

Making Room for Success

| Addressing Capacity Shortfalls at California's Universities

OCTOBER 2019



**COLLEGE
FUTURES**
FOUNDATION

*More Graduates for a
Thriving California*

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INTRODUCTION

Reforms undertaken by California in the past decade to improve academic performance and prepare students to attend four-year universities are paying off: More students are graduating from high school than ever before, and more of them have completed college preparatory classes. In addition, growing numbers of community college students are earning the credits needed to transfer and continue their higher education.

But even as we celebrate that success, tens of thousands of qualified students are being turned away from California's public universities each year. The University of California and California State University are unable to accommodate the increased demand. The capacity shortfall has become a crisis. Additional challenges compound the problem presented by a lack of physical space and seats for students. Universities need sufficient faculty to cover course loads, and students need adequate supports such as counseling and financial aid. Time to degree and clear degree pathways also play a role in whether students can get to and move through higher education. Statewide and regionally, collaborative, accelerated, and sustained efforts are needed to increase educational attainment and job opportunities.

Tens of thousands of qualified students are being turned away from California's public universities each year.

By failing to serve an increasing number of eligible students, California is squandering hard-won gains and undermining public trust. Improvements at all levels of the state's education system have been driven by recognition that the state's future prosperity depends on closing equity gaps and increasing the number of students earning four-year degrees.

Education is a critical factor in significantly boosting a family's socioeconomic status for generations to come. In an increasingly global, high-tech economy, a college degree improves the chances for obtaining a job with livable wages. By investing in getting students to and through college, California benefits from increased employment and tax revenues, decreased reliance on social services, and faster growth in technological and other innovations.

The University of California, among the world's premier postsecondary research institutions, and California State University, the largest four-year public university system in the United States, have helped elevate the Golden State as the world's fifth-largest economy. But increasing capacity challenges at these universities could threaten the state's economic future and widen racial, income, and geographic inequities.

By 2030, the state is projected to have a shortfall of about 1.1 million workers with a bachelor's degree.¹ At least 60 percent of California's K–12 students are from underserved groups that have had historically low rates of college success.² Meeting the projected shortage of skilled workers depends on dramatically raising the rates of college success for students from low-income families and communities of color.

The capacity challenges at universities, however, disproportionately impact students from groups that are underrepresented in college. Some of the largest capacity gaps in California are in regions with high percentages of low-income families and communities of color. Many students already face formidable socioeconomic barriers and cannot afford additional burdens. When earning a baccalaureate degree requires moving to another region or state, these students are largely left behind. Yet these students and the state have the most to gain if they earn a degree—and the most to lose if they do not.

To support a thoughtful and productive conversation about how to leverage the state's resources, strengths, and assets, College Futures Foundation commissioned a study of postsecondary capacity issues by McKinsey & Company, a consulting firm that conducts qualitative and quantitative analysis to guide strategy and planning. The analysis examined capacity at the California Community Colleges, the University of California, the California State University, and the Association of Independent California Colleges and Universities (private schools). McKinsey worked in collaboration with these higher education systems and the California Department of Education and used proprietary and publicly available data. This report lays out the scope of capacity challenges through the next decade, details the economic and social implications, and outlines potential solutions.

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Capacity challenges disproportionately impact students from groups that are underrepresented in college.

Unless otherwise cited, data in this report are from the capacity analysis conducted by McKinsey & Company.



SUMMARY

Findings from this study show that California's higher education challenges are urgent and pose an immediate threat to the state's economy.

Defining capacity challenges

- **More college-eligible students.** By 2030, about 144,000 qualified students per year will not be able to attend four-year institutions in California, nearly double the number kept away during the 2018–2019 academic year.³
- **Acute impact regions.** Regions with the highest proportion of low-income families and communities of color suffer the largest shortages of space for eligible students.
- **Insufficient graduate seats.** Space in advanced degree programs, which are required for many jobs in health care, technology, and other fields, will fall short by about 21,000 seats per year by 2030.

Connecting economic trends

- **Higher education pay-off.** In 2030, the state is projected to have a shortfall of nearly 1.8 million workers, and 68 percent of the gap is for high-skill jobs that require at least a bachelor's degree and are more likely to offer higher than average wages.
- **Regional opportunities.** Even in areas that have traditionally lagged the rest of the state economically, demand will increase for high-skill, higher-paying jobs, particularly in health care.

Together with state and regional leaders, the different segments of California's higher education system have the power to advance innovations that can resolve capacity issues to benefit the entire state. This report explores several key solutions.

Making room for more students

- **Improved student experience.** Institutions can make demand for seats more manageable by furthering student success initiatives that help students complete their degrees more efficiently.
- **Creative use of space.** The capacity of physical space can be increased by sharing facilities and other resources throughout the education system and redesigning schedules.
- **Regional partnerships.** Businesses, K–12 districts, community colleges, and four-year institutions can work together to align education and labor needs and optimize local resources.

California has long built its economic strength on providing quality, accessible postsecondary education. Our future depends on continuing that legacy.

DEFINING CAPACITY CHALLENGES

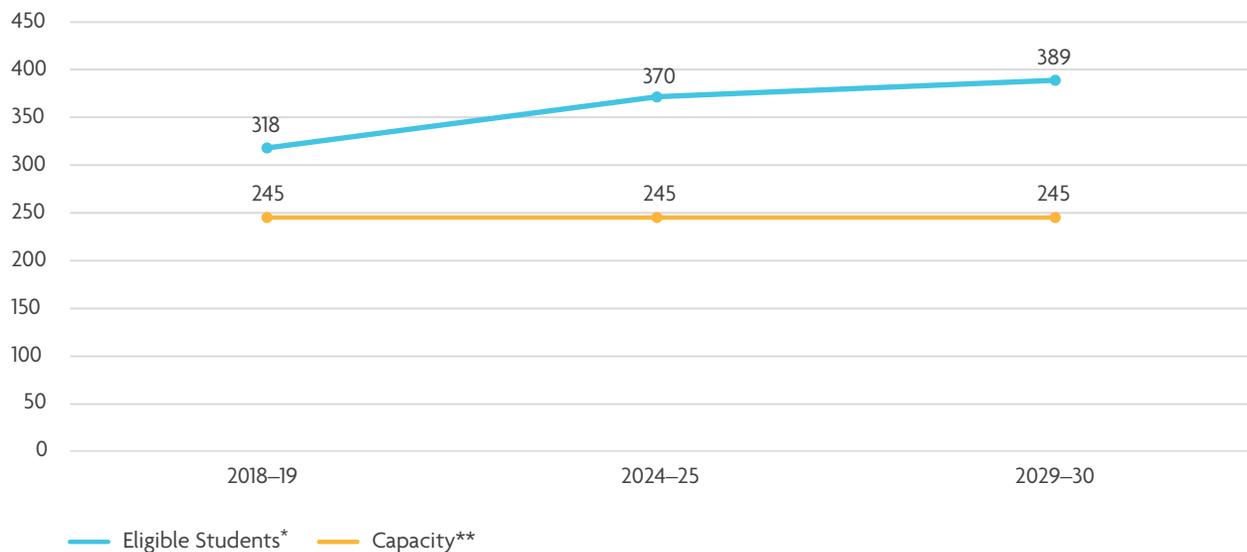
1 MORE COLLEGE-ELIGIBLE STUDENTS

Significant progress of student success initiatives means that the number of students eligible for college will continue to dramatically increase.

Even as California's overall population of K–12 students is expected to decline, retention and graduation rates are expected to climb. Through 2030, the number of high school graduates prepared to enter a bachelor's degree program is expected to grow about 10 percent annually.

EXHIBIT 1:

Demand for Four-Year Degrees in California Through 2030
Number of Students, Thousands



*Eligible students include high school graduates who have completed the college preparatory courses required for admission to CSU or UC, community college students working toward transferring, and adult learners.

** About 76 percent of the capacity for four-year degrees in California is at UC and CSU. The remaining capacity is at private nonprofit universities, 13 percent, and private for-profit schools, 11 percent.

Sources: CA Department of Education, Integrated Postsecondary Education Data Systems (IPEDS), DataMart, CSU, and UC Info Center

At community colleges, new programs have expanded student support services and improved coordination with universities to help students transfer more easily. With more effective and efficient pathways, the California Community College system is aiming to increase the number of transfer students to four-year institutions 35 percent by 2022.

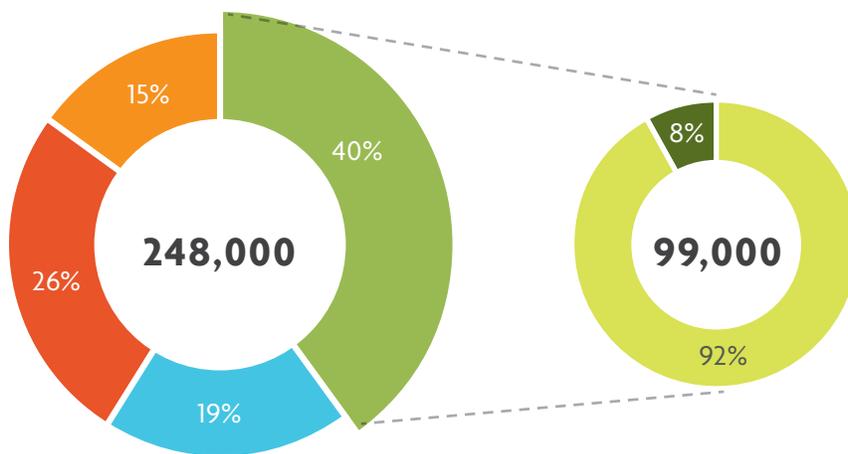
Currently, 52 percent of students qualified to attend universities are high school graduates who have completed the college preparatory classes (the A–G course sequence) required for admission to the California State University (CSU) or the University of California (UC). Another 44 percent are community college students who are working toward transferring. A small share of demand also comes from adults over the age of 25 and other high school graduates.

California universities did not have room for about 73,000 qualified students for the 2018–2019 academic year alone. That number is roughly equivalent to the entire student population at CSU Fullerton and San Jose State University combined.⁴ By 2030, the shortfall is projected to nearly double to 144,000.

Action from private institutions alone cannot significantly address the shortfall. More than three-fourths of the capacity for baccalaureate degrees in the state is at CSU and UC.

EXHIBIT 2:

Projected Higher Education Attendance for UC/CSU-Eligible High School Graduates, 2030*



- Denied UC/CSU Enrollment Due to Capacity Limits
- Enroll in Two-Year Degree Program
- Enroll in Four-Year Degree Program
- Go Out of State or Do Not Attend College**
- Attend CSU
- Attend UC

* Similar trends are likely for community college transfer students who are eligible for UC/CSU admission, but not enough data is available for a detailed analysis.

** A further breakdown of students who go out-of-state or do not attend college is not available.

Sources: CA Department of Education, UC Info Center, IPEDS, CSU, and National Center for Higher Education Management Systems (NCHEMS)

Although two-year institutions have a surplus of seats, this surplus is not enough to make up for the shortfall at universities. Even if students are sent to the estimated 44,000 extra seats available primarily at community colleges, that would still leave up to 100,000 students without a spot in the higher education system.⁵

Moreover, shifting more students to community colleges would possibly impact completion rates, particularly for underrepresented students. Despite recent success in increasing community college transfers, high school graduates who directly enroll in universities are still much more likely to earn a bachelor's degree than those who start at community colleges.

Latino students, who comprise more than half of the current K–12 student population, are more likely to enroll in community colleges—even if they are eligible for four-year universities. In 2016, nearly 40 percent of Latino students who were eligible for CSU or UC did not attend.⁶ Socioeconomic reasons, including lack of finances, geographic accessibility of community colleges, and discomfort with demographics and climate at four-year universities have kept them away. The insufficient capacity at CSU and UC will prevent even more Latino students from enrolling.

In addition, relying on the surplus capacity at community colleges alone will not help meet the needs of employers. Estimates of job openings in California suggest that nearly twice as many bachelor's degrees as associate degrees will be required by 2030. A variety of scenarios that factor in historical growth in capacity and improvements in university graduation rates lead to the same conclusion: The state must increase its ability to serve more students seeking four-year degrees.



2 ACUTE IMPACT REGIONS

Regions where an increase in four-year degree attainment would have the greatest social and economic effect face the largest capacity shortages.

Nearly 80 percent of the state's high school seniors in 2017 lived in six regions: Los Angeles, the Inland Empire, the Central Valley, San Diego, Sacramento, and San Francisco. Roughly the same percentage of total seats in the state's colleges and universities are available across these regions.

However, region by region, the supply of higher education doesn't align with the greatest demand. This means that students who want a four-year degree will likely have to move away to find an open spot at a university, and many will have to go far to find even an available community college.

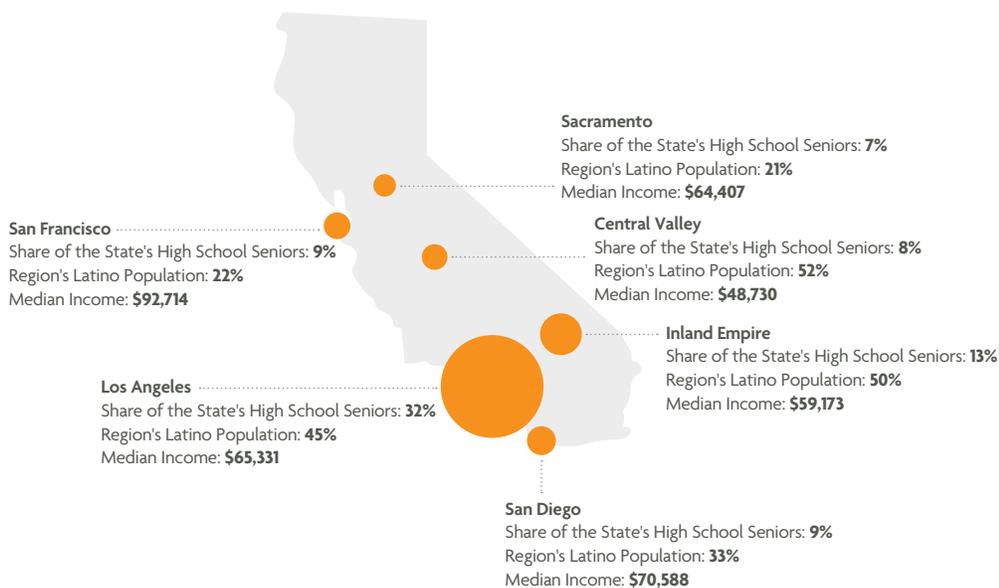
News reports have highlighted the growing numbers of California students who are moving to nearby states. At Arizona State University for example, enrollment from California students since 2006 has grown 83 percent. Those who can will increasingly find opportunities elsewhere, taking their future contribution to the labor force and economy with them.

The capacity challenges disproportionately affect the Inland Empire and the Central Valley, where students would benefit the most from a college degree and are least able to move to enrollment opportunities out of the region or state. In both regions, incomes are significantly below the state median, and Latino residents make up half the population. The Inland Empire and Central Valley are also home to high numbers of young adults, with about one in five of the state's total high school seniors in 2017.

EXHIBIT 3:

Demographics by Key California Regions, 2017*

Circle size represents region's share of high school seniors in the state



The Central Valley, Inland Empire, and Los Angeles regions have large proportions of two groups underrepresented in college: low-income families and Latinos.

*Nearly 80 percent of the state's high school seniors lived in these six regions in 2017, and roughly the same percentage of total seats in the state's colleges and universities are in these regions.

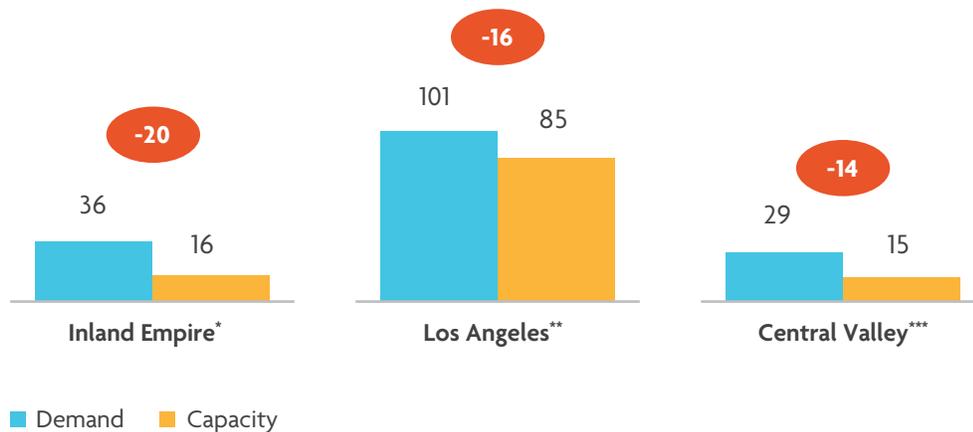
Sources: DataMart, UC Info Center, CSU, IPEDS, U.S. Census

In the Inland Empire, less than half of the 36,000 qualified students will be able to attend a local university by 2030. The community colleges will be able to absorb just 3,000 of the remaining students, forcing 17,000 students to travel if they want any access to higher education.

In the Central Valley, half of the 29,000 eligible students will be able to attend nearby universities. Most of the remaining students will be able to find space in local community colleges, but about 2,000 will need to leave the region to find educational opportunities.

Like the Central Valley and Inland Empire, Los Angeles has a high proportion of students from low-income families and communities of color. Los Angeles area universities have room for all but 16 percent of the region's 101,000 students expected to qualify for admission by 2030. Nearby community colleges can absorb the rest, but these students may face additional challenges in transferring and completing a four-year degree.

EXHIBIT 4:
Demand and Capacity at Four-Year Institutions, 2030
Number of Students, Thousands



* Inland Empire includes San Bernardino and Riverside counties

** Los Angeles includes Los Angeles and Orange counties

*** Central Valley includes Fresno, Kern, Merced, and Stanislaus counties

Sources: IPEDS, DataMart, CSU, UC Info Center, CA Department of Education, and CA Department of Finance

3 INSUFFICIENT GRADUATE SEATS

Rising student success rates are also leading to shortages in graduate programs.

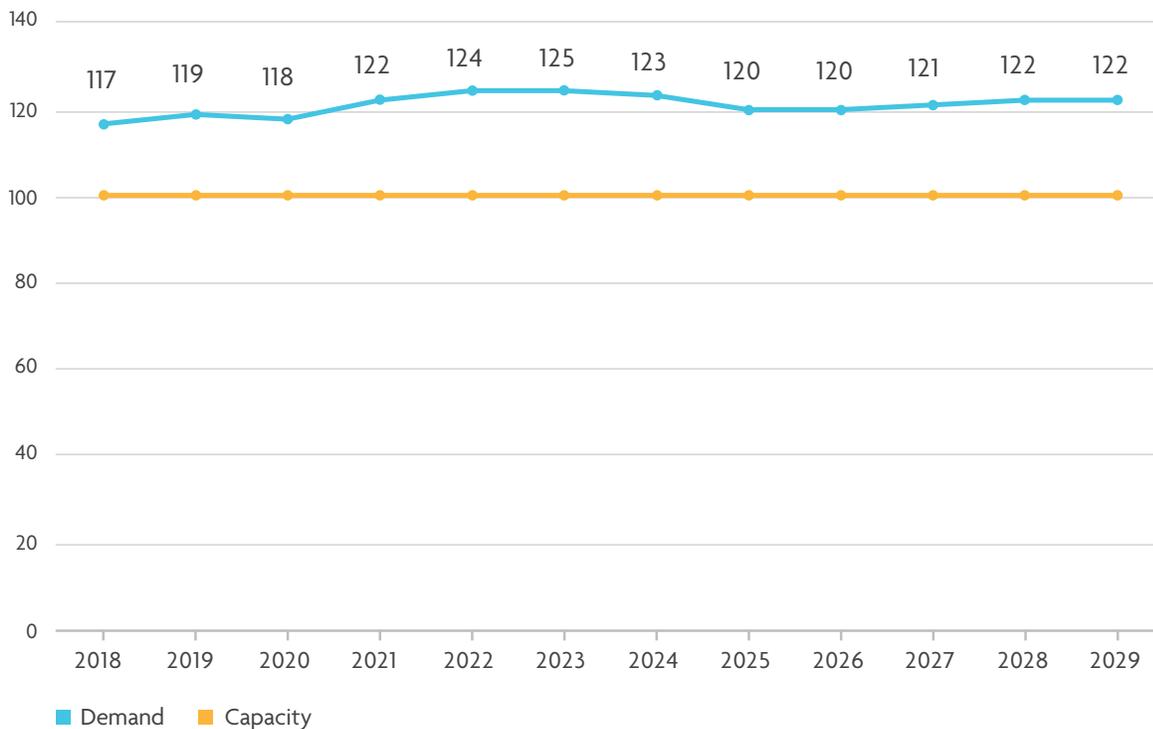
Advanced degrees can help graduates earn higher wages and are required for fields such as medicine and science. About 101,000 seats are available in state graduate programs, but another 16,000 are needed to meet current demand. By 2030, the shortage is expected to grow to 21,000.

Private nonprofit institutions make up 49 percent of the capacity in graduate programs, with 19 percent each at UC and CSU and the remainder at for profit schools. About 35 percent of California bachelor's degree holders pursue a graduate degree within two years of completing their undergraduate studies.

The health of the economy will determine the depth of the capacity shortfall. If low unemployment rates continue, fewer adults will return to school. But if a recession occurs, the capacity gap could increase up to 24,000 seats as more bachelor's degree holders try to earn advanced degrees to improve their job prospects.

By 2030, the shortage of graduate seats is expected to grow to 21,000.

EXHIBIT 5:
Baseline Projections for Graduate Programs
Number of Students, Thousands



Source: IPEDS

CONNECTING ECONOMIC TRENDS

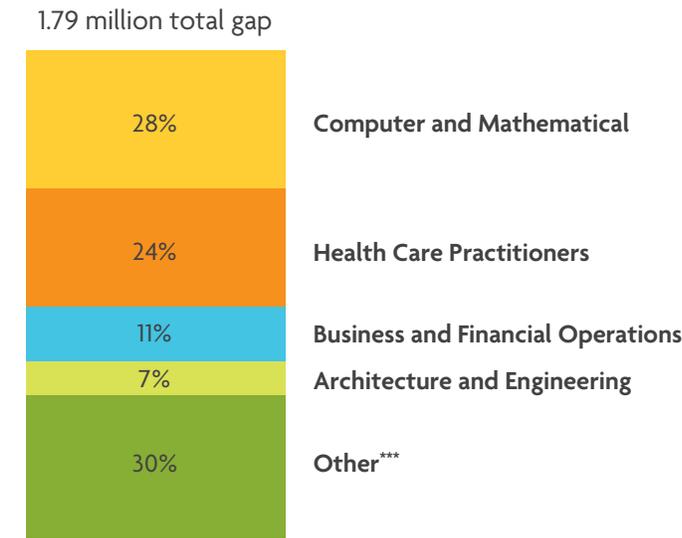
1 HIGHER EDUCATION PAY-OFF

Workers with a bachelor's degree improve their chances for employment and higher wages.

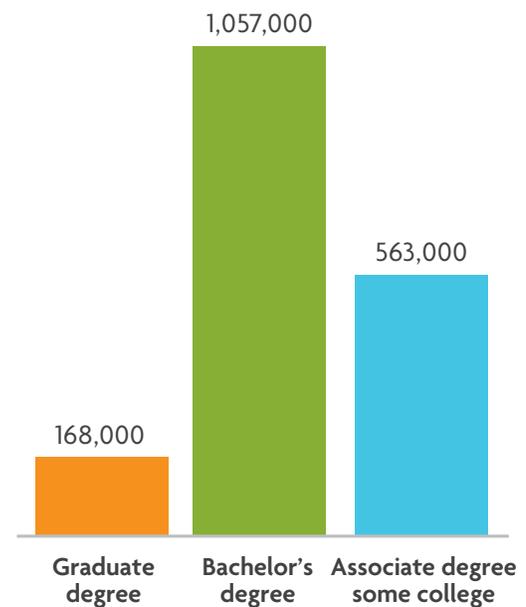
By 2030, California is projected to have a shortfall of nearly 1.8 million workers. About 59 percent of that gap represents the need for workers with bachelor's degrees, and another 9 percent is for workers with graduate degrees. Employees with an associate degree or some college education make up the remainder of the shortfall.

EXHIBIT 6:
Labor Market Gap* in California, 2030
Number of Workers

By Job Sector**



By Degree Type Needed**



* Labor market gap calculated as the difference between projected job postings in 2030 and projected graduates in 2030. Both job postings and graduates were estimated using a 10-year employment Compound Annual Growth Rate (2018-28)

** Includes occupations requiring some level of higher education: postsecondary non-degree award, some college but no degree, and associate, bachelor's, master's, and doctorate degrees.

*** Other includes the following occupation sectors: education, sales, office and administrative support, transportation and warehousing, and installation, maintenance, and repair.

Source: Economic Modeling Specialists International (EMSI)

Health care, the state's largest industry, will continue to lead job growth, with an increase in jobs of more than 31 percent projected through 2030. Within the industry, the greatest need is for highly educated practitioners such as doctors and nurses, rather than support personnel such as nursing assistants and pharmacy aides. The lack of enough qualified graduates will mean that nearly 430,000 practitioner positions could be left vacant, representing about 24 percent of the state's shortfall for all workers.

In the health care industry, as in many others, positions that require more education pay better and are in higher demand. Consider the differences in nursing jobs: In 2017, the state needed 240,000 more registered nurses than were available, compared to the 22,000-person shortage of licensed practical nurses. Registered nurses, who hold baccalaureate degrees, have an annual median salary of \$75,000—nearly twice as much as licensed practical nurses, who have two-year degrees.

EXHIBIT 7:
Health Care Jobs by Education, Demand, and Salaries, 2017

	Occupation	Labor Market Gap*	COL-Adjusted Annual Salary**
Postsecondary Certificate or Associate Degree	Medical Records Technician	9.5	\$33.7K
	Licensed Practical Nurses	21.7***	\$39.7K
	EMT and Paramedics	0.1	\$23.2K
	Dental Hygienists	0.3	\$74.7K
	Clinical Laboratory Technician	11.8	\$41.1K
	Radiologic Technologists	6.1	\$57.7K
Bachelor's Degree	Registered Nurses	240.0	\$74.8K
	Occupational Health Specialist	3.6	\$62.5K
	Dietitians/Nutritionists	1.8	\$54.8K
	Respiratory Therapists	1.9	\$58.7K
Graduate Degree	Nurse Practitioners	13.3	\$90.8K
	Family/General Physicians	18.4	\$131.8K
	Physician Assistants	16.9	\$86.5K
	Nurse Anesthetists	0.3	\$149.6K
	Pharmacists	11.5	\$106.6K
	Dentists	2.2	\$109.1K

* Labor market gap is the difference between the number of unique job postings in 2017 and the number of graduates in thousands in 2017.

** Cost of living adjustment (median).

***Scale breaks used to display high and low values on the same axis.

Sources: US Bureau of Labor Statistics (BLS), EMSI

Professional services, a broad sector encompassing jobs requiring specialized expertise including legal, engineering, scientific, accounting, and technology work, is expected to grow by nearly 15 percent by 2030. Within professional services, computer and math jobs are expected to suffer the biggest shortage of employees of any occupation area, including health care practitioners. More than half a million jobs could go unfilled.

As in health care, education levels correlate with salaries and demand. In 2017, software developers, who have a bachelor's degree, earned median annual salaries of \$89,000, compared to \$46,000 for web developers, who have associate degrees. About 158,000 more software developers were needed than available, more than triple the demand for web developers.

EXHIBIT 8:

Computer and Math Jobs by Education, Demand, and Salaries, 2017

	Occupation	Labor Market Gap*	COL-Adjusted Annual Salary**
Associate Degree	Web Developers	51.1	\$46.3K
	Computer Network Support	-12.1	\$53.7K
Bachelor's Degree	Software Developers	157.8***	\$89.3K
	Database Administrator	8.1	\$71.0K
	Network Architect	-2.8	\$92.6K
	Computer Programmer	0.9	\$66.8K
	Network Administrators	45.0	\$68.3K
	Computer Systems Analyst	43.1	\$71.7K
Graduate Degree	Computer Research Scientist	-1.8	\$91.9K

* Labor market gap is the difference between the number of unique job postings in 2017 and the number of graduates in thousands in 2017.

** Cost of living adjustment (median).

*** Scale breaks used to display high and low values on the same axis.

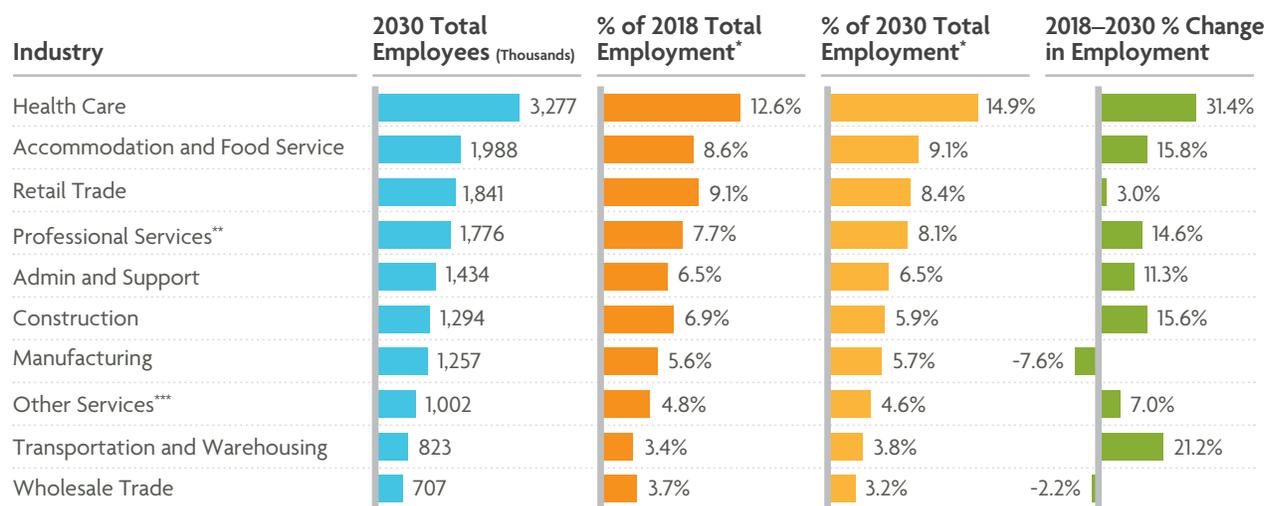
Sources: EMSI, BLS

Although some industries that do not require higher education are expected to grow, their jobs are lower-paying. Less than 10 percent of workers in accommodation and food service, construction, and transportation and warehousing have four-year degrees.⁷ Workers have few paths for upward mobility within these fields and have historically suffered from shrinking wages and benefits.

As technology becomes more sophisticated, higher education offers more opportunities for jobs of the future. Workers in health care and professional services will need more technical skills to use advanced technology, as well as creative and critical thinking skills to do what technology cannot. Meanwhile, jobs that are lower-paid and require less education are more vulnerable to automation. The industries with the highest potential for workers to be replaced with technology include transportation and warehousing, manufacturing, and food preparation and service.

EXHIBIT 9:

Top 10 Industries in California by Projected Employment, 2018-2030



* Excluding government and unclassified employees.

** Professional services are made up businesses that specialize in performing professional, scientific, and technical activities that require a high degree of expertise and training. These include legal advice and representation; accounting, bookkeeping, and payroll; architectural, engineering, and specialized design; computer services; consulting and research; and advertising.

*** Other services encompass sub-industries such as automotive repair, equipment repair, personal care services, dry cleaning, and death care services.

Sources: EMSI, BLS

2 REGIONAL OPPORTUNITIES

Increasing the number of college graduates will help regions diversify their economy and boost their tax base.

The Central Valley and Inland Empire have historically lagged the rest of the state economically, and capacity challenges in higher education put them at risk of falling further behind. Local students may forgo earning degrees or move away for higher education and not return.

Even if their economic base does not change significantly, these regions still will face increasing demand for college graduates because more jobs will require critical thinking and technical skills. In 2030, the Inland Empire will need an additional 141,000 workers, and 61 percent of that shortfall will be for jobs that require at least a baccalaureate degree. The largest proportion of total workers needed will be for health care practitioners (37 percent). Highly educated workers are also needed for computer and math (9 percent), business and financial operations (7 percent), education (5 percent), and architecture and engineering fields (5 percent).

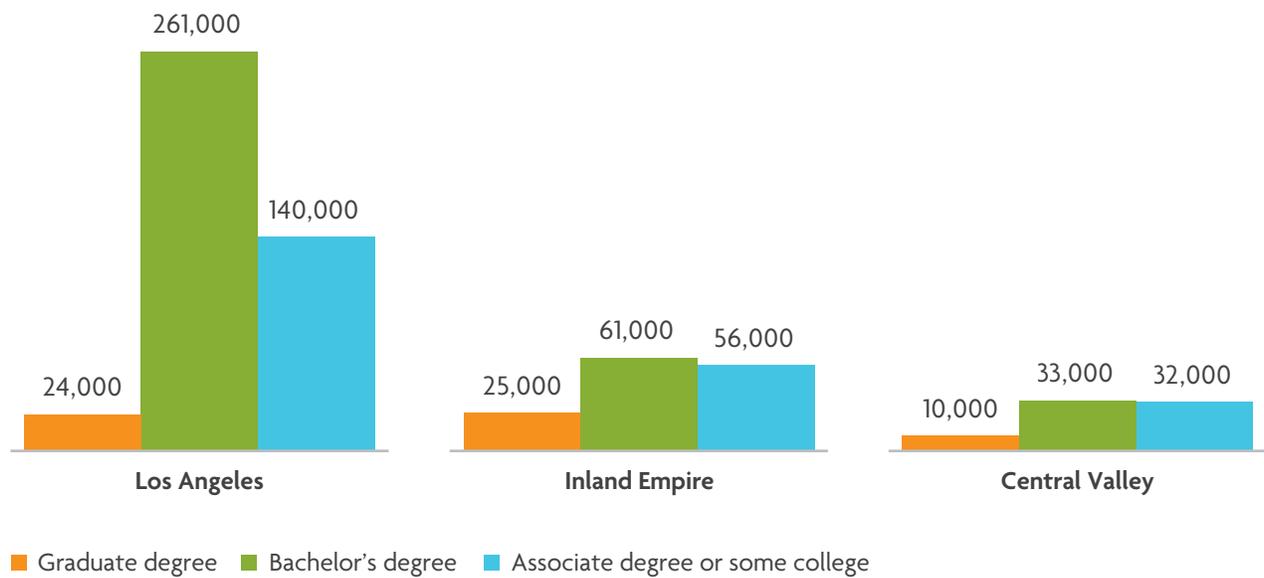
Similar trends are seen in the Central Valley, which faces a shortfall of 74,000 workers, 59 percent of whom need at least a bachelor's degree. Health care practitioners will make up nearly 31 percent of the total labor gap, with workers for the computer and math sector far behind at less than 8 percent.

California's largest region, Los Angeles, is projected to have a shortfall of 425,000 workers, 67 percent of whom need at least a bachelor's degree. Because Los Angeles has a more diverse economy than the Inland Empire and Central Valley, the demand for college-educated workers is more widely spread through several sectors. The greatest shortage of workers will be in the computer and math field (25 percent), followed by health care practitioners (24 percent) and business and financial operations (12 percent).



Increasing the number of college graduates would not only meet expected labor demands, it would spur the development of more high-skilled, higher-wage jobs. Businesses prefer places where they can draw from a robust pool of qualified workers. In addition, economies based on a college-educated workforce are more resilient during downturns and recover faster. In 2014, as the economy recovered after the Great Recession, the state unemployment rate for workers with a bachelor's degree or higher was 4.5 percent, compared to 11.3 percent for those with a high school diploma.⁸

EXHIBIT 10:
Regional Labor Market Gaps* by Degree Type Needed, 2030**
Number of Workers



* Labor market gap calculated as the difference between projected job postings in 2030 and projected graduates in 2030. Both job postings and graduates were estimated using a 10-year employment CAGR (2018-28).

** Includes occupations requiring some level of higher education: postsecondary non-degree award, some college but no degree, and associate, bachelor's, master's, and doctorate degrees

Source: EMSI

MAKING ROOM FOR MORE STUDENTS

So far, the primary response to the capacity crisis has been to curtail access, campus by campus. Every CSU except CSU Dominguez Hills and every UC except UC Merced have declared some level of impaction, meaning that not all eligible students can be accommodated either in certain programs, as first-time freshmen, or as transfers.⁹ Two commonly impacted majors are nursing and computer science, which are in high demand in the job market. When a CSU campus is impacted, it can raise GPA and standardized test score requirements, adding further barriers for students who already have had to overcome substantial socioeconomic hurdles.

We cannot continue with piecemeal responses that have little effect on increasing capacity and fail to address the needs of students. In order to have the resources and ability to make a significant and sustained impact, we need all segments of the state's education system to work together.

The situation is untenable. We must tackle both the capacity and demand for degrees. To make the demand more manageable, we need to change the way we serve students. To expand our supply, we need to change the way we use space and resources. And to make the biggest impact, we need to focus on regions with the greatest needs.

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To make a significant and sustained impact, we need all segments of the state's education system to work together.



1 IMPROVED STUDENT EXPERIENCE

Expand student success initiatives so that students can complete their degrees more efficiently.

Recent reforms at community colleges have been so successful in getting students transfer-ready that they have significantly increased capacity challenges at four-year institutions. To manage that demand, we need to lean into our success. Expanding the reforms that help students shorten their time to degrees will help redistribute the demand for admissions to four-year institutions.

When students have more avenues toward a baccalaureate degree, the state's education system gains greater flexibility and capacity. More community colleges and universities should partner to improve transfer credit agreements, create joint-degree programs, and provide better support services for transfer students. High schools need to foster a college-going culture and raise expectations for underrepresented students by offering opportunities such as dual enrollment.

Students should receive increased support for each education segment. Improved advising at all levels will give students a clear understanding of academic and career pathways and help them make informed choices. More financial aid will help them stay in school. Students need to be better informed about the full financial aid they are entitled to and get help in applying for and receiving that aid. Financial aid also should be extended beyond tuition to address needs such as housing, transportation, food, and child care. Whether they are in K–12, a community college, or a university, students should be able to envision a bachelor's degree as their end goal and receive support toward success.

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Students should be able to envision a bachelor's degree as their end goal and receive support toward success.



2 CREATIVE USE OF SPACE

Redefine the use of physical space by sharing and optimizing resources.

Just as the flow of students through our system should be more connected, so too should the use of physical space. Capacity should be viewed holistically, rather than by campus or segment.

While many campuses are overflowing, others are underutilized. We need to increase awareness of available resources and make it easier for students to consider broader options. As of spring 2019, CSU began referring eligible applicants who are denied admission to other state universities that have space. For years, the UC system has directed thousands of qualified students to UC Merced. A single streamlined application for the UC and CSU systems could open more choices to students. Incentives such as additional financial aid at campuses with room would help students make the move.

Facilities also need to be leveraged more creatively. Colleges and universities can share facilities, and new types of spaces such as K–12 facilities can be used for higher education. Schools also can increase online and blended learning offerings. Class schedules should maximize available resources, with courses offered during the summer, evening, and weekends. Just as businesses have shifted to flexible shifts and locations, higher education needs to think beyond traditional times and designated capacity.

Just as businesses have shifted to flexible shifts and locations, higher education needs to think beyond traditional times and designated capacity.



3 REGIONAL PARTNERSHIPS

Create regional partnerships that align education and labor needs.

The availability of higher education close to home makes college-going more accessible, especially for underrepresented students. Many students need or want to attend college close to their families and existing support systems, and after graduation, they need or want to stay and contribute to their communities. When regions such as the Central Valley and Inland Empire have more educated workforces, they are more likely to attract more economic development.

Businesses, K–12 districts, community colleges, and four-year institutions can work together through regional consortia to collect data and develop strategies. Such partnerships can move more quickly than the state to expand student success initiatives and innovate to optimize the use of local spaces. They also can more closely assess the area's needs and act accordingly, increasing and accelerating completion of degrees that will fill current and future demands.

Regional partnerships can move more quickly than the state to expand student success initiatives and innovate to optimize the use of local spaces.



CONCLUSION

Higher education has the power to transform individuals, families, and communities. For generations, broad access to educational opportunities has been a source of deep pride and socioeconomic health in California.

Ensuring that our public universities can welcome all students will require a substantial commitment of time, resources, and political will. As the economy continues to evolve rapidly and jobs increasingly demand newer skillsets, California's colleges and universities will have to adapt quickly to provide more students with the tools they will need to thrive.

Without immediate action to accommodate growing demand for higher education, we are endangering our state's future. The longer we wait, the more we risk allowing underserved communities to slip further behind.

The overflow at the universities can be viewed as an opportunity to expand the benefits of future economic growth to broad swaths of the population and reverse the longtime trend of shrinking wages and decreasing affordability for many Californians. Recent improvements at all levels of California's education system have already showcased our state's ability to match our ambitions.

Students who are ready and eager to continue their higher education are among the state's best assets—essential to both a strong economy and society. By enabling these students to fulfill their potential, our state can reap benefits immediately and for years to come.

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The overflow at the universities can be viewed as an opportunity to expand the benefits of future economic growth to broad swaths of the population.



APPENDIX

The goal of the study was to support a thoughtful, well-grounded, and productive conversation about how to leverage the state's resources, strengths, and assets to address the university capacity challenge. To that end, McKinsey collaborated with the higher education systems across the state and used proprietary and publicly available data. Information, data sources, and methodologies are outlined below.

Information and Data Sources

Representatives and groups across the higher education and K–12 systems were consulted, including:

- California Community Colleges
- University of California
- California State University
- Association of Independent California Colleges and Universities
- California Department of Education

In addition to data provided from each of the systems, the capacity assessment leveraged information from the following sources:

- U.S. Bureau of Labor of Statistics
- Employment Development Department
- Integrated Postsecondary Education Data Systems
- National Student Clearinghouse
- Economic Modeling Specialists International
- National Center for Higher Education Management Systems
- Urban Institute: Social and Economic Policy Research
- California Department of Finance
- Public Policy Institute of California
- Georgetown Center on Education and the Workforce
- U.S. Census

Methodology for Undergraduate Capacity Assessment

The undergraduate capacity assessment is predicated on the following methodological choices:

- Projections are based on headcounts, which can be converted to full-time equivalents using ratios of part-time to full-time students in each system.
- The capacity assessment does not include extension programs for adult learners.
- The capacity assessment focuses on new students.
- “Demand” for four-year degrees was calculated following three different approaches: eligibility, enrollment, and applications. Eligibility is defined as the sum of A–G eligible high school graduates, community college students counted in the “transfer cohort” in addition to non-A–G eligible high school graduates desiring a bachelor’s degree, and adult learners.
- Demand based on eligibility was selected as the baseline scenario as it encompasses all potential students that could aspire to apply for a bachelor’s degree in California.
- Capacity projections are based on historical enrollment patterns for new students and do not rely on the utilization formula for available physical facilities. Capacity scenarios were created based on current maximum capacity, potential impact of graduation initiatives, and historical enrollment growth patterns.
- Labor market supply and demand for employees is based on historical patterns for graduates with relevant degrees and new job openings compounded arithmetically.
- Regional demand for undergraduate degrees includes demand from high school graduates, transfer students, and adults residing in the region of focus. Demand from other regions in the state is not included.

Methodology for Graduate Capacity Assessment

The graduate capacity assessment focuses on three types of graduate degree programs: master’s, doctorates, and post-baccalaureate certificates.¹⁰ The assessment is predicated on the following methodological choices:

- Demand and capacity projections are expressed in headcounts, which can be converted to full-time equivalents using ratios of part-time to full-time students in each system.
- The assessment focuses on graduate demand from in-state and out-of-state students.
- Capacity projections are based on historical enrollment patterns for new students and do not rely on the utilization formula for available physical facilities.
- Labor market supply and demand for employees is based on historical patterns for graduates with relevant degrees as well as new job openings compounded arithmetically.
- Assumes students who earned a bachelor’s degree in California will demand graduate programs in the state due to significantly higher tuition out-of-state.
- Assumes the share of bachelor’s degree-holders enrolling in graduate programs increases modestly during an economic downturn following the same patterns observed during the Great Recession.

ENDNOTES

- ¹ Johnson, Hans, Marisol Cuellar Mejia, and Sarah Bohn. “Will California Run Out of College Graduates?” Public Policy Institute of California, October 2015.
- ² California Department of Education, 2017–18. <https://www.cde.ca.gov/ds/sd/cb/ceffingertipfacts.asp>. In California, African American, Latino, American Indian, Native Alaskan, as well as other groups such as students from low-income families are widely recognized as “underserved.”
- ³ About 76 percent of the capacity for four-year degrees in California is at UC and CSU. The remaining capacity is at private nonprofit universities, 13 percent, and private for-profit schools, 11 percent.
- ⁴ The California State University 2019 Fact Book. <https://www2.calstate.edu/csu-system/about-the-csu/facts-about-the-csu/Documents/facts2019.pdf>
- ⁵ About 93 percent of capacity at two-year institutions are from the California Community Colleges. The remainder is from private nonprofit and private for-profit schools.
- ⁶ “The State of Higher Education for Latinx in California.” The Campaign for College Opportunity. November 2018.
- ⁷ Public Policy Institute of California. July 2019.
- ⁸ Johnson. “Will California Run Out of College Graduates?”
- ⁹ Impacted Undergraduated Majors and Campuses, 2019–20. The California State University. <https://www2.calstate.edu/attend/degrees-certificates-credentials/Pages/impacted-degrees.aspx>
- ¹⁰ Graduate degree categories defined by IPEDS. Master’s degrees refer to MBAs and other master’s degrees (including M.A. in Education). Doctorate degrees refer to both professional degrees (J.D., M.D., Pharmacy, Veterinary) and research degrees (Ed.D, D.M.A., D.B.A., D.S., Ph.D.). Post-baccalaureate certificates include those in accounting, programming, journalism, etc. These do not include teacher preparation certifications.

About College Futures Foundation

At College Futures Foundation, we believe there is nothing more transformative for individuals, our economy, and our society than educational opportunity, and that the pathway to a college degree should be clear and open to the diverse students of California.

Right now, that is not the case. Not all hardworking young people are getting a fair shot at a better life. The vast majority of our state's K–12 students are people of color and from low-income households, yet when it comes to graduates from our public universities, these students are in the minority. At every step, they face roadblocks. We are working to change that.

College Futures Foundation partners with organizations and leaders across the state to catalyze systemic change, increase bachelor's degree completion, and close equity gaps so that this vision of a seamless, student-centered educational path to opportunity becomes a reality—and one that's available to every student, regardless of zip code, skin color, or income.

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