

Where California High School Students Attend College

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Acknowledgements

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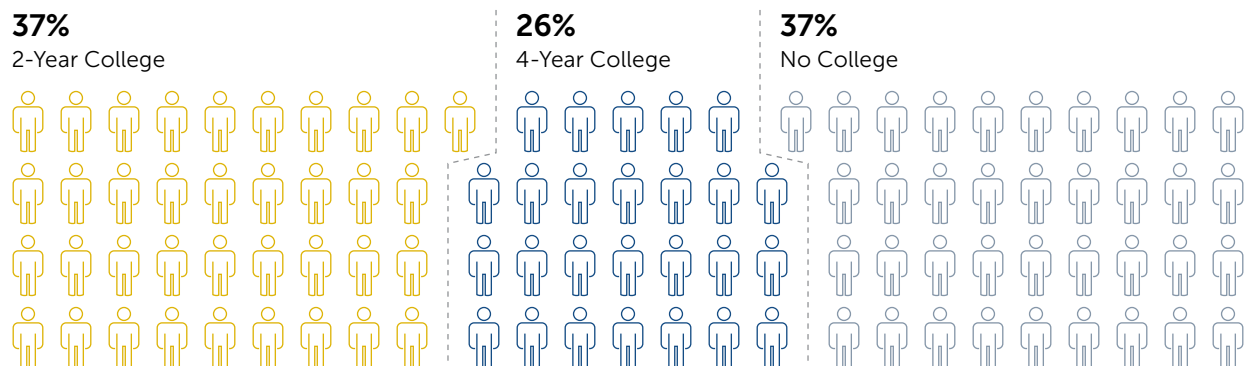
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Executive Summary

For as much as we know about the economic benefits of a college degree, California policymakers and educators have little information about the college destinations of high school graduates. To fill this information gap, we assembled a unique data set of three recent cohorts of public high school students matched with college enrollment data from the National Student Clearinghouse. This report, a product of a partnership with the California Department of Education, details where California public high school students attend college and how college attendance and destinations vary by county.

- Among California public high school students, 63% enroll in college following high school graduation.
 - 26% of high school students enroll in a four-year college.
 - 37% of high school students enroll in a two-year college.
- Among California public high school students who enroll in college:
 - 28% enroll in public four-year campuses in-state (18% at CSU, 10% at UC).
 - 57% enroll in public two-year in-state community colleges.
 - 4% enroll in private in-state colleges, predominately four-year institutions.
 - 11% enroll in out-of-state institutions.
- Only 7% of all high school students (or 11% of all students who enroll in college) leave the state to attend college after high school, these students reach every state in the nation.
- Substantial disparities in college enrollment exist by student subgroups:
 - Female students are more likely to go to college, and more likely to attend four-year colleges, than male students.
 - Students from socioeconomically disadvantaged backgrounds enroll in college at lower rates than their more advantaged peers.
 - College enrollment, particularly by higher education sector, varies by race/ethnicity.

63% of California Public High School Students Enroll in College after Graduation



Introduction

Today, a college degree is more important than ever before. The education earnings premium, as it is often referred to, has grown tremendously over the past several decades, and college degree attainment is the surest way to safeguard economic prosperity for individuals and for society at large. High school students have largely registered the college refrain, and, as such, enrollment continues to rise. Total enrollment in public colleges and universities in the U.S. increased by 11% since 2006 (from 9.4 million to 10.4 million), and by 13% in California during this time period (College Board, 2018).

Despite the importance of postsecondary schooling, today's leaders and California's educators in school systems across the state lack basic information about the college destinations of our youth (Phillips, Reber, & Rothstein, 2018; California Competes, 2018). This report aims to fill some of this gap by providing statistics on where California public high school students attend college and how these college destinations vary in counties across the state. These statistics have not been available at the state level in nearly a decade.¹ The report leverages a unique data set from the California Department of Education on the census of high school students, which we matched to college enrollment data from the National Student Clearinghouse. Specifically, we detail college enrollment for all California public high school students by key student subgroups and by county. We focus on enrollment by degree type (two-year/four-year), sector (public/private), and location (in-state/out-of-state).

¹ The most recent high school graduation cohort for which college enrollment data was obtained from National Student Clearinghouse and reported by the California Department of Education was 2008-2009. In addition, Public Policy Institute of California released maps of college enrollment in California counties using more limited data in 2010. Available here: <https://www.ppic.org/data-set/maps-of-college-enrollment-rates-in-californias-counties/>

Data and Analysis

The information presented in this report relies on data from multiple sources. The primary data source is 11th grade student scores on California’s standardized assessments (i.e., STAR/CST and CAASPP/SBAC) along with demographic data including gender, race/ethnicity, a socioeconomic status indicator, and high school of enrollment. We match these K-12 data to individual-level data on college enrollment obtained from National Student Clearinghouse for 11th grade students in 2012-2013, 2013-2014, and 2014-2015.^{2,3} If on track to complete high school in four years, these student cohorts would have graduated high school in the spring of 2014, 2015, and 2016 respectively.

Using this merged data set, we examine first-time college enrollment during the first year and a half following a student’s expected high school graduation (more specifically, the first institution of attendance following high school completion).⁴ Using individual data, we calculated county-level summary statistics for enrollment at a variety of college types based on the high school where students took the 11th grade assessment. We also investigated enrollment patterns for student subgroups.

The Appendix for this report (available online) provides tables of college enrollment statistics by institution type and by student subgroup for each of the 58 counties in California.⁵

² For two cohorts we merge to 11th grade assessment data, and for one cohort we merge to assessment data from prior years.

³ Dynarski, Hemelt, and Hyman (2015) examine the benefits and challenges of working with National Student Clearinghouse (NSC) data. In particular, they calculate NSC coverage rates—identifying the extent to which students who are enrolled in college do not appear in NSC—over time, by state, college type, and demographic subgroups. Coverage rates for California in 2011, the last year reported in Dynarski et al. (2015), rank 25 out of 50 states and DC at 93%.

⁴ As students may be enrolled for multiple terms at multiple institutions during the year and a half after their expected high school graduation, we selected the term and institution for analysis as follows: Records from the first fall term post expected graduation were prioritized over records from the first spring term over records from the second fall term. If there were not records from any of these terms, records with the earliest enrollment date were selected. If after limiting a student’s term of interest for the analysis, there were still multiple records to choose from, records from four-year colleges were prioritized over records from two-year colleges over records from less than two year institutions. If there were still multiple records for a student, records were sorted first by enrollment start date and then by enrollment end date, with the first record kept.

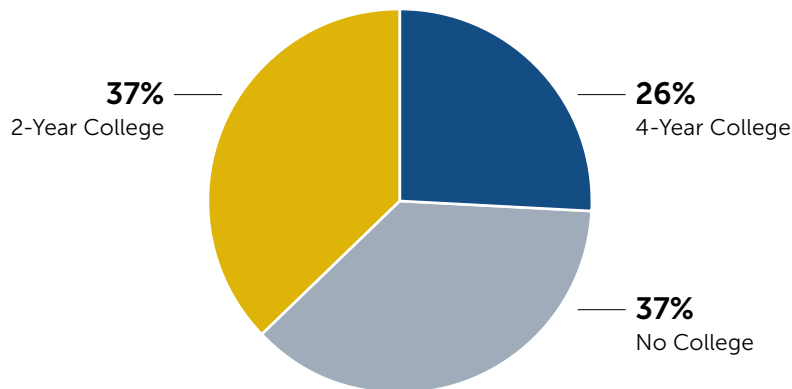
⁵ We report summary statistics of institutional types by subgroups when enrollment meets our minimum reporting requirements (>15). All enrollment numbers—in addition to the percentages reported here—are available in the Appendix (available online).

College Enrollment

College Enrollment: Two-Year and Four-Year

Across California, 63% of public high school 11th graders enroll in college in the year and a half following high school graduation (Figure 1). About 26% of high school students enroll in a four-year college and 37% enroll in a two-year college.

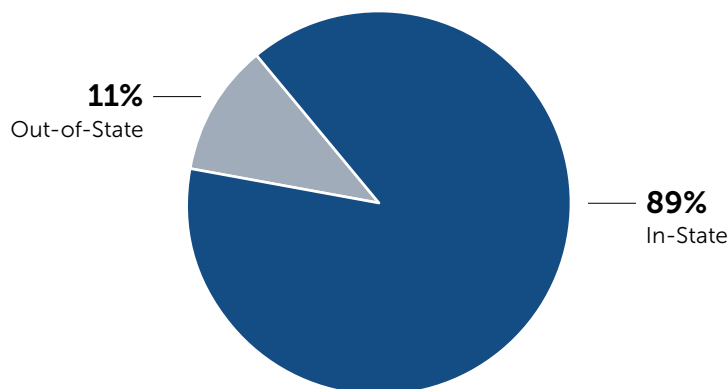
Figure 1: College Enrollment Rates of California Public High School Students



College Enrollment: In-State and Out-of-State Among Enrollees

Of the students who enroll in college, almost all (89%) enroll at campuses within the state of California (Figure 2). Only 11% of students from California public high schools attend college at out-of-state institutions.

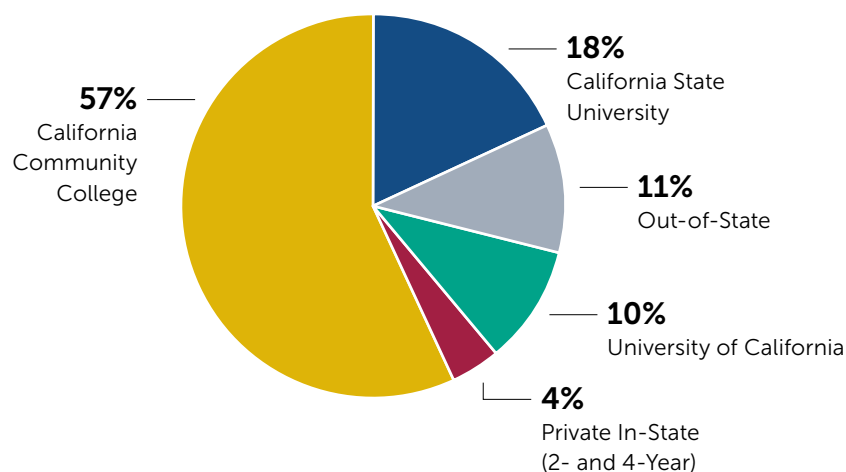
Figure 2: In-State and Out-of-State Enrollment of California Public High School Students Who Enroll in College



College Enrollment: Two-Year and Four-Year, Public and Private, Out-of-State

Among all California public high school students who enroll in college, 28% enroll in public four-year campuses in-state (18% at CSU, 10% at UC), 57% enroll in public two-year in-state community colleges, and an additional 4% enroll in private in-state colleges (the vast majority of in-state private institutions are four-year) (Figure 3).

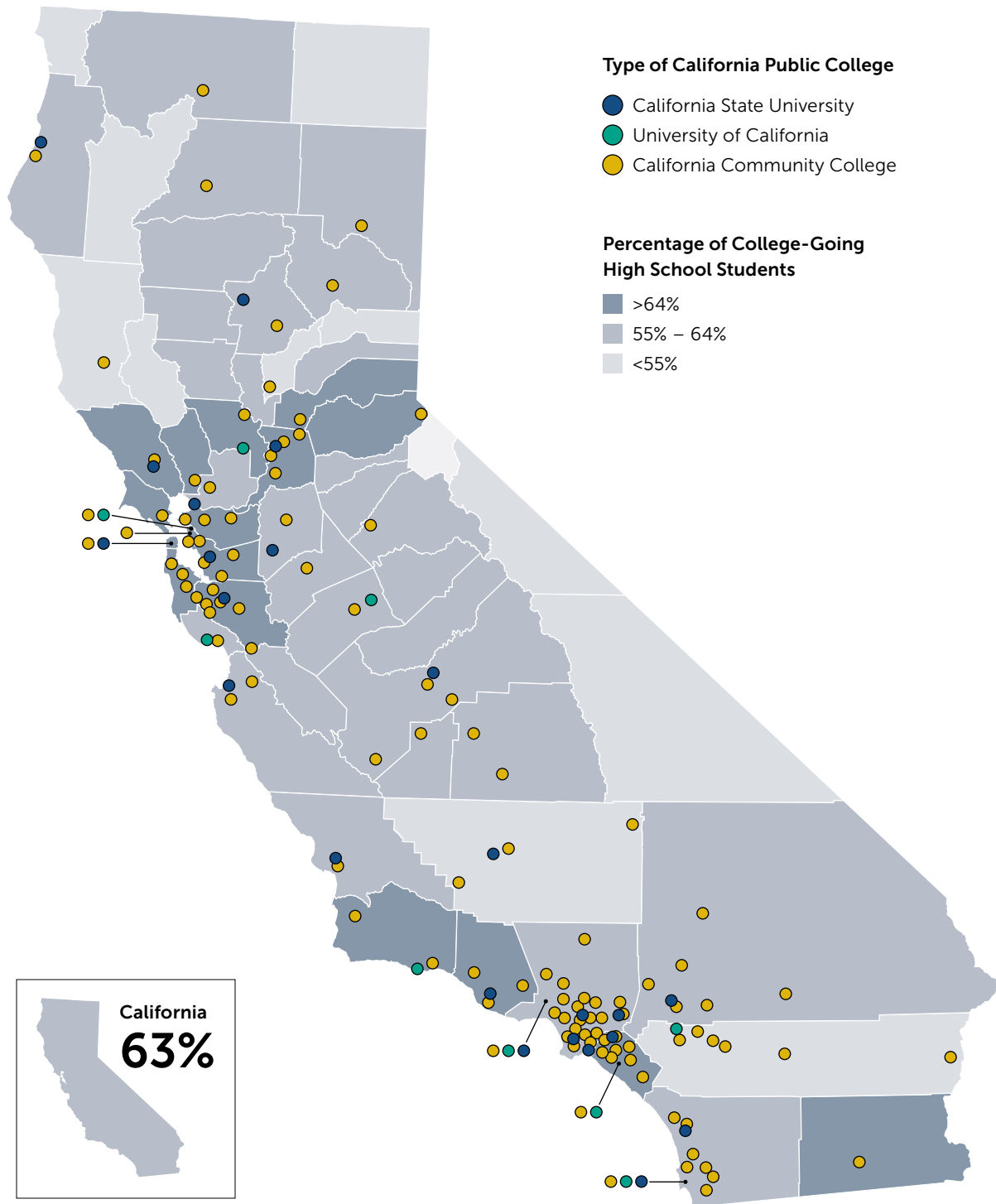
Figure 3: Institution of Enrollment of California Public High School Students Who Enroll in College



College Enrollment Varies Across Counties

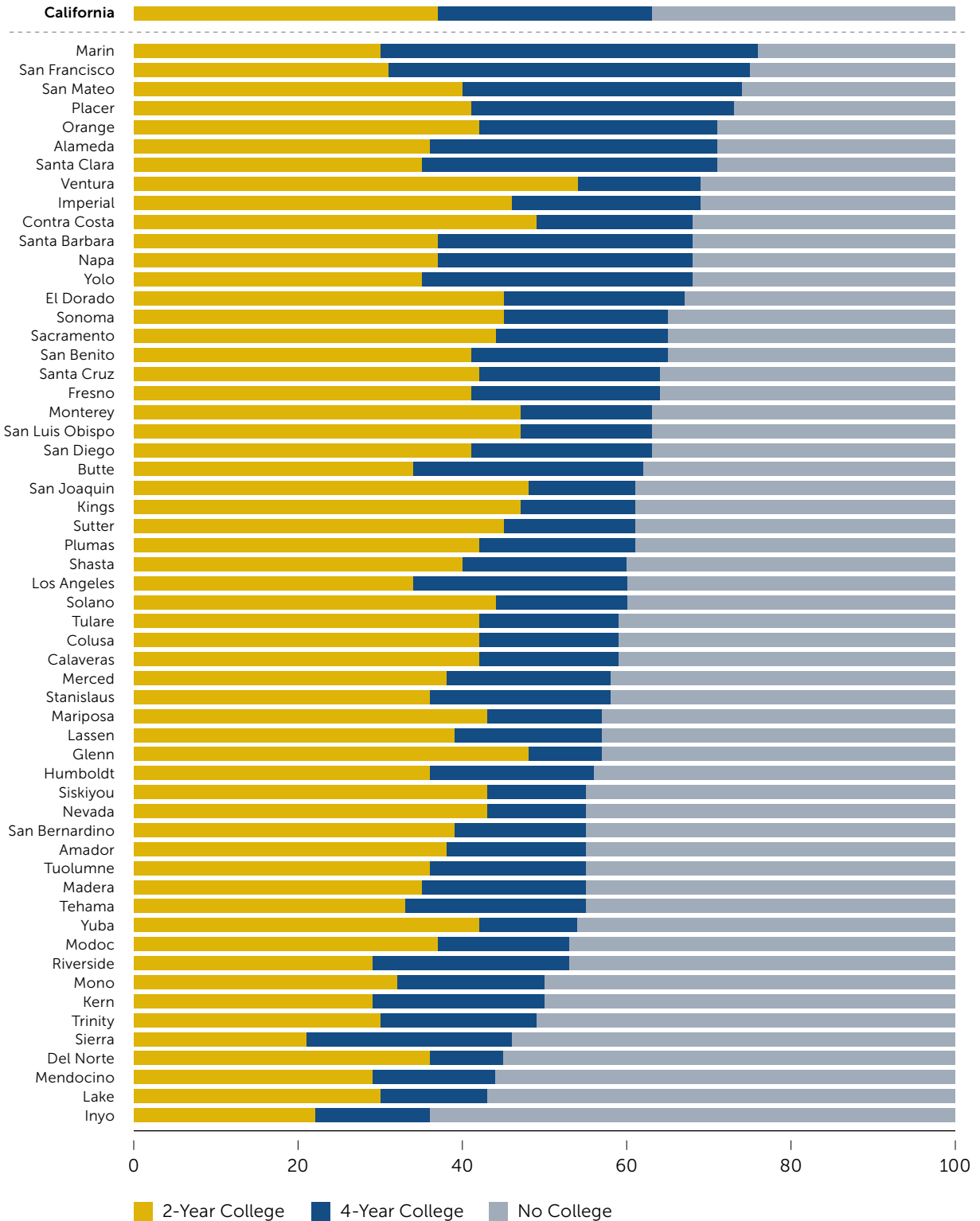
The proportion of California public high school students who enroll in college following graduation varies across counties (Figure 4). For example, 75% of high school students from Marin County and San Francisco County high schools enroll in college, whereas only 36% of students from Inyo County high schools enroll in college after high school completion. A similar pattern is observed when comparing the proportion of students that enroll in two-year colleges versus four-year colleges (Figure 5). Again, Marin and San Francisco Counties have the largest proportion of students (46% and 44%, respectively) enrolling in four-year colleges. In contrast, Imperial County has the highest rate of two-year college enrollment at 54%.

Figure 4: College Enrollment Rates Across California Counties



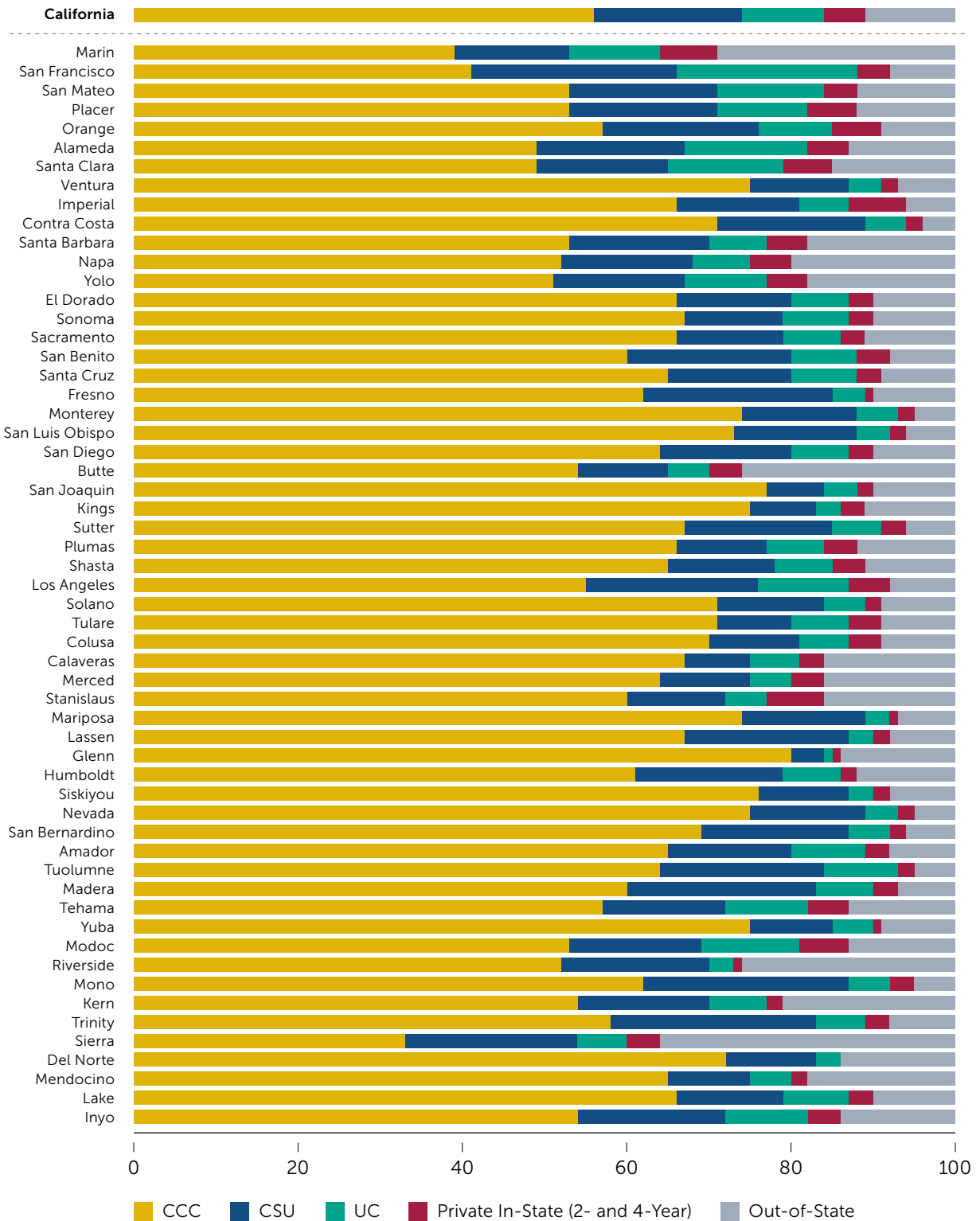
Note: Alpine County statistics are not depicted in this graph because the number of high school students in each category does not meet our minimum requirements for reporting.

Figure 5a: College Enrollment Rates of California Public High School Students, by County (sorted by overall college enrollment)



Note: Alpine County statistics are not depicted in this graph because the number of high school students in each category does not meet our minimum requirements for reporting.

Figure 5b: Institution Type of Enrollment of California Public High School Students Who Enroll in College (sorted by overall college enrollment)



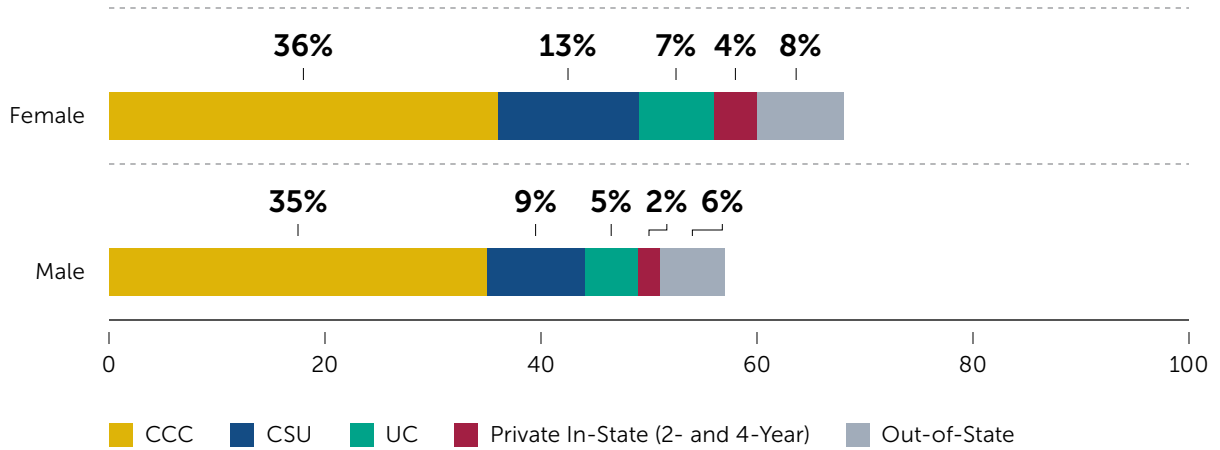
Note: Alpine County statistics are not depicted in this graph because the number of high school students in each category does not meet our minimum requirements for reporting.

In-State College Enrollment by Student Characteristics

Student Gender

Female students are more likely to go to college than male students (Figure 6). Approximately 68% of females enroll in college, while 57% of males enroll in college following high school. This difference is primarily the result of greater enrollment by female students in four-year colleges (in-state and out-of-state). In fact, both male and female students across the state enroll in two-year colleges at nearly the same rate (about 35%).

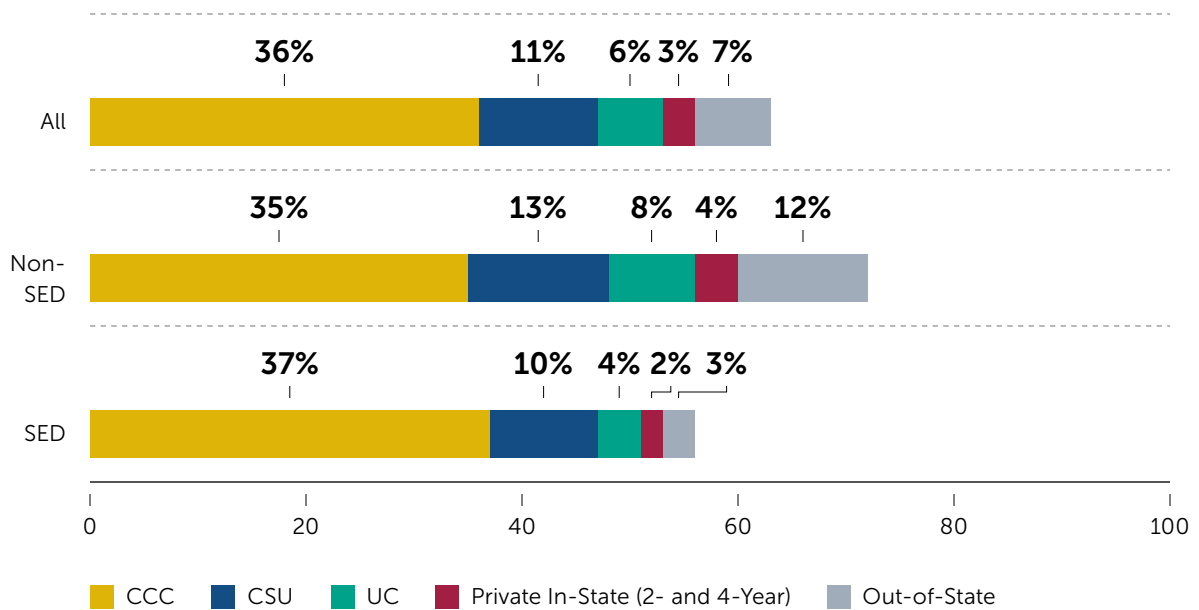
Figure 6: In-State College Enrollment, by Student Gender



Student Socioeconomic Disadvantage Status

Across the state, students from socioeconomically disadvantaged (SED) backgrounds enroll in college at lower overall rates than their more advantaged peers, a difference of 16 percentage points overall (Figure 7). On average, students from socioeconomically disadvantaged backgrounds are more likely to enroll in two-year colleges (37%) than in four-year colleges (18%), whereas among non-socioeconomically disadvantaged students nearly half enroll in four-year colleges in-state or out-of-state.

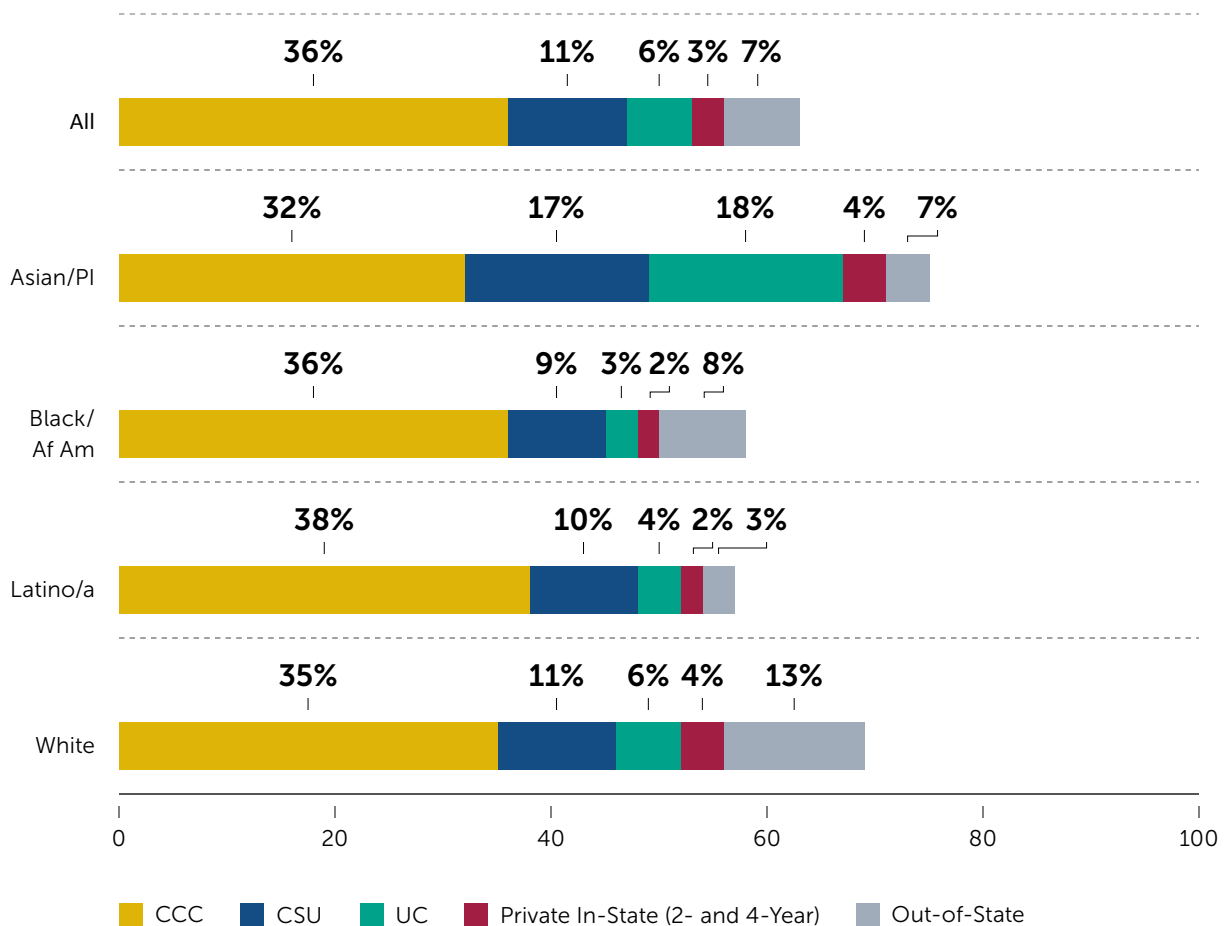
Figure 7: In-State College Enrollment, by Student Socioeconomic Disadvantage Status



Race/Ethnicity

College enrollment varies considerably by student race/ethnicity (Figure 8). Across the state, Asian students enroll in college at higher rates than students from all other racial/ethnic backgrounds, 78%, as compared to Black students at 58%, Latino students at 56%, and White students at 69%. Looking at enrollment by sector, we note that enrollment at the University of California campuses varies substantially by race/ethnicity, 18% of Asian, 3% of Black, 4% of Latino, and 6% of White students enroll at the University of California after high school. At the California State University, patterns are similar, albeit less pronounced: 17% of Asian, 9% of Black, 10% of Latino, and 11% of White students enroll at the California State University campuses after high school. Overall, all groups have higher college participation at two-year versus four-year colleges (about 37% enrolling at California Community Colleges), save for Asian students, with a 32% enrollment at California Community Colleges post-high school.

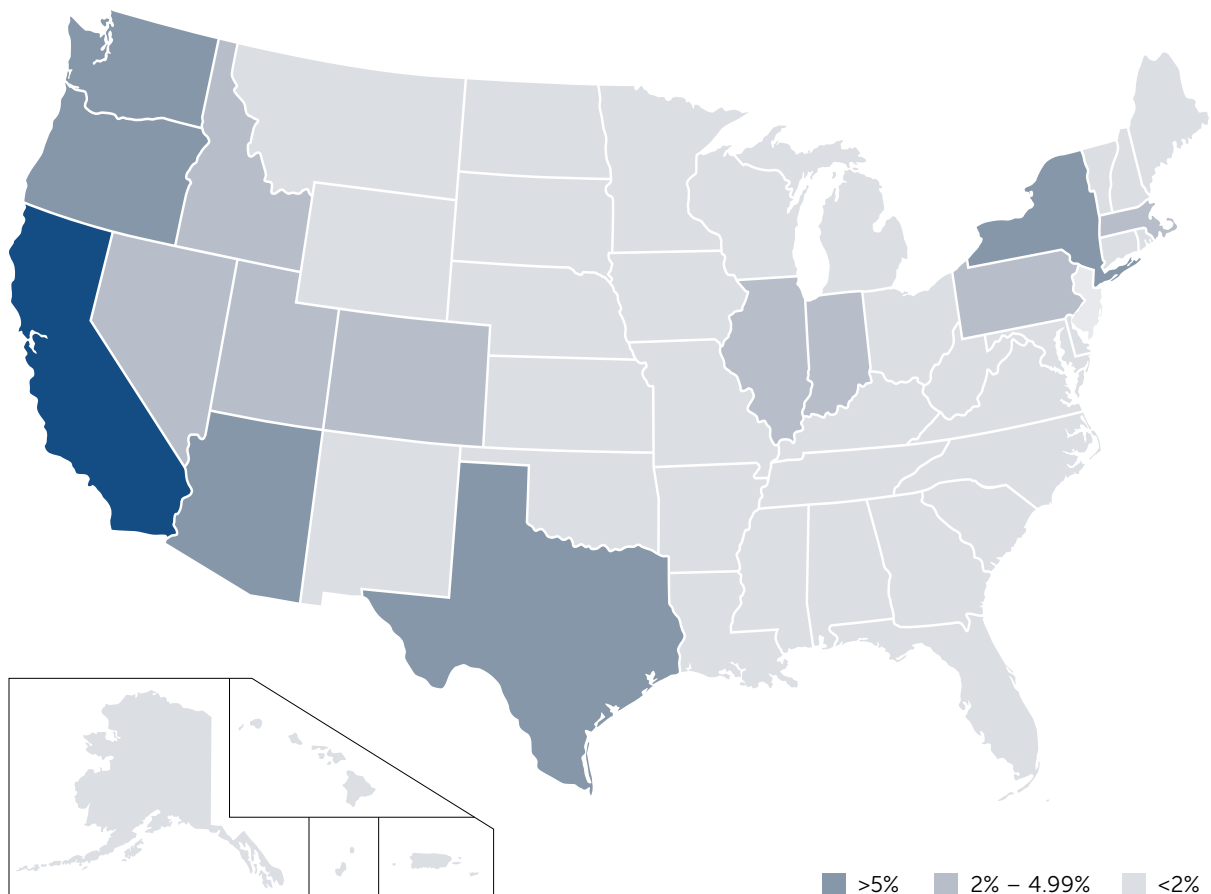
Figure 8: In-State College Enrollment, by Student Race/Ethnicity



Out-of-State College Enrollment

Only 7% of all high school students (or 11% of all students who enroll in college) from California public high schools leave the state to attend college after high school.⁶ However, California students enrolling out-of-state reach every state in the nation. Arizona takes the lion share of out-of-state enrollees at 14.3%, followed by Oregon at 8.5%. Overall, the following thirteen states combined represent 70% of all out-of-state enrollment: Arizona, Oregon, New York, Washington, Texas, Massachusetts, Colorado, Nevada, Utah, Illinois, Idaho, Pennsylvania, and Indiana.⁷

Figure 9: Destinations of California Public High School Students Who Enroll in Out-of-State Colleges



⁶ This represents about 96,000 students from the three cohorts included in this analysis.

⁷ Less than 2% of students enroll in Western Undergraduate Exchange Colleges, which offer discounted tuition for California students attending public universities in more than a dozen western states and territories. For a list of colleges participating in the Western Undergraduate Exchange Colleges (W.U.E.) and to learn more about the program, visit their website: <https://www.wiche.edu/wue>

Of the students who attend an out-of-state four-year college, about 45% attend a “broad-access” institution (defined as having an acceptance rate of 75% or higher), while 26% attend a selective institution (defined as having an acceptance rate below 50%). White students are much more likely to enroll in colleges out-of-state compared to other racial/ethnic groups.

Table 1: Out-of-State College Enrollment Rates of California Public High School Students, by Student and College Characteristics

	All	Asian/PI	Black/ Af Am	Latino/a	White	SED
Out-of-State Enrollment	6.8%	7.4%	8.4%	2.9%	13.1%	2.8%
4-Year College	6.0%	7.0%	7.3%	2.3%	12.1%	2.1%
Acceptance Rate <25%	0.5%	1.5%	0.3%	0.1%	0.7%	0.1%
Acceptance Rate 25% - 50%	1.1%	1.7%	1.5%	0.4%	2.1%	0.4%
Acceptance Rate 50% - 75%	1.7%	2.1%	2.4%	0.6%	3.4%	0.6%
Acceptance Rate 75% - 99%	2.4%	1.5%	2.2%	0.9%	5.5%	0.7%
Non Selective Institution	0.3%	0.2%	1.0%	0.2%	0.4%	0.3%
2-Year or Less College	0.8%	0.4%	1.1%	0.6%	1.1%	0.7%

Conclusion

In recent years, nearly two-thirds of California’s high school graduates enrolled in college within a year and a half of completing high school. Nationally, about 70% of high school completers enrolled in college by the October immediately following high school completion (National Center for Education Statistics, 2018). California boasts one of the highest rates of two-year college enrollment among college-goers at 57%, compared with the national rate of 43% (College Board, 2018). Substantial disparities in college enrollment exist by student subgroups, particularly in some counties. Moreover, college destinations remain highly stratified by student background (socioeconomic status and race/ethnicity).

California faces a critical need to produce more college graduates for an increasingly complex labor market, and college enrollment is just one part of the solution (Johnson, Cuellar Mejia, & Bohn, 2018). College completion rates remain low in both the open access community colleges and the broad access state universities (CSU). A likely key culprit for the low rates of college completion is a lack of alignment and coordination between California’s K-12 and higher education systems, which leaves many students unprepared for college, and many colleges ill-prepared to support students’ needs. This misalignment may be most evident in the fact that there is no systematic tracking of students’ educational trajectories, leaving educators without critical information regarding the outcomes of their students.

This portrait of college enrollment and college destinations for the census of California public high school students is overdue; the last time California provided this information was nearly a decade ago. Notwithstanding, the California Department of Education continues to emphasize and invest in college and career readiness through comprehensive efforts to reform college readiness standards, aligned assessments, and accountability metrics such as the College/Career Indicator. Yet, in an era of intense “college for all” ethos, the lack of regularly available information about students’ postsecondary trajectories makes it difficult for institutions to monitor outcomes and make informed decisions. It also creates challenges for organizations seeking to promote and improve college and career readiness.

Despite relatively high rates of college participation, important disparities by race/ethnicity and other background characteristics exist in both overall enrollment and in institutional destination types. This analysis does not provide explanations for these disparities. From previous research, we know that college choice (including the decision to apply and enroll, and where) is a function of a host of individual attributes (e.g., aspirations and beliefs, academic preparation, college knowledge, fortitude and resilience), as well as structural barriers (e.g., access to quality academic preparation, college information, and financial constraints). In future work, we plan to examine a variety of inputs that may affect the decision to enroll in college, where to enroll, and ultimately, college degree attainment.

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Author Biographies

Michal Kurlaender is Professor of Education Policy at the University of California, Davis, and Faculty Co-Director of Policy Analysis for California Education. Kurlaender investigates students' educational pathways, in particular K-12 and postsecondary alignment, and access to and success in college. Kurlaender works closely with all three of California's public higher education sectors—the University of California, the California State University and the California Community College systems.

Sherrie Reed serves as Executive Director for California Education Lab located in the School of Education at the University of California, Davis. Her research interests include education policy, specifically accountability, charter schools, school finance, college readiness, and career technical education. Prior to her role with UC Davis, Reed worked in K-12 education as a teacher, administrator and charter school developer for over 20 years.

Kramer Cohen is a Ph.D. candidate in the Department of Economics at the University of California, Davis. Her research interests include the economics of education and labor economics, with a particular interest in college readiness, educational effectiveness, and the effect of educational systems on historically underrepresented students. Prior to attending UC Davis, Kramer was a research associate at the Public Policy Institute of California and taught at San Francisco State University.

Matt Naven is a Ph.D. candidate in the Department of Economics at the University of California, Davis. His primary research interests are public economics and the economics of education, with particular interest in increasing college access for low-income students.

Paco Martorell is Associate Professor in the School of Education at the University of California, Davis. His work is in the economics of education, with a focus on financial aid, developmental education, the effects of grade retention, the returns to for-profit colleges, and the impacts of school facility investments. Prior to joining the faculty at UC Davis, Martorell was an Economist at the RAND Corporation and a professor at the Pardee RAND Graduate School.

Scott Carrell is Professor of Economics at the University of California, Davis. His primary area of research is in the economics of education and current projects include an investigation of the role of faculty interactions in student academic success, measuring school quality under both past and current assessment contexts in California. Carrell is a retired U.S. Air Force officer and previously taught at Dartmouth College and the U.S. Air Force Academy.

About

Policy Analysis for California Education (PACE) is an independent, non-partisan research center led by faculty directors at Stanford University, the University of Southern California, the University of California Davis, the University of California Los Angeles, and the University of California Berkeley. PACE seeks to define and sustain a long-term strategy for comprehensive policy reform and continuous improvement in performance at all levels of California's education system, from early childhood to postsecondary education and training. PACE bridges the gap between research and policy, working with scholars from California's leading universities and with state and local policymakers to increase the impact of academic research on educational policy in California.

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- Convenes seminars and briefings that make current research accessible to policy audiences throughout California.
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- Works with local school districts and professional associations on projects aimed at supporting policy innovation, data use, and rigorous evaluation.



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