GETTING DOWN TO FACTS II

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Outcomes and Demographics of California's Schools

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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 research brief is one of 19 that summarize 36 research studies that cover four main areas related to state education policy: student success, governance, personnel, and funding.

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PACE Policy Analysis for California Education

This brief summarizes five *Getting Down to Facts II* technical reports on the outcomes and demographics of schools in California:

Aims and Purposes of a State Schooling System: The Case of California
Harry Brighouse and Kailey Mullane, September 2018.

College Readiness in the Era of Common Core
Michal Kurlaender, Sherrie Reed, K.A. Kramer, and Briana Ballis, September 2018.

Setting the Stage: Trends in Student Demographics and Enrollment in California
Sarah Reber and Demetra Kalogrides, September 2018.

A Portrait of Educational Outcomes in California
Sean F. Reardon, Christopher Doss, Josh Gagné, Rebecca Gleit, Angela Johnson, and Victoria Sosina, September 2018.

A Portrait of California Career Technical Education Pathway Completers
Sherrie Reed, Shaun M. Dougherty, Michal Kurlaender, and Joanna Mathias, September 2018.

These and all GDTFII studies can be found at www.gettingdowntofacts.com.

Introduction

Public education in California is a study in contrasts. By many measures, schools are improving and students are doing better. But look deeper and there are significant differences in educational opportunities and, therefore, outcomes based on race, ethnicity, family income, and language. These reports describe the gaps that still exist among schools and among districts in the state. One study provides the first comprehensive comparison of patterns in educational outcomes between California and the rest of the country.

These five reports examine both the challenges and the promising efforts to achieving California's vision of providing an equitable public education—a vision of preparing every student with the critical thinking skills, knowledge, and social-emotional skills to succeed in higher education, to qualify for careers in high-demand fields, and to become responsible and engaged citizens.

Measuring the outcomes and making comparisons is a complex task given the state's size and unique diversity. With 6.2 million students, California has 1 million more students than Texas, the next largest, and is the only state with a minority white student population.

The challenge of achieving equity is compounded by the size, diversity, and social conditions of California's student population, including persistent poverty, especially within some ethnic and racial groups; a large population of English language learners (ELLs); and widespread segregation of schools.

KEY FINDINGS

Student and School Characteristics:

- California's student population doesn't look like the rest of the country.
- Social and economic conditions are improving for California's children.
- Poverty rates are persistent, with large gaps by race, ethnicity, and achievement.
- California schools are highly segregated by race, ethnicity, family income, and language.
- More than half of California's high schools offer career technical education programs (CTE).

Student Outcomes:

- Student outcomes are improving.
- Substantial achievement gaps remain.
- Compared with students in other states, California students perform worse on average on academic measures and have lower graduation rates.
- The college readiness exam indicates that a majority of California's 11th grade students are not prepared for higher education.
- Career technical education programs provide college and career readiness opportunities for diverse students.
- California does not have good data systems for tracking students' educational trajectories.

Summary of Key Findings: Student and School Characteristics

California's student population doesn't look like the rest of the country

California school demographics are vastly different from other states. More than 57% of public school students are Hispanic, while just over 25% of students are white. English learners compose 21% of California students—more than in any other state.

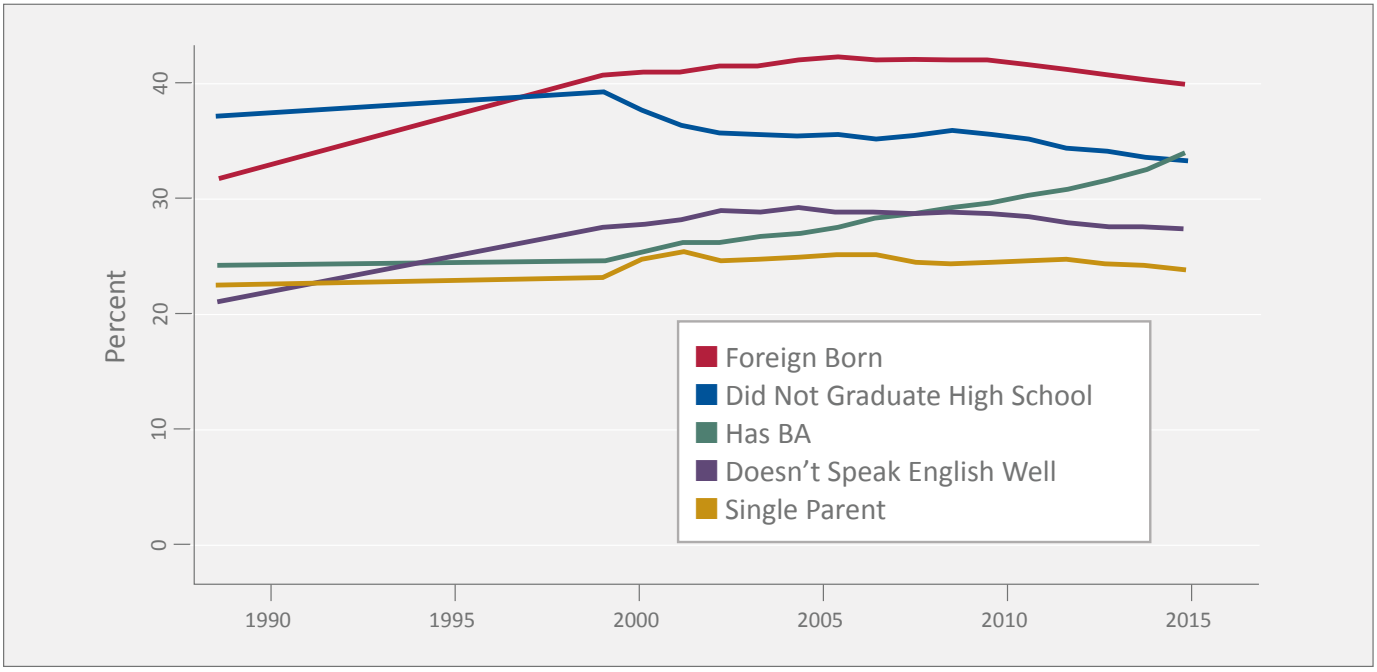
Social and economic conditions are improving for California children

The socioeconomic conditions of California's public schoolchildren have improved during the past 15 years. As Figure 1 shows, parents are becoming more educated. In 1990, 24% of children had at least one parent with a bachelor's degree or higher; that grew to 34% in 2015. At the same time, the percentage of students with a parent who did not complete high school declined from 36% in 1990 to 33% in 2015.

Children are also slightly less likely to be living in single-parent families and, since 2000, there has been an increase in the percentage of children whose parents are fluent in English.

Racial and ethnic biases in discipline have become a significant factor in educational opportunity. African American and Hispanic students are significantly more likely to be suspended or expelled for less serious infractions than are their white classmates. When students are not in school, they are not learning; and the less time they spend in school, the more likely they are to drop out. California lawmakers and some school districts have been at the forefront of this issue, enacting state legislation and creating district policies that prohibit the suspension of students for "willful defiance," a broad category that had been applied disproportionately.

Figure 1: Parental Characteristics for California Children Attending Public Schools



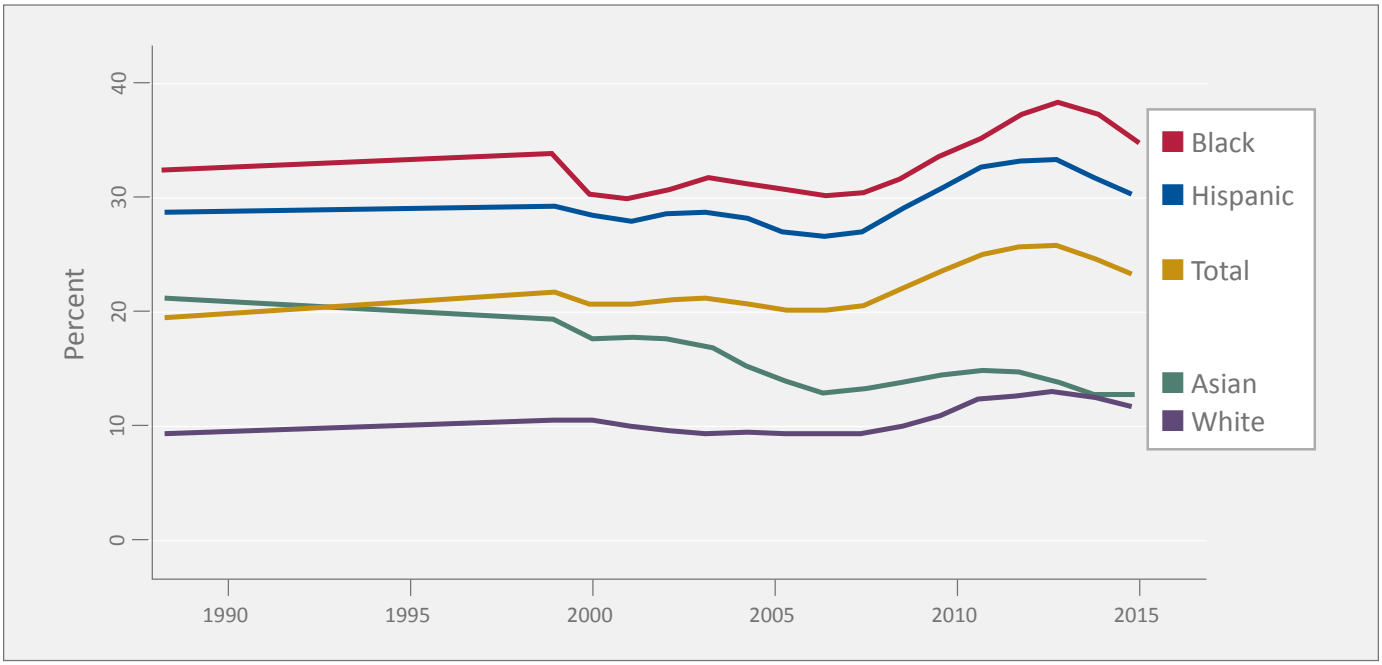
Data: Census/American Community Survey, 3 Year Moving Averages.

Poverty rates are persistent, with large gaps by race, ethnicity, and language

About one in five schoolchildren lives in poverty, according to the Current Population Survey's Annual Social and Economic Supplement. During the recession, the child poverty rate in California increased from 17% in 2008 to nearly 24% in 2012. It is falling again, though it has not returned to the prerecession level. Figure 2 (on the following page) shows trends in two measures of economic disadvantage among public schoolchildren in California since 1990.

Poverty rates differ by race and ethnicity, with black and Hispanic students more likely to be in families living at or below the poverty level than their white and Asian peers. With the exception of Asian students, the gap in poverty rates has remained fairly constant over time. When they rise or fall, they do so in parallel.

Figure 2: Trends in Poverty Rates, by Race/Ethnicity



Data: Census/American Community Survey, 3 Year Moving Averages.

California schools are highly segregated by race, ethnicity, family income, and language

Because of their higher poverty rates, Hispanic students are more likely than other groups to attend segregated schools that are disproportionately low income. On average, Hispanic students attend schools that are 70% Hispanic, even though they compose just 56% of the population, and more than 60% of the students are eligible for free or reduced-price meals. In contrast, the average white student attends a school that is 35% Hispanic and 48% white, and has roughly half the poverty rate of predominately Hispanic schools.

More than half of California's high schools offer career technical education programs (CTE)

Career technical education is increasingly seen as important to meet the changing needs of California's labor market. CTE is replacing traditional vocational education, which was historically seen as a way to track lower-achieving, nonwhite students into lower-paying, nonacademic careers.

Those perceptions are changing as CTE matures from single courses to career academies, which are multiyear, full-day programs that integrate academic and technical education organized around an interest area, industry sector, or career field. Today, approximately 70% of California's traditional public high schools offer CTE pathways, and about 37% of students participate in or complete a pathway program.

The most common CTE programs are agriculture and natural resources; arts, media, and entertainment; business and finance; health science and medical technology; energy, information, and communication technology; hospitality, tourism, and recreation; marketing, sales, and services; and engineering and architecture.

During the past two decades, California has invested heavily in CTE through hundreds of millions of dollars in competitive grants. However, it is hard to gauge the impact of these programs because of the state's

data limitations. For example, there is very little research comparing outcomes between similar students enrolled in CTE programs with those not enrolled. There is also limited knowledge of how well CTE is meeting workforce demands.

Summary of Key Findings: Student Outcomes

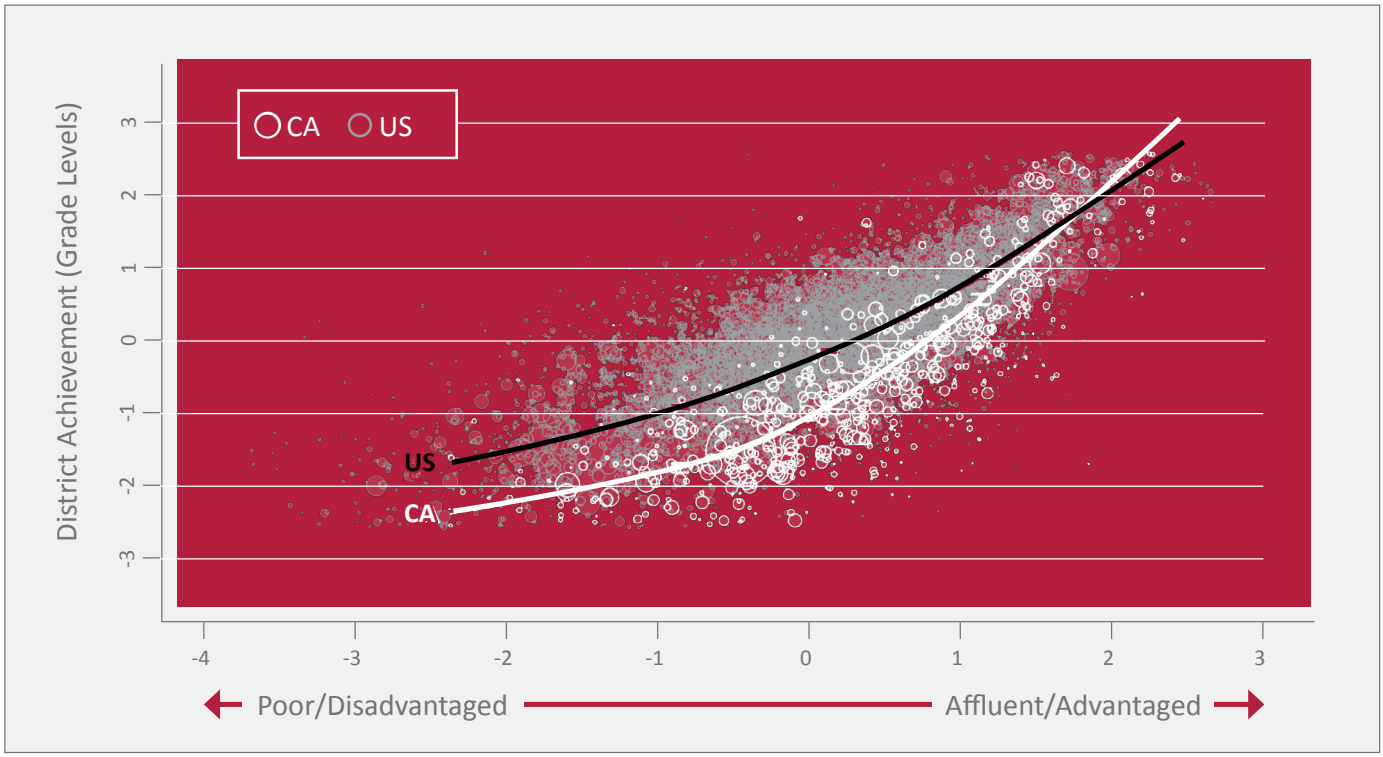
Student outcomes are improving

Student test scores are improving in California, the achievement gap is narrowing, and out-of-school suspensions and school expulsions are decreasing. The high school graduation rate improved from 79% in 2012, to 82% in 2015. It is still a bit lower than the national rate of just over 83%, but California's increases run across all races, ethnicities, income levels, and English learner status. All groups of students—with the exception of Hispanic students—are tracking above the national average.

Substantial achievement gaps remain among California students by subgroup and compared to other states

Despite the steady progress, California continues to lag other states on most measures, on average. California's 4th and 8th grade students score below the national average in reading and in math on the National Assessment of Educational Progress (NAEP). They are narrowing the gap in reading, but are still well below the national average. However, when California's scores are disaggregated by socioeconomic status (SES), affluent districts do score as well as similarly affluent districts in the rest of the country, while in nonaffluent districts, students score nearly a full grade level behind their peers nationwide (see Figure 3).

Figure 3: Achievement and Socioeconomic Status, All Students, 2015



Data: Stanford Education Data Archive (SEDA).

Over time, these gaps translate to real differences in adult outcomes. Test scores predict later outcomes including adolescent risky behaviors, future educational attainment, and adult income and employment.[1] They also predict college completion, which plays a strong role in shaping later-life earnings.[2]

The differences begin before children start kindergarten. However, after they start school, California students have a greater rate of improvement in average test scores than the rest of the country, and that growth rate is more equitably distributed. (The only exception is the wealthiest districts, which are on par with the rest of the country.)

These findings indicate that the disparities between California's low-income districts and the rest of the country are not a result of students in nonaffluent districts not learning as much; rather they suggest that children from poor families have fewer educational opportunities in early childhood, leading them to start kindergarten at a deficit.

The college readiness exam indicates that a majority of California's 11th grade students are not prepared for higher education

California has been working to improve college readiness for years, primarily by strengthening the alignment between the high school and college curricula. A voluntary college readiness section was added to the state's 11th grade standardized test to let students, and their families, know if they are on track to graduate with the grades and courses required for admission to the University of California and California State University.

The college readiness exam is now mandatory and included in the state's 11th grade Smarter Balanced Assessment, which is aligned to the Common Core State Standards. Early results show that California's K-12 education system is not adequately preparing students for college.

Using multiple sources of data, researchers tracked the first group of 11th graders who took the new exam in the spring of 2015 to learn how many enrolled in college, how well they did, and whether they continued at least until their second year. They found that just 30% of 11th grade students met the college readiness standards in English language arts (ELA) and in math. Nearly twice as many students were considered college-ready in English as in math. There were also significant gaps by race and ethnicity (see Figure 4 on the following page). Poor and English language learner students were least likely to be college ready.

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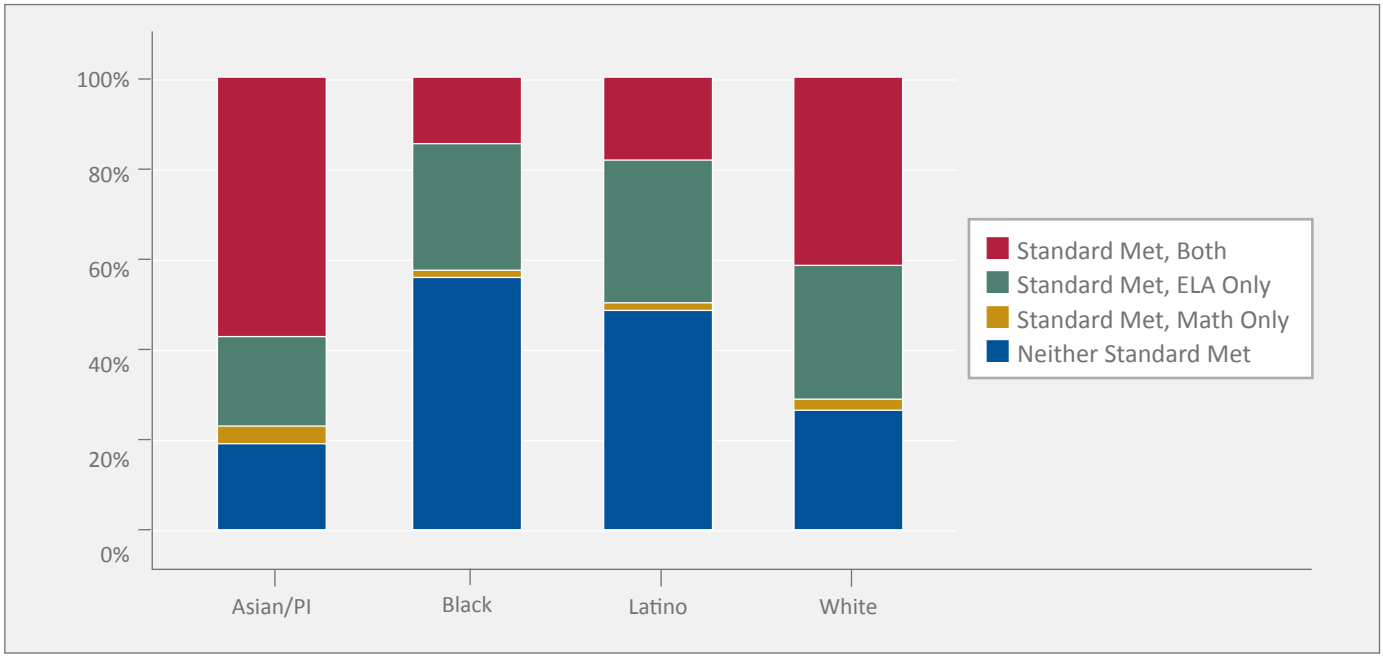
[1] Heckman, J. J., Stixrud, J., & Urzua, S. (2006). The effects of cognitive and noncognitive abilities on labor market outcomes and social behavior. *Journal of Labor economics*, 24(3), 411-482.

[2] Murnane, R. J., Willett, J. B., Duhaldeborde, Y., & Tyler, J. H. (2000). How important are the cognitive skills of teenagers in predicting subsequent earnings?. *Journal of Policy Analysis and Management*, 19(4), 547-568.

Figure 4: 11th Grade Smarter Balanced Assessment Achievement Levels, by Race/Ethnicity



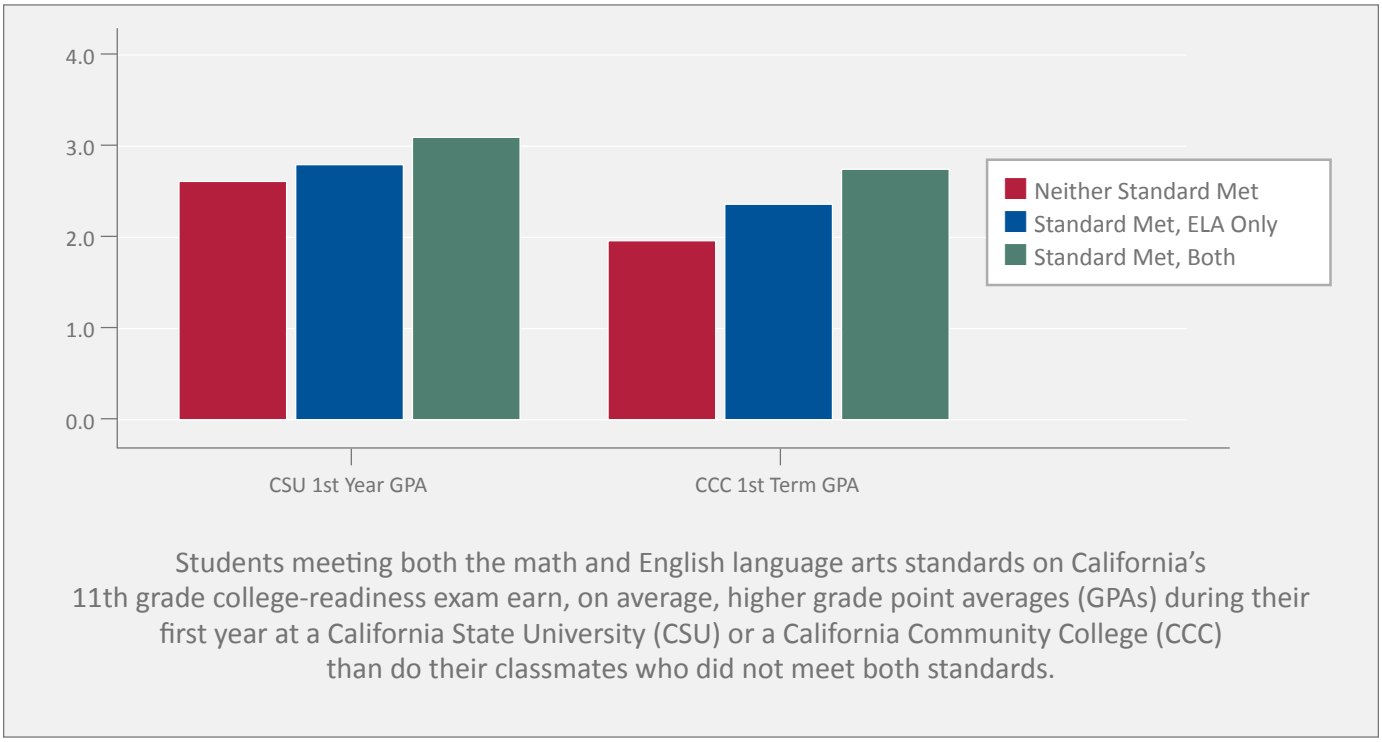
Data: California Department of Education.
Note: PI stands for Pacific Islander.

More than a third of 11th graders taking the test in spring 2015 enrolled in a California Community College (CCC), though half of them did not enroll full time. Enrollment was fairly even among racial and ethnic groups, but African American and Hispanic students were more likely to enroll in a basic skills class in math or English language arts. On average, 86% of these students continued on to a second year in community college.

High school students who met or exceeded college readiness standards were more likely to apply to California State University (CSU) or the University of California (UC). The CSU students have an average first-year grade point average (GPA) of 3.0, and 84% of them continue into their second year. The rates are lower for African American and Hispanic students.

In both CSU and community colleges, the students who met the college readiness standards did better academically (see Figure 5 on the following page).

Figure 5: College GPA for CSU and CCC



Students meeting both the math and English language arts standards on California's 11th grade college-readiness exam earn, on average, higher grade point averages (GPAs) during their first year at a California State University (CSU) or a California Community College (CCC) than do their classmates who did not meet both standards.

Data: California Department of Education, California State University Chancellor's Office, and California Community Colleges Chancellor's Office.

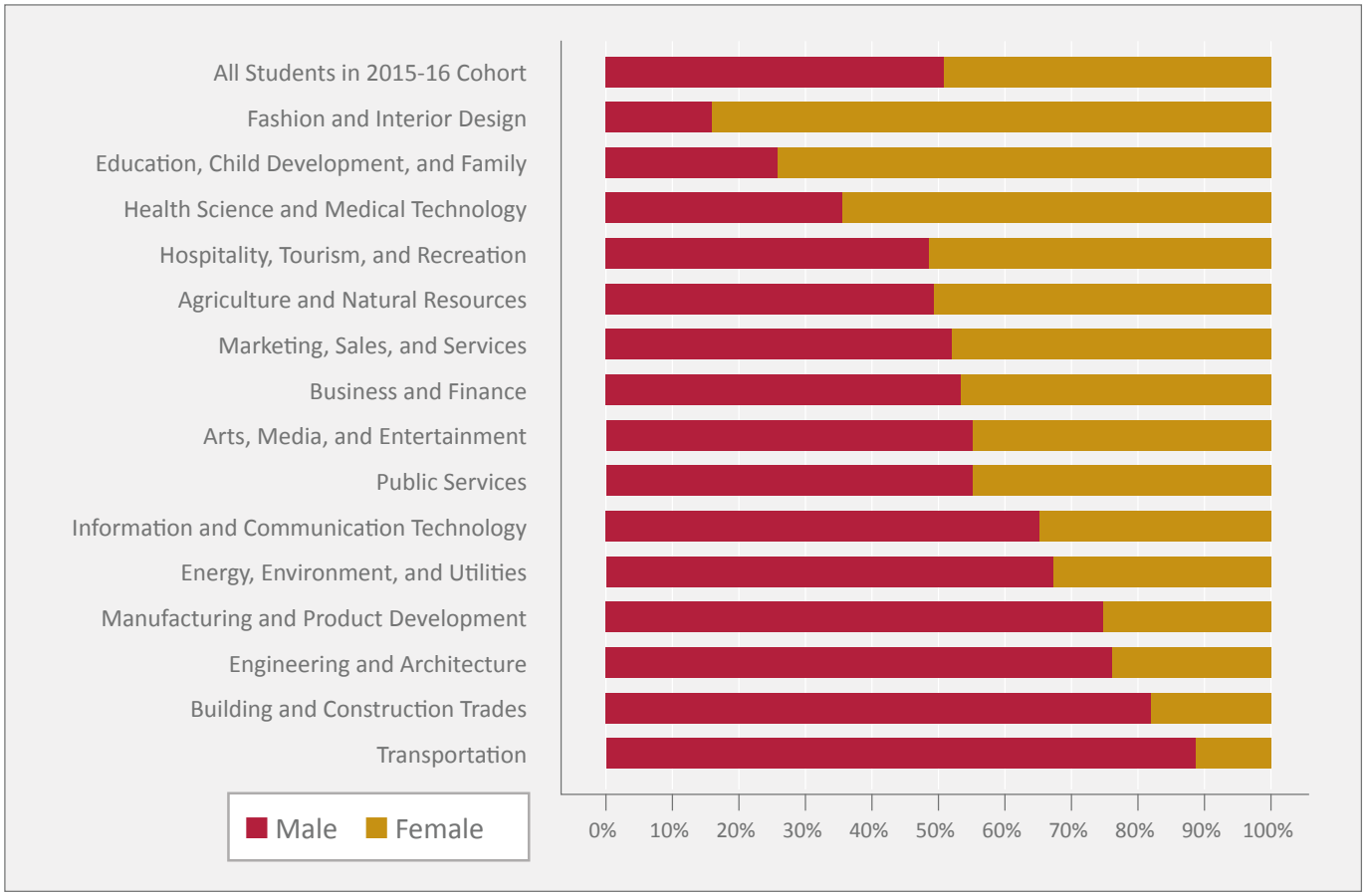
Career technical education programs provide college and career readiness opportunities for diverse students

Much of the research on the impact of career technical education on California students is descriptive and observational. However, randomized experiments conducted in other states and countries have found that students who complete CTE programs get higher grades, are more likely to graduate from high school and enroll in college, and earn higher salaries than similar students not enrolled in CTE.

However, if CTE pathway completion rates are used as an indicator of college and career readiness, the results in California are small. An analysis of students entering high school in 2012-13 found that only 18% completed a CTE pathway by 2015-16, their expected year of high school graduation.

In California, there are noteworthy differences in gender, race/ethnicity, English learner status, and socio-economic status among students who enroll in and complete CTE pathways. Students who participate in CTE are more likely to be male, Latino, English learners, and from socioeconomically disadvantaged backgrounds than students who do not participate in CTE pathways. As shown in Figure 6 (following page), male students tend toward programs focused on transportation; building and construction trades; and engineering and architecture. Female students, on the other hand, are disproportionately represented in industries such as education, child development and family services; health science and medical technology; and fashion and interior design. Similarly Latino, white, Asian, and African American students participate in the various CTE programs at differing rates.

Figure 6: CTE Pathway Completers, by Industry Sector and Gender



Data: Extracted from the California Longitudinal Pupil Achievement Data System (CALPADS) and provided by the California Department of Education.

It is not clear to what extent these differences are due to student choice or differences in schools. Most of California's traditional public high schools offer CTE programs, suggesting broad access for students of varying backgrounds. Yet, the vast majority of schools have only a small proportion of the student body completing CTE pathways. Only 150 schools have more than half of their graduates completing a pathway, and only 22 schools have 100% of their graduates completing CTE pathways. Schools with the greatest CTE participation serve a higher proportion of socioeconomically disadvantaged students and Latino students than schools without any CTE students, indicating that CTE may not be equally available to all students.

California needs better data systems

Data limitations impeded *Getting Down to Facts II* researchers. Some data simply do not exist, and others have to be culled together from individual sources. That leaves researchers without the ability to provide nuanced information that teachers need to meet students' differing needs and learning styles.

"Creating a detailed database is the greatest challenge in doing this work," write researchers Sean Reardon and Christopher Doss. "Obtaining detailed information on student achievement and linking it to fine-grained neighborhood and geographic variables is a challenge."

Without being able to measure the outcomes of reform efforts, there is no way to improve them.

Conclusion

California's standards show that the state cares about getting things right in public schools, but it needs clearer goals, measurements, and definitions in order to create effective policies that promote equitable opportunities for all students.

California schools are doing better, but they still lag behind the nation according to most measures. The rate of improvement must accelerate if students are to catch up to their peers across the country.

State education officials could set benchmarks of success to determine if students are learning what they need to be learning. California also needs to address the ongoing opportunity and achievement gaps by race, ethnicity, language, and income. All five reports found a consistent pattern of disparities in the impact of socioeconomic conditions on achievement, discipline, graduation rates, and college success.

Policymakers are moving in the right direction with regard to improving college and career readiness, but the reforms need more rigorous study to understand where they are working and where they are not. Well before college, one area that needs critical attention is kindergarten readiness. In this case, policymakers can already turn to a large body of research showing that quality preschool programs provide lasting benefits.

"In order to catch up to the nation, and ultimately surpass it, California must accelerate the growth it has seen over the past five to 10 years," write Reardon and Doss. Moreover, they write that given the significant gaps between affluent and low-income students, white and Asian students compared to black and Hispanic students, English language learners and non-EL students, policies ought to focus on targeting resources to students where they will have the greatest impact. A good place to start is by investing in high-quality pre-K programs to provide low-income children with educational opportunities to help erase the deficit that exists when they enter kindergarten.

DATA SOURCES

- California Community College Chancellor's Office.
- California Department of Education.
- California State University Chancellor's Office.
- Census/American Community Survey (Census/ACS): micro-level Census and ACS data downloaded from the IPUMS-USA website.
- Civil Rights Data Collection biennial survey, Office of Civil Rights, U.S. Department of Education.
- Common Core of Data: an annual survey of all public elementary and secondary schools and school districts in the United States.
- Commuting Zone Data: county-level data from the U.S. Department of Agriculture's Economic Research Service.
- Current Population Survey, Annual Social and Economic Supplement (CPS: ASEC).
- Early Childhood Longitudinal Study.
- ED Data Express, U.S. Department of Education.
- EDFacts, U.S. Department of Education.
- Stanford Education Data Archive.
- The California Longitudinal Pupil Achievement Data System (CALPADS).

Lead Author Biographies

Harry Brighouse is a professor in the Department of Philosophy and director of the Center for Ethics and Education at the University of Wisconsin, Madison. His work focuses on issues in political philosophy, philosophy of education, and educational policy.

Michal Kurlaender is a professor of education at the University of California, Davis, and the faculty codirector of Policy Analysis for California Education (PACE). Her research focuses on students' pathways to college; in particular, the alignment between K-12 and colleges and access to and success in higher education.

Sean F. Reardon is the Endowed Professor of Poverty and Inequality in Education and is professor (by courtesy) of Sociology at Stanford University. His research focuses on the causes, patterns, trends, and consequences of social and educational inequality.

Christopher Doss is an associate policy researcher at the RAND Corporation. He specializes in fielding descriptive and causal studies to understand the impact of policies and interventions in early childhood education, teacher and school leadership, and educational technologies.

Sarah Reber is an associate professor of Public Policy at the UCLA Luskin School of Public Affairs. Her research focuses on understanding the educational, social, and fiscal effects of policies regarding school desegregation, civil rights, and Title I.

Demetra Kalogrides is a research associate at the Center for Education Policy Analysis. She worked with Sean Reardon to create the data in the Stanford Education Data Archive (SEDA - seda.stanford.edu). She also studies issues related to teachers and principals using administrative and survey data from various school districts.

Sherrie Reed is the project and research director for The Partnership for Research on College & Career Readiness at the University of California, Davis. She is leading a multiyear research project evaluating college and career readiness standards in the era of Common Core State Standards.