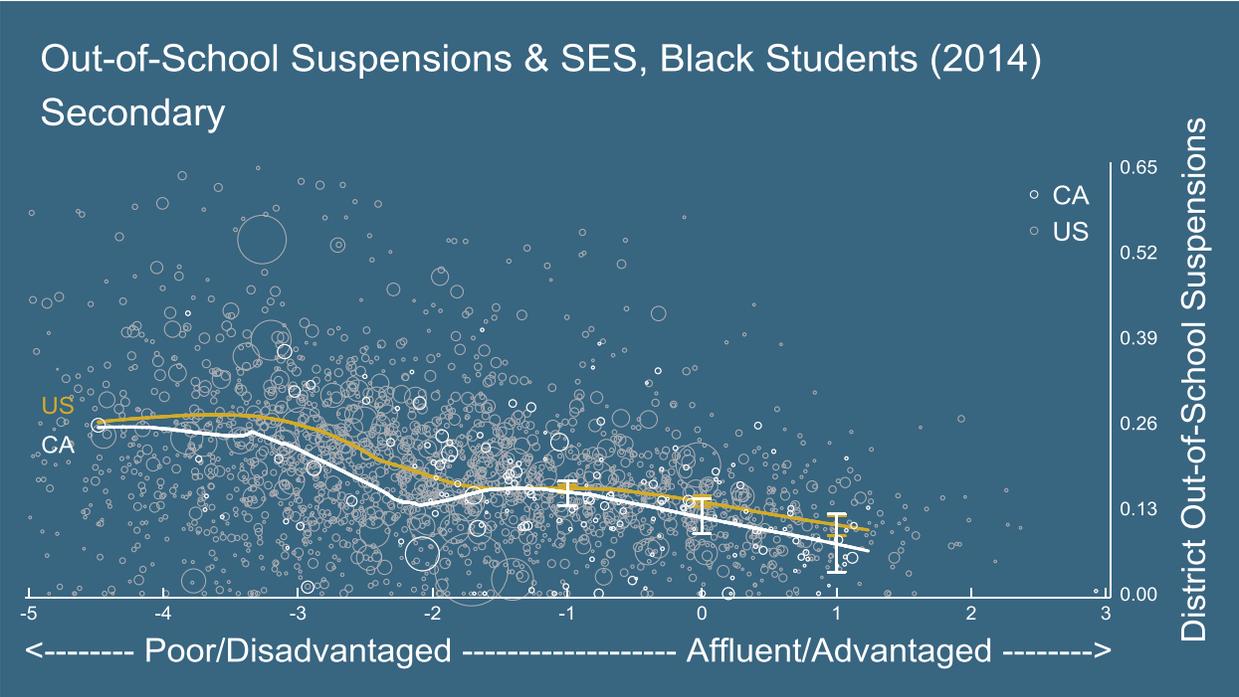


Figure A13: Out of school suspension rate, conditional on SES for black subgroup

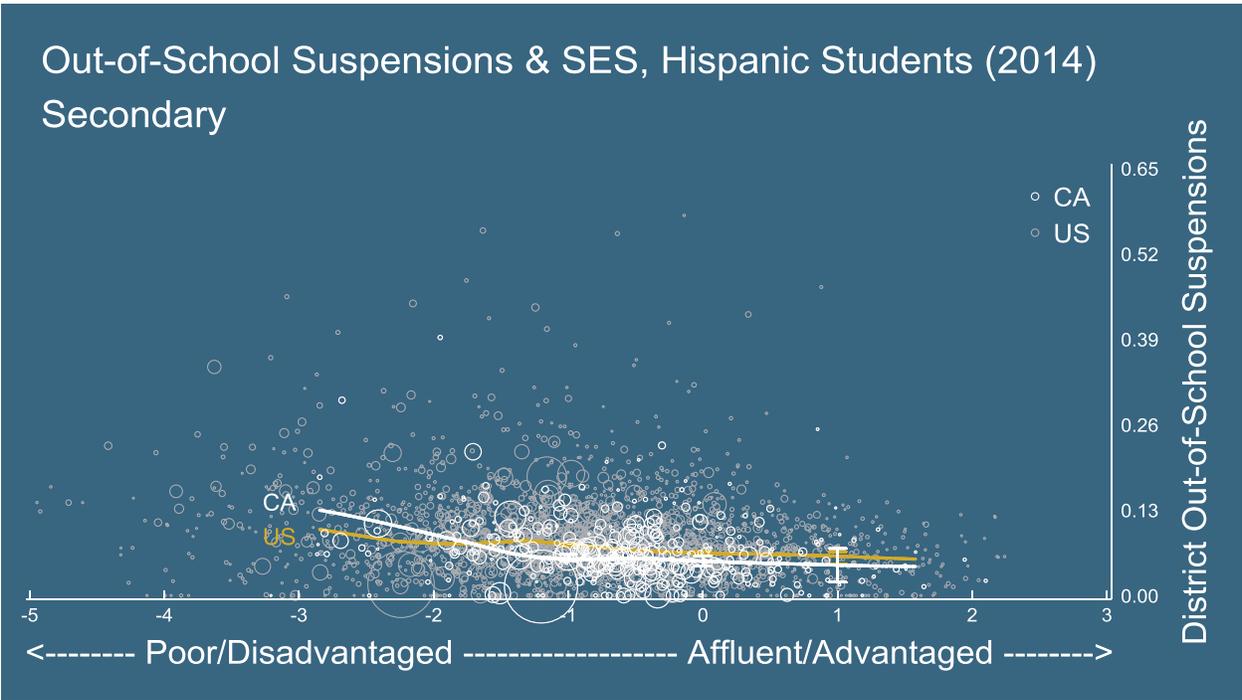


Figure A14: Out of school suspension rate, conditional on SES for Hispanic subgroup

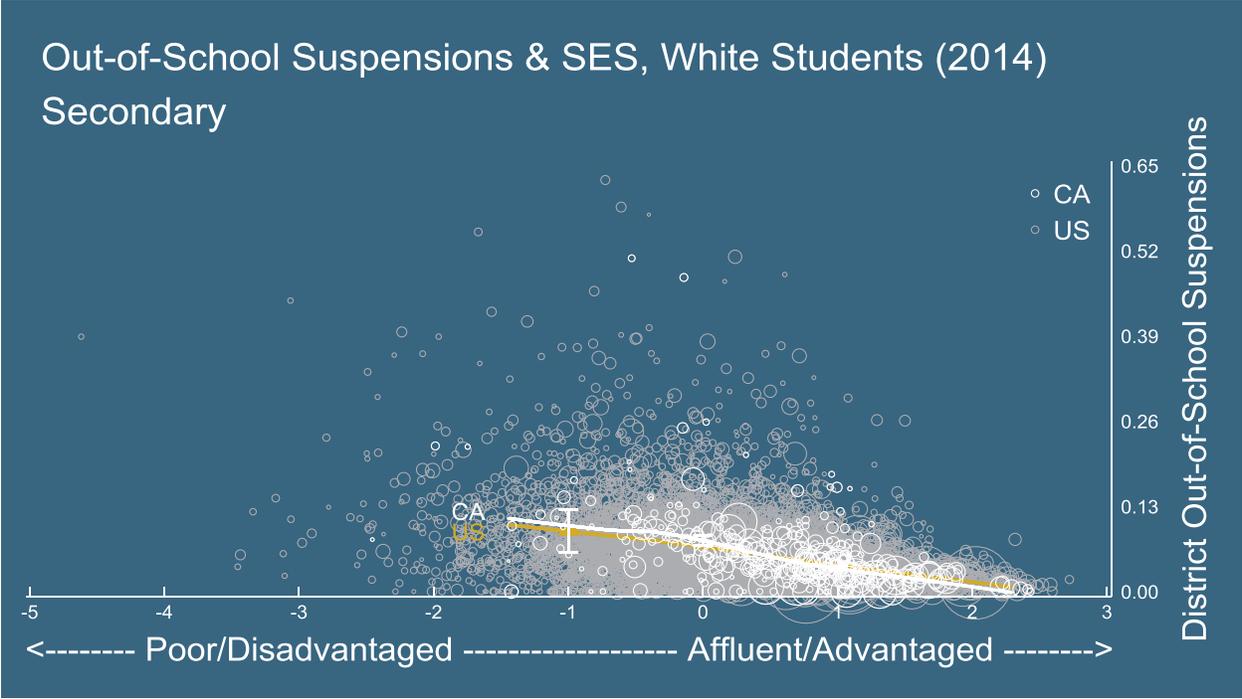


Figure A15: Out of school suspension rate, conditional on SES for white subgroup

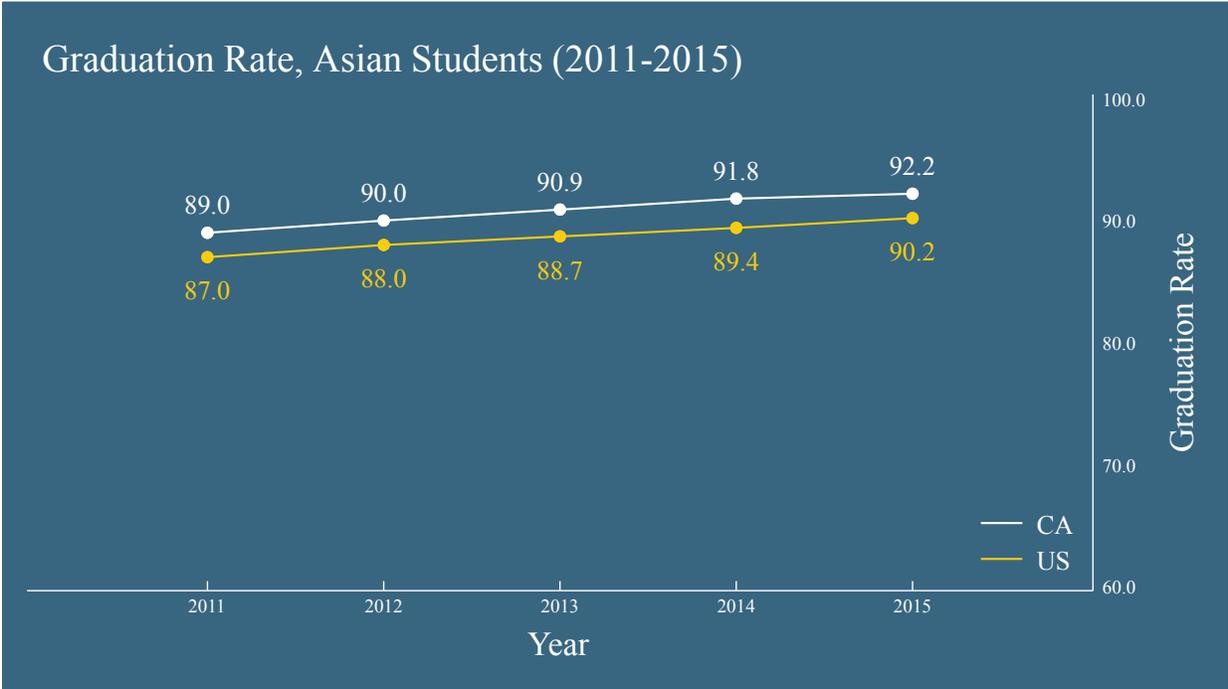


Figure A16. Graduation rate, Asian students (2011-2015)

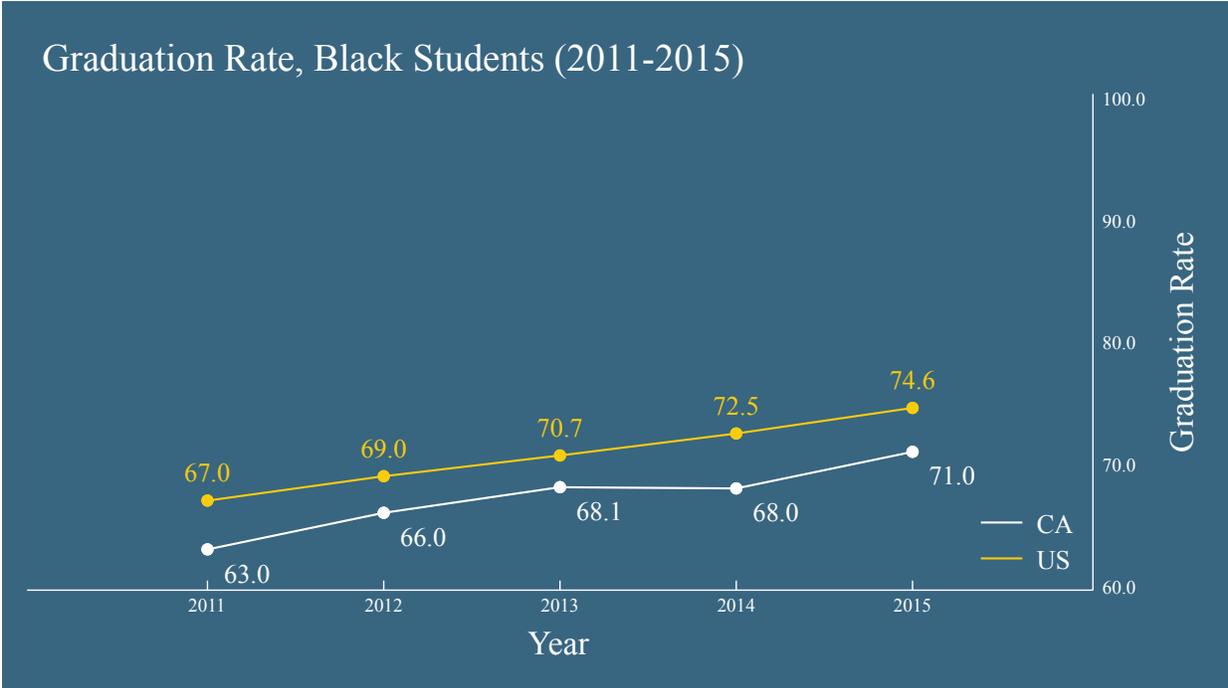


Figure A17. Graduation rate, black students (2011-2015)

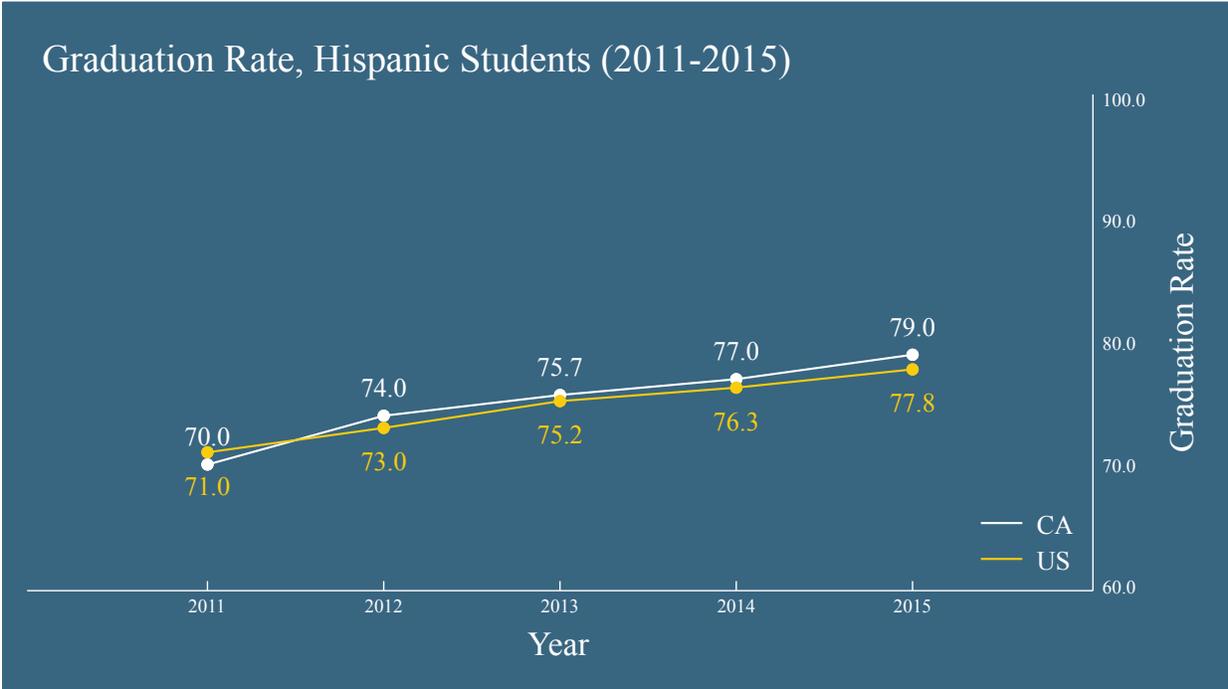


Figure A18. Graduation rate, Hispanic students (2011-2015)

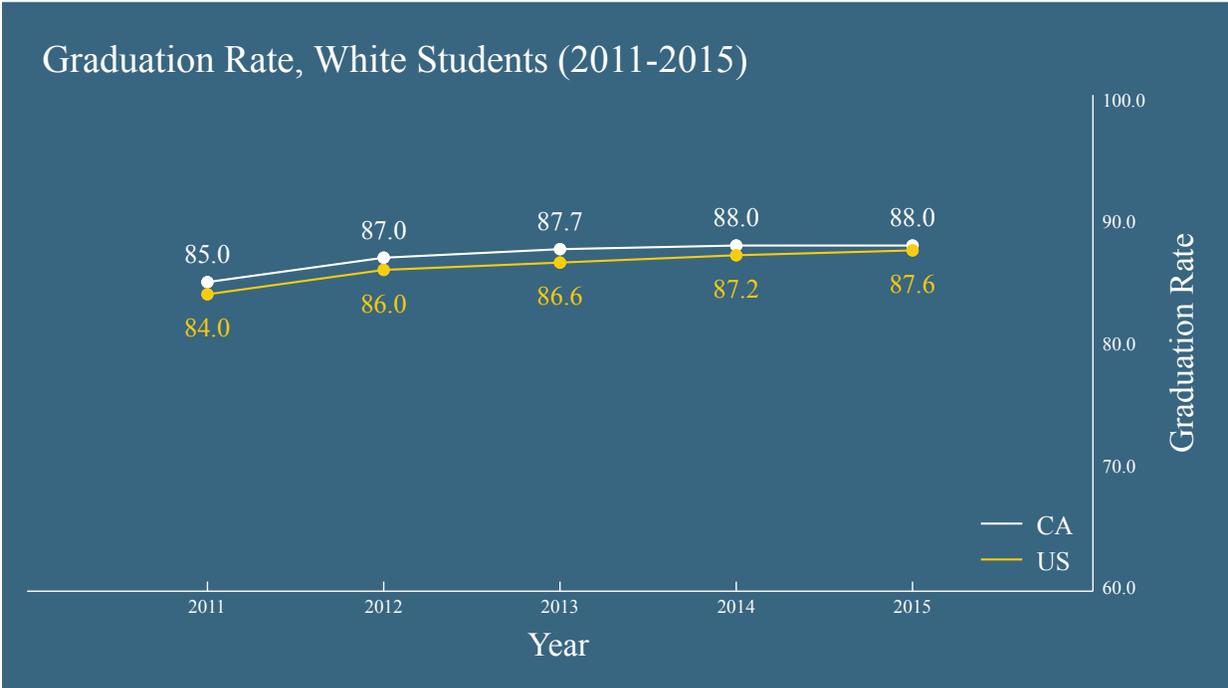


Figure A19. Graduation rate, white students (2011-2015)

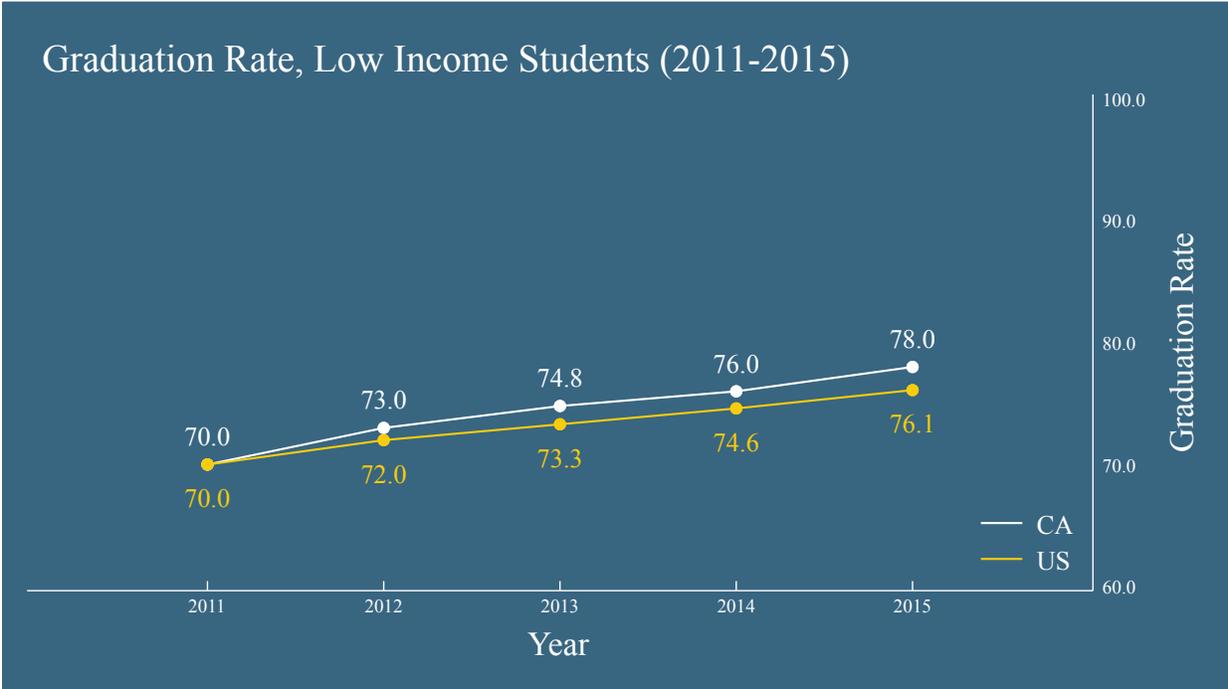


Figure A20. Graduation rate, low income students (2011-2015)

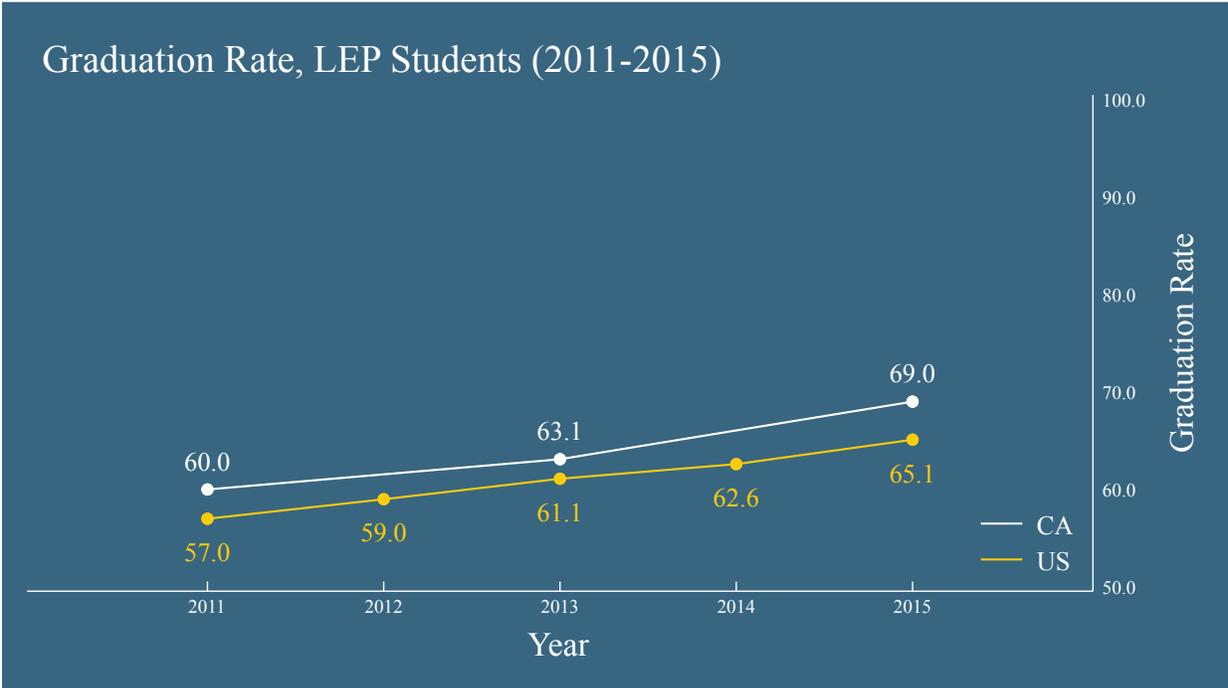


Figure A21. Graduation rate, LEP students (2011-2015)

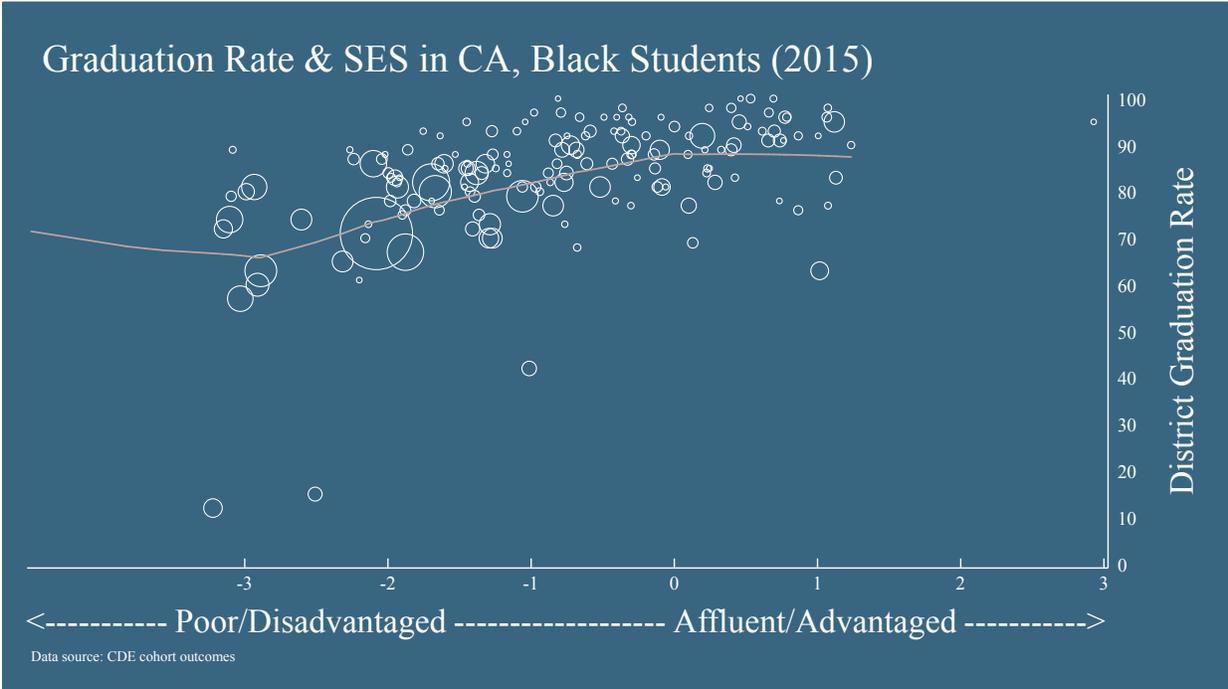


Figure A22. Graduation rate and SES in CA, black students (2015)

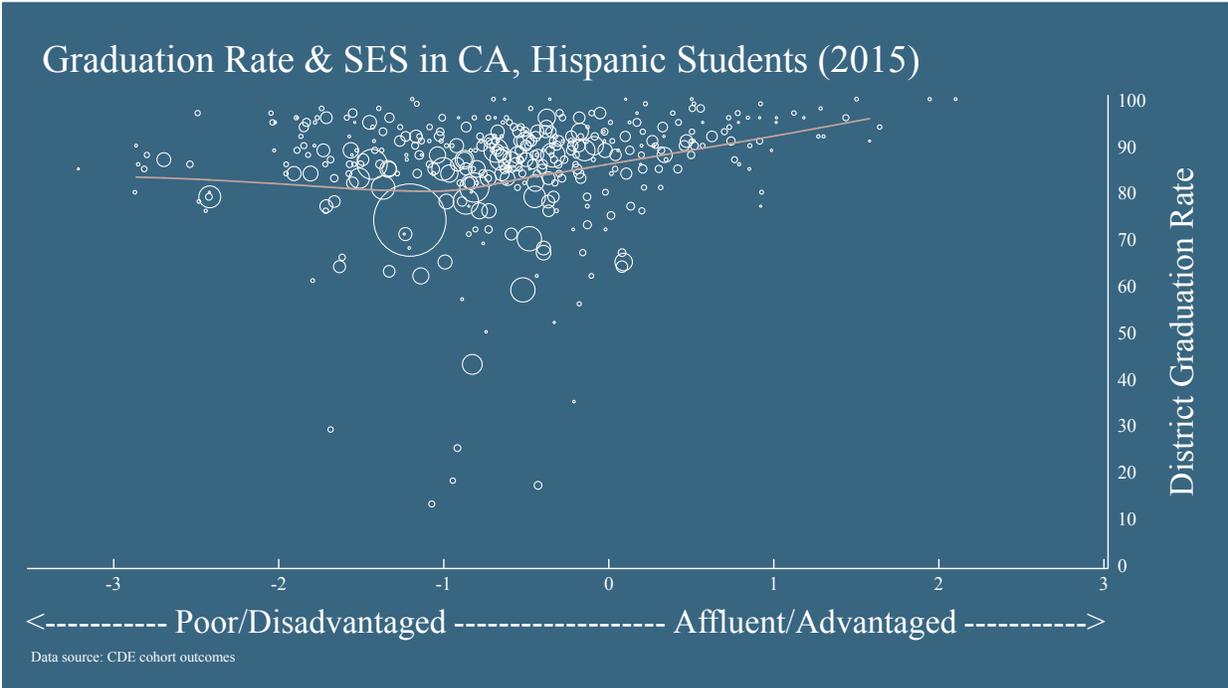


Figure A23. Graduation rate and SES in CA, Hispanic students (2015)

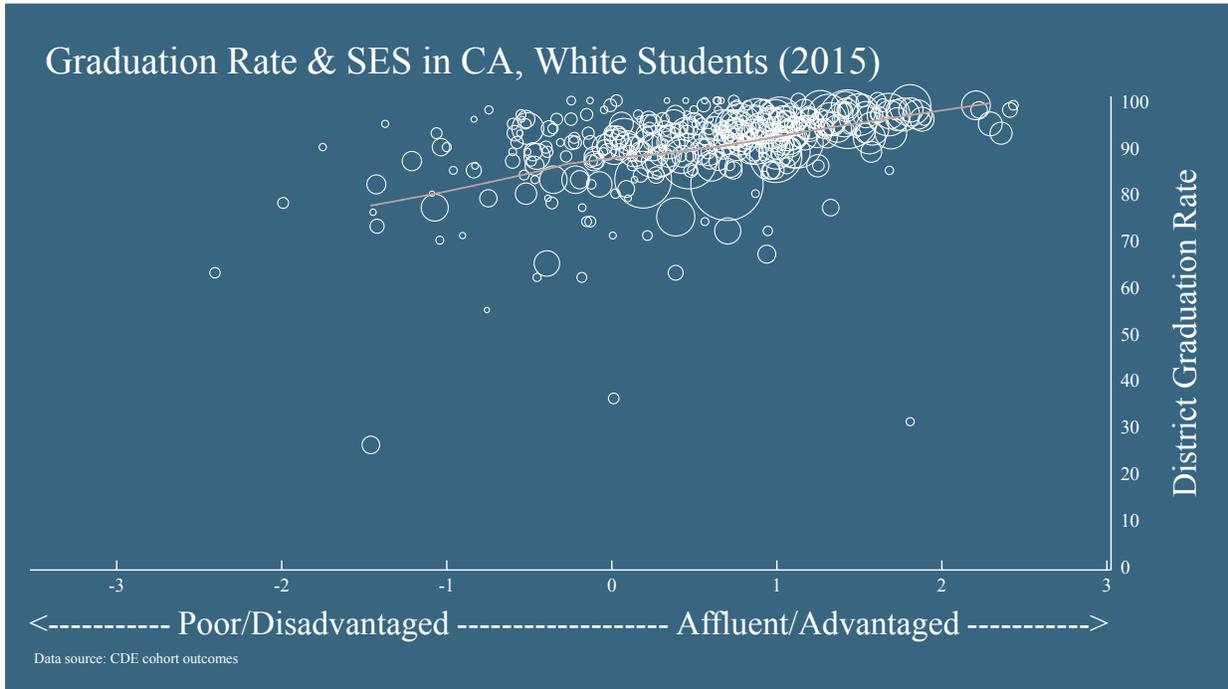


Figure A24. Graduation rate and SES in CA, white students (2015)

Table A1. California state-level graduation rates by source:

Year	2011	2012	2013	2014	2015
ED	76.0	79.0	80.4	81.0	82.0
CDE*	77.1	78.5	80.4	80.8	83.2
EDFacts	81.4	83.4	84.8	85.6	87.4
<b>Cohort size</b>					
(denominator):					
ED	n/a	n/a	n/a	492,971	488,612
CDE	503,273	502,856	495,316	493,701	489,036
EDFacts	446,680	510,970	505,600	432,850	426,790

\*CDE definition of graduates includes students who received an adult education diploma or passed the California High School Proficiency Exam. ED and EDFacts definitions do not include these two groups of students. EDFacts cell sizes are rounded to the nearest 10 in accordance to procedures governing the use of restricted data.