

Education and Workforce Development

Few things are as key to escaping poverty as receiving a quality education. Yet, in far too many ways, California's public education system has failed poor and marginalized communities.

California's school system is the nation's largest, serving more than 6.2 million students. Individual school districts can also be enormous: the Los Angeles Unified School District, for example, is the second biggest in the nation. Statewide, California spent roughly \$97.2 billion for K–12 schools (counting federal, state, and local monies) in the 2018–2019 year, or about 48 percent of the state budget.¹ Spending has increased steadily in recent years and now amounts to roughly \$12,000 per student, an increase of about \$2,000 over the past five years.² This puts California in the middle of the pack nationally, though below other populous states such as New York and Illinois (see Figure 4.1).³

Although California schools have seen some improvements in recent years, California still ranks near the bottom in terms of student performance. According to data from the National Assessment of Educational Progress, California's public school test scores are significantly below average, tied with the District of Columbia in 45th place.⁴ And a 2017 Cato Institute study, which accounted for student body heterogeneity, estimated that California's public schools ranked 35th in the nation.⁵ That is slightly better than U.S. News & World Report's estimate, which put California schools 44th nationally, but still below the median.

Other measures are even grimmer. In 2019, only 52 percent of California students met college-readiness benchmarks in ACT reading and math scores.⁶ Just 83.3 percent of California high school students graduate, making the state home to the highest dropout rate in the nation.⁷ Eighth-grade students lagged behind national standards in both math and English language arts with only 37 and 49 percent, respectively, meeting benchmarks on California's Smarter Balanced assessments.⁸ Among fifth graders, only 38 percent and 52 percent met these benchmarks. Clearly, California is failing half its students—by its own standards—across grade levels.

Moreover, looking at California's public schools on a statewide basis does not really tell the story of how badly they have failed students in low-income and minority communities.

Data show persistent academic achievement gaps by both income and race. On average, across all grade levels and incomes, African American and Latino students score significantly lower on standardized tests (measuring proficiency in both English language arts and mathematics) than white or Asian students (see Figure 4.2).⁹

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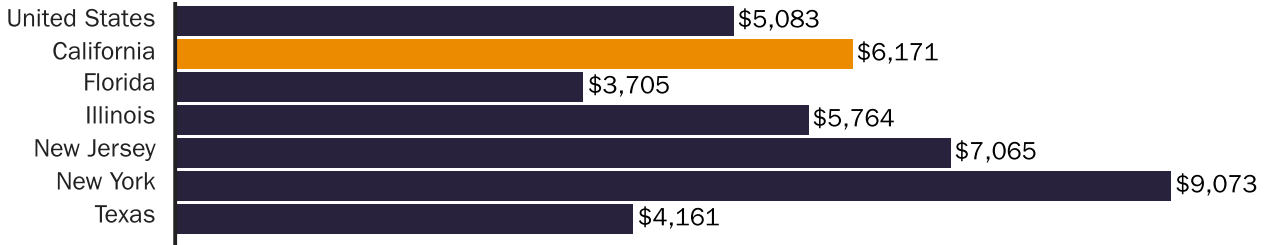
And when it comes to preparing students for college or a career, California schools do a surprisingly poor job across the board, but they fail African American and Latino students even more severely. In 2018, only 21 percent of African American students and 35 percent of Latino students who graduated were considered fully prepared for college or a career compared to 52 percent of white students and 74 percent of Asian students (see Figure 4.3). African Americans also have much lower graduation rates than other groups, are much more likely to be absent from school more than 10 percent of the time, and are more likely to be suspended or subjected to other types of school discipline.¹⁰

In addition to race, there are also significant academic achievement disparities by income. Across all races and ethnicities, low-income students scored in the 39th percentile on state standardized tests. Low-income students have a graduation rate of only 80 percent.¹¹ Moreover, low-income students of all races perform worse on standardized tests, are less likely to graduate, and are less likely

Figure 4.1

How California ranks in education investment and spending compared to other states

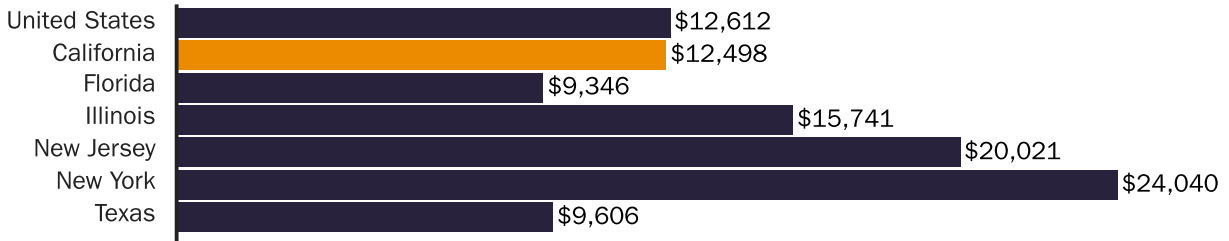
Per capita tax revenue, 2017



Percent of economy invested in education, 2017



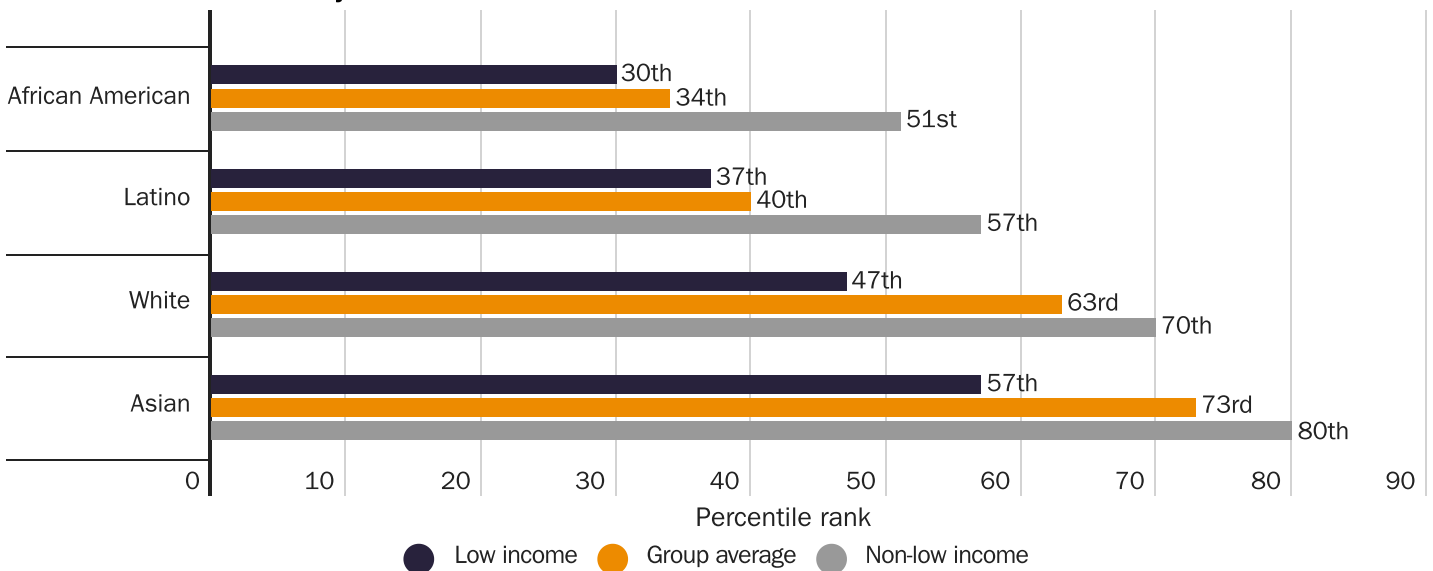
Per pupil expenditures, 2018



Source: Carrie Hahnel, "California's Education Funding Crisis Explained in 12 Charts," Policy Analysis for California Education, October 2020, <https://edpolicyinca.org/publications/californias-education-funding-crisis-explained-12-charts>.

Figure 4.2

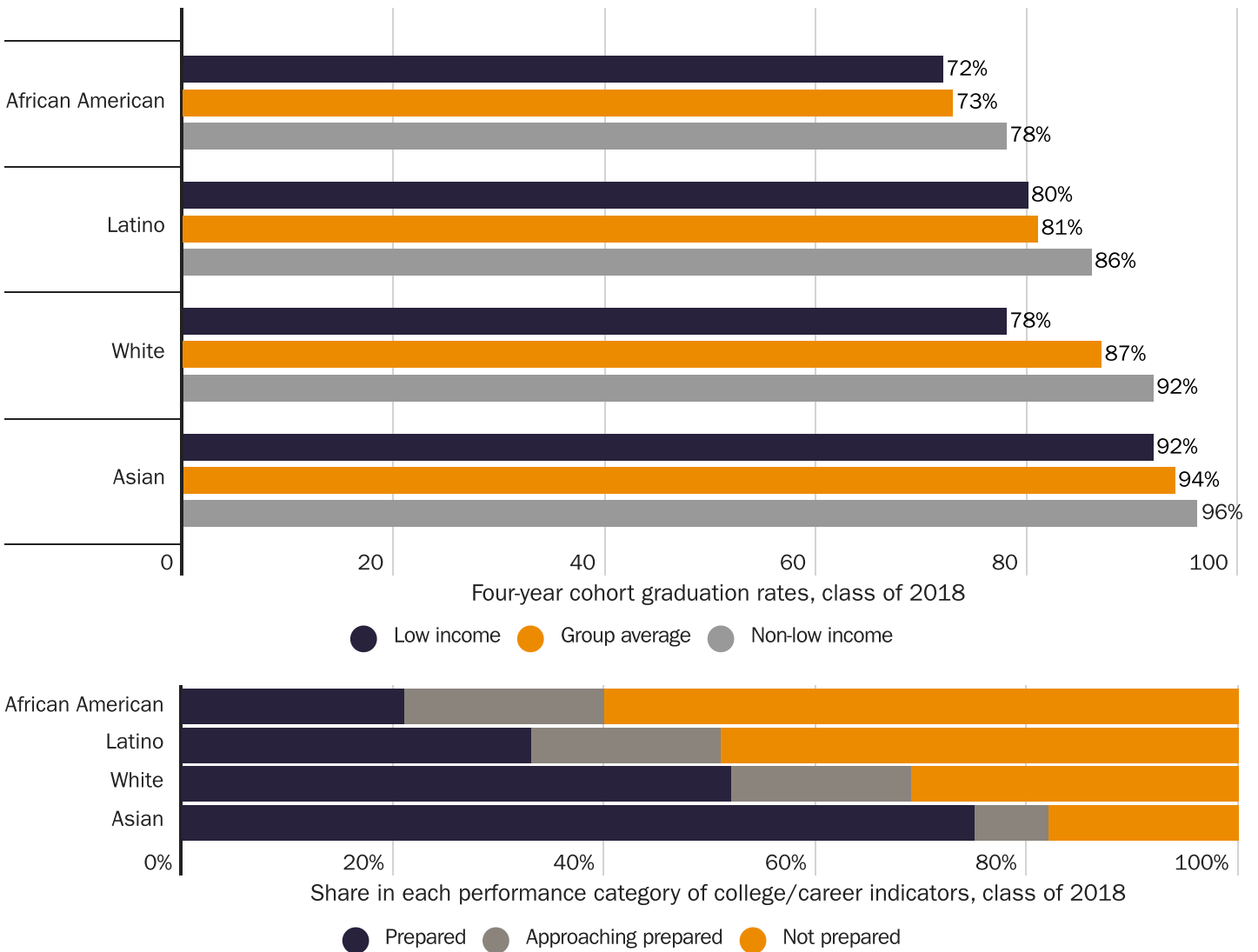
Educational achievement by race and income



Source: Ned Resnikoff, "Narrowing California's K-12 Student Achievement Gaps," Legislative Analyst's Office, January 31, 2020, p. 5, figure 3, <https://lao.ca.gov/Publications/Report/4144>.

Figure 4.3

Graduation rates and post-secondary preparedness gaps in California by race and income



Source: Ned Resnikoff, "Narrowing California's K-12 Student Achievement Gaps," Legislative Analyst's Office, January 31, 2020, p. 6, figure 4, <https://lao.ca.gov/Publications/Report/4144>.

to be prepared for college or a career than higher-income students of the same race or ethnic makeup (see Table 4.1).

For reasons of race and geography, California schools are increasingly segregated along class lines. Perhaps nowhere else is the broad array of social services that underserve disadvantaged Californians, and the broad array of reforms needed to combat poverty, more apparent than in education. Redlining and racism in housing has concentrated disadvantaged communities in specific areas where lackluster schools hold back young peoples' earning potential and where over-policing funnels individuals into the criminal justice system. Education is a key policy

area in the effort to alleviate poverty, particularly because it helps people increase their ability to get well-paying jobs that they can use to support themselves and their families. It is impossible to deny the extent to which educational opportunities divide our society.

Studies consistently find that students from schools attended mostly by poor children have lower levels of academic achievement than those from schools attended by more affluent students. Of course, some might blame this disparity on the many other social problems that disproportionately affect poor children—problems that no school, no matter how good, can remedy. Many teachers

Table 4.1

Educational attainment for other student groups

	Four-year cohort graduation rates	Share “deemed” prepared for college/career	College-going rate
All students	83%	42%	64%
Low-income youth	80%	34%	57%
Homeless youth	69%	24%	50%
Foster youth	53%	10%	48%
English learners	68%	15%	42%
Students with disabilities	66%	9%	45%

Source: Ned Resnikoff, “Narrowing California’s K–12 Student Achievement Gaps,” Legislative Analyst’s Office, January 31, 2020, p. 7, figure 5, <https://lao.ca.gov/Publications/Report/4144>.

complain that they are expected to make up for missing parents, poor nutrition, neighborhood violence, and other issues outside their control. They cannot be expected to do so. Nonetheless, the fact that those same poor children, facing those same social problems, perform better in schools in high-income neighborhoods is “one of the most consistent findings in research on education,” according to Gary Orfield and Susan Eaton of Harvard University.¹²

In fact, some studies show that a student’s educational achievement correlates at least as strongly with his or her classmates’ family income as with that of their own family.¹³ A dismal 18 percent of children nationwide from low-income families score “proficient” on scholastic achievement tests, compared to roughly 48 percent of the rest of the student population. However, in schools with high concentrations of low-income students, only 7.4 percent of low-income students—less than half as many—score “proficient.”¹⁴ As Robert Putnam writes in *Our Kids*, “There’s no denying that rich and poor kids in this country attend vastly different schools,” a fact that he blames in part for “the growing youth class gap.”¹⁵

If class divides our government school system, so does race. Sixty years after *Brown v. Board of Education*, our schools are once again becoming segregated by race. The typical Latino student in California, for instance, attends a school with Latino enrollment about 15 percent higher than the statewide average.¹⁶ Schools with nonwhite enrollments of 99–100 percent also increased to 7.3 percent from 4.9 percent of total California schools during the same timeframe.

A report from the University of California Academic Senate concludes that much of the academic achievement gap for students of color is the result of systemic racial and class inequities.¹⁷

These inequities are not simply a question of funding. Although disparities between school districts’ revenues (the result of different property tax bases) may be a source of inequity in other states’ education systems, this is less of an issue in California. For historical reasons, including Proposition 13’s limits on property taxes, state funding accounts for a larger share of school district funding than local property tax revenues, allowing for a more equitable distribution of funding than is the case in other states.¹⁸

California’s most recent move toward funding students directly is its Local Control Funding Formula (LCFF). Signed into law in 2013 and largely implemented in time for the 2015–2016 school year, the LCFF sets funding for school districts using a per-student base grant from the state, with additional supplemental funding for each student in a high-need category (for example, non-native English speakers or low-income students) and even further funding if there is a high concentration of high-need students.¹⁹

Indeed, California’s struggle to effectively educate disadvantaged students appears to be a function of structural issues rather than simply a lack of funding.

Moreover, the link between funding and student achievement is tentative at best. Eric Hanushek, perhaps the leading expert on this issue, has studied the effect of per-pupil expenditures on academic outcomes, finding

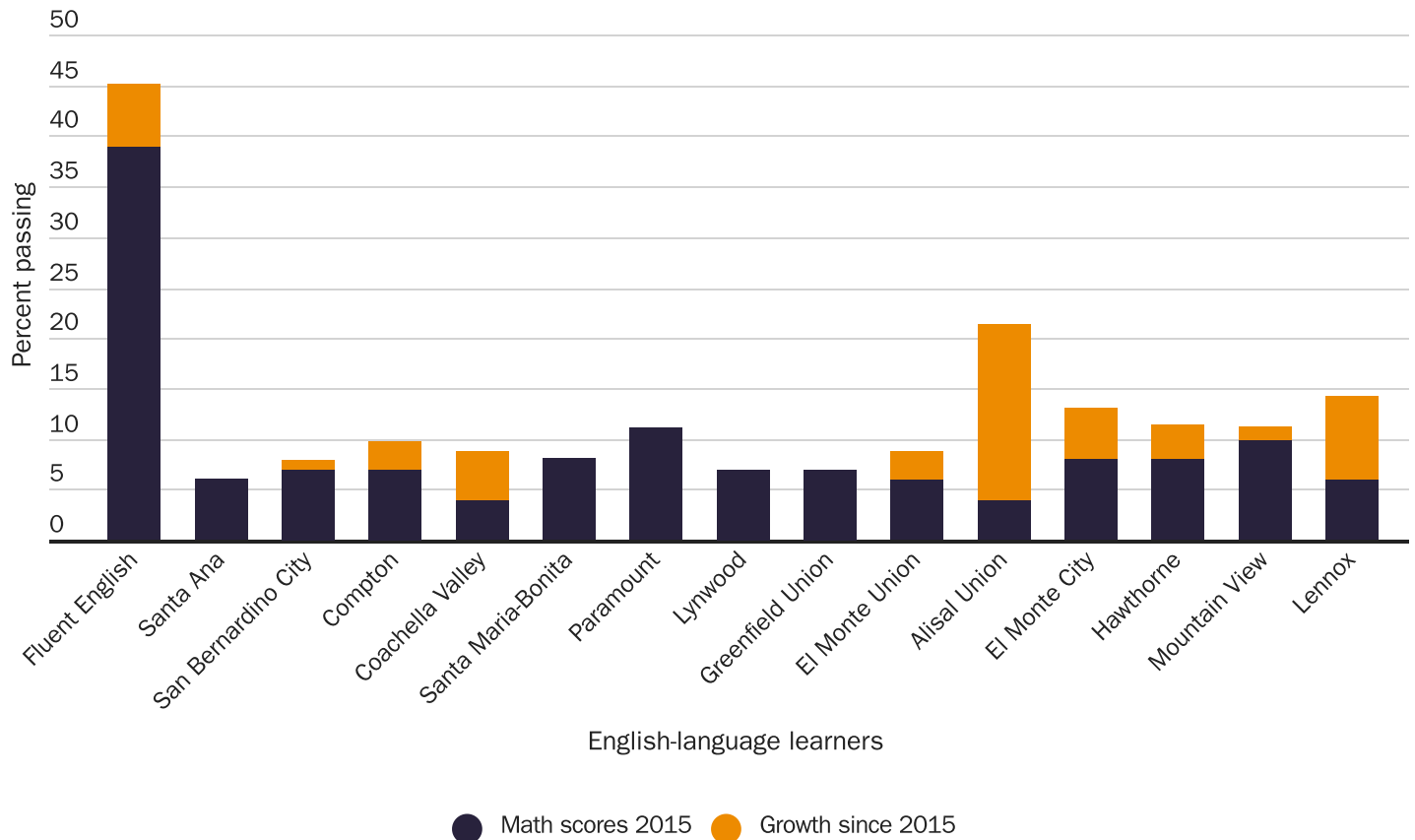
either no relationship or a relationship that is weak or inconsistent, while some other scholars find benefits in specific cases, depending on how the money is used.²⁰ Despite the lack of consensus, leading researchers on the issue agree that any effect of per-pupil expenditures on academic outcomes depends on how the money is spent, not on how much money is spent. For example, Hanushek concludes that “few people . . . would recommend just dumping extra resources into existing schools,”²¹ while from the other side of debate, Larry Hedges and Rob Greenwald note that “the results do not provide detailed information on the educationally or economically efficient means to allocate existing and new dollars.”²²

California’s experience with per-pupil funding is similarly mixed. Some low-income school districts have seen an improvement in outcomes after receiving additional funding through LCFF, while others have stagnated or even seen a decline in performance (see Figure 4.4).²³

In addition, a state auditor’s report shows serious transparency issues that have made it nearly impossible to determine whether districts are spending their additional funding on disadvantaged students as intended.²⁴ The audit also finds a loophole allowing districts to treat any unspent supplemental and concentration funds in a given year as base funds the following year, which can be used for general purposes. Both the California legislature and the state Board of Education have said that they are working to resolve these issues, but improvements remain to be seen.²⁵

It would be unfair, of course, to attribute all of California’s academic problems to failures of its public school system. Many other socioeconomic factors play important roles. There is also significant overlap between poorly performing schools and patterns of housing segregation based on both race and income. Regardless, the state shouldn’t continue to throw money at the existing system without fundamental reforms.

Figure 4.4
Math test scores for English-language learners



Source: Ricardo Cano, “Mind the Achievement Gap: California’s Disparities in Education Explained,” CalMatters, February 3, 2020.

THE IMPACT OF COVID-19

One of the most interesting things about the COVID-19 pandemic is the way it has exposed flaws in so many government institutions. Many of California's long-standing problems, including in housing, the criminal justice system, and business regulation, have been both exacerbated and highlighted by COVID-19 and the response to it. In particular, the pandemic has made it difficult to ignore problems with the state's public school system.

Most California public schools closed in March 2020 and did not return to in-person learning until at least April 2021. Even where schools did reopen, many districts only partly reopened, leading California to have one of the lowest rates of in-person schooling. As of September 2021, the Delta variant of COVID-19 has raised significant questions about whether the pace of reopening will continue.²⁶

“The COVID-19 crisis has further exposed, among other problems, the ways that California's educational system marginalizes disadvantaged students and limits the schools that perform best for them.”

School closures are harmful to children in many ways. Children suffer psychologically from the absence of contact and socialization. They are less able to build relationships with their teachers, and studies show that academic performance declines substantially during prolonged school closures.²⁷ Parents also often must sacrifice work and income to stay home and care for school-age children.

All these problems are particularly severe for low-income and minority students, who frequently lack access to broadband internet and other “study from home” essentials. A McKinsey report predicts that white students will be set back 4 to 8 months' worth of learning as a result of COVID-19-related school closures, while students of color could be set back 8 to 12 months.²⁸

The COVID-19 crisis has further exposed, among other problems, the ways that California's educational system marginalizes disadvantaged students and limits the schools that perform best for them. On the other hand, these revelations provide an opportunity to get things right for the future and build back a more inclusive society.

RECOMMENDATIONS

Remove Barriers to the Growth of Charter Schools and Other Alternatives to Traditional Education Models

Specifically, lawmakers should eliminate the LCFF funding gap between districts and high-need charter schools.

Roughly 10 percent of California children attend charter schools, with a higher rate of African American enrollment than in traditional public schools.²⁹

California charter schools generally outperform traditional public schools, particularly for disadvantaged students. A study by the Center for Research on Education Outcomes at Stanford University found that “charter students in poverty have growth equivalent to 14 more days of learning in reading and 29 more days of learning in math than their [traditional public school] peers.” Another study by Policy Analysis for California Education came to a similar conclusion.³⁰

A 2019 study by the University of Southern California and Innovate Public Schools found that charter schools made up 27 percent of the top performing schools in Los Angeles compared to about 18 percent of schools overall and 57 percent of San Francisco Bay Area schools, using criteria such as math and reading scores, suspension rates, and completion of the so-called A–G requirements for admission to the University of California system. African American and Latino students in particular had a much higher A–G completion rate in charter schools than did their peers in traditional public schools.³¹ And a report by the California Charter Schools Association found that African American and Latino graduates of charter schools not only apply to University of California schools at a higher rate but also have

nearly twice the acceptance rate of minority graduates of traditional public schools.³² Other studies are more ambiguous, and certainly there are poorly performing charter schools, but the body of research suggests that charter schools are one of the brighter spots in California's education system, especially for low-income families.

Despite this, California remains surprisingly hostile to charter schools. The most frequent complaint is that charter schools somehow harm overall district finances, thereby depriving traditional public schools of funding. However, an overwhelming body of research shows that, to the extent that charter school expansion has any ill effects on districts' fiscal situations, these can be easily offset by refund programs.³³ On the other hand, charter-related challenges account for a minuscule share of school districts' fiscal troubles overall.³⁴

At one point in 2019, the California State Assembly considered legislation to establish a moratorium on all new charter schools. While the moratorium was ultimately rejected, the legislature did enact new restrictions to slow the spread of charter schools, including AB 1505, which gives school districts more authority to reject charter applications that they feel are redundant or would harm the district's finances. The legislature also passed AB 1507, which prohibits charter schools from operating outside their authorizing district in most situations.³⁵

Charter schools are also underfunded compared to traditional public schools. Traditionally, schools are funded through local property taxes, but this has left low-income communities, where property values are low, at a severe disadvantage compared to their wealthier neighbors. This problem was further complicated by California's Proposition 13, which held down property taxes, leading the state government to step in to provide school funding that would have otherwise come from property taxes.

California has made a number of reforms to school financing over the years, but the most recent major school financing reform was 2013's LCFF, which was designed to reduce disparities in education funding between districts while also providing additional support to those districts with high concentrations of disadvantaged students. Using the LCFF, the state provides districts with a base grant per student to help equalize funding between districts and

provides additional funding to districts with concentrations of high-need students.

The LCFF treats charter and traditional schools similarly in terms of the base grant. However, the LCFF caps the amount of supplemental funding that some charter schools can receive for high-need students. This cap impacts roughly a third of charter school students and reduces charter schools' supplemental funding allowance by roughly 20 percent compared to what similar traditional schools receive. This disparity is even greater—as much as 24 percent in some cases—for those charter schools with the highest concentrations of disadvantaged students.³⁶

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Yet the evidence shows that any impact that charter school funding has on traditional school funding is negligible—if it can be found at all. According to some reports, the disparity between charter and traditional school funding was created to discourage districts from packing disadvantaged students into charter schools.³⁷ While that is clearly a concern, especially as it could potentially exacerbate segregation, the right approach to this potential problem is not to place an undue financial burden on schools that serve high concentrations of disadvantaged students but to ensure that these students and their families have access to high-quality schools.

Establish a Tuition Tax Credit Program to Finance Scholarships for Low-Income Families to Attend the School of Their Choice

While charter schools offer an alternative to traditional public schools, they are still, in the end, government-run schools. Government oversight puts limits on how innovative charter schools can be. Therefore, an approach that is liable to yield even greater fruit for poor and disadvantaged

students is to open America's large and thriving private education sector to them.

First, and perhaps most important from the standpoint of alleviating poverty, private school choice would enable low-income families to take advantage of better schools. Although the quality of private schools is far from uniform, the evidence from more than 30 years of studies shows that private schools consistently outperform public schools in terms of test scores, graduation rates, future income, lower violence levels, parental satisfaction, and other critical metrics.³⁸

“According to April 2021 polling by the Public Policy Institute of California, 42 percent of parents surveyed reported that they would send their youngest child to private school if they could.”

Currently, some 664,231 students attend 3,915 private schools in California.³⁹ However, the cost of attending these schools can be quite high. The average cost of attending a private elementary school in California is more than \$11,080; the cost of attending a private secondary school is more than \$19,830.⁴⁰ As a result, only about 13 percent of students enrolled in the state's private schools come from low-income households. In effect, wealthy Californians can escape underperforming schools, while low-income families remain trapped.

One way to rectify this disparity of opportunity is to provide parents with financial assistance if they wish to send their child to a private school. Essentially, this means allowing education funding to follow the child regardless of where that child attends school.

The best way to open more educational opportunities to low-income Californians would be to establish a program of tuition tax credits or educational savings accounts. These programs provide tax credits to individuals and corporations that contribute to a scholarship fund operated by private charitable foundations. These scholarships are then offered

to parents to cover tuition, fees, and other expenses needed to send their children to private school or, in some cases, a public school in another district. In this way, these scholarships operate much like vouchers, with the critical difference being that the money contributed to the scholarship fund never passes through the state treasury or any other publicly managed account.⁴¹ Today, 19 states operate tuition tax credit programs, and roughly 225,000 students have received scholarships through those programs (see Figure 4.5).⁴²

Many Californians want their children to have the expanded access to private schools that a tuition tax credit would provide: according to April 2021 polling by the Public Policy Institute of California, 42 percent of parents surveyed reported that they would send their youngest child to private school if they could.⁴³ Notably, 14 percent said that they would choose public charter schools, a higher share than the roughly 10 percent of California students enrolled in charter schools, so Californians appear to be interested in increased access to charter schools as well.⁴⁴

A measure to establish a tuition tax credit program in California will likely be on the 2022 ballot.⁴⁵

Restructure Future Pension Obligations to Shift More Resources to the Classroom

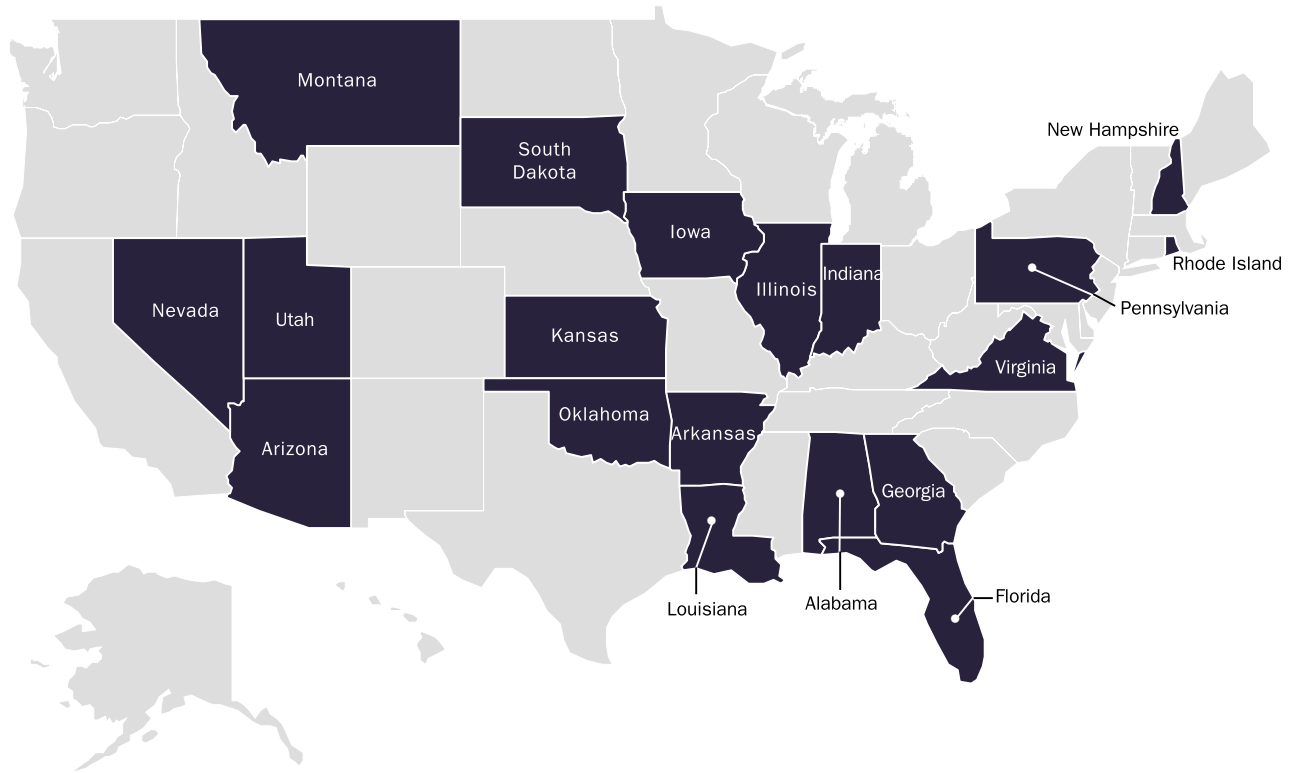
Whatever one thinks about the level of total education funding in California, increases in spending do not necessarily translate into more resources in the classroom. Thus, we see a 27 percent increase in education spending since 2012, while teacher salaries (to cite one example) have risen by only 7 percent.⁴⁶

The biggest single culprit for this funding drain is pensions. Today, district contributions to the California State Teachers' Retirement System (CalSTRS) consume 19.1 percent of payroll, up from 8 percent as recently as 2013 (see Figure 4.6).⁴⁷

Public employee pensions in California are troubled across the board, but the education system's pension obligations are especially problematic. Despite rising contributions, the program faces more than \$100 billion in unfunded obligations. To put that in perspective, those unfunded obligations exceed the entire amount of the state's K–12 education funding for 2020.⁴⁸

Figure 4.5

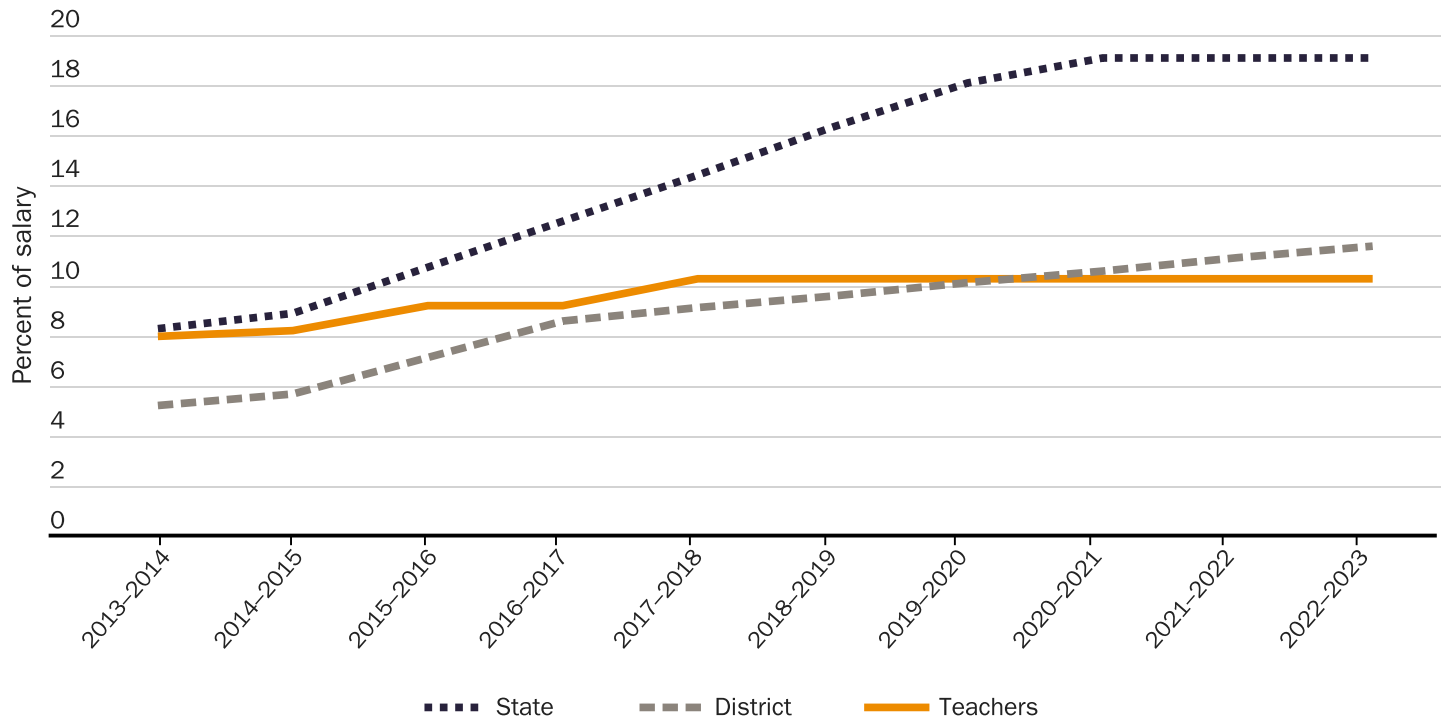
Tuition-tax credit systems by state



Source: "School Choice in America," EdChoice, <https://www.edchoice.org/school-choice/school-choice-in-america/>.

Figure 4.6

Teacher pension plan payments in California; portion paid by each group



Source: Yuxuan Xie and Justin Allen, "California Teacher Pension Payments 2013-2023," EdSource, March 19, 2019, <https://edsources.org/2019/new-data-detail-soaring-costs-of-california-school-pensions-2/610118>.

California is one of several states whose teachers don't participate in the Social Security system. Rather, they receive their full retirement benefits through the CalSTRS system. The benefits are fairly generous. Teachers who retire at age 60 after 25 years in the classroom receive 50 percent of their final pay annually; that amount increases to 60 percent if they taught for 30 years.

California's Supreme Court has repeatedly ruled that public pension benefits in effect on the date of hire are a contract creating a vested right for employees, meaning that existing benefits can't be cut and that employee contributions can't be raised without compensation.⁴⁹ But those pensions were promised at a time when the plan's investments were riding high. That changed with the Great Recession, when the market's downturn wiped out nearly 25 percent of the fund's value in 2009.⁵⁰ Since then, the system has compounded the problem in an attempt to obfuscate the true size of the shortfall by relying on overly optimistic estimates for future returns.⁵¹

The court-imposed limits on changes to benefits and contributions put both the state and local districts in a vice. Still, there are some steps that can be taken to reduce future obligations and allow more education funds to go directly to classrooms and students.

To California's credit, then Governor Jerry Brown and the legislature passed the Public Employees' Pension Reform Act (PEPRA) in 2013 and a CalSTRS funding plan (AB 1469) in 2014 with the goal of averting long-term fiscal crises stemming from public pensions.⁵² The combination of cost savings and increased pension contributions mandated by PEPRA and AB 1469 will, in theory, ensure that CalSTRS is fully funded by the mid-2040s, which is when the AB 1469 funding plan expires.⁵³ The goal of these reforms—a fully funded pension system—is laudable, but several structural challenges remain.

First, and perhaps most importantly, despite these reforms, it is still not a foregone conclusion that CalSTRS will be fully funded on time—or ever. A variety of possibilities, including a downturn in the stock market or decreased tax revenues, could knock CalSTRS off its path toward fully funded status. When these events occurred in 2020 as a result of the coronavirus pandemic, not only did CalSTRS' investments fall short of expectations, but the state delayed a planned increase

in contributions to the fund. Combined, this increased CalSTRS' shortfall between assets and liabilities.⁵⁴

Second, the CalSTRS funding plan requires spending more on pensions, which while necessary to keep CalSTRS solvent does not address the concern that pension costs crowd out classroom spending. While the ongoing challenge of pension costs will be a factor in future decisionmaking for all California school districts, other analysts suggest that this challenge will pose a greater problem for high-poverty districts and disadvantaged students.⁵⁵

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To put California's school districts on sounder fiscal footing, and to ensure that money is spent most efficiently toward the goal of educating students, it's worth asking some fundamental questions about public pensions, and possibly making some structural changes. Policymakers need to reevaluate the purpose of public pensions. Clearly pensions are one part of a broader package of teacher compensation, which is intended to recruit and retain good teachers. It is a dubious proposition that pension spending is as efficient toward the goal of recruiting and retaining talented teachers as other components of teachers' compensation packages are: teachers receive the benefits of pension spending years or decades in the future, while the economic truth remains that a dollar today is worth more than a dollar tomorrow.

This is not to say that retirement benefits should be entirely eliminated from California teacher compensation packages, but some share of spending that goes toward pensions—projected to reach about 40 percent of payroll—would be better spent on benefits that are more

efficient at recruiting and retaining talented teachers.⁵⁶ Given that California policymakers have a duty to spend taxpayers' money in the most efficient way possible, they must consider how to decrease pension costs going forward so that more money is available for uses that directly support students' learning.

As previously noted, pension obligations for currently serving teachers cannot be retroactively revised, so any restructuring would apply to future hires. While this would seem to limit potential savings, it's important not to understate the savings that can be gained from forward-looking pension reform: efforts to limit the growth of overall pension obligations will mean that less money needs to be set aside to fund these obligations.

There are many options for controlling pension costs. One of the most suggested options is switching from the current defined-benefit program to a defined-contribution—commonly called “401(k)-style”—program, which is standard in the private sector.

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Switching to a defined-contribution program has several benefits: perhaps most importantly, because contributions to the plan are made at the same time as employees earn benefits, there is no possibility of an unfunded liability. Defined-contribution programs also allow employees greater flexibility. These plans commonly offer different investment options that allow the employee to choose a portfolio in line with their personal financial situation and goals. Employees can also more easily keep their benefits (i.e., their savings account) if, for instance, they work in a different district or choose a different job. A noteworthy example is

the defined-contribution plan offered by the University of California system.⁵⁷

From a fiscal perspective, beyond the benefit of fully funding retirement liabilities at the time they are created, defined-contribution plans also share investment risks and returns more fairly between taxpayers and employees. One of the key problems of CalSTRS is that it relies on estimates of financial market returns that are, at best, an educated guess: any time the stock market drops, the gap between CalSTRS assets and liabilities widens substantially, placing the program farther from the goal of full funding. On the other hand, unexpectedly high returns on CalSTRS investments are not passed on to program members as they would be under a defined-contribution program. And while the exact costs of a defined-contribution plan depend on the details of that plan, there is a potential for cost savings in the billions of dollars per year for local governments.⁵⁸

All that said, previous reform attempts have shown that both a defined-contribution and a hybrid defined-benefit/defined-contribution plan are politically difficult in California. A brief review of reform attempts includes a hybrid plan as a point of PEPRA, the Little Hoover Commission's recommendation to institute a hybrid plan, as well as a more recent proposal from Assemblyman Kevin Kiley, which would have created a defined-benefit plan and incentivized participation using higher salaries for plan members.⁵⁹ PEPRA, as enacted, omitted Governor Brown's hybrid plan proposal, and Kiley's proposal died in committee. Nationwide, however, there are several reforms that can serve as examples for California.⁶⁰ The federal government, for instance, uses a hybrid plan and enrolls employees in Social Security (from which many California public employees are excluded). Some states also provide workers a choice between different pension plan options.

PEPRA and the CalSTRS funding plan are admirable first steps in what will be a long-term effort to ensure fiscal solvency for California's schools. These laws put California's public pension program on a sounder fiscal footing, but the current situation is not sustainable. Pension spending equal to 40 percent of teacher salaries and a new gap between assets and liabilities every time the stock market

underperforms is simply not a responsible long-term plan for California's teacher pensions. Reforming the system would provide more choices for teachers, more realistic financial planning for districts, and more resources for students.

Increase Emphasis on Vocational and Technical Education, and Make Greater Use of Apprenticeships

California has one of the more robust apprenticeship programs in the country. Currently, some 74,000 Californians are enrolled in one of 1,400 such programs, in such fields as automotive services, information technologies, health services, and hospitality, among others.⁶¹ Still, that represents less than 4 percent of Californians aged 18–24 who do not attend (or have not graduated from) college.

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To be eligible for an apprenticeship, Californians are generally required to be at least age 18 and a high school graduate. Yet research suggests that allowing high school students to participate in apprenticeships can lead to better job prospects and higher wages after graduation. Moreover, participation in such programs tends to increase the likelihood of high school graduation for low-income students by as much as 7 percentage points.⁶²

In addition to apprenticeships, California's education system should place greater emphasis on vocational, technical,

and other education programs that will better prepare students for a career if they do not go on to college.

Currently there are 74 public vocational schools in California, with a total enrollment of 470,000.⁶³

Notably, many of these resources exist in California's community colleges. While California's community colleges provide an important resource, particularly for disadvantaged communities, and reforming education past the 12th-grade level is beyond the scope of this paper, there is a strong argument for moving some of these vocational resources to high schools. Clearly, moving vocational opportunities to earlier in a student's educational path helps the student gain earning potential earlier in life, helping them enter the workforce and support themselves sooner, instead of relying on family or government support while they gain job training after high school.

Furthermore, the apprenticeships and vocational training that do exist are imperfect. As others have noted, key challenges nationally include connecting potential workers to apprenticeships and more closely integrating education and apprenticeship programs.⁶⁴ Although there is progress to be made, California is well-placed to make policy changes that will expand apprenticeships and vocational education and, through doing so, increase disadvantaged Californians' earning potential. In part because vocational training is already situated in the community college system, California can implement a dual enrollment model, in which students can be enrolled in both high school and college classes, for internship and vocational training programs. This model has worked elsewhere in the country, and while dual enrollment is an option for some California students, it is not implemented on a wide scale for vocational fields.⁶⁵

Shifting to a dual enrollment model and locating some services for apprenticeship participants in high schools would also expand the opportunities for students to connect with apprenticeship programs, helping to overcome a key challenge that apprenticeship programs face in trying to attract participants.

Notes

1. Patrick Murphy and Jennifer Paluch, “Just the Facts: Financing California’s Public Schools,” Public Policy Institute of California, November 2018.
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