BACKGROUND

California needs dramatic growth in postsecondary degrees awarded to meet future state workforce needs and to boost workers into better-paying and more stable employment.

In 2015, both California Competes and the Public Policy Institute of California (PPIC) issued reports highlighting the degree and credential attainment gaps the state could face over the course of the next 10 to 15 years. These reports were discussed at a March 2016 joint hearing of the Assembly Budget Subcommittee on Education Finance and the Assembly Higher Education Committee. Based on that hearing, the 2016 Budget Act directed the University of California (UC), the California State University (CSU) and the California Community Colleges (CCC) to report to the Legislature on actions needed to increase degree production. Those reports were completed in Spring 2017.

This hearing will allow the segments to discuss their reports and other issues related to expanding access and completion. The private nonprofit college sector also will discuss increasing degrees awarded. PPIC and California Competes will provide further discussion regarding how the state can set targets for closing the degree gap, and MDRC, the nonpartisan education and social policy research organization, will provide a summary of innovative practices from around the country that could help California improve higher education outcomes.

CALIFORNIA'S DEGREE GAP

The following section provides brief summaries of the 2015 PPIC and California Competes reports and a summary of work PPIC has done to show how many more degrees each segment would need to produce to meet state workforce needs by 2030.

Will California Run Out of Graduates? According to PPIC (*"Will California Run out of College Graduates?", 2015)* by 2030 California will face a shortage of 1.1 million workers holding a bachelor's degree. PPIC projects that 38% of all jobs will require workers with at least a bachelor's degree, which only 33% of California workers will possess in 2030 based on current trends.

PPIC's study is based on both long-term occupational projections from the California Employment Development Department and demographic trends, which include the large-scale retirement of the well-educated baby boom generation. PPIC projects California's labor force to grow about 9% between 2013 and 2030, and the share of adults with a bachelor's degree to increase by only about 1%. California is unlikely to attract enough highly educated migrants to close the skills gap, and California residents are only making slight improvements in educational attainment.

PPIC also notes that on an individual basis, educated workers earn significantly more during their lifetime and are less severely affected by economic downturns. According to PPIC, workers with more education are more likely to be employed and, on average, are experiencing salary gains – suggesting that a college degree is increasingly valuable in the labor market. The expected value of the lifetime wage gains by completing college can total

more than $1 million. Even for degrees with low economic returns, the lifetime wage premium totals more than $200,000.

Mind the Gap. California Competes proposes a statewide goal of 55% of adults with either baccalaureate and sub-baccalaureate degrees. Based on current projections, California is expected to produce 9.5 million degrees by 2025. In order to achieve the 55% target, California would need to produce 11.9 million degrees. To close the 2.4 million degree gap, it would take 10% annual increases in production.

California Competes notes that bachelor's degree production has increased between 2% and 3% each year over the past decade. The sub-baccalaureate credential production has increased by an 8% annual average.

California Competes notes that sub-baccalaureate credentials are critically important in meeting California's postsecondary education needs. In 2013, California institutions awarded 92,100 vocational credentials, an increase of nearly 40,000 over the number in 2004. Over the past decade, a notable shift occurred in the institutions awarding these credentials. In 2004, about 43% were awarded by for-profit colleges, 53% by community colleges, and about 4% from nonprofit institutions. In 2013, for-profit colleges awarded 55% of California's certificates and associates degrees, 43% were from community colleges, and 2% from nonprofit institutions.

California Competes also notes the importance of examining specific workforce needs, and the majors required to meet that need, as well as the importance of closing achievement gaps to ensure the racial and ethnic makeup of California's degree recipients better reflects the state's demographics.

Closing the Gap. At the 2016 hearing, PPIC provided testimony regarding specific goals for each of California's higher education segments to meet the need for more bachelor's degrees. An initial scenario involved the following:

- *Increasing access by changing current eligibility standards at UC and CSU.* Eligibility would increase 5% over current levels at UC (the top 17.5% of high school graduates will be eligible for UC, up from the 12.5% share set by California's Master Plan for Higher Education) and 6.7% at CSU (the top 40% will be eligible for CSU, up from the top third).
- *Increasing access by increasing transfer.* The number of transfer students would increase 35% over baseline levels.
- *Increasing completion.* Completion rates would increase 9% at UC and 17% at CSU. At UC, completion rates for students who enroll as freshmen would increase incrementally from 83% in 2016 to 92% by 2026. Completion rates for freshmen at CSU would increase incrementally from 57% in 2016 to 74% by 2030. There would be similar increases in completion rates for transfer students at both institutions.

The chart below illustrates this potential scenario.

ALL COLLEGES IN CALIFORNIA HAVE AN IMPORTANT ROLE IN CLOSING THE WORKFORCE SKILLS GAP

	Number of bachelor's degrees awarded, 2015–16 through 2029–30		
	Closing-the-gap scenario	Baseline scenario	Difference
All California colleges and universities	4,149,487	3,072,583	1,076,904
University of California	1,003,380	752,468	250,912
California State University	1,824,620	1,343,559	481,061
Private non-profit colleges	790,064	583,815	206,249
Other	531,422	392,741	138,682

Based on this scenario, the 2016 Budget Act required UC and CSU to report in 2017 on issues and challenges they would face to meet these numbers. Community colleges were similarly asked to report on ways to increase transfer students and sub-baccalaureate credentials. Summaries of those reports are below.

MEETING THE STATE'S HIGHER EDUCATION NEEDS

Enrollment and Budgetary Scenarios for Increasing Degrees Awarded at UC. Under the PPIC scenario, UC would need to generate about 250,000 more bachelor's degrees by 2030 than current projections indicate. UC notes in its report that it is already exceeding PPIC baseline projections for enrollment and degree production, due to recent increases in freshmen and transfer enrollment and an improvement in six-year graduation rates from 83% to 85%.

Despite recent gains, UC states that it would need to make dramatic and costly changes to achieve the goal. UC estimates annual undergraduate enrollment increases of 10,000 in 2017-18 growing to 13,000 in 2023-24, including a 50 to 55% increase in the number of California resident transfer students enrolled over the next seven years. UC also raises concern regarding improving graduation rates, as PPIC calls for six-year rates to grow to 92%. UC notes that increasing enrollment would require drawing from a larger pool of applicants, making it more difficult to improve graduation rates. The chart below summarizes UC's calculations.

year	UC baseline under-graduate enrollment*	enrollment required to achieve 58% increase in BA degrees	increase over prior year	% increase over prior year	cumulative increase in enrollment	cumulative percentage increase in enrollment	estimated BA degrees awarded	estimated additional BA degrees above PPIC baseline
2015-16	198,866	198,866	4,054	2.1%	4,054	2%	50,699	1,623
2016-17	200,227	210,170	11,304	5.7%	15,358	8%	51,735	3,065
2017-18	201,596	219,890	9,720	4.6%	25,078	13%	53,560	5,049
2018-19	202,976	230,060	10,170	4.6%	35,248	18%	55,716	7,347
2019-20	204,364	240,701	10,640	4.6%	45,889	24%	58,100	9,867
2020-21	205,762	251,833	11,132	4.6%	57,021	29%	60,930	12,405
2021-22	207,170	263,480	11,647	4.6%	68,668	35%	63,748	14,978
2022-23	208,587	275,666	12,186	4.6%	80,854	42%	66,696	17,399
2023-24	210,015	288,416	12,750	4.6%	93,604	48%	69,781	19,607
2024-25	211,451	301,755	13,339	4.6%	106,943	55%	73,008	21,937
2025-26	212,898	301,755	-	-	106,943	55%	76,385	24,569
2026-27	213,832	301,755	-	-	106,943	55%	78,974	26,762
2027-28	213,832	301,755	-	-	106,943	55%	80,738	28,350
2028-29	213,832	301,755	-	-	106,943	55%	81,641	29,055
2029-30	213,832	301,755	-	-	106,943	55%	81,641	28,871
	*estimated fall undergraduate headcount				cumulative additional BA degrees :			250,883

UC states the total cumulative increased UC cost in constant 2016-17 dollars of a scenario to achieve an additional 250,000 bachelor's degrees by 2030 at UC would be about $17 billion for increased operating costs (or about $1.1 billion per year). Increased capital costs would be another $2.5 to $3 billion.

CSU Report on Greater Statewide Degree Attainment by 2030. CSU would need to increase bachelor's degree production by about 480,000 to meet the PPIC scenario. To achieve this number, CSU assumes:

- New undergraduate annual enrollments would grow from nearly 130,000 (approximately 66,000 first-time freshmen and 64,000 transfers) to 165,000 (approximately 80,000 first-time freshmen and 85,000 transfers).
- Student outcomes would align with Graduation Initiative 2025 expectations, which include:
  - A 40% 4-year freshman graduation rate;
  - A 70% 6-year freshman graduation rate goal;
  - A 45% 2-year transfer graduation rate goal;
  - An 85% 4-year transfer graduation rate goal;
  - And the elimination of achievement gaps based on socioeconomic status or ethnicity or race.

CSU states that gains in degrees earned initially from new student growth would be slight and would grow exponentially with achievement of Graduation Initiative 2025 goals. With increased new undergraduate student enrollment and Graduation Initiative 2025 goals achieved, 481,000 degrees beyond the 1.4 million already projected would be earned. Significant gains in earned degrees would occur between 2025 and 2030 as new student enrollment and outcomes would both be at historic peaks.

A conservative estimate of operational costs is $1.3-1.4 billion, according to CSU. The chart below indicates the amount of freshmen and transfer enrollment under "steady state," which is are current enrollment figures, versus enrollment needed to meet the PPIC target.

CSU "Steady State" vs PPIC Target

	Steady State			Subject to Funded Growth Commitments			Difference		
Cohort Entry Year	Freshmen	UG transfer	New Student Total	Freshmen	UG transfer	New Student Total	Freshmen	UG transfer	New Student Total
2017-18	66,000	64,000	130,000	70,000	70,000	140,000	4,000	6,000	10,000
2018-19	66,000	64,000	130,000	72,000	75,000	147,000	6,000	11,000	17,000
2019-20	66,000	64,000	130,000	75,000	80,000	155,000	9,000	16,000	25,000
2020-21	66,000	64,000	130,000	75,000	82,000	157,000	9,000	18,000	27,000
2021-22	66,000	64,000	130,000	78,000	84,000	162,000	12,000	20,000	32,000
2022-23	66,000	64,000	130,000	80,000	85,000	165,000	14,000	21,000	35,000
2023-24	66,000	64,000	130,000	80,000	85,000	165,000	14,000	21,000	35,000
2024-25	66,000	64,000	130,000	80,000	85,000	165,000	14,000	21,000	35,000
2025-26	66,000	64,000	130,000	80,000	85,000	165,000	14,000	21,000	35,000
2026-27	66,000	64,000	130,000	80,000	85,000	165,000	14,000	21,000	35,000
2027-28	66,000	64,000	130,000	80,000	85,000	165,000	14,000	21,000	35,000
2028-29	66,000	64,000	130,000	80,000	85,000	165,000	14,000	21,000	35,000
2029-30	66,000	64,000	130,000	80,000	85,000	165,000	14,000	21,000	35,000

Vision for Success. The California Community Colleges Vision for Success sets six systemwide goals, including increasing transfer students to meet the PPIC target. The goals, to be achieved by 2022, are:

- Increase by at least 20% the number of CCC students annually who acquire associates degrees, credentials, certificates, or specific skill sets that prepare them for an in-demand job.
- Increase by 35% the number of CCC students transferring annually to a UC or CSU.
- Decrease the average number of units accumulated by CCC students earning associate's degrees, from approximately 87 total units (the most recent system-wide average) to 79 total units—the average among the quintile of colleges showing the strongest performance on this measure.
- Increase the percent of exiting CTE students who report being employed in their field of study, from the most recent statewide average of 60% to an improved rate of 69%—the average among the quintile of colleges showing the strongest performance on this measure.
- Reduce equity gaps across all of the above measures through faster improvements among traditionally underrepresented student groups, with the goal of cutting achievement gaps by 40% within 5 years and fully closing those achievement gaps within 10 years.
- Reduce regional achievement gaps across all of the above measures through faster improvements among colleges located in regions with the lowest

educational attainment of adults, with the ultimate goal of fully closing regional achievement gaps within 10 years.

ISSUES TO CONSIDER

The Legislature adopted general higher education goals in 2013: to improve student access and success, to better align degrees and credentials with the state's economic, workforce, and civic needs, and to ensure the effective and efficient use of resources in order to increase high-quality postsecondary educational outcomes and maintain affordability. Additionally, Assembly budget and policy priorities in recent years have focused generally on access, affordability and completion. But annual budget and policy discussions have tended to focus on increasing access and improving outcomes with limited resources and little long-term discussion. There is no specific plan centered around specific goals.

Given the significant need for a more educated workforce, the importance of higher education in fostering families' financial security and stability, and legislative interest in moving toward the PPIC targets, the Assembly could consider creating segment-specific enrollment and completion targets as part of a long-term higher education plan. As a plan is developed, issues to consider are:

While ambitious and expensive, it can be done! Significant increases in enrollment and completion won't be easy or cheap. However, there are some historic indicators that this goal could be met. Community college transfers to UC and CSU rose by 32% between 2012-13 and 2015-16 and UC transfers increased by 40% between Fall 1999 and Fall 2005, according to the California Community College Vision for Success. PPIC presented data in the 2016 hearing that between 2002-03 and 2014-15, the annual number of bachelor's degrees awarded by public and private universities increased by 50%. Between 1964-65 and 1979-80, the increase was 95%.

Decades-old eligibility standards should be reviewed. The 1960 Master Plan for Higher Education set targets for the number of California public high school graduates to be eligible for admission to CSU - the top one third of each year's graduates - and UC - the top one-eighth of each class. While these standards have never been adopted in statute, both segments have used the Master Plan's targets in setting admissions policies. PPIC observes that changing these targets, to allow for more significant enrollment growth, would be necessary to generate more awarded degrees. Beyond that, few would argue that attitudes and economic conditions in California have changed since 1960, and it seems clear that more than 33 percent of graduating high school seniors are interested in pursuing a bachelor's degree. A thorough review of these standards is warranted.

It should be noted that an eligibility study published in 2017 by the Governor's Office of Planning and Research found that under UC's current admissions policies, eligibility is slightly above its Master Plan target, while CSU's current admissions policies yield eligibility of more than 40 percent—an all-time high and significantly over its Master Plan target.

Achievement gaps must be eliminated. All three segments have achievement gaps related to low-income or underrepresented minority students. UC reports a 6% gap between low-income and non-low-income four-year graduation rates; CSU reports similar four- and six-year graduation rate gaps for low-income students; and the community colleges report a 17% completion rate difference between African-American students and white students, and a 12% difference between Hispanic and white students.

All three segments are working to close these gaps. In their 2017 reports to the Legislature, both UC and CSU were asked to provide recommendations for actions that would improve educational attainment for students from underrepresented minority groups. Among the recommendations were:

- Increase and improve academic preparation programs that encourage and support more underrepresented students to succeed in the A-G requirements in high school;
- Increase and improve outreach programs that aid and encourage college-going and help the segments identify and target future students;
- Enact regional partnerships between K-12, community colleges, and CSU and UC campuses;
- Enact evidence-based remedial programs and policies;
- Increase on-campus mentorship programs and student support programs that help student build ties to the campus.

Capital costs must be addressed. Major enrollment growth will require campus expansion. Capital outlay costs would likely be high: UC suggests its effort to meet the PPIC targets would likely require $2.5 or $3 million in capital spending. CSU does not provide a specific estimate for meeting its target, but notes that the CSU Five-Year Facilities Renewal and Capital Improvement Program identifies a need of $12.5 billion for academic and self-support projects to support the instructional program and modest enrollment growth. And in its five-year capital outlay plan approved in 2017, California Community College Chancellor's Office estimated the total unmet facilities needs for the system as $29.9 billion.

There has been relatively little discussion of long-term capital outlay needs during budget hearings in recent years, particularly for UC and CSU. The state's last general obligation bond that included UC and CSU was in 2006. And the 2014 and 2015 Budget Acts included major changes to capital outlay budgeting and legislative processes for UC and CSU. The state does not provide specific capital outlay funding, leaving the segments to determine how much General Fund revenue to use to support debt service for projects. There is a spring legislative review process in place for proposed capital projects, but the Legislature does not oversee how much segments spend on capital.

California community colleges do currently have access to general obligation bond revenue, via Proposition 51, which was approved in 2016. The Legislature does retain authority to approve specific community college projects.

All three public segments have been asked to discuss capital outlay plans as part of their testimony in this hearing. A key discussion point for the Legislature and the segments is whether the segments are emphasizing enrollment growth and specific state workforce needs when they conduct capital outlay planning.

Scaled-up innovation is needed. The major costs associated with meeting this ambitious state goal largely assume that higher education programs and delivery models will remain the same as they are today. As the Legislature considers developing a long-term higher education plan, it should consider innovative ways to increase access and success, and lower costs. All segments have been asked to present innovative ideas as part of their testimony in this hearing, and the research group MDRC will present a summary of successful practices and programs from other states. The Governor's Budget proposes a new online community college, targeted at working adults who require flexibility in how they access college courses. This proposal will likely be mentioned in the community colleges' testimony at this hearing and will be further discussed at future budget hearings. Other ideas for innovation abound, including the creation of three-year baccalaureate degrees, competency-based credit, dual enrollment, and increasing hybrid or "blended" online learning. Some of these ideas have a strong research basis, while others are relatively new ideas, making it unlikely that evidence or research exists to support it.

As the Governor's Budget Summary for 2018-19 notes, the state has spent $100 million on Innovation Awards since 2014-15. It is unclear how impactful this funding has been. The challenge for the state is to determine if there are existing programs and practices, or new ideas, that can be scaled up to better serve the millions of Californians in college, and the millions more who will attend college in the next decade.