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HIGHER EDUCATION IN CALIFORNIA

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-  EXPANDING COLLEGE ACCESS
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-  INVESTING IN PUBLIC HIGHER EDUCATION
-  MAKING COLLEGE AFFORDABLE
-  MEETING CALIFORNIA'S WORKFORCE NEEDS
-  STRENGTHENING CAREER EDUCATION



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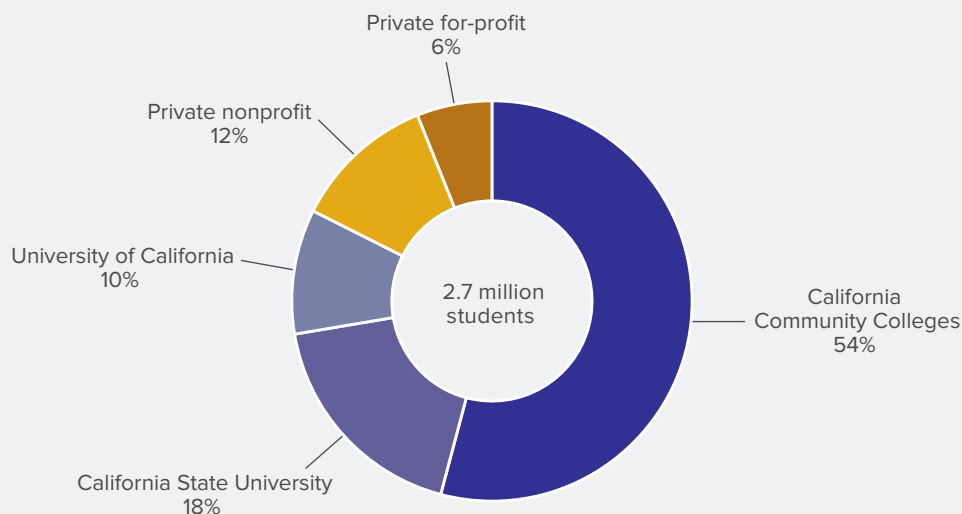
California's system is the largest—and among the most diverse—in the nation

California's higher education system has three public segments: the University of California (UC), the California State University (CSU), and the California Community Colleges. It also includes more than 150 private nonprofit colleges and about 160 for-profit institutions. In total, the state's colleges and universities enroll almost three million students from a wide range of backgrounds. An additional 170 private for-profit trade schools (postsecondary institutions that award vocational certificates but do not offer degrees) enroll about 30,000 students.

Eight out of every ten college students in California attend a public institution—and more than half are enrolled in the community college system. Even so, the share attending private schools is sizeable. Indeed, private nonprofit colleges enroll slightly more students than the University of California. Enrollment in private for-profit colleges has been declining after increasing sharply for many years.

Unlike most other states, California has not had a coordinating body for higher education over the past several decades. This has made goal setting, oversight, and coordination more challenging. The structure and principles established almost 60 years ago by the Master Plan for Higher Education remain largely unchanged. The Master Plan allowed the state's public system to accommodate dramatic increases in enrollment for several decades while providing broad access and charging little or no tuition. But over the past two decades, tuition has risen sharply and enrollment has not kept up with demand. Current discussions and recent legislative efforts are moving the state toward reestablishing a higher education authority.

MOST CALIFORNIA STUDENTS ATTEND PUBLIC INSTITUTIONS



SOURCE: Integrated Postsecondary Education Data System (IPEDS).

NOTE: Enrollment is for students at colleges that offer at least an associate degree as of fall 2017 (the most recent year of available data for private colleges).

California's public institutions have distinct missions

- **The University of California is the state's primary academic research institution.**

UC has ten major campuses, five medical centers, and three national laboratories. In 2016–17, externally funded research expenditures totaled \$4.6 billion at UC, with almost half coming from federal agencies. The National Institutes of Health (NIH) and the National Science Foundation (NSF) provided nearly three-quarters of UC's

federal support. Six of the schools—Berkeley, Davis, Irvine, Los Angeles, San Diego, and Santa Barbara—are members of the Association of American Universities (AAU), along with 56 other top research-intensive universities. The UC system, which is constitutionally independent of the state, is governed by a 26-member board of regents.

- **UC educates hundreds of thousands of students.**

UC educates more than 280,000 undergraduate and graduate students and employs about 228,000 faculty and staff. It is the state's primary awarder of doctoral and professional degrees. UC's undergraduate admission framework is highly selective: only the top eighth of California's high school graduates are eligible. In-state undergraduate tuition and fees were \$12,570 in the 2019–20 academic year. Each campus charges an additional mandatory local fee, which averages around \$1,500.

- **The California State University is the largest university system in the nation.**

CSU provides undergraduate and graduate instruction to approximately 474,600 students on its 23 campuses and employs about 50,000 faculty and staff. The vast majority of CSU students are undergraduates—the top third of California's high school graduates are eligible for admission—and CSU awards more bachelor's degrees than any other segment of higher education in California (about 105,000 in 2017–18). But CSU also awards master's and doctoral degrees in a few professional fields—and trains a majority of the state's K–12 teachers. In-state undergraduate tuition and fees were \$5,742 in the 2019–20 fiscal year, and local campus fees ranged from less than \$1,000 at Fresno State to about \$4,000 at Cal Poly San Luis Obispo. The CSU system is governed by a 25-member board of trustees; most are appointed by the governor and confirmed by the senate.

- **The California Community Colleges are the nation's largest higher education system.**

The state's community colleges enroll 2.1 million students (about 900,000 on a full-time-equivalent basis) at 114 colleges that are organized into 72 districts. In 2017–18, the community colleges awarded about 160,000 associate degrees, 78,000 credit certificates, and 18,000 noncredit certificates; more than 103,000 students transferred to four-year institutions. In Fall 2019, California's 115th and first fully online community college will begin enrolling students into pilot vocational programs. Average annual tuition for full-time students is \$1,104, but many students qualify for full fee waivers. The system is governed by a 17-member board of governors appointed by the governor. A locally elected board of trustees appoints campus presidents and oversees the operation and budgets of the colleges in each district.

- **The community colleges have multiple missions.**

California's community colleges offer lower-division academic courses for students interested in transferring to four-year colleges; career education and vocational certificates; adult basic education, including English-language courses for nonnative speakers; and enrichment courses for members of the community. California's high school graduates are more likely to attend community colleges than their peers in other states—the state ranks fifth nationwide in the share of recent high school graduates who enroll in community colleges and 47th in the share who start at four-year schools. In 2015, 15 bachelor's degree pilot programs were approved, offering some community college students the opportunity to earn four-year degrees in applied fields such as dental hygiene, respiratory care, and mortuary science.

California's private institutions vary widely in size, selectivity, and mission

- **Private nonprofit colleges range from large research institutions to small liberal arts colleges.**

California's largest private nonprofit, the University of Southern California, enrolls about 44,000 students, while there are dozens of private nonprofits with fewer than 500 students. Graduate students make up a relatively high share of enrollment at private nonprofits. Most private nonprofit colleges are governed by boards of trustees. Many belong to the Association of Independent California Colleges and Universities. Three private nonprofits—Stanford, the University of Southern California, and the California Institute of Technology—are AAU members.

- **Private for-profits enroll large numbers of students ...**

For-profit colleges award a large share of certificates in California. After years of growth, enrollment at private for-profit colleges is beginning to decline. The largest for-profit educational institutions currently operating in California are Ashford University (with about 92,000 students, most part-time, in 2016–17), the University of Phoenix (17,000 students), and the Academy of Art University (16,000 students).

- ... and there are persistent concerns about cost and quality.

Private for-profit colleges account for a disproportionate share of student debt and loan defaults. Controversies over the cost and quality of the training offered by private for-profits have led to greater oversight in California. In 2015, one of the largest private for-profit colleges (Heald College and its parent, Corinthian Colleges) ceased operations after investigations by the federal government and by attorneys general in several states, including California. The federal government has recently stepped back from regulations that could have cut off access to federal funding for some for-profit colleges.

California's higher education oversight is fractured

Because California does not have a higher education coordinating body, its colleges and universities are governed by a mix of government and independent entities. This makes it difficult for the state to set goals and coordinate its many systems. In other states, higher education coordinating bodies can facilitate the effective use of student-level longitudinal data to assess student progress from high school to college and career.

- **The California Student Aid Commission oversees state financial aid expenditures.**
The California Student Aid Commission (CSAC) administers financial aid programs for California residents attending public and private universities, colleges, and vocational schools in the state. The Cal Grant program, one of the largest grant aid providers in the country, awards about \$2 billion annually to students who meet academic and need-based criteria. For the most part, Cal Grants cover tuition for low-income students at UC and CSU. There are 15 CSAC commissioners, most of whom serve four-year terms—11 are appointed by the governor, and the chair of the Senate Rules Committee and the Speaker of the Assembly each appoint 2.
- **The US Department of Education provides financial aid and collects data on student outcomes.**
The US Department of Education administers federal financial aid programs that provide grants and subsidized student loans. Like many other states, California uses the department's Free Application for Federal Student Aid (FAFSA) to determine eligibility for its own grant and loan programs. The department collects and publishes descriptive summary-level data on thousands of higher education institutions across the country, including measures such as graduation rates and student debt. This data helps the department evaluate higher education institutions. It also helps parents and students make college choices.
- **Accreditation agencies provide independent oversight.**
Students receive federal or state financial aid to attend higher education institutions that are accredited by one of several independent agencies. California's primary accreditor is the Western Association of Schools and Colleges (WASC). The Accrediting Commission for Community and Junior Colleges—a division of WASC—handles accreditation for two-year colleges—though it is being challenged by the California Community College Chancellor's Office. In general, these agencies evaluate the quality of higher education institutions through a peer review process.
- **The Bureau for Private Postsecondary Education oversees private vocational institutions.**
California's Bureau for Private Postsecondary Education (BPPE) is a state consumer protection agency that provides oversight and limited regulation. BPPE monitors and attempts to resolve consumer complaints, reviews educational programs, and provides operating licenses.

Looking ahead

Policymakers need to set overarching, long-term goals for higher education and devise strategies to achieve them. They also need to identify the most effective ways to hold institutions accountable to students and to the state.

The state needs to set new goals for its higher education system. California has not updated many of its goals for higher education since the Master Plan was adopted almost 60 years ago, and it has no comprehensive plan for higher education that is consistent with 21st-century realities. There have been signs of progress—for example, the California Community Colleges and CSU recently adopted ambitious new goals to improve graduation rates, and the state has worked with UC and CSU to outline ways to increase the number of college graduates. Setting measurable goals—such as expanding eligibility for UC and CSU, increasing transfers from community colleges to four-year colleges, and ensuring that college is affordable for all students—is essential to a shared vision of the state's future.

Higher education institutions should work with each other and with the state's K–12 system. To improve student outcomes, special attention must be paid to transitions between high school and postsecondary education, and between two-year and four-year institutions. Policymakers and higher education authorities should strengthen critical mechanisms of coordination among these segments, including preparation for college in high school, dual enrollment, transitions to college, and transfer processes for community college students seeking to enroll in four-year colleges. The Associate Degree for Transfer program is a step in the right direction, but should be broadened to include more majors and more campuses.

California is set to develop a statewide longitudinal data system. The governor and legislature are actively working to create a data system, and California's educational sectors have voiced support. Recently signed legislation will create a working group to answer critical questions about content, privacy, access, use, and governance. An integrated student data system can answer important questions about the educational pipeline and the impact of education on work and earnings. Such a system can also encourage stronger collaborations among institutions to improve student outcomes.

CONTACT A PPIC EXPERT











Hans Johnson
johnson@ppic.org



Marisol Cuellar Mejia
cuellar@ppic.org

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Public Policy Institute of California
500 Washington Street, Suite 600
San Francisco, CA 94111
T 415.291.4400 F 415.291.4401
PPIC.ORG/HIGHER-EDUCATION

PPIC Sacramento Center
Senator Office Building
1121 L Street, Suite 801
Sacramento, CA 95814
T 916.440.1120 F 916.440.1121



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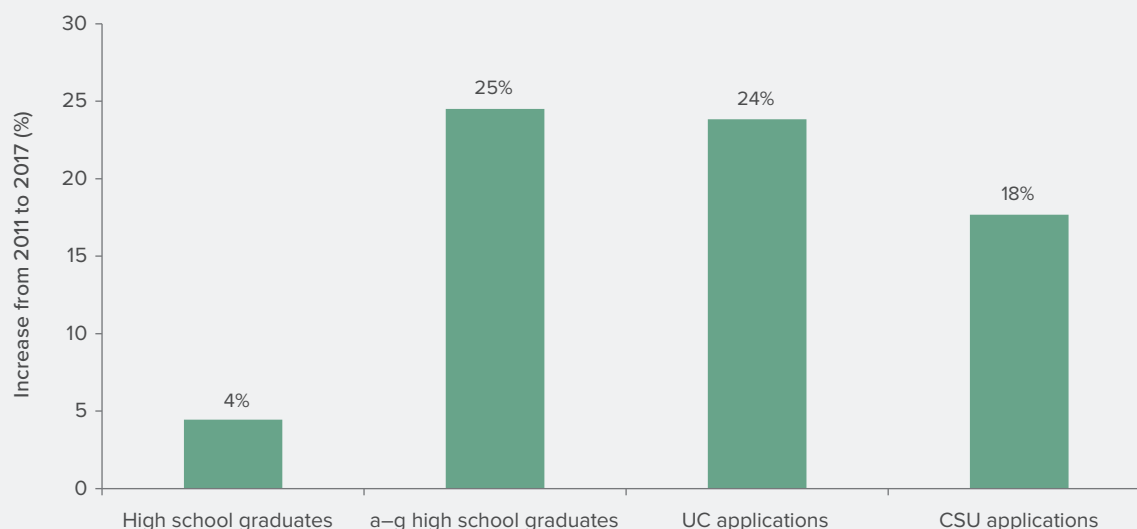
PUBLIC POLICY
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Access to college is essential to California's future growth

More California high school graduates are academically ready for college than ever before. More are applying to and enrolling in college, and both the University of California (UC) and the California State University (CSU) are expanding access for example—UC pledged to enroll 10,000 more freshmen and transfer students between 2016 and 2018. But many qualified applicants were still turned away, which is a source of concern. Indeed, a 2018 PPIC Statewide Survey found that more than half of Californians are concerned about enrollment capacity in the state's public colleges and universities.

Expanding access to college benefits individuals and the state as a whole. The economic returns to a postsecondary degree are at their highest level in decades, even as more Californians are attending college, and workers with postsecondary degrees will continue to play a crucial role in the state's economic growth. Expanding access can also ensure that our system of higher education offers opportunities to Californians who have historically been underrepresented in postsecondary institutions, including those from low-income families and the state's Latino and African American populations.

RECENT INCREASES IN COLLEGE READINESS AND COLLEGE APPLICATIONS INDICATE A GROWING DEMAND FOR HIGHER EDUCATION



SOURCES: University of California, California State University, California Department of Education.

NOTES: Students who are a-g graduates have completed the college preparatory course sequence required for admission for UC and CSU. Increases among California residents only, 2011–17.

More high school graduates are competing for limited university slots

The growing share of California high school graduates who are college ready has increased competition for admission to the state's four-year universities. Eligible students are being turned away from their first-choice colleges. Some choose other colleges in California, but growing numbers are leaving the state.

- **California's Master Plan aimed to provide higher education opportunities for all students.**

The enrollment framework for the state's public higher education system was set almost 60 years ago by the Master Plan for Higher Education. According to the Master Plan, UC selects from the top 12.5 percent of high school graduates, CSU selects from the top 33 percent, and the California Community Colleges offer access to all state residents. Students also choose to attend nonprofit and for-profit private colleges, as well as colleges in other states.

- **More students are taking the courses that qualify them for college ...**

To be eligible for admission to CSU or UC, students must successfully complete college preparatory coursework (known as the a–g requirement) that includes four years of English, three years of math, two years of lab science, two years of social science, two years of a foreign language, one year of visual or performing arts, and one year of a college preparatory elective, a total of 15 courses. The proportion of public high school graduates who meet this requirement has been increasing rapidly: from 34 percent in 2007–08 to 47 percent in 2016–17. Gains have been especially strong for Asian American and Latino high school graduates: the share of Asian American students completing the a–g requirement grew from 56 percent in 2003–04 to 76 percent in 2016–17, and the share of UC- and CSU-eligible Latino students rose from 22 to 42 percent.

- **... but Master Plan eligibility levels are limiting student options.**

California universities are accepting more students than ever, but the Master Plan framework limits enrollment options for many qualified students. For example, 19 of the 23 CSU campuses are unable to enroll all qualified applicants in the majors to which they apply due to space constraints. During the 2017 admissions, CSU campuses rejected more than 16,600 qualified freshmen applicants, which is an increase of 36 percent since 2013–14.

- **The share of nonresidents at UC has grown—but it is still relatively small.**

The share of first-time UC freshmen coming from another state or country increased from 6 percent in 2008 to 21 percent by 2018, but it is still well below the 30 percent national average for public research universities. Non-residents pay a supplemental tuition of \$29,000 on top of in-state tuition; this money augments state funding and regular tuition revenue. UC has frozen nonresident enrollment at 2017–18 levels for Berkeley, Irvine, Los Angeles, and San Diego, but is allowing for growth of up to 18 percent at its other campuses.

- **Many more California students are leaving the state to attend college.**

A growing number of California’s high school graduates are attending college in other states. Between 2004 and 2017, this number more than doubled, to just over 36,100 students—roughly equal to UC’s freshman class, or 15 percent of the college population. Almost half of those who leave go to public universities—in 2017, the University of Oregon, Northern Arizona University, University of Nevada-Reno, and University of Colorado-Boulder each enrolled more than 800 recent California high school graduates.

Access varies across types of institutions

Greater numbers of underrepresented students enroll at CSU and the community colleges than at UC; increased competition and rising tuition may widen this gap.

- **Some parts of the system are more diverse than others.**

The student populations at California’s community colleges and CSU more or less reflect the racial/ethnic composition of high school graduates in the state. In the UC system, Asian Americans are overrepresented, while African American and Latino students are underrepresented. This underrepresentation has grown since Proposition 209—passed in 1996—prohibited the consideration of race in the admissions process. Whites are overrepresented at private nonprofits while African American students are overrepresented at private for-profits.

- **California’s lowest-income high school graduates are more likely to start at a community college.**

About a quarter of full-time first-time college freshmen come from families making less than \$30,000 a year. About half of these students begin at community college, while 19 percent start at CSU and 10 percent at UC. Students from families with higher incomes are generally less likely to start at a community college: only 6 percent of students from families making more than \$75,000 do so, while 58 percent start at UC or CSU and nearly 30 percent go to a private nonprofit.

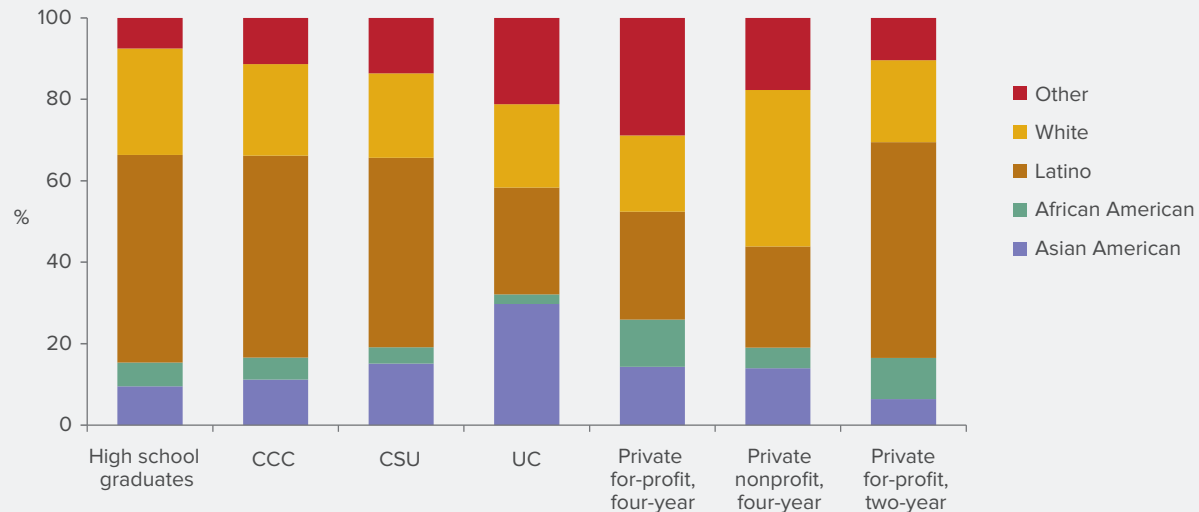
- **Most students who enroll in community college do not transfer to four-year institutions.**

For some students, community colleges can be a cost-effective way to begin work on a bachelor’s degree. In fact, transfers from community colleges make up about half of CSU graduates each year. Not all community college students intend to transfer, of course. But only about 38 percent of entering students in 2009–10 who were on track to transfer ever did so. Transfer pathways are improving: the number of degrees awarded through the Associate Degree for Transfer—a program that prepares students for transfer to any CSU campus—increased from about 11,000 in 2013–14 to nearly 50,000 in 2017–18.

- **Cost concerns may discourage low-income students from attending four-year colleges.**

According to the PPIC Statewide Survey, most Californians are concerned about the affordability of public colleges and universities. High school graduates from low-income families are eligible for grants that cover tuition in California's public system. But books, housing, and other living expenses can cost thousands of dollars and are not fully covered by grants. Legislation introduced in 2019 (SB 291) aims to address these costs for community college students.

CALIFORNIA'S DIVERSE COLLEGE POPULATION IS UNEVENLY DISTRIBUTED



SOURCE: California Department of Education, Integrated Postsecondary Education Data System (IPEDS).

NOTES: High school graduates are from 2017. College enrollment is final release fall 2017 first-time degree/certificate-seeking undergraduates. "Other" includes Pacific Islanders, American Indians, Alaskan Natives, students who mark two or more races or do not reveal their race, and students who are not US citizens or nationals. Response rates: 100 for CCCs, 23 for CSU, and 9 for UC, 76 private for-profit four-year, 64 for private for-profit two-year, and 49 for private nonprofit four-year.

Looking ahead

Providing meaningful access to college is essential to California residents and the state economy. While projections suggest that the number of high school graduates will not change dramatically over the next 10 years, additional resources devoted to college access could boost college enrollment.

Plan for the impact of better K–12 preparation. California's K–12 system recently implemented the Common Core State Standards, designed to better prepare students for college and careers. These new academic standards, along with changes to the way colleges determine college readiness (Assembly Bill 705 and Executive Order 1110), are expected to dramatically increase the number of high school graduates ready for college-level coursework. California must be ready to offer these students access to college.

Expand access to four-year colleges. The economy requires many more highly educated workers than it did when the Master Plan enrollment formulas were developed in 1960. The state and its public systems should increase the share of high school graduates eligible for UC and CSU. Another way to increase access to four-year colleges among under-represented groups—including low-income, first-generation, Latino, and African American students—is to improve transfer rates from community colleges. Many private colleges and universities have joined CSU in signing on to the Associate Degree for Transfer program; these agreements have the potential to significantly improve transfer rates.

Connect high school and college data. Unlike many states, California has long lacked a longitudinal data system that monitors student progress through K–12 and college. This limits the state's ability to identify programs and practices that could improve student access and outcomes. In June 2019, the state legislature passed a bill (AB 75) that funds a process for the development of a statewide education data system. With comprehensive information on how—and how many—students make the leap from high school to college, the state can learn more about barriers to college entrance and completion.

CONTACT A PPIC EXPERT



Jacob Jackson
jackson@ppic.org



Olga Rodriguez
rodriguez@ppic.org











Sarah Bohn
bohn@ppic.org



Hans Johnson
johnson@ppic.org

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Public Policy Institute of California
500 Washington Street, Suite 600
San Francisco, CA 94111
T 415.291.4400 F 415.291.4401
PPIC.ORG/HIGHER-EDUCATION

PPIC Sacramento Center
Senator Office Building
1121 L Street, Suite 801
Sacramento, CA 95814
T 916.440.1120 F 916.440.1121



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PUBLIC POLICY
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California needs more college graduates

California is projected to fall 1.1 million bachelor's degrees short of economic demand by 2030. Expanding access to higher education could help shrink the gap, but California also needs to boost the likelihood that students who enroll in college will stay on track to earn degrees.

Bachelor's degree holders are much less likely to be unemployed than those who do not obtain a four-year degree; they also tend to have higher incomes. While California's community colleges play a key role in preparing students for well-paying jobs, California also needs to increase the number of community college students transferring to and graduating from four-year schools. Policies that focus on preparing students for college-level courses are key to increasing transfer and completion rates—and shortening the amount of time needed to graduate.

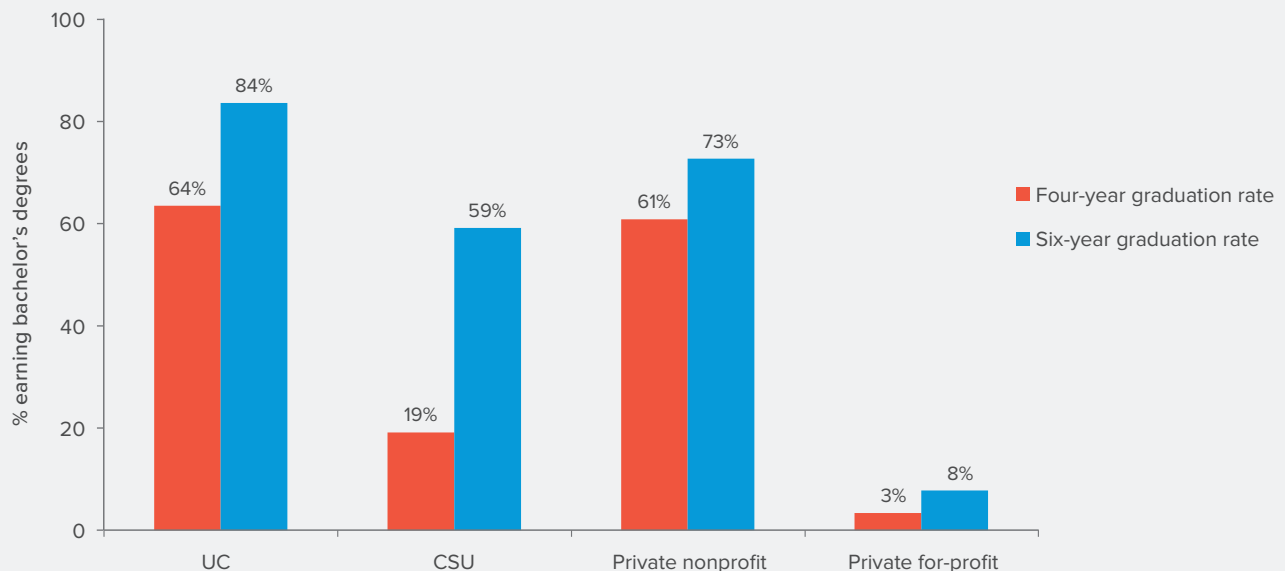
Graduation rates vary across institutions and demographic groups

The share of adults with bachelor's degrees is slightly larger in California than in the United States as a whole—but students often take longer than four years to graduate. This increases individual costs, delays entry into the workforce, and reduces the number of slots for new students.

- **Graduation rates are improving at California's public universities, but few finish in four years.**

Over the past decade, both the California State University (CSU) and the University of California (UC) have increased graduation rates and shortened the amount of time it takes students to earn degrees. But there is room for improvement. UC's six-year graduation rate (84%) is slightly higher than rates at private nonprofits, but only 64 percent of students graduate on time (within four years). CSU's graduation rates are much lower: about 59 percent of students graduate within six years and only 19 percent graduate in four years. Students at private for-profit universities fare even worse.

MANY STUDENTS TAKE LONGER THAN FOUR YEARS TO EARN BACHELOR'S DEGREES



SOURCE: Integrated Postsecondary Education Data System (IPEDS).

NOTES: 2012 IPEDS-defined adjusted entering cohort. All UC and CSU campuses reported graduation rates, 64 percent of private nonprofit colleges reported graduation rates, and 39 percent of private for-profit colleges reported graduation rates.

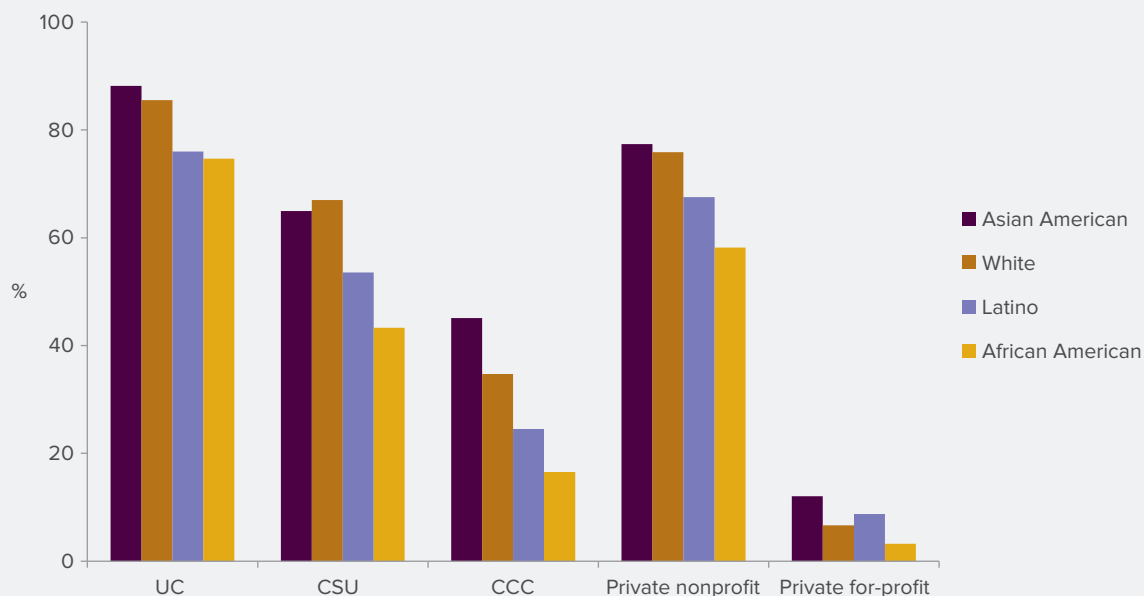
- **Graduation rates vary across demographic groups.**

Recent improvements in graduation rates have been similar across all demographic groups, so long-standing gaps persist. Women are more likely to graduate than men, as are students from wealthier families compared to students from low-income families. White and Asian American students have higher completion rates than African American and Latino students across all types of postsecondary institutions. CSU recently launched a new program that aims to close these graduation gaps while substantially increasing both four- and six-year graduation rates by 2025.

- **A range of academic and economic factors can make it difficult to graduate in four years.**

A variety of issues can keep students from graduating on time. Many students face academic challenges, such as limited course availability and placement in developmental (or remedial) education. Many have to work at least part time to cover expenses and/or receive insufficient financial aid; as a result, they may need to reduce their course loads, lengthening the amount of time it takes to graduate.

GRADUATION RATES FOR RACIAL/ETHNIC GROUPS VARY ACROSS SYSTEMS



SOURCE: Integrated Postsecondary Education Data System (IPEDS).

NOTES: 2012 IPEDS-defined adjusted entering cohort graduation rates within three years of entering community colleges, and within six years of entering four-year colleges. Graduation rates are available for all UC and CSU campuses, but for only about 64 percent of private nonprofits and about 39 percent for private for-profits.

Transfers from the California Community Colleges are essential to improving completion

California is more reliant on its community colleges as a point of entry to postsecondary education than almost any other state. Community colleges serve a diverse population with diverse goals. Not all students intend to obtain associate degrees or transfer to four-year programs—many are interested in technical training or learning new skills. But large numbers of students do enter community colleges with the hope of transferring and earning a bachelor's degree.

- **Completion rates are low at community colleges.**

Only 13 percent of community college freshmen receive an associate degree after two years, and 31 percent do so within three years. These very low rates reflect the diversity of student goals. However, only about 48 percent of students aiming to receive an associate degree or certificate, transfer to a four-year school, or complete at least 60 transferable units do so within six years. There are large completion gaps among racial/ethnic groups, with Asian American and white students more likely than their African American and Latino classmates to finish.

- **The transfer process can be complicated, but it is improving.**

Varying requirements can deter students from transferring or keep them at community colleges longer. Articulation agreements between schools (which specify the courses and grades required to transfer) are often campus specific—so credits that are accepted at one four-year school might not be accepted at another. Transfer pathways are improving: the number of degrees awarded through the Associate Degree for Transfer (ADT)—a program that prepares students for transfer to any CSU campus—increased from about 11,000 in 2013–14 to nearly 50,000 in 2017–18. Many private institutions have also signed on to the ADT; this will lead to a more streamlined transfer process.

- **Students who do eventually transfer are likely to earn degrees.**

Students who end up transferring from a community college to a UC school have graduation rates that are similar to those of first-time freshmen, and transfers to CSU have better graduation rates than first-time CSU freshmen (79% vs. 61% for students admitted in 2012). In fact, in 2017–18, transfers from community colleges made up only 36 percent of entering students at CSU, while transfer students who graduated that year received 51 percent of all CSU diplomas.

College readiness is a key factor

Many factors influence completion rates at two-year and four-year colleges, but preparedness plays a major role. Entering students who are ready to take college-level courses can graduate more quickly—and when remediation is needed, it should facilitate rather than deter student progress.

- **College readiness has improved in recent years.**

The share of high school seniors who have completed the coursework required for admission to UC or CSU is at a historic high, and enrollment in advanced placement courses and participation in the SAT are on the rise. Also, California now has K–12 standards and assessments that are designed to better prepare students for college and careers. California’s statewide standardized tests give students an early indication of their readiness for college-level work at CSU or CCC. In 2018, 56 percent of 11th graders needed to pass just one more class to be ready for college-level courses in English at the CSU and most community colleges, compared to about 31 percent in math.

- **Students in developmental education have worse outcomes.**

Many students are deemed unprepared for college-level coursework upon entering college and are directed to take developmental (or remedial) courses. Students who start college in developmental courses are less likely to earn a degree or to transfer, and they tend to take longer if they do finish. For example, at the state’s community colleges only 24 percent of students who ever take a developmental English or math course transfer within six years, compared to 65 percent of college-ready students. Research shows that many students placed in remediation could have been successful if they had enrolled in transfer-level courses.

- **Remediation practices are improving.**

While about a third of incoming freshmen at CSU were deemed in need of remediation in 2017, CSU did away with remediation in 2018. All students now enroll in college-level classes; CSU offers co-requisite courses—which provide concurrent remediation—and additional support to help students succeed. In compliance with newly legislated reforms, the community colleges are placing more students directly into college-level classes with similar support.

Looking ahead

The state can boost the number of college graduates by helping students who enroll in its public and private institutions make timely progress toward degrees.

Adopt more strategies to shorten the time it takes to graduate. Both UC and CSU have made progress in expediting graduation, and many campuses are doing more to inform students that they need to take 30 units a year to graduate on time. Financial aid has been shown to increase the likelihood of graduation. Expanding aid to more students and/or expanding aid to cover more costs could increase completion rates. The state could also consider increasing aid to help more students attend nonprofit private colleges, given their high four-year completion rates.

Increase transfer rates from community college. A continued focus on removing barriers can help increase the number of students who transfer and obtain bachelor’s degrees. Specifically, improving placement policies and redesigning

developmental course sequences can increase the number of community college students taking college-level courses and eventually transferring.

Evaluate and improve performance-based funding. Performance-based funding could be a useful tool to improve outcomes in higher education. As a part of the new community college funding formula, a portion of a community college's funding depends on the outcomes of its students, such as the number of degrees/certificates awarded or the number of students who transfer. As the funding plan rolls out the state should evaluate its impact on student achievement and consider how performance funding might work in other institutions.

CONTACT A PPIC EXPERT



Jacob Jackson
jackson@ppic.org











Kevin Cook
kcook@ppic.org



Hans Johnson
johnson@ppic.org

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San Francisco, CA 94111
T 415.291.4400 F 415.291.4401
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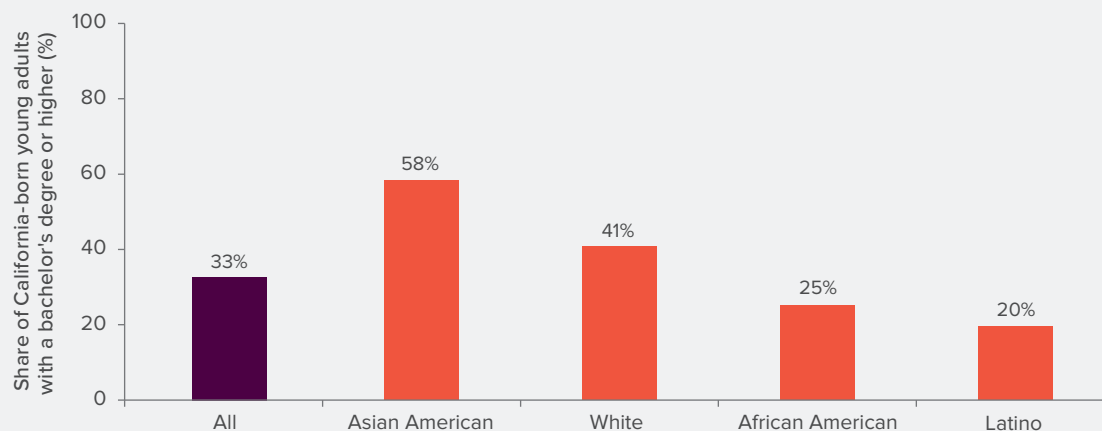
California needs more historically underrepresented students to graduate from college

A solid majority of California’s future college-age population will come from demographic groups that have been historically underrepresented in higher education—including Latinos, African Americans, and those who are low income or the first in their families to go to college. PPIC research has shown that this demographic shift could make it more difficult for the state to meet future workforce needs.

Underrepresented students are less likely to complete college—for example, among young adults who were born in California, 58 percent of Asian Americans and 41 percent of whites have at least a bachelor’s degree, compared to 25 percent of African Americans and 20 percent of Latinos. Significant barriers with respect to college readiness, access to college, and college completion continue to lower underrepresented students’ odds of obtaining college degrees relative to their wealthier, well-represented peers. At the same time, large shares across underrepresented groups say that a college degree is very important, according to a PPIC 2018 Statewide Survey—particularly Latinos (69%) and low-income Californians (63%).

Every educational sector, from K–12 schools to public and private universities, has an important role to play in narrowing equity gaps and ensuring that more historically underrepresented students have opportunities to achieve upward economic mobility through higher education. The state and its educational institutions have invested heavily in a wide range of policies and programs that aim to help students make it into and through college. However, further action is needed to reduce persistent gaps.

YOUNG ADULTS FROM UNDERREPRESENTED GROUPS ARE LESS LIKELY TO HAVE A BACHELOR’S DEGREE



SOURCE: Authors’ calculations based on 2017 American Community Survey data.

NOTE: Restricted to adults age 25–34 born in California and living anywhere in the United States.

Access to college remains uneven

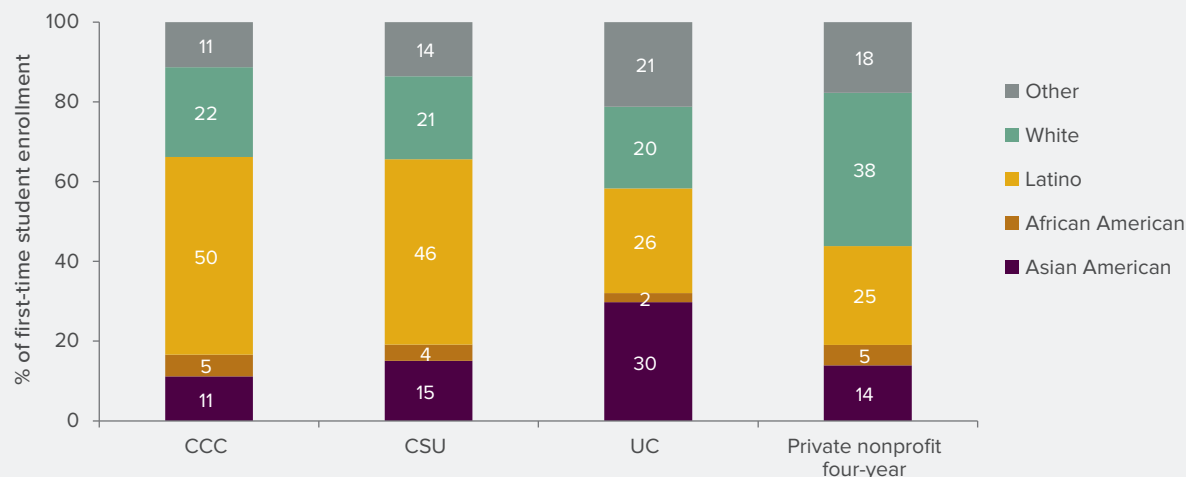
Financial aid makes college possible for many low-income students. However, there are large differences in the enrollment of underrepresented students across institutions.

- **Community colleges and state universities are important access points.**

First-time students at the California Community Colleges (CCC) and the California State University (CSU) reflect the racial/ethnic diversity of California’s high school graduates; Latinos are the largest racial/ethnic student group in both sectors (50% and 46%, respectively). And large shares of students at both sectors (54%) are in the first

generation of their families to go to college. In contrast, Asian Americans (30% of first-time freshmen) are overrepresented at the University of California (UC), and whites (38% of first-time freshmen) are overrepresented at private nonprofit colleges. Notably, the shares of low-income and first-generation students at CSU and UC have increased substantially over the past decade.

COMMUNITY COLLEGE AND CSU STUDENTS REFLECT CALIFORNIA'S RACIAL/ETHNIC DIVERSITY



SOURCE: Integrated Postsecondary Education System (IPEDS).

NOTES: College enrollment is final release fall 2017 first-time degree/certificate-seeking undergraduates. "Other" includes Pacific Islanders, American Indians, Alaskan Natives, students who mark two or more races or do not reveal their race, and students who are not US citizens or nationals. Response rates: 100 CCC campuses, 23 for CSU, 9 for UC, and 49 for private nonprofit four-years.

- **Grant aid makes college possible for many low-income Californians.**

Tuition at public institutions for students from low-income—and many middle-income—families can be covered by a combination of federal, state, and institutional grants. Community college tuition for low-income residents is fully covered by fee waivers from the state's board of governors. However, many low-income students and their families struggle to cover other expenses, such as housing, health care, and child care. Legislation was introduced in 2019 (SB 291) to provide financial aid to community college students that addresses their total costs.

- **State policy changes have facilitated college access for undocumented Californians.**

More than 200,000 immigrants in California have benefitted from the federal Deferred Action for Childhood Arrivals (DACA) policy, according to a PPIC report. DACA and California's Dream Act offer undocumented students in-state tuition, state financial aid, work permits, driver's licenses, and other support. Amid uncertainty about federal immigration policies and enforcement, California's public higher education systems have advocated for the continuation of DACA and rolled out additional supports and services.

Despite progress, completion gaps persist

Graduation rates are slowly increasing among underrepresented students, but these rates are still relatively low. Whether students first enroll in a four-year or a two-year school makes a difference in their outcomes.

- **The share of bachelor's degrees awarded to Latino and African American students is growing.**

The proportion of bachelor's degrees awarded to Latinos and African Americans by public universities increased between 2010 and 2018—from 27 percent to 41 percent at CSU and from 18 percent to 25 percent at UC. This improvement coincided with increased spending on student services—suggesting that additional support could further narrow attainment gaps. Still, there are gaps between enrollment and completion—especially at CSU, where Latinos and African Americans represented about half of first-time freshmen but obtained only 41 percent of degrees in 2017–18.

- **Graduation rates for underrepresented students vary across higher education sectors.**

Graduation rates for underrepresented students are lowest at community colleges and private for-profit institutions.

For example, among degree- and/or transfer-seeking students, only 37 percent of African Americans and 42 percent of Latinos transfer or obtain a community college credential within six years. In recent years, graduation rates at CSU have improved for all groups, but gaps persist (11 points for low-income students, 23 points for African Americans). Graduation rates are higher at UC and many private nonprofit colleges—which have selective admission processes and relatively high levels of student support. Still, there are equity gaps both at UC (6 points for low-income students and 10 points for African Americans) and at private nonprofits (9 points and 13 points, respectively).

- **Community colleges could improve pathways to bachelor's degrees.**

Students who begin college at two-year institutions are much less likely to earn bachelor's degrees than those who start at four-year universities. One major barrier is that not all community college credits are transferable; many students spend time and money “re-earning” credits after they have transferred to a four-year school. Improving pathways is especially important because many students who do transfer are successful: in 2017–18, transfer students obtained 43 percent of the bachelor's degrees awarded by CSU and 29 percent of those awarded by UC. The Associate Degree for Transfer is a step in the right direction—it guarantees that students with 60 community college credits can transfer to any CSU campus; they need to earn 60 CSU credits in order to receive a bachelor's degree.

Limited college prep resources are a major barrier

Underrepresented students often go to K–12 schools with limited college preparatory curricula. These students are therefore more likely to be declared unprepared for college-level course work.

- **Underrepresented students have made gains in college prep, but gaps persist.**

The proportion of public high school graduates completing college preparatory coursework required by UC and CSU (known as the a–g requirement) increased from 34 percent in 2007–08 to 47 percent in 2016–17. Latinos made especially large gains (from 22% to 39%), and the white–Latino performance gap has narrowed from 17 to 13 percentage points. The share increased from 23 percent to 35 percent among African Americans, but the white–African American gap remains unchanged. The share of socioeconomically disadvantaged students completing the a–g requirement increased from 28 percent to 39 percent.

- **Lower-income students often go to K–12 schools with limited college-prep curricula.**

Underrepresented students are more likely to attend schools with weak college-preparatory resources, such as advising, mentoring, and test preparation. Federal, state, and local initiatives can fill an important gap by informing students and their families about college preparation, enrollment, and success. Outreach efforts should begin in middle school so that these students have the opportunity to become prepared for college.

- **Reforms are lowering college remediation barriers.**

In the past, the vast majority of first-time community college students and about a third of entering CSU students were deemed not college ready in math and/or English—and underrepresented groups have long been over-represented in remedial, or developmental, education. Lengthy developmental sequences delayed student progress toward degrees or transfer. Recent reforms at CSU and community colleges eliminated placement tests and required colleges to use high school records as the primary factor in assessing college readiness; these reforms are significantly reducing remediation rates among underrepresented students.

Looking ahead

If current educational and economic trends continue, California will face a shortage of skilled workers—and economic inequality will continue to rise. But the state can take steps to increase access to and graduation from college among historically underrepresented groups.

Improve college preparation. So-called “promise programs” that inform middle school students and their parents about college entrance requirements and financial aid opportunities can help improve college readiness. High school counselors must provide accurate information and student schedules need to allow for the completion of college preparatory requirements. Requiring high school students to opt out of college preparatory courses rather than opting in has had encouraging results.

Monitor the impact of recent reforms. Recent reforms and initiatives aim to increase transfer rates from community college to four-year colleges, increase graduation rates, and improve economic outcomes. These efforts, including remediation reform (fully implemented in fall 2019 at CCC and fall 2018 at CSU) and several initiatives (the Associate Degree for Transfer, Guided Pathways, and the California Community Colleges' Vision for Success) are all steps in the right direction. Ensuring the effective implementation of these and other changes—including any course corrections that may be needed—will require rigorous monitoring and evaluation.

Address the total cost of college. In addition to covering the rising cost of tuition and fees, financial aid—from federal, state, and institutional sources—should aim to cover the full cost of attendance so that low-income students can graduate and gain access to fulfilling, well-paying jobs and careers without the burden of long-term debt. Current legislative proposals to address the total cost of college for community college students as well as initiatives to address student hunger and housing insecurity could help low-income students focus more fully on academic achievement.

CONTACT A PPIC EXPERT



Olga Rodriguez
rodriguez@ppic.org











Marisol Cuellar Mejia
cuellar@ppic.org



Hans Johnson
johnson@ppic.org

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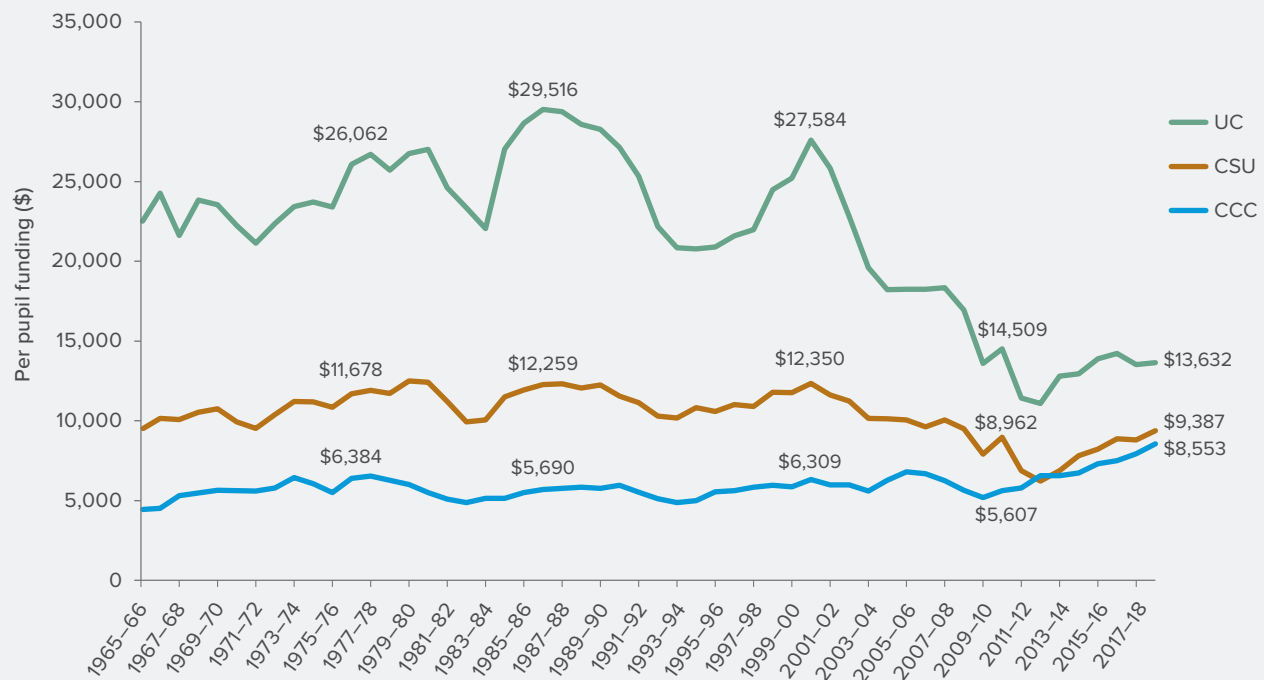
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How should California fund public higher education?

State funding for higher education has increased in recent years. Per student funding for the California Community Colleges (CCC) is at an historic high and the Cal Grant program is larger than ever. But the state's investment in its public universities remains far lower than in the past. Indeed, California invests less per student (adjusted for inflation) at its public universities than it did 30 years ago. When state contributions dropped dramatically during the Great Recession, the University of California (UC) and California State University (CSU) increased tuition to make up for lost revenue. These tuition hikes contributed to concerns about college costs. According to a 2018 PPIC Statewide Survey, most Californians (58%) believe that higher education affordability is a big problem for the state.

Some California policymakers have acknowledged that state disinvestment in higher education is partly responsible for rising student costs. At the same time, many higher education leaders are concerned that the current financial model of public higher education is inefficient and unsustainable. Clearly defined goals, greater transparency, and better data systems can help ensure that California's investments in higher education continue to benefit the state and its residents.

STATE FUNDING FOR PUBLIC HIGHER EDUCATION IS BEGINNING TO REBOUND



SOURCES: California Postsecondary Education Commission and the California Department of Finance.

NOTE: The General Fund expenditures per full-time-equivalent student shown in this chart are adjusted for inflation and do not include federal American Recovery and Reinvestment Act funds used to replace state higher education funding from 2008 to 2011.

State investment in higher education has declined and shifted over time

- Higher education's share of the state budget has grown smaller over the past four decades.

The share of state higher education spending peaked at 18 percent of the budget in 1976-77; by 2018-19, it had fallen to 11 percent. Funding per full-time-equivalent student has declined most dramatically at UC, from slightly more than \$26,000 to \$13,632. State funding per CSU student has fallen from \$11,678 per student in 1976-77 to \$9,387 in 2018-19.

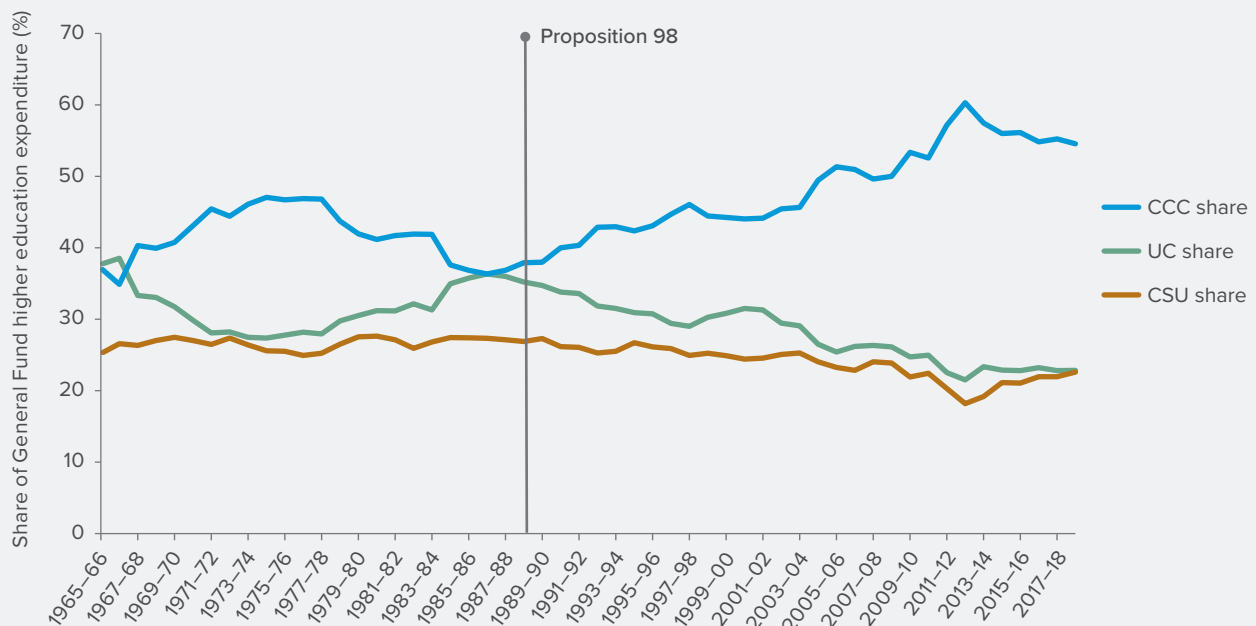
- **The state General Fund and tuition revenue cover most of the public system's instructional costs.**

General Fund appropriations combined with tuition revenue pay for the bulk of undergraduate instructional costs at UC, CSU, and the community colleges. The state also provides Cal Grants, which cover the full cost of UC and CSU tuition for state residents who are academically eligible and meet financial need criteria. Students at private colleges can also get Cal Grants, though their tuition is rarely covered in full. Non-instructional expenditures—for dormitories, food service, medical centers, and research activities, among other things—are funded primarily through user fees and federal grants.

- **Proposition 98 has altered the distribution of higher education funding.**

Approved by voters in 1988, Proposition 98 requires that 40 percent of the General Fund be spent on K–12 schools and the community colleges. At the time, state higher education funding was split more evenly among the three public segments. Now, the community college segment receives 55 percent and the other two segments split the remaining 45 percent.

PROPOSITION 98 HAS REDISTRIBUTED HIGHER EDUCATION FUNDING



SOURCES: California Postsecondary Education Commission and the California Department of Finance.

NOTES: General Fund expenditures in this chart do not include federal American Recovery and Reinvestment Act funds used to replace state higher education funding from 2008 to 2011. General Fund expenditures for other higher education purposes, including Cal Grants, are excluded.

Public universities have raised tuition and put off infrastructure investments in response to reduced state support

State funding cuts left UC and CSU with two options: raising revenue from other sources and cutting expenses. UC and CSU have relied mostly on increasing tuition; they have also deferred investments in infrastructure. In recent years, some expenses have been reduced through enrollment restrictions and other measures, and salaries and benefits—the bulk of instructional costs—have been relatively flat.

- **In-state tuition at UC, CSU, and the community colleges has risen significantly.**

In-state tuition at the four-year universities has tripled over the past two decades; net tuition (full tuition minus scholarship aid) per student has more than doubled. UC and CSU have used some tuition revenue to increase scholarship aid for lower-income students—covering the full cost of tuition for most of those who are eligible. Community college tuition for state residents has increased by nearly 40 percent since 2005–06—from \$1,018 per year to \$1,423 in 2016–17. Although this increase has been significant, California's community college tuition is still about \$2,000 below the national average, and many students receive fee waivers.

- **Deferred maintenance will cost an estimated \$50 billion by 2022–23.**

California has underinvested in higher education infrastructure over the past decade. The state has not issued any new bonds to expand and improve academic facilities at the state's four-year institutions since 2006. The 2013–14 budget shifted funding responsibility for capital investment and debt repayment to the CSU and UC segments. While UC and CSU now have increased flexibility, a decentralized approach reduces transparency and increases the difficulty of aligning capital investment with state priorities. Community college districts have the authority to issue bonds with voter approval—and various districts borrowed more than \$35 billion for capital projects from 2001 to 2016.

- **CSU faces an especially large maintenance and capacity challenge.**

CSU's infrastructure is both extensive and old. Across its 23 campuses there are more than 2,000 facilities, with an average age of 37—well past the benchmarked standard life of 30 years. CSU's maintenance backlog grew from \$325 million in 1996–97 to about \$2.6 billion in 2017. Maintaining capital assets and infrastructure, modernizing buildings, and ensuring adequate capacity are all essential to expanding access and improving student outcomes.

Do the segments allocate their resources efficiently?

Increases in tuition have bridged the gap created by falling state funding for both the UC and CSU segments. But these increases have led some policymakers, parents, and students to believe that institutional spending is out of control. At the very least, they have raised concerns about the overall efficiency of all three segments.

- **UC and CSU have increased the number of degrees awarded despite reductions in state funding ...**

Over the past 30 years, California's four-year public universities have increased enrollment and awarded a steadily rising number of degrees despite the decline in per student funding from the state. The amount of money spent to produce those degrees actually declined by 4 percent from 1987 to 2015. This decrease was driven by CSU, where spending fell from about \$69,000 to \$48,000 per degree. Spending at UC, on the other hand, increased from just under \$119,000 to \$132,000 per degree.

- **... but it is difficult to track revenues and expenditures.**

Multiple funding sources combined with a broad range of activities create a dense web of financial relationships, but the public system could provide better information about costs and spending. For example, expenditures are reported in broad categories such as “student services” or “institutional support.” Greater detail on the costs in these categories would make it easier for policymakers, taxpayers, students, and parents to identify the services they are paying for. Using an institutional cost-per-degree measure would be a useful way to frame the discussion—it is consistent and reliable over time and across institutions and geographical areas.

Looking ahead

California and its public colleges and universities can take steps to make the most of state investments in higher education.

The state should consider linking higher education funding to clear goals and measures. Historically, state higher education funding has been based on enrollment targets or the previous year's expenditures. Instead, funding could be based on goals agreed upon by policymakers, college administrators, faculty, and students. These goals could include improving graduation rates at four-year institutions, increasing the share of low-income students, or expanding the number of career education certificates awarded. The state recently created the Student Centered Funding Formula for the community colleges, which would align funding with progress toward goals. This new formula—which has not yet been implemented—ties state allocations to student outcomes as well as enrollment and student demographics.

Innovation may help increase efficiency. Efficiency gains are most likely to be realized through innovations that improve student retention and completion. For example, the public higher education sectors could adopt technologies that can help identify students who are at risk of failing or dropping out, allowing time for intervention. Improvements in the quality and delivery of courses could help online learning and other technological tools become cost-efficient ways to expand access to college. Students enrolled in online courses currently have lower success rates than students in traditional courses, and there is little, if any, evidence that online course delivery saves money.

Increased transparency and improved data are key to continued progress and support. Efforts to reduce higher education costs are much more likely to succeed if they are facilitated by better data systems, transparent reporting, and a deeper analysis of the wide array of costs involved. A more accessible accounting system would help policymakers and institutions develop a mutual understanding of the revenues needed to provide quality higher education.

Encourage the public system to plan for capital projects and maintenance. Spending on capital projects can be uneven from one year to the next. State revenue has proven to be unpredictable. Currently, the segments choose between two options: allocating dollars out of their annual operating budgets or borrowing. Another option is to set aside a portion of the operating budget for anticipated and unanticipated capital spending. Transparent, multi-year financial planning and saving by the segments could reduce future uncertainty and help ensure that maintenance is not deferred during economic downturns.

CONTACT A PPIC EXPERT



Kevin Cook
kcook@ppic.org











Patrick Murphy
murphy@ppic.org



Hans Johnson
johnson@ppic.org

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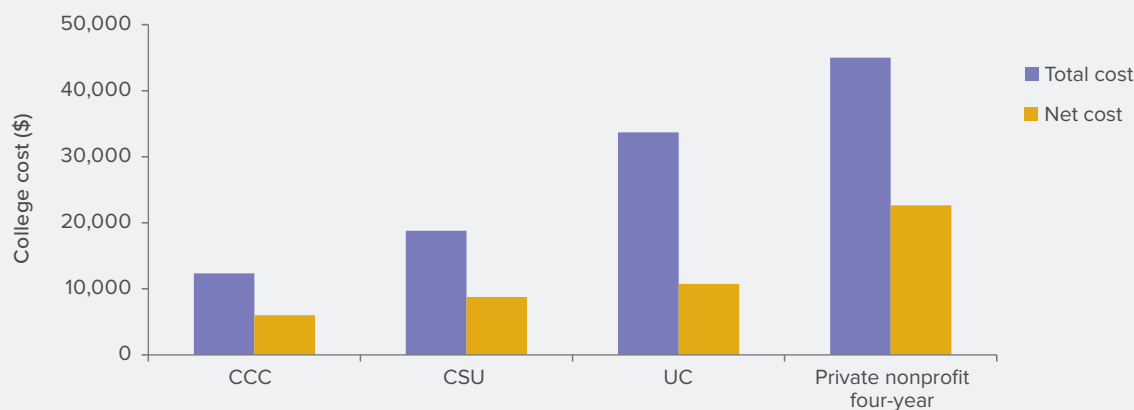
College affordability involves more than just tuition

After doubling during the Great Recession, tuition at California’s public universities has leveled off: since 2012, it has increased by a modest 2.5 percent at the University of California (UC) and has not risen at all at the California State University (CSU). However, tuition is now at all-time highs at UC (\$11,442), CSU (\$5,472), and the California Community Colleges (\$1,104). Given these realities, as well as discussions about college affordability at the federal level, it is not surprising that Californians are concerned about college costs. The November 2018 PPIC Statewide Survey found that 58 percent of Californians think that affordability in higher education is a big problem.

Because the amount of financial aid available increases as tuition goes up, at least half of the students across California’s three public segments pay no tuition. However, non-tuition costs are significant, especially for students from low-income families. State financial aid programs are focused mostly on tuition, so students must cover costs that add up to thousands of dollars. And these costs are rising: taken together, housing, transportation, and book costs have increased 24 percent since 2012.

The benefits of a college education are well documented, and higher education has major implications for economic growth, equality, and social mobility. Given that more than half of the students in California’s public K–12 schools are economically disadvantaged, affordability is crucial to the state’s future. Making four-year institutions affordable is especially beneficial, because students who start at four-year colleges are more likely to earn bachelor’s degrees than those who start at community colleges. For these reasons, the state and its higher education system need to do more to help lower-income students earn college degrees without incurring large amounts of debt.

FINANCIAL AID REDUCES COSTS FOR LOWER-INCOME FAMILIES—PARTICULARLY AT UC



SOURCE: IPEDS student financial aid and institutional characteristics files, 2016–17.

NOTES: Total cost includes books, housing, food, and transportation. Net cost is total cost minus the average grants and scholarship aid for a typical student from a family making less than \$75,000 per year.

Financial aid is keeping college affordable for many students

California has a robust financial aid program—in combination with federal and institutional aid, it helps many low- and middle-income students attend colleges that would otherwise be out of reach.

- Financial aid comes from a variety of sources.**

Students in California get grants, scholarships, work-study programs, and loans from local, state, and federal institutions. More than two-thirds of grant aid in California comes from federal and state aid, mostly in the form of Pell Grants, Cal Grants, and California Community College Promise fee waivers. Grant aid eligibility depends

not only on a student's financial and academic standing but also on the type of college a student chooses to attend. For example, private nonprofit colleges commonly offer institutional grants to offset relatively high tuition, while students at private for-profit colleges often rely on loans.

- **California has one of the country's most generous state financial aid programs.**

California is more generous than other states in supplementing federal grants. Moreover, state aid targets low-income students at public and private institutions. The state provided about \$4.2 billion in financial aid in 2016–17 (\$2 billion in Cal Grants). Awards vary across colleges: in 2018–19, Cal Grants could be as high as \$12,570 at UC, \$5,472 at CSU, and \$9,084 at private colleges. The Middle Class Scholarship program, enacted in 2013, extends state aid even further: students from families with annual incomes and assets of \$177,000 or less get 40 percent of their tuition costs covered.

- **California's poorest students can attend public four-year universities without paying any tuition ...**

Students from families with the lowest incomes usually get the largest grant aid packages and, if otherwise eligible, often pay no tuition at CSU, UC, and the community colleges. These students make up large shares of the population at the state's public universities: tuition is fully covered by grants and waivers for 57 percent of undergraduates at UC and more than 60 percent at CSU. Low-income students also see reduced costs at private institutions, but grants and scholarships may not completely cover their tuition.

- **... but housing and other costs remain a problem.**

For the most part, state aid does not cover non-tuition costs such as room and board, transportation, and books. In fact, housing can make up a majority of the cost of attendance. In 2018–19, the estimated average cost of attending a UC school was \$35,300, of which 39 percent (\$13,900) was tuition and fees and 45 percent (\$15,800) was housing. At CSU, the estimated average price of attendance was \$26,611, of which 28 percent (\$7,363) was tuition and fees and 53 percent (\$14,248) was housing. New research also suggests that many college students are facing housing instability and food insecurity.

- **Mandatory fees—which pay for essential student services—are contributing to rising costs.**

Mandatory campus-based student fees beyond tuition are on the rise—and most are not covered by grant aid. These fees pay for access to essential resources such as health centers and student affairs services. Most originate at the campus level, and although students vote to approve (or revoke) these fees, only a small fraction of students cast ballots.

Many students rely on loans

In California, overall student debt is relatively low, but Californians at all income levels rely on loans to help cover the cost of college.

- **Borrowing has declined since 2012.**

Between 2000 and 2012, the share of full-time freshmen who took out loans in California increased from 28 percent to 35 percent—and the average loan amount for the first year of college more than doubled, rising from about \$3,000 to \$6,985. Since 2012, however, both the share of freshmen taking loans and the size of the loans has declined.

- **California's college students are less likely than their peers in most other states to take out loans.**

California's colleges have the third-lowest share of freshmen with loans in the nation—only 28 percent took out loans in 2015, compared to 48 percent of freshmen in the rest of the country. This difference is especially pronounced for community college students. In California—where community college fees are the lowest in the nation—only 3 percent of community college freshmen took out loans, compared to 27 percent nationally.

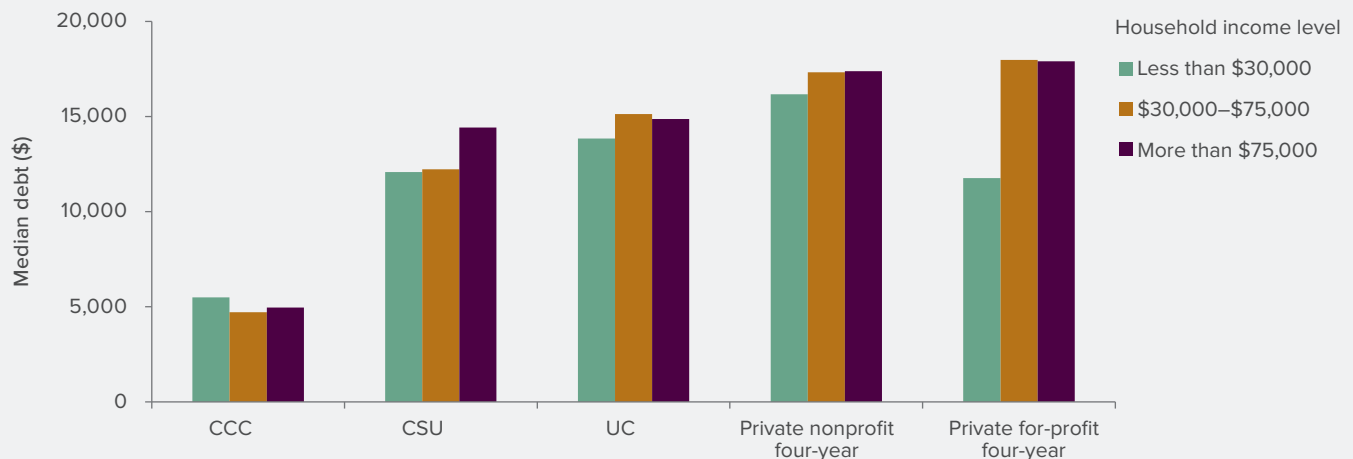
- **Students attending private institutions are more likely to get loans.**

Private colleges tend to be more expensive than public colleges. Consequently, the share of students taking out loans at private institutions is much higher. In 2015, 54 percent of full-time freshmen at private nonprofit colleges in California took out loans, compared with only 39 percent of full-time freshmen at public four-year colleges. The share of full-time freshmen taking out loans is particularly high at private for-profit colleges (70%).

- **Loan amounts vary tremendously between public and private colleges.**

In 2015, California had the second-lowest average loan amounts in the nation for students at public four-year institutions, which account for 38 percent of full-time freshmen. However, average loan amounts at California's private institutions were similar to those in the rest of the nation. Average loan amounts for freshmen at the state's private for-profit colleges were 40.7 percent higher than those for students at public four-year colleges (\$7,955 vs. \$5,440).

LOAN AMOUNTS ARE HIGHEST AMONG STUDENTS AT PRIVATE COLLEGES



SOURCE: PPIC calculations based on data from the US Department of Education's College Scorecard.

NOTE: Applies to 2016–17.

Debt problems vary among students and across institutions

Loan default rates—which indicate the difficulty of paying off debt—vary greatly across California's student population. Not surprisingly, high levels of debt are particularly troublesome for students who do not graduate and for graduates who enter low-paying professions.

- **Students who go to public universities and private nonprofit colleges have low loan default rates.**

Three-year default rates for borrowers who began repaying loans in 2015 after attending UC (2.3%), CSU (4.7%), and private nonprofits (4.1%) are much lower than the rates for those who enrolled in private for-profits (13.2%) and community colleges (18.3%). The share of community college students who take out loans, however, is extremely small, and their average loan amounts are low.

- **Loan default rates are particularly high among students attending private for-profit colleges.**

Given that so many students attending private for-profit colleges take out large loans, it is perhaps unsurprising that 54 percent of all California student loan recipients in default attended for-profit institutions, even though these institutions account for less than 10 percent of enrollment statewide.

Looking ahead

Financial aid helps many middle- and lower-income students attend college in California, but the state and federal government can do more to make higher education affordable.

Make college affordability recession proof. Even though the public higher education segments can increase tuition to make up for state spending cuts and stay afloat during economic downturns, the most recent increases in tuition caused many middle-income students to pay more for college and increased dependence on students from other states and countries to generate revenue. The state could consider drawing from its own reserves in the next recession, or it could create a dedicated funding stream for higher education.

Expand grant aid to cover more costs. Some low- and middle-income families have struggled with the rising net cost of college. Expanding grant aid to help students pay costs beyond tuition, such as housing and books, can help those who might not otherwise be able to afford to enroll in and get through college, and would help reduce loans and debt.

Remove some of the barriers to receiving aid. State aid has some age or timing requirements that keep older students or students who do not follow a traditional educational pathway from being guaranteed a grant, even if they are otherwise eligible. Those students enter a competitive pool for state aid, but only 1 in 10 in that pool receive offers of state aid. Expanding aid to cover more students may increase students' abilities to afford college and avoid debt. In 2019 the legislature raised the number of competitive grants from 25,000 to 41,000, but most of those non-traditional students will still not receive a state grant.

CONTACT A PPIC EXPERT



Hans Johnson
johnson@ppic.org











Jacob Jackson
jackson@ppic.org



Courtney Lee
clee@ppic.org

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Meeting California's Workforce Needs

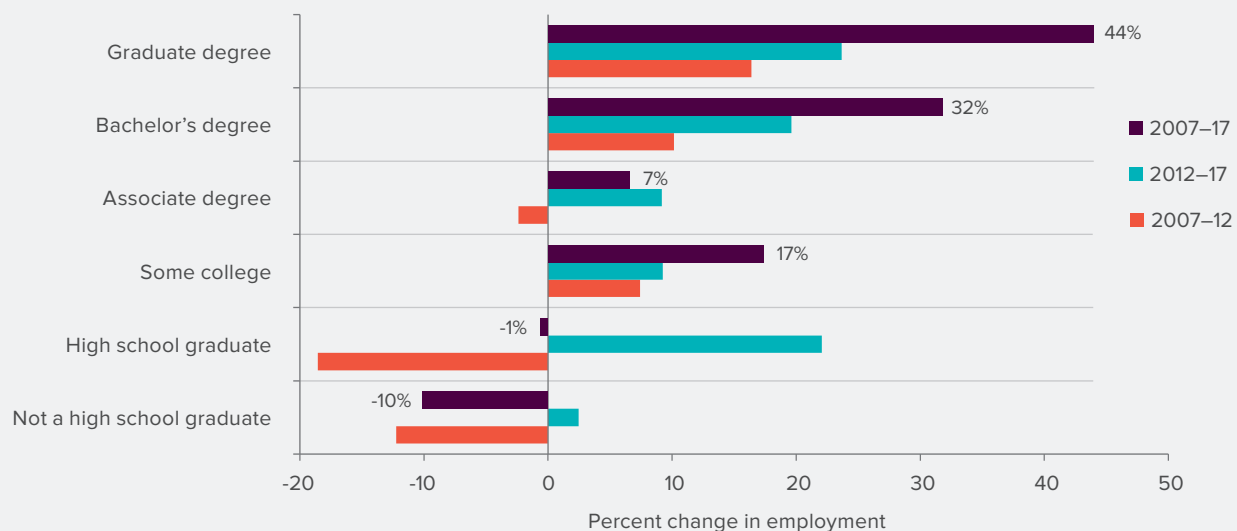
California's economy needs college graduates

A skilled workforce is key to a thriving California economy. Strong and growing demand for highly educated workers has been a hallmark of the state's economy for decades, and forecasts show this demand continuing into the future. If current trends continue, about 40 percent of jobs in California will require at least a bachelor's degree by 2030. Failing to keep up with the demand for skilled workers could curtail economic growth, limit economic mobility, and increase inequality.

The importance of increasing the number of college graduates goes beyond workforce needs. Individuals with higher levels of education earn higher wages and enjoy greater job security and non-wage benefits. The state as a whole could also benefit from lower unemployment and poverty rates, lower demand for social safety net programs, lower incarceration rates, higher tax revenue, and greater civic engagement.

The challenge of increasing the number of college graduates in California is heightened by demographic shifts toward populations that have historically been underrepresented in higher education. Meeting this challenge requires sustained coordination across educational sectors—from K–12 schools to public and private universities. It also involves measuring student progress and identifying effective programs and policies.

HIGHLY EDUCATED WORKERS HAVE FARED BEST THROUGH THE RECESSION AND RECOVERY



SOURCE: US Census Bureau, American Community Survey.

NOTE: Figure shows full-time year-round workers.

Higher education confers multiple benefits

The value of a college degree is the highest it has been in decades. College graduates have more labor market success than less-educated adults and enjoy a range of other benefits.

- **Demand for skilled workers is increasing in the vast majority of occupations.**

The share of college-educated workers is increasing not only in areas that have traditionally required high levels of education, such as computer science and health care, but also in occupations that used to have lower shares of college graduates, such as management in the hospitality industry.

- **Educated workers earn substantially more in California.**

In California, the typical full-time year-round worker with only a high school diploma earns \$36,000, while the typical worker with at least a bachelor's degree earns \$81,000. While the field of study does matter, even college

graduates who are in the 25th percentile of earners compared to other college graduates still earn higher wages than the typical worker with only a high school diploma. Moreover, in the last few decades wages have increased more for those with a college or advanced degree than for those with lower levels of education. Between 1990 and 2017, and when adjusted for inflation, median earnings increased by 19 percent for workers with at least a bachelor's degree, while decreasing by 15 percent for those with only a high school diploma.

- **The college wage premium has grown despite increases in the number of college graduates.**

The wage premium associated with a college degree—the ratio of average annual earnings for workers with at least a bachelor's degree compared to those with no more than a high school diploma—has increased consistently over time. The college wage premium among full-time year-round workers grew from 58 percent in 2000 to 71 percent in 2017. The wage premium's continued growth, even as the share of college graduates in the workforce has increased, indicates that demand for college graduates has outpaced the growing supply.

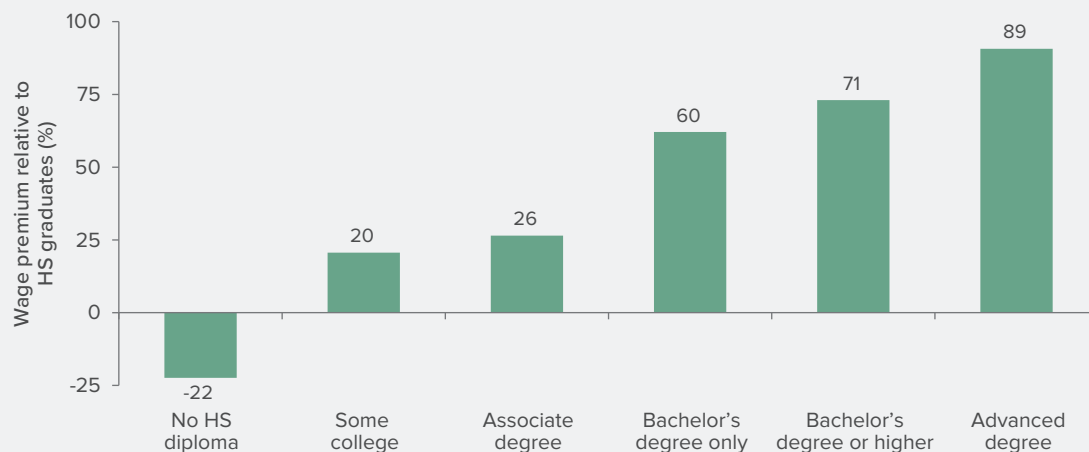
- **The benefits of a college degree extend beyond wage gains.**

Three-quarters of workers with at least a bachelor's degree are employed full time (and often get vacation, retirement, and other non-wage benefits), compared to 58 percent of workers with only a high school diploma. The unemployment rate for workers with only a high school education is 7.0 percent, more than twice the rate for those with at least a bachelor's degree (3.4%). About a quarter of working-age adults (25–64) with only a high school diploma do not participate in the labor force, compared to 14 percent of those with at least a bachelor's degree. College graduates are more likely to own a house and less likely to be in poverty or in need of safety net resources. They have lower mortality rates and are more likely to have long-lasting marriages and to be civically engaged.

- **Career education at California's community colleges is critical for workers and the economy.**

One out of every three jobs in California requires some college but less than a bachelor's degree; this share is expected to hold steady in the future. Career education programs at the community colleges prepare many Californians for these “middle skill” occupations. Career education credential typically require less time but offer lower economic payoffs than bachelor's degrees. However, credential holders do see a 20 percent increase in earnings. Wage gains vary considerably by program area and credential length. Returns to career education credentials range from virtually zero in some business and IT programs to more than 100 percent for associate degrees in health.

HIGHER EDUCATION YIELDS HIGHER WAGES



SOURCE: Authors' calculations based on 2017 American Community Survey one-year estimates.

NOTES: Full-time year-round workers ages 25 to 64. The wage premium is the percent difference in wages between college graduates (with at least a bachelor's degree) and high school graduates. These estimates are regression-adjusted for age, race/ethnicity, gender, and citizenship. “Bachelor's degree or higher” shows the wage premiums of both bachelor's and advanced degrees.

Demographic trends pose challenges to increasing the supply of college graduates

Large numbers of well-educated Californians are retiring: every year, the number of new retirees with bachelor's degrees is higher than the number of degrees awarded by the University of California. Meanwhile, a growing number of young Californians are part of groups that have long been underrepresented in higher education.

- **The number of retirees in California has grown dramatically—and many have college degrees.**
The total number of retirees grew from 3.8 million in 2008 to 5.2 million in 2018, by 38 percent—by contrast, the state’s overall population grew 8 percent. This rapid growth is a consequence of the aging baby boom, the very large cohort of people born between 1946 and 1964. This group is highly educated—the number of retirees with bachelor’s or graduate degrees increased by more than 700,000 between 2008 and 2018.
- **Improving college access and completion among underrepresented groups is key.**
Educational attainment has been rising among Latinos and African Americans, but not fast enough. Low-income, first-generation, Latino, and African American students—who make up most of the student population in the state’s public high schools—are less likely to finish high school, enroll in college, and graduate from college than their peers. For instance, among young adults born in California, 60 percent of Asian Americans and 40 percent of whites have at least a bachelor’s degree, compared to 21 percent of African Americans and 18 percent of Latinos.
- **Highly educated immigrants are essential to California’s workforce.**
Recent immigrants to California are now more likely than US-born Californians to hold at least a bachelor’s degree. While the overall number of recent immigrants fell by 21 percent between 2000 and 2017, the number of highly educated immigrants rose by 41 percent. In 2017, about half of recent immigrants had at least a bachelor’s degree—and three in ten members of the state’s highly educated workforce are recent immigrants. These changes in educational attainment coincide with shifts in recent immigrants’ countries of origin. China has displaced Mexico as the leading country of origin; India, the Philippines, and Vietnam round out the top five. In 2017, 48 percent of recent immigrants from China—and about 80 percent from India—had at least a bachelor’s degree.

Higher education institutions are committed to increasing the number of graduates

The state and its higher education institutions are making progress by increasing enrollment, graduation rates, and degrees awarded. These advances have been made possible at least partly because of renewed funding from the state.

- **More students are graduating from CSU and UC than ever before.**
Recent investments in higher education have led to sizable increases in enrollment at the state’s public universities. Along with concerted efforts to improve completion among students already in college, the number of degrees awarded by California’s colleges and universities has increased substantially. The number of bachelor’s degrees awarded at CSU and UC in 2017–18 was the highest ever (161,000), and the increase over the past few years (24,000) is the largest in at least two decades.
- **Community colleges play a key role in increasing the number of bachelor’s degrees awarded.**
The California Community College’s Vision for Success, a blueprint for improving student outcomes, sets ambitious goals for transfer rates to four-year universities. Those targets include a 35 percent increase in the number of transfer students at UC and CSU—from about 72,000 in 2015 to almost 100,000 by 2020. Because the student population at the community colleges reflects California’s economic and demographic diversity, improving transfer pathways will ensure that more low-income, first-generation, and other underrepresented students have access to a four-year degree.
- **Private nonprofit colleges and universities are making important efforts.**
California’s private nonprofit college system—which includes small liberal arts schools and large research universities—enrolls almost as many undergraduates as the University of California. Many colleges are seeking to increase enrollment and have developed protocols to increase transfers from California’s community colleges.

Looking ahead

The key to meeting future workforce needs and improving student outcomes in California is to make deliberate choices and take action today. Increasing college completion among underrepresented groups should be an important focus.

Align state education goals—and funding—with workforce needs. California has not adopted broad and widely accepted targets since it released the Master Plan for Higher Education in 1960. Workforce demand has changed substantially since then and will continue to evolve. If the state establishes a higher education coordinating body, one of its first priorities should be to establish new goals for higher education access and completion.

Improve completion rates at both two- and four-year institutions. A large share of California's high school graduates attend college, but relatively few obtain four-year degrees. Even small improvements in transfer rates to four-year institutions and in college completion could substantially reduce the degree gap and improve educational outcomes among low-income and underrepresented students.

Provide students with information on the earnings potential of career pathways. College training that does not lead to a well-paying career does little to improve economic outcomes. Students need information and guidance as they make important choices. California's public colleges have taken a big step in the right direction by providing easily accessible information on labor market outcomes (and success rates) across colleges and programs in the system.

Focus on increasing college readiness among K–12 students. Improving student achievement in high school and earlier—especially among low-income and disadvantaged students—can help lay the groundwork for success in college. This is a primary goal of the recently adopted Common Core curriculum in K–12 schools.

CONTACT A PPIC EXPERT



Hans Johnson
johnson@ppic.org











Sarah Bohn
bohn@ppic.org



Marisol Cuellar Mejia
cuellar@ppic.org

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Career education can improve economic mobility and meet workforce needs

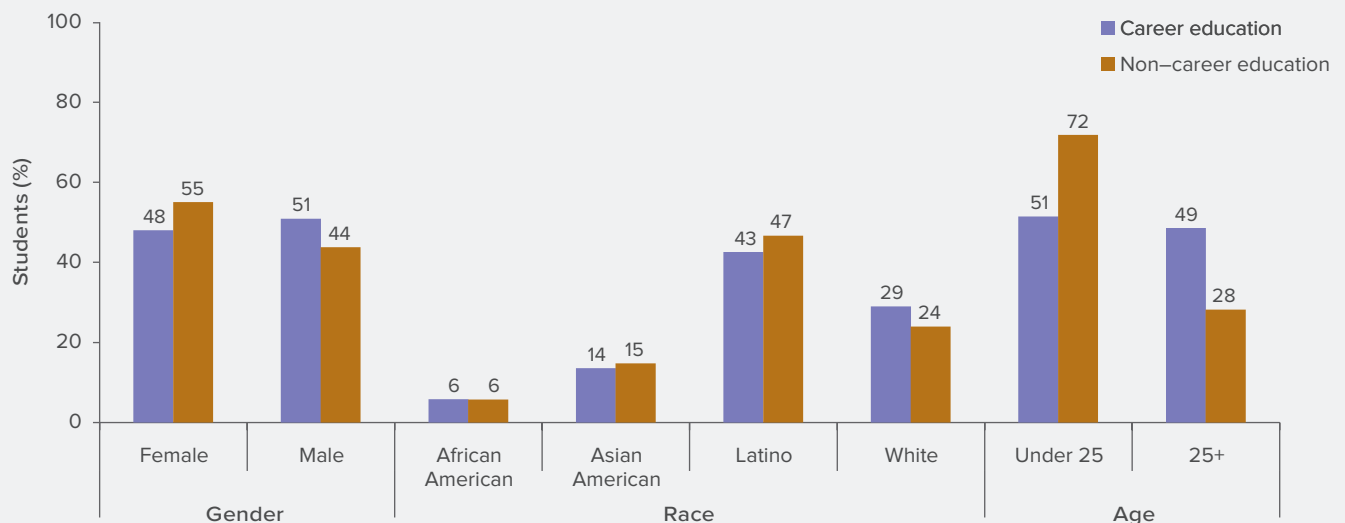
About 30 percent of California’s future jobs will require some training beyond high school but less than a four-year college degree. And in today’s economy, jobs that offer family-supporting incomes often require some postsecondary education. Career education prepares students for these “middle-skill” jobs by providing occupation- and industry-specific training. Career education is especially important for low-income workers, offering them a path toward upward economic mobility. Californians seem to be aware of these realities: PPIC Statewide Surveys consistently find that more than 95 percent feel that it is important for the state’s community colleges to offer career education.

Career education is getting renewed attention from policymakers interested in improving students’ economic outcomes and addressing California’s workforce needs. Recent investments at the state and national levels have focused on expanding and improving career education programs. Since 2014, California policymakers have directed more than \$1 billion toward developing and expanding career education in both the K–12 and community college systems. In 2016, the state created the Strong Workforce Program, which allocates \$248 million annually to support advancement of career education programs across the California community college system. Given the importance of career education, it is critical to ensure the success of these efforts by identifying and expanding effective approaches.

Most students pursuing career education in California attend a community college

- **The community colleges enroll hundreds of thousands of career education students each year.**
More than a quarter of total enrollment in community colleges is in career education programs, which award about 40 percent of all community college credentials. Annually, more than 300,000 full-time-equivalent (FTE) students are enrolled in career education throughout the system—and accounting for students who attend part-time increases that number dramatically.
- **Many career education students are older than traditional college age.**
The career education student population is similar to the overall community college population in terms of gender and race/ethnicity, but there are age differences. Half (49%) of those who pursue career education are age 25 or older, compared to only 28 percent of students enrolled in other community college courses.

CAREER EDUCATION STUDENTS ARE DIVERSE BUT TEND TO BE OLDER



SOURCE: California Community College Chancellor’s Office MIS Data Mart.

NOTES: Shares reflect full-time-equivalent enrollment in courses that are defined as vocational by the Chancellor’s office. Non-career education enrollment reflects the difference between total enrollment (credit and non-credit) and career education enrollment.

- **Most career education students enroll in six key disciplines.**

The six largest career education disciplines (those with the most FTEs) in the community college system are business and management (e.g., accounting), engineering and industrial technologies (e.g., construction trades), health (e.g., nursing), family and consumer sciences (e.g., child development), public and protective services (e.g., administration of justice), and information technology (e.g., computer networking). The number of FTEs enrolled in each discipline ranged roughly between 29,000 and 54,600 students for the 2017–18 academic year.

- **Career education completion rates are low—but they are higher than overall completion rates.**

Only about half (55%) of the students who enroll in career education programs end up with a degree, certificate, apprenticeship, or transfer-related outcome within six years. However, completion rates in career education programs are higher than for the overall student population and have improved in recent years, particularly for older students and Latino students.

- **Completion rates vary across demographic groups.**

Asian American career education students have the highest completion rates (62%). Completion rates among Latino students are the same as for whites (55%) in the most recent available data, while rates for African American career education students are lower (47%). There are stark differences in completion rates across age groups, with older students less likely to complete programs. The fact that only 45 percent of career education students age 25 or older complete programs suggests that they may need additional support.

- **For-profit college enrollment has declined.**

For-profit colleges also provide career education, but enrollment in for-profit colleges has dropped considerably over the past decade as a result of several school closures and increased scrutiny from federal and state lawmakers. However, there could be an uptick in for-profit career education enrollments due to the recent repeal of federal rules that required career programs to prove that their graduates can find “gainful” employment in order to maintain access to federal financial aid.

Career education credentials from community colleges improve earnings

Most students who complete career education credentials from California community colleges do see higher earnings. But there are sizable differences in wage returns; the length of the program (the number of units it requires) and the field of study matter greatly.

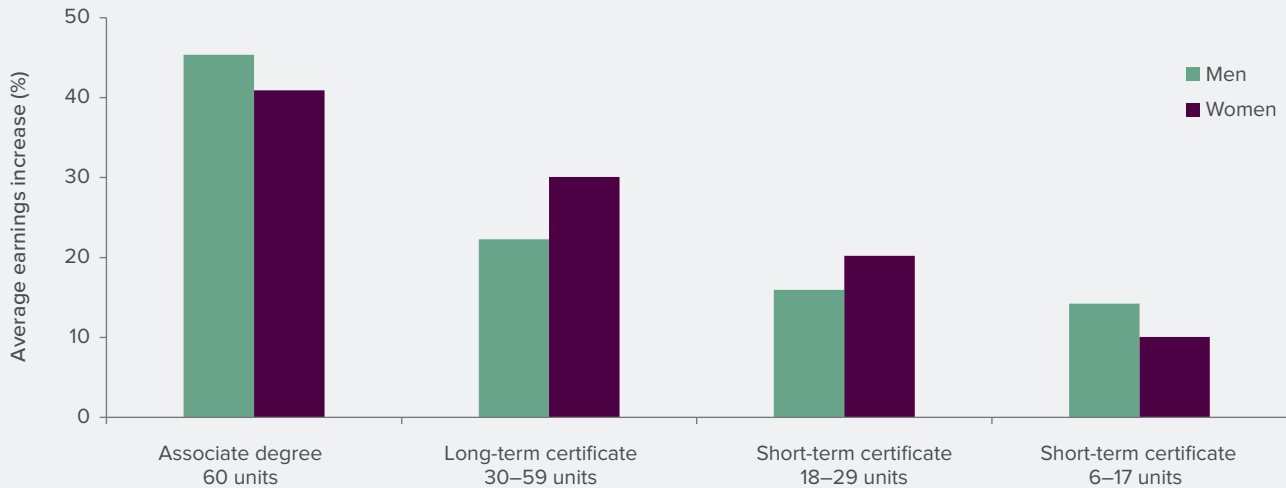
- **Both men and women see sizable returns to completing career education programs.**

For men who complete career education programs, wage returns range from 14 percent for the shortest-term certificate to 45 percent for an associate degree; the comparable range for women is 10 percent to 41 percent. Women who obtain long-term certificates see greater earnings gains than men (30% vs. 22%). These differences are driven largely by how students sort into different program areas. For example, larger shares of women are in health fields, while men dominate engineering and public/protective services.

- **There are big differences in earnings potential across fields of study.**

Health is clearly the most remunerative program: associate degrees nearly double future wages, and longer certificates confer 30 to 50 percent wage gains. Public and protective services offers higher returns (15% to 20% increases) for short-term certificates relative to other disciplines. Some engineering and industrial technology credentials provide returns in the 10 to 20 percent range. Credentials in information technology fields appear to offer the smallest earnings bumps, in some cases adding no value. It is also important to consider long-term earnings trajectories. For example, students who obtain credentials in early childhood education do see returns, but because wages are low for these jobs, progress toward higher income levels is slow.

CAREER EDUCATION CREDENTIALS FROM THE COMMUNITY COLLEGES PROVIDE ECONOMIC RETURNS



SOURCE: Ann Huff Stevens, Michal Kurlaender, and Michel Grosz, "Career Technical Education and Labor Market Outcomes: Evidence from California Community Colleges," *Journal of Human Resources* 1015-7449R2 (2018; published online before print).

NOTES: Average earnings increase to career education credentials, accounting for individual factors, time trends, and enrollment. Individual wage return from a fixed-effects regression model is averaged across all career education students and weighted by the share of credentials awarded in detailed program areas (4-digit TOP codes).

- **Students who stack credentials can improve their earnings potential—but not many do so.**

About 40 percent of career education students receive short-term certificates, which can be earned in as little as one semester. While these certificates offer less wage growth, on average, than longer-term credentials, students who “stack” additional credentials in the same field can improve their earnings trajectories. Some community colleges offer stackable sequences that can move students toward broader (or more remunerative) career opportunities. But even though a majority of students who earn short-term certificates return to community colleges, only about a quarter obtain additional credentials.

Looking ahead

Career education programs at California community colleges have the potential to increase economic mobility, particularly for students who do not earn four-year college degrees, while also responding to the state’s workforce needs. The state can increase the number of Californians who complete high-value programs by providing clear information on pathways and their payoffs and offering student supports.

Inform student choices and program development with data and collaboration. The Community College Chancellor’s Office provides a number of public online tools that shed light on the earnings potential of career education credentials. It is critical that these data be used to inform student decisions as well as system- or college-level decisions about courses and programs. In addition, collaboration with local employers, industry groups, and workforce agencies is essential to ensuring that career education leads to well-paying jobs.

Encourage more students to pursue higher-value credentials. PPIC research finds that well-designed stackable pathways facilitate completion and can lead to earnings growth, but only a small share of career education programs have such pathways. The Guided Pathways initiative, which is intended to provide students with clearer routes to employment and the support they need to get there, could help colleges develop more effective stackable sequences.

Address student supports and services. Because career education students tend to be older than traditional college students, they may need different types of academic and non-academic support: for example, child care and transportation assistance, and/or course schedules that can accommodate working adults. The current state budget approved

increased funding for Cal Grants aimed at non-traditional students and grants that cover non-tuition expenses for parents pursuing higher education. In addition, the new online college aims to provide flexible in-demand training.

Track the impact of reforms. A number of reforms at community colleges—including the new online college and Guided Pathways—have the potential to improve outcomes for career education students. But given the number of initiatives that are under way and the decentralized community college system, it is critical to gauge—and learn from—the impact of new approaches.

CONTACT A PPIC EXPERT











Sarah Bohn
bohn@ppic.org



Shannon McConville
mcconville@ppic.org

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