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March 10, 2017

The Honorable Holly J. Mitchell
Chair, Joint Legislative Budget Committee
1020 N Street, Room 553
Sacramento, California 95814

Dear Senator Mitchell:

Pursuant to Section 66028.6 of the Education Code, enclosed is the University of California's report to the Legislature on the *Enrollment and Budgetary Scenarios for Increasing Degrees Awarded at UC*.

If you have any questions regarding this report, Interim Associate Vice President David Alcocer would be pleased to speak with you. He can be reached by telephone at (510) 987-9113, or by email at David.Alcocer@ucop.edu.

Yours very truly,


Janet Napolitano
President

Enclosure

cc: Senate Budget and Fiscal Review
The Honorable Anthony J. Portantino, Chair
Senate Budget and Fiscal Review Subcommittee #1
(Attn: Ms. Anita Lee)
(Attn: Ms. Cheryl Black)
The Honorable Kevin McCarty, Chair
Assembly Budget Subcommittee #2
(Attn: Mr. Mark Martin)
(Attn: Mrs. Katie Sperla)
Ms. Peggy Collins, Joint Legislative Budget Committee
Mr. Danny Alvarez, Secretary of the Senate

The Honorable Holly J. Mitchell

March 6, 2017

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Ms. Tina McGee, Legislative Analyst's Office
Ms. Amy Leach, Office of the Chief Clerk of the Assembly
Mr. Jim Lasky, Legislative Counsel Bureau
Mr. E. Dotson Wilson, Chief Clerk of the Assembly
Mr. Jeff Bell, Department of Finance
Mr. Christian Osmena, Department of Finance
Mr. Jack Zwald, Department of Finance
Ms. Tina McGee, Legislative Analyst's Office
Mr. Mac Taylor, Legislative Analyst's Office
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Executive Director Jenny Kao
Director Todd Greenspan
Manager Bruce Kennedy

**Enrollment and Budgetary Scenarios for Increasing
Degrees Awarded at UC**

Legislative Report

March 2017



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Enrollment and Budgetary Scenarios for Increasing Degrees Awarded at UC

SB 826, the Budget Act of 2016 (Chapter 23, Statutes of 2016), requires the University of California to provide a report on the changes that would be required in order for the University to award an additional 250,000 bachelor’s degrees by 2030 including recommendations that would improve the educational attainment of students from underrepresented minority groups. Specifically, the language in Section 6440-001-0001, Schedule 4.4 states:

No later than March 1, 2017, the Regents of the University of California shall report to the Director of Finance and the Legislature, in conformity with Section 9795 of the Government Code, both of the following:

(a) Any policy and budget changes that would result in an increase in the number of bachelor’s degrees awarded by the University of California by 250,000, above current projections, by 2030, including any changes to broaden eligibility, increase enrollment, or improve graduation rates.

(b) Specific recommendations for actions that would improve educational attainment for students from underrepresented minority groups.

There is similar language in Budget Act asking the California State University to report on the changes needed to increase their bachelor’s degrees by 480,000 by 2030.

Background: PPIC report is the basis for this reporting requirement. Hans Johnson, director of the Public Policy Institute of California (PPIC) Higher Education Center provided [testimony](#)¹ to the Legislature in May 2016 on the projected gap between the number of bachelor’s degrees that are likely to be generated in California by 2030 and the number needed based on projections of workforce demand. That gap is about 1.1 million degrees. PPIC has devised a tool that can project ways to close the gap in degrees produced by 2030.

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

Figure 1 (Source: PPIC)

¹ http://www.ppic.org/main/blog_detail.asp?i=2050

The PPIC “closing-the gap scenario” calls for UC to add another 250,000 degrees by 2030, for CSU to add another 480,000, and for private non-profit and private for-profit California colleges and universities to increase by about 345,000 degrees.

The PPIC work assumes three potential sources of additional UC and CSU degrees between the baseline and their “Closing-the-Gap Scenario “– increased eligibility, increased transfer, and improved completion rates.

ADDITIONAL BACHELOR’S DEGREES AWARDED AT UC AND CSU UNDER THE CLOSING-THE-GAP SCENARIO								
	UC				CSU			
	Increased eligibility	Increased transfer	Increased completion	UC total	Increased eligibility	Increased transfer	Increased completion	CSU total
2015–16	–	–	–	–	–	–	–	–
2016–17	–	–	534	534	–	–	1,728	1,728
2017–18	–	1,053	1,088	2,141	–	–	3,444	3,444
2018–19	1,669	2,099	1,717	5,485	–	6,287	5,527	11,814
2019–20	3,328	3,140	2,402	8,870	1,033	9,405	7,680	18,118
2020–21	5,022	4,212	3,170	12,405	2,079	12,615	10,075	24,769
2021–22	6,730	5,291	4,004	16,026	3,135	15,848	12,653	31,636
2022–23	8,504	5,349	4,852	18,705	4,225	16,020	15,069	35,314
2023–24	10,386	5,444	5,796	21,626	5,375	16,305	17,699	39,379
2024–25	12,334	5,541	6,811	24,686	6,566	16,597	20,463	43,625
2025–26	14,301	5,622	7,875	27,798	7,772	16,838	23,289	47,899
2026–27	14,411	5,665	7,935	28,011	8,950	16,967	26,058	51,975
2027–28	14,459	5,684	7,962	28,105	8,980	17,025	28,523	54,528
2028–29	14,514	5,706	7,992	28,211	9,014	17,089	31,016	57,119
2029–30	14,564	5,725	8,020	28,310	9,045	17,148	33,519	59,713
Total additional	120,222	60,531	70,159	250,912	66,174	178,144	236,743	481,061

Figure 2 (Source: PPIC)

UC is already exceeding PPIC baseline projections for enrollment and baccalaureate degrees.

UC staff reviewed the PPIC calculations. There are two areas where the PPIC baseline projections could be updated:

- Current UC enrollment already exceeds PPIC baseline projections, particularly given the large increase in California resident undergraduates that UC added in 2016-17 (almost 7,500) and the University's plan to add 10,000 new California undergraduates by 2018-19 (above 2014-15 levels)
- Similarly, the number of UC degree recipients already exceeds the baseline figures used in the PPIC calculations. For 2015-16, UC awarded 50,699 bachelor's degrees or 1,623 more than the figure used in the PPIC baseline calculations for 2015-16.

There are a number of reasons why the degrees awarded have risen faster than PPIC projected, but two of the most significant reasons are:

- UC completion rates are improving. UC six-year graduation rates for the freshman cohorts that are now graduating have improved to 85 percent compared to the 83 percent used in the PPIC report. Four-year graduation rates for transfer cohorts have improved from 85 percent to 88 percent.
- The number of California Community College transfers enrolled has increased dramatically. The transfer cohorts that are now graduating are about 28 percent larger than the transfer cohorts prior to the recession. This is because UC prioritized transfer even as it had to moderate enrollment growth because of budget cuts during recession. Coupled with the improved graduation rates, UC is now generating substantially more degrees via the transfer function compared to the data used by PPIC to generate its baseline estimate.

Given recent UC progress in graduation rates and transfer, achieving a 250,000 increase in degrees awarded by 2030 would only be possible with very large UC enrollment increases.

UC staff reviewed in detail the three options that PPIC identifies for increasing the number of bachelor's degree by 2030:

1. "Increased eligibility" as calculated in the PPIC report. In his testimony to the Legislature, PPIC's Johnson states that "the share of recent high school graduates eligible for and enrolling in four-year colleges will need to increase." Later in this report we discuss the kinds of changes that would be required to ensure that a greater proportion of high school graduates would be able to meet UC and CSU admissions standards. However, in order to estimate the ultimate impact on UC enrollment it is important to note that "increased eligibility" in the PPIC report is expressed as increased UC and CSU enrollment in the underlying calculations in the PPIC model. Thus, it is possible to model the UC enrollment increase needed to generate the additional

degrees without first attempting to describe what an enrollment increase of that size might mean for UC eligibility. Once the needed enrollment increase is derived, it is then possible to compare that level of enrollment to projections about the future size of high school graduating classes and to assumptions about what proportion of those eligible choose to enroll at UC. That comparison could be used to estimate an eligibility rate that would be needed to support that level of enrollment.

If projected growth in K-12 high school graduates does not keep pace with these hypothetical increases in enrollment, UC would be drawing students from a larger proportion of the high school graduating class. The University is projecting that K-12 high school graduates will continue to grow through a substantial portion of the PPIC projection period. Thus, a portion of the additional enrollment could be accommodated through increases in California high school graduates as well as increases in participation (the proportion of high school graduates who actually enroll at UC). However, as discussed below, it is likely that the required enrollment increase would be large enough to require that UC draw students from a larger admissions pool than current policy and practice.

2. Increased transfer. The PPIC report assumes the same proportion of freshmen to transfers for the enrollment growth associated with “increased eligibility.” Thus, there would already be quite large transfer enrollment growth associated with any enrollment growth linked to the “increased eligibility.” The increased degree production from increased transfer in the PPIC report is expressed as increased transfer enrollment at UC above the current ratio. To increase degrees associated with “increased transfer” in the PPIC scenario requires adding additional transfer students above the already large increase in enrollment growth of transfer students assumed above in part 1. Because UC has already agreed to the state goal of adding 1 new transfer student for every 2 new freshman students, the UC calculations are based on that ratio.

3. Increased completion. The PPIC hypothetical scenario for 250,000 additional UC degrees by 2030 assumes 28 percent of the additional degrees would come from improved UC graduation rates. Over the 15 year period, the PPIC model projects that UC’s six-year graduation rate would improve by 11 percent (from 83 percent to 92 percent) and be phased in within 10 years. As discussed above, UC’s graduation rate has improved to 85 percent and UC’s calculation discussed below is based on maintaining that rate during the projection period. UC is hoping to continue to improve on that rate given moderate and stable enrollment growth. However, in modeling the level of enrollment growth that would be needed to achieve 250,000 additional degrees by 2030, it is likely that UC would need to grow at a rate faster than the expansion of the pool of qualified applicants. In that case, UC would be enrolling students from deeper in

the enrollment pool. Given that likelihood, this analysis assumes that the higher graduation rates are maintained during the projection period.

Hypothetical UC estimate of enrollment increases that would be required to achieve an additional 250,000 degrees above the PPIC baseline scenario by 2030. In order to identify the legislative and policy changes required to achieve an additional 250,000 bachelor's degrees by 2030, it is necessary to estimate the UC enrollment increases that would be required in order to achieve that increase in degrees. Given the discussion above, the UC analysis assumes transfer improvement consistent with its achievement of the 2:1 systemwide ratio and it assumes it will maintain its improvement in graduation rates for entering cohorts of freshmen and transfers.

The PPIC scenario that achieves 250,000 additional degrees by 2030 would require UC to award 50 percent more degrees by 2025-26 ramping up to 58 percent more degrees by 2029-30. Because of the lag between enrollment increases and degrees awarded, UC would need to enroll approximately 55 percent more undergraduate students by 2024-25 in order for degrees awarded to increase 58 percent by 2029-30.

Figure 3 below provides a hypothetical example of how UC might grow undergraduate enrollment to achieve a 55 percent increase by 2024-25. This scenario requires UC to achieve a 4.6 percent increase in undergraduates each year for the next eight years. Numerically, this translates into annual undergraduate enrollment increases of 10,000 in 2017-18 growing to 13,000 in 2023-24. Total enrollment would grow by 107,000 students by 2024-25 and then be maintained at that level through 2029-30.

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

Figure 3: Hypothetical scenario to achieve 250,000 more bachelor's degrees by 2030

To achieve this level of enrollment growth in the next eight years would require UC to dramatically increase the participation rate among California high school graduates. UC projections of California high school graduates are somewhat higher than the projections used by the California Department of Finance. To achieve the proposed level of enrollment growth, the proportion of high school graduates enrolled in UC (the UC participation rate) is projected to increase from around 8.5 percent to close to 12 percent under this scenario. This would mean that UC would be taking students from deeper in the K-12 applicant pool. A rough calculation indicates that UC would need to be drawing students from the top 17 to 20 percent of the high school class (as opposed to the current Master Plan standard of the top 12.5 percent).

Similarly, there would have to be a dramatic increase in the pool of eligible California Community College transfer applicants. Achieving this level of enrollment growth would require a 50 to 55 percent increase in the number of California resident transfer students enrolled over the next seven years. While there is growth in the pool of CCC transfer applicants, it is unlikely that the pool would grow at this level. Annual growth in CCC applicants has averaged about 3 percent per year over the last six years. Since UC already admits and enrolls a very high proportion of the current pool of transfer applicants, it would be a significant challenge to the CCCs to prepare enough additional transfers to meet this level of growth. It is likely that UC would need to admit and enroll CCC transfer students who are currently enrolling at the California State University, potentially affecting CSU's ability to meet the PPIC goal for additional bachelor's degrees.

Budgetary and fiscal changes that would be required to achieve this 250,000 additional bachelor's degrees at UC by 2030

Operating budget increases. UC would require additional funding to accommodate a cumulative enrollment increase of 55 percent at the end of eight years. The State's share of UC's marginal cost is estimated at around \$10,000 per student. Thus, for the eight years of these large enrollment increases, UC would require annual state General Fund appropriations increases starting at \$97 million in 2017-18 and increasing to \$113 million. Thus, by 2024-25, UC's annual appropriation would need to be \$1 billion more (in constant 2016-17 dollars) just for this enrollment increase, excluding all other cost increases.

Capital outlay funding needed. Since adding 107,000 students would not be a marginal change, there would need to be funding for new facilities and for renovating existing facilities. Apart from the question as to whether or not there is space for such growth and whether or not there is time to construct new facilities, the University estimates that growth of this magnitude would require \$2.5 to \$3 billion in additional capital outlay costs. This would be on top of current UC

proposed needs of \$5.6 billion for capital outlay funding related to UC enrollment growth that has already occurred or is planned in the next 5 to 10 years.² State general obligation bond acts have historically been the primary source the State has used to fund higher education expansion.

Need for additional Cal Grant and financial aid funding. In 2014-15, UC undergraduates received about \$840 million in Cal Grant awards. Assuming a proportional increase in needy students among the additional 107,000 students (without accounting for any changes in tuition and fees), the State would need to appropriate an additional \$460 million (in constant 2016-17 dollars) annually for UC's share of students eligible for Cal Grants. Given that UC would be taking a larger share of California public high school graduates, it is likely that the proportion of needy students would be greater, so this is a conservative estimate. In addition, there would be increased costs for the Middle Class Scholarship program.

Need for additional graduate and professional degrees. The PPIC analysis only focuses on bachelor's degrees. However, the future workforce needs of the state depend not only on individuals trained at the master's and doctoral levels in high-skill and high-wage fields, but also on the research that UC graduate students participate in as part of their graduate training. That research provides the economic and entrepreneurial foundation for many of the new industries that keep the California economy vibrant. Individuals receiving advanced degrees could fulfill some of the workforce needs identified in the PPIC report and thus UC would recommend that any goal adopted by the state for additional degrees include graduate and professional degrees. About 20 percent of current UC enrollments are at the graduate and professional level, and UC would seek to maintain that percentage in any enrollment growth scenario. Thus, if there were a UC undergraduate enrollment increase of 107,000 students, UC would expect to grow by 21,400 graduate and professional students. At the \$10,000 marginal cost rate, that would require a state general fund appropriation increase of \$214 million. Alternatively, the graduate student growth could be included in the 107,000 student growth.

Conclusion. 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. These increased costs are just the costs for accommodating the additional enrollment growth. As a result of the recession, UC campuses received budget cuts that have yet to be restored. For the future students to receive the same quality education as students in the past, there would also need to be additional funding to address these current gaps.

² <http://www.ucop.edu/capital-planning/files/capital/201626/2016-26%20Capital%20Financial%20Plan.pdf>, p.3

Hypothetically extrapolating UC’s current plan to add 3,400 students next year to a scenario that adds 3,400 students every year through 2030.

The cost and rate of growth to achieve 250,000 additional UC bachelor’s degrees appears daunting. However, a hypothetical example of moderate and sustained enrollment growth at UC over the next 15 years could generate quite a large number of additional UC degrees. Such a scenario would require adequate operating and capital resources. For example, Figure 4 below shows the estimated additional degrees of hypothetically extrapolating UC’s current 2017-18 enrollment growth plan (an increase of 2,500 undergraduates and 900 graduate students) to a scenario that adds 3,400 students each year through 2030 and counts additional graduate degrees in the total. Under this hypothetical scenario, it is estimated that UC would generate an additional 150,000 degrees by 2030 above the PPIC baseline –about 125,000 additional bachelor’s degrees and about 25,000 more graduate and professional degrees. This scenario represents about 1.2 percent average annual enrollment growth between now and 2030. UC is fully committed to helping create the jobs of the future and to educating enough Californians to be able to fill those high-skill high-wage jobs.

year	UC baseline undergraduate enrollment*	ugrad. enrollment with annual 2,500 FTE increase	increase over prior year	% increase over prior year	cumulative increase in ugrad. enrollment	cumulative % increase	estimated additional BA degrees	cumulative increase graduate/professional enrollments	estimated additional graduate/professional degrees	
2015-16	198,866	198,866	-		-	-	1,623	-		
2016-17	200,227	210,170	11,304	5.7%	11,304	6%	3,148	-	-	
2017-18	201,596	212,670	2,500	1.2%	13,804	7%	5,135	900	130	
2018-19	202,976	215,170	2,500	1.2%	16,304	8%	6,947	1,800	339	
2019-20	204,364	217,670	2,500	1.2%	18,804	9%	8,462	2,700	628	
2020-21	205,762	220,170	2,500	1.1%	21,304	10%	9,444	3,600	996	
2021-22	207,170	222,670	2,500	1.1%	23,804	11%	9,877	4,500	1,313	
2022-23	208,587	225,170	2,500	1.1%	26,304	12%	10,026	5,400	1,631	
2023-24	210,015	227,670	2,500	1.1%	28,804	13%	9,828	6,300	1,949	
2024-25	211,451	230,170	2,500	1.1%	31,304	14%	9,608	7,200	2,267	
2025-26	212,898	232,670	2,500	1.1%	33,804	15%	9,541	8,100	2,584	
2026-27	213,832	235,170	2,500	1.1%	36,304	16%	9,822	9,000	2,902	
2027-28	213,832	237,670	2,500	1.1%	38,804	17%	10,323	9,900	3,220	
2028-29	213,832	240,170	2,500	1.1%	41,304	17%	10,803	10,800	3,537	
2029-30	213,832	242,670	2,500	1.0%	43,804	18%	11,297	11,700	3,855	
*estimated fall undergraduate headcount							cumulative additional degrees:	125,882		25,350

Figure 4: Hypothetical scenario for an annual 1.2 percent UC enrollment increase

Recommendations for actions to improve educational attainment for students from underrepresented minority groups.

However, the resources needed for enrollment growth is not the only impediment to achieving this type of growth. The costs above are the direct costs associated with UC students. There would need to be resources expended to increase the educational attainment of students in K-12 and at the community colleges in order to achieve these enrollment increases.

The legislative report language asks UC to report “[s]pecific recommendations for actions that would improve educational attainment for students from underrepresented minority groups.”

Efforts to broaden eligibility, increase enrollment, or improve graduation rates will require a thoughtful planning process that includes multiple key stakeholders, shared ongoing commitment and significant state investment. In parallel with these efforts, it is essential to support activities that have already shown results in increasing the eligibility, enrollment, and academic success of historically underrepresented populations.

UC is fully committed to educating a student body that is representative of California’s diversity. However, a significant barrier to attainment of a UC education is a disparity in college readiness – defined here as SAT test-taking and “a-g” completion – between African Americans and Chicano/Latinos and their white and Asian/Pacific Islander counterparts. According to the California Department of Education, based on 2014 graduation data³, fewer African American and Latino graduates completed the “a-g” course sequence and took the SAT than their Asian/Pacific Islander and white counterparts. For example, about one-third of African American graduates and one-quarter of Chicano/Latino graduates completed the “a-g” course sequence, compared to about half of Asian Pacific Islander and white graduates respectively.

Also, approximately just half of African American graduates and only about one-third of Chicano/Latino graduates took the SAT, whereas virtually all Asian/Pacific Islander graduates and about half of white graduates took the exam. One bright spot is that African American and Latino students who are college ready apply to UC at similar or higher rates than white graduates. According to analysis conducted by UCOP, half of African American students and two out of five Chicano/Latino a-g completers applied to UC versus one-third of white “a-g” completers. Furthermore, of those African American and Chicano/Latino students who took the SAT, one-third applied, matching the UC application rates of white counterparts.

³ California Freshman Diversity Pipeline to UC, <https://www.universityofcalifornia.edu/infocenter/ca-hs-pipeline>

Readiness is also a barrier to educational attainment for California's community college students. Students who are transfer ready – defined by the CCCs as having completed 60 UC/CSU transferable units, including math and English, with a minimum GPA of 2.0 – are less racially diverse than the overall community college population. In 2015-16, underrepresented minorities comprised 50.6% of the community college population – over 1.6 million students. Of those students, only 54,361 were transfer ready, comprising just 43.8% of the overall transfer pool. The difference is especially pronounced among African American community college students who represent 6.2% of overall enrollment, but just 4.3% of the transfer-ready pool. At the same time, UC has seen recent increases in applications and admits among underrepresented groups. In fall 2016, community college transfer students from underrepresented groups comprised 34.7% of admits as compared to 32.2% in 2015. The proportion of African American students increased to 5.5% from 4.6% and Chicano/Latino students increased to 28.3% from 26.8%.

Recommendations

In order to continue to further expand the UC enrollment of underrepresented minority students, greater attention must be paid to eliminating the college readiness barriers that prevent students from becoming eligible, applying to and enrolling at UC. While there are a number of actions that public schools and community colleges could take to increase the number of students ready for college, this analysis limits itself to programs related to UC's current work in this area.

From UC's perspective, this can be accomplished in several ways:

1. Amplify the message that UC is attainable, affordable and welcoming

Many students, particularly those who are educationally disadvantaged, may believe that UC is not for them: it's too hard to get in and, even if they could, they can't pay for it. Worse yet is an impression that students from underrepresented groups may not be welcomed at UC. UC has aimed to dispel these myths through an outreach campaign called "Achieve UC," entailing large-scale events, workshops, informational resources and targeted media. Achieve UC events personally connected UC officials with more than 100,000 middle school, high school, and community college students and parents over the past year, sharing a clear message: "We want you. Your unique perspective and experience is needed to enrich the UC environment and educational experience for all. You can get into UC if you follow a clear set of steps and work hard, and UC can help make your education affordable with generous financial aid packages. We're here to help you achieve your dream."

While it is too soon to say if Achieve UC messaging translates into increased applications and enrollments, there is evidence that the initiative is inspiring many more students to seek information about how to prepare for UC. After the fall 2016 Achieve UC campaign, the new Achieve UC website⁴ jumped from less than 150 visitors to nearly 99,000 visitors within the space of one month. The website is a one-stop shop, linking visitors to detailed information about preparation, affordability, and freshman and transfer admissions. The next phase of Achieve UC will require more school and college visits, more targeted media, wide dissemination of materials, technical and content updates to the Achieve UC website, as well as program evaluation.

UC is also spreading inspiring and informational messages through the UC President's Pre-College Scholars initiative, a program that identifies high potential, high achieving 9th and 10th grade students from underrepresented, low income, and first generation backgrounds. Scholars receive special tips and tools, and opportunities to visit campuses and engage in the academic and cultural life of UC. Approximately 3,500 students are currently participating as President's Pre-College Scholars. There are many more high achieving, high potential students who may benefit from the program.

2. Support successful outreach and academic preparation programs

UC's primary college preparation outreach strategy for underrepresented, low income, and first generation students is its Student Academic Preparation and Educational Partnerships (SAPEP) portfolio of programs. SAPEP programs, services and initiatives aim to prepare a higher proportion of California's students for postsecondary education, graduate academic and graduate professional school opportunities, as well as success in the workplace. SAPEP programs address the whole spectrum of what it takes to get students from under-resourced K-12 schools into college. Advising students on course selection and planning, improving practical living skills and financial literacy, assisting with transfer planning and how to choose and prepare for a subject major, and helping administrators and teachers enhance curricular relevance and rigor are a few of the ways these programs facilitate students enrolling in and completing college.

Signature programs in the SAPEP portfolio include:

⁴ <http://achieve.universityofcalifornia.edu/>

Early Academic Outreach Program (EAOP): EAOP serves educationally disadvantaged middle and high school students. EAOP designs and provides academic development services delivered in partnership with schools to provide students the skills and knowledge needed to succeed at UC and elsewhere.

Mathematics Engineering and Science Achievement (MESA): MESA provides academic advising and enrichment to underrepresented K-12, community college and university students through multiple centers throughout California. MESA aims to increase the STEM diversity pipeline to and through college and into California's STEM workforce.

Puente: The Puente program serves underrepresented middle and high school, and community college students throughout the state. Puente takes an interdisciplinary approach, including writing, counseling, and mentoring components, with the goal of improving college going rates and college degree attainment.

Community College Transfer Preparation (Transfer Prep): Transfer Prep increases opportunities for underrepresented community college students to transfer to UC and other four-year postsecondary institutions. Academic advisers provide advising and support on topics including major preparation, application and financial aid to prospective transfer students.

Scout from the University of California (UC Scout): UC Scout facilitates college preparation through internet-based middle and high school courses, including "a-g" and Advanced Placement courses.

State funding for SAPEP peaked in 2000-01 at \$82.2 million. By comparison, current state funding for SAPEP is \$12.6 million. UC has internally redirected its own funds to SAPEP programs. In addition, SAPEP programs have actively leveraged funding from other sources, including the federal government, foundations, business and industry, but have been unable to make up the difference. Consequences of the decreased State investment include reduced program staffing, prioritization of services for high school students over earlier developmental outreach (which has been shown to be a highly effective practice), and an inability to expand to additional schools serving high proportions of underrepresented, low income, and first generation students.

Despite funding challenges, SAPEP programs are effective. In 2014-15, UC's academic preparation programs served more than 180,000 K-12 students in more than 1,100 public schools. High school students participating in these programs were more likely than their peers

to complete “a-g” requirements (76% vs. 42%), take the SAT or ACT exams (66% vs. 42%) and attend California 2- and 4-year public colleges (61% vs. 41%). Adequate State support is needed if UC is to build upon SAPEP’s existing infrastructure and expertise to increase college access and success for more underrepresented, low income and first generation students.

3. Increase UC presence at LCFF+ high schools and community colleges with high minority enrollment and traditionally low transfer rates

With \$20 million in one-time State funding for outreach and student support services, UC campuses are providing information, advising, enrichment and assistance to ensure that low-income and underrepresented minority students, including students who are enrolled in schools designated as LCFF+ schools, have access to a UC education and the academic support needed to graduate within four years. Campus-based efforts supported by this investment include parent engagement programs and workshops, utilization of data analytics to identify struggling students and target interventions, academic support in writing, and high school-to-college transition services. Thousands of students currently attending LCFF+ schools or enrolled at UC (having formerly attended LCFF+ schools) are the beneficiaries of these efforts. In order to realize increased enrollment and undergraduate success, sustained outreach and support are required.

UC is also partnering with K-12 schools and districts to implement the \$200M College Readiness Block Grant program, sharing resources and expertise in professional development for teachers, administrators, and counselors; counseling services and advising plans to support students and families; programs to support college readiness; and access to coursework and other opportunities to satisfy “a-g” requirements. A student’s college readiness is cumulative and requires sustained support. Continued investment via the College Readiness Block Grant will enable schools and districts to provide sustained support to students over the course of their high school career, from help researching colleges in 9th grade to assistance filling out the UC application in 12th grade.

In 2016, UC received \$2.6 million from the California Community College Chancellor’s Office to increase transfer preparation, application, and enrollment among underrepresented minorities, particularly those attending community colleges with historically low transfer rates. This funding supports communication and training about UC’s transfer pathways, regional academic advising partnerships between UC campuses and target community colleges, and summer bridge programs on UC campuses to orient and advise transfer-directed students from those colleges. As additional UC transfer pathways are articulated, marketing, outreach, counselor

training, and student advising will need to keep pace. These activities necessitate continued investment.

4. Build relationships with community- and faith-based organizations to extend the reach of UC's college access and preparation services

In an effort to serve more students from underrepresented groups, UC is reaching out to trusted institutions and organizations that play essential roles in students' development. In 2016, UC provided summer academic enrichment in math and science, and continues to offer year-round college workshops in partnership with African American churches. UC also embarked on a groundbreaking partnership with the Boys and Girls Club of America, co-enrolling Boys and Girls club participants in EAOP and vice versa. In addition, UC reaches tens of thousands of students and families through participation in annual college fairs coordinated by Univisión and the Mexican consulate in Sacramento.

On the community college side, UC signed a Memorandum of Understanding with the Umoja Community Education Foundation to establish the UC-Umoja Diversity Pipeline Partnership. Umoja is a program on many community college campuses that promotes African American student success through a curriculum and pedagogy responsive to the African and African American diasporas. As part of UC's commitment, all nine undergraduate campuses provide academic advising services to Umoja participants; training, professional development, and information to Umoja leadership and advisers; and, for those participants admitted to a UC campus, facilitate information sharing on culturally relevant campus academic, social, and transitional support prior to beginning classes.

Each of these relationships will require continued management to develop trust and facilitate growth so that more underrepresented minority students have access to college information and advising.

5. Upgrade tools and develop new resources to identify, inform and prepare underrepresented students, and help them make the transition to UC

UC offers several technological resources that hold promise for bridging the gap between the proportion of underrepresented students in California high schools and community colleges and those who apply, are admitted to, and enroll at UC.

The Transcript Evaluation Service (TES) is a data tool that uses a proprietary algorithm and trained UC Evaluators to analyze students' transcripts, thus providing a UC-certified snapshot of

earned “a-g” course credits and those still needed. Administrators can use TES to assess school-wide or district-wide progress toward meeting “a-g” requirements, identify areas of need, and improve course offerings. The tool permits administrators to disaggregate data to assess the eligibility status of students by race/ethnicity, gender, and grade level. TES also provides individual reports, which counselors, parents and students can use to identify and fill gaps in “a-g” eligibility and increase their competitiveness as UC and CSU applicants. According to a study conducted by RTI International in 2013, schools participating in TES for four consecutive years increased student eligibility for CSU by 32.1% and for UC by 21.6%.

Currently, TES serves more than 100 schools with potential to serve every high school in California. At present, the TES algorithm is undergoing a redesign to enhance accuracy and functionality, and ultimately aims to link student transcripts directly to the UC application to ease the application process, particularly for under-resourced students. Further investment is needed for technological development, marketing, and training for districts and schools in the use of the tool.

UC Scout, mentioned above, can serve as a quick intervention when students have fallen off the “a-g” track or, alternatively, are ready for more advanced coursework. UC Scout is a full-service online learning platform that offers innovative, interactive online courses for middle and high school students. UC Scout courses are developed by UC faculty and certified by UC to meet “a-g” requirements. The program also provides access to rigorous Advanced Placement and honors courses that increase students’ competitive eligibility, but may not be available at their high school.

In 2016, UC Scout received \$4 million for the “a-g” Success Initiative to develop 45 “a-g” approved courses that are aligned with State content standards. Courses will be launched on a rolling basis and all courses will be available by January 1, 2018. As part of this initiative, UC is conducting outreach to schools serving students underrepresented in higher education regarding options for satisfying the “a-g” subject requirements. The next phase of the project requiring additional investment includes continuing marketing and outreach to local education agencies, training for educators in best practices for utilizing UC Scout in their classrooms, and evaluation.

UC also invests in online tools for transfer students. UC administers the *UC Transfer Admission Planner (TAP)*, an online tool to help prospective transfer students track and plan their coursework. Students can use TAP to enter completed and planned coursework from the very beginning of their college careers, or at any point when they decide to transfer to a UC campus. TAP helps students track progress toward meeting UC’s minimum requirements, allows UC staff to communicate important information to prospective transfer students, and populates the UC

application. More than 150,000 TAP accounts have been created to date, but more work remains to be done in the areas of outreach, and training of counselors and students in the use of the tool and evaluation.

ASSIST, another transfer tool and the basis for TAP, is an online resource that delineates what courses are transferrable to a UC or CSU campus based on official articulation agreements between California's public institutions of higher education. Currently, *ASSIST* is undergoing revision and expansion and will need to be further updated as more UC transfer pathways are fully articulated.

UC is also piloting a mobile application for students in the summer before starting at UC, and continuing through the first year. This app was developed specifically for UC in collaboration with Beyond 12, a non-profit organization with experience using technology to increase the number of underrepresented minority, low-income, and first generation students who graduate from college. The application helps students manage important deadlines and activities, develop behaviors essential to college success, link to campus resources, and interact with their peers. Currently, five campuses are piloting the app with a select group of first-year UC students who previously participated in UC's high school college preparation programs. The next phase of this project will require additional investment and would include expansion of the app to more UC campuses, tailored content development for each campus, technical development, and outreach to students.

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