

This draft strategic plan is not yet complete and is still under discussion, but will give a good sense of our campus context and current efforts to improve student success.

Student Success Strategic Plan University of California Santa Cruz

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Executive Summary

The Student Success Steering Committee at the University of California, Santa Cruz (UC Santa Cruz), in alignment with UC President Napolitano and UC Santa Cruz campus leadership, has agreed upon a set of student success goals to be achieved by 2019:

- Increase overall graduation rates,*
- Decrease time to degree, and*
- Eliminate disparities in graduation rates between African American and Latino students as compared to White students, as well as low income students relative to their non-low income peers.*

To help achieve these goals, President Napolitano has provided the campus with \$1.6 million per year to spend exclusively on student success efforts. UC Santa Cruz's four- and six-year graduation rates lag behind those of most other UC campuses. Yet by various measures they outperform expectations given the population of students we serve. Furthermore, UC Santa Cruz's graduation rate gaps between Underrepresented Minorities and Whites are smaller than those of many other UC campuses. UC Santa Cruz enrolls a high proportion of students who are low-income, underrepresented minorities, and first generation college students. Indeed, UC Santa Cruz has achieved status as an Hispanic Serving Institution, was ranked first by BestColleges.com among the top colleges for Hispanic students, and ranked 8th on the [name the source] Social Mobility Index. However, even though we have much to be proud of, we aim to improve student success even more.

UC Santa Cruz is implementing a variety of educational approaches and programs to achieve these goals, documented in this Strategic Plan. By these means, UC Santa Cruz aims to change the learning environment and campus culture for all students, and especially those who need more support to graduate. It is our vision that student success be approached from a variety of vantage points to attend to both students' academic needs and their social and emotional (often referred to as "noncognitive") needs. For instance, a new intervention for 2015-16 is the College Transition Collaborative, which aims to improve students' sense of belonging on campus before they even begin their coursework. Another, the Summer Academy for Frosh, aims to acclimate students to campus life and give them a head start on core work in math and writing before they matriculate in the fall. A third new intervention is a data and case management system provided which aims to equip staff and faculty on campus with better and more accessible information on students' academic and advising needs. This system uses predictive analytics to identify students who are at-risk of failure to graduate, as well as an early warning system to put in motion a sequence of interventions for students whose course outcomes early in the term indicate a risk of failing the course.

Accountability for this work will fall at all levels of the university system, from the University Office of the President to the UC Santa Cruz campus leadership; divisional, college, and departmental leaders; faculty, lecturers, teaching assistants, and other course instructors; advisors and support service providers; and students themselves. We recognize the importance of ensuring that programs and interventions operate as intended and serve their targeted student populations so that students have the opportunities to succeed, as we hope they will. We have put in place a number of formal and informal assessment processes to inform the ongoing work of the committee and help us to make mid-course corrections, as necessary.

These goals will require a commitment at all levels to address student success and in some cases, changes to the normal mode of operations.

University of California Santa Cruz

Student Success Strategic Plan

Where We are Now

State Policy and Political Context

University of California President Janet Napolitano has made it clear to the UC Santa Cruz community that addressing student success on our campus is a priority for her. Toward that end, she has provided multi-year financial support to the campus to improve graduation rates, especially 4-year rates, across the board and close achievement gaps between underrepresented minority students and the overall student population.

At the same time, financial support for University of California campuses overall has declined dramatically due to changes in allocations in the California State budget. Napolitano herself points out in her response to the Governor's proposed 2016 California budget that California's per-student allocation to the system has declined from about \$18,000 in 1991 to \$8,000 today (in current dollars).¹ Overall funding has declined by \$460 million between 2007 and the present, even as enrollments have increased. These financial realities have led the UC regents to approve tuition increases, passing on these budgetary shortfalls to the students themselves. In his 2016 proposed budget, the Governor calls on the California higher education system to use the allocated funds to achieve statewide goals, which include decreasing the time it takes for students to graduate and increasing the number of students who complete their programs.²

This financial backdrop is important context for the Student Success Strategic Plan, which aims to improve graduation rates and time to degree and at the same time close achievement gaps. We will support all of our students to achieve at higher rates, but at the same time acknowledge that some face greater financial pressures due to the cost of education.

University Context

A founding principle of the University of California, Santa Cruz, is an uncommon commitment to undergraduate education. This commitment is reflected, for example, in our residential college system. We are an unusual public university in California, and in the U.S., in achieving national distinction as a place of both high-impact research and distinguished undergraduate teaching and learning. Although UC Santa Cruz's graduation rates have not kept pace with those at some other UC campuses, UC Santa Cruz differs from most other UC campuses in the proportion of underserved students we enroll and educate. Educational equity requires not just that underserved students be admitted to and graduate from

¹ <http://www.universityofcalifornia.edu/press-room/uc-president-napolitano's-statement-gov-brown's-budget-proposal>.

² 2014-15 Governor's Budget Summary, p. 39. Available at <http://www.ebudget.ca.gov/2015-16/pdf/BudgetSummary/FullBudgetSummary.pdf>.

college; it requires that they share in the opportunity to attend and graduate from research universities and from institutions having the most dedicated undergraduate programs. Our campus is in a unique position to provide these opportunities.

Even before President Napolitano urged the campus to focus on improving graduation rates, UC Santa Cruz had already committed itself toward that goal. In 2011, the Campus Provost and Executive Vice Chancellor established “Five for 2015” goals, two of which focused directly on undergraduate student success: increase retention rates for undergraduate students, and enhance academic pathways to allow students to graduate in four years or less. A third goal, to prepare the campus to achieve Hispanic Serving Institution status (HSI), has already been achieved. Indeed, UC Santa Cruz was awarded roughly \$3.5 million in HSI-related grants this year, one of only two UC campuses to ever receive such funding.

In Spring 2013, the CP/EVC appointed a Faculty Assistant to the CP/EVC and in January 2014 a Student Success Steering Committee was formed to address student success issues on campus. The SSSC includes members who represent all of the campus leadership and all constituencies concerned with student success (see Figure 1).

In 2013-14, UC Santa Cruz embarked on an Envision UC Santa Cruz process to identify from stakeholders within and outside the campus what priorities for campus goals should be. Among the six goals established by Envision UC Santa Cruz is to advance student success, including the following specific actions: (i) Establish campus-wide measures of student success; (ii) Enhance the role of the colleges in student success; (iii) Implement new tools to support undergraduate student academic success, such as adviser-to-adviser communication systems, classroom and curricular capacity assessments, and case management for early intervention; (iv) Improve campus climate for all students, with special attention to groups under-represented in higher education; (v) Implement a mentorship training program for faculty advising graduate students; (vi) Enhance research development and training to improve graduate education; (vii) Implement programs for graduate and undergraduate students to develop professional skills for future careers; and (viii) Develop mentorship programs that connect current students with alumni.³

A key factor related to student success is campus climate, including how well students feel they fit in on campus and how they perceive the views of others on campus toward them as learners. According to the 2014 campus climate survey conducted by the University of California Office of the President,⁴ the majority of staff, students, and faculty feel comfortable or very comfortable in their work and classroom environments. Among students, those from underrepresented minorities and those with disabilities were less likely to feel satisfied with their classroom climates. Nearly a quarter of respondents reported they had personally experienced exclusionary, intimidating, offensive or hostile conduct on campus, with reports being highest among ethnic and racial minority respondents. UC Santa Cruz has responded to campus climate issues in a variety of ways, including appointing campus leadership to spearhead working groups and initiatives aimed at improving climate for all who are part of the campus community.

³ <http://cpevc.ucsc.edu/envision-ucsc/goals/student-success/index.html>

⁴ http://campusclimate.ucop.edu/_common/files/pdf-climate/ucsc-full-report.pdf

Figure 1. Student Success Steering Committee (as of November 2015)

David Abercia	Chief of Staff, Undergraduate Education
Holly Gritsch de Cordova	Director, Learning Support Services
Olof Einarsdottir	Vice Chair, Academic Senate; Professor of Chemistry & Biochemistry
Julian Fernald	Director, Institutional Research, Assessment, and Policy Studies
Julie Foster	President, Student Union Assembly
Samara Foster	Associate Director, Student Success Research Center
Andrea Gilovich	Senior Systems Analyst, Registrar
Stacey Gustafson	Associate Registrar, Systems and Development
Charis Herzon	Assistant Director, Learning Support Services
Richard Hughey	Vice Provost and Dean of Undergraduate Education
Galen Jarvinen	Special Assistant, Chancellor's Office
Allison Land	Department Manager, Psychology
Regina Langhout	Provost, Oakes College; Professor of Psychology
Kalin McGraw	Lead Academic Preceptor, Kresge College
Betty O'Donnell	Biological Sciences Advisor
Jaye Padgett	Faculty Assistant to CP/EVC, Student Success; Professor of Linguistics
Pablo Reguerin	Executive Director, Retention Services and Educational Opportunity Programs
Alma Sifuentes	Associate Vice Chancellor, Campus Life
Tchad Sanger	University Registrar
Stacey Sketo-Rosener	Assistant Vice Provost, Undergraduate Advising
John Tamkun	Chair, Committee on Educational Policy, and Professor, MCD Biology
Michelle Whittingham	Associate Vice Chancellor, Enrollment Management
Michael Yamauchi-Gleason	College Administrative Officer, Kresge & Porter Colleges

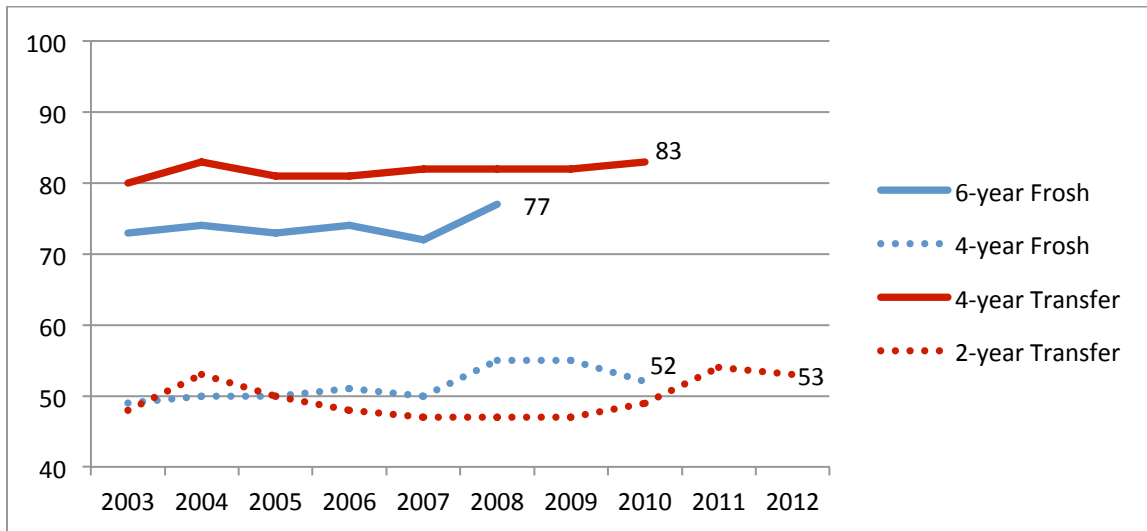
How Far We've Come

Graduation rate trends

Figure 2 shows graduation rates for entering frosh and transfer student cohorts since 2003. As can be seen, UC Santa Cruz graduation rates for frosh and transfer students have increased overall during the time period examined. For example, the solid blue line shows that frosh entering UC Santa Cruz in 2003 had a 6-year graduation rate of 73%, whereas those entering in 2008 had a 6-year graduation rate of 77%. Among transfer students, the 4-year graduation rate rose from 80% to 83% for students entering UC Santa Cruz between 2003 and 2010. However, the 4-year graduation rate for entering frosh, and the 2-year graduation rate for transfers, have declined most recently.⁵

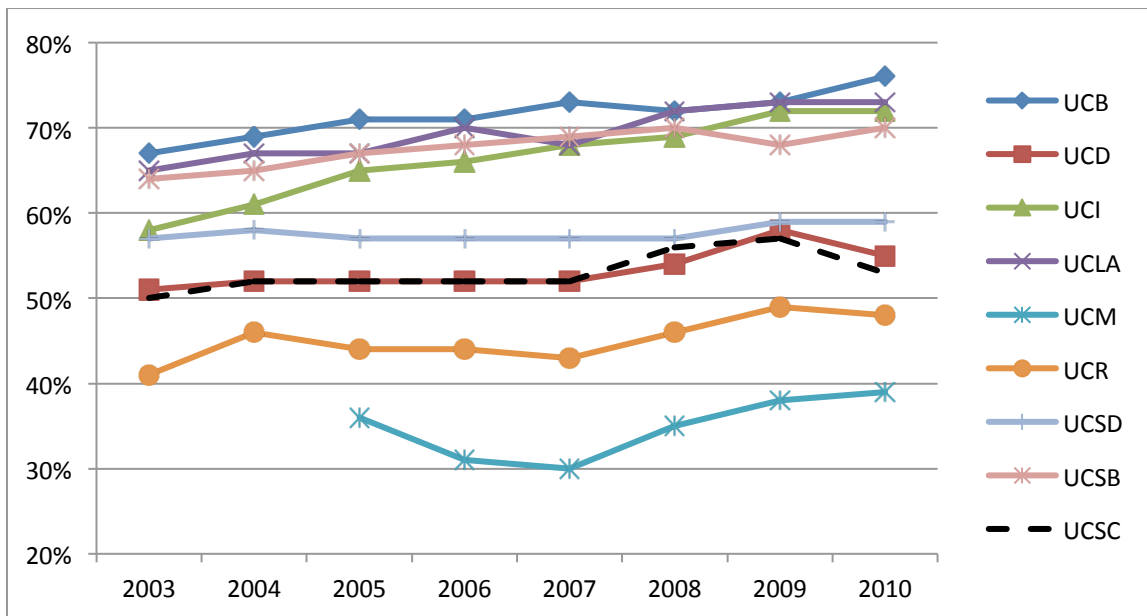
⁵ Initial analysis by Institutional Research, Assessment, and Policy Studies, suggests that the decline reflects longer time to degree rather than decreasing retention.

Figure 2: Graduation Rates for UCSC Frosh and Transfer Student Cohorts, 2003-12



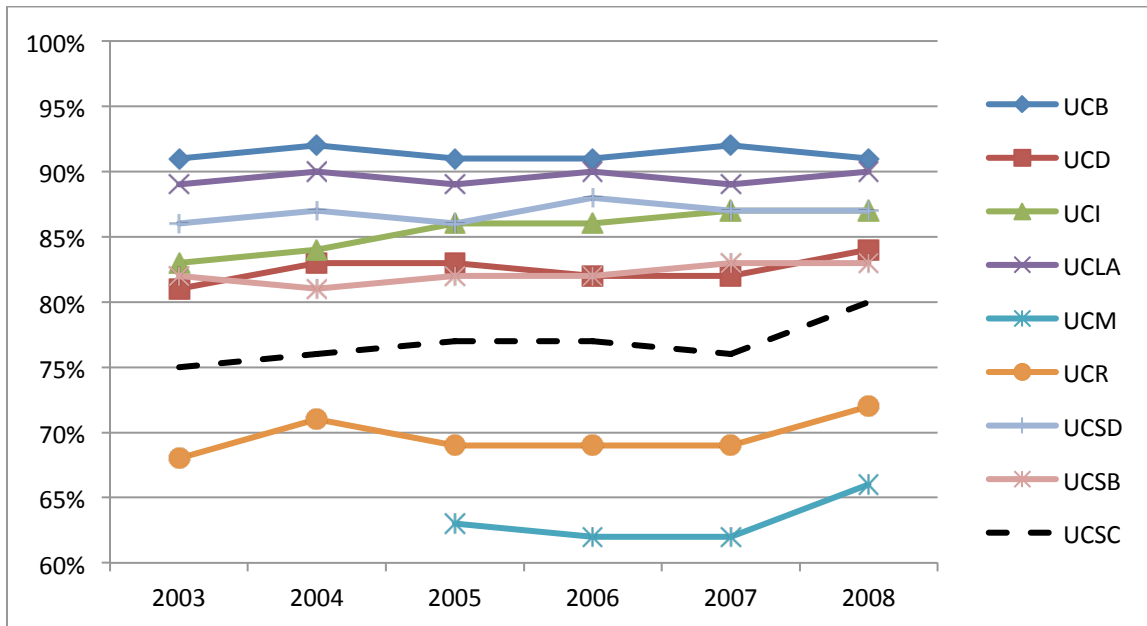
Compared to most UC campuses, UC Santa Cruz has lower 4-year and 6-year graduation rates for entering frosh (Figure 3 and Figure 4). The dashed black line in each figure shows UC Santa Cruz’s cohort graduation rate by year. UC Santa Cruz’s graduation rate lags behind other campuses except Riverside and Merced (and for 4-year rates, Davis).⁶ However, these trends do not take into account differences in students’ background characteristics or college preparation, which are important factors that affect graduation rates. Models that take into account these characteristics are discussed further below.

Figure 3: Four-Year Cohort Graduation Rates for entering frosh, by UC Campus



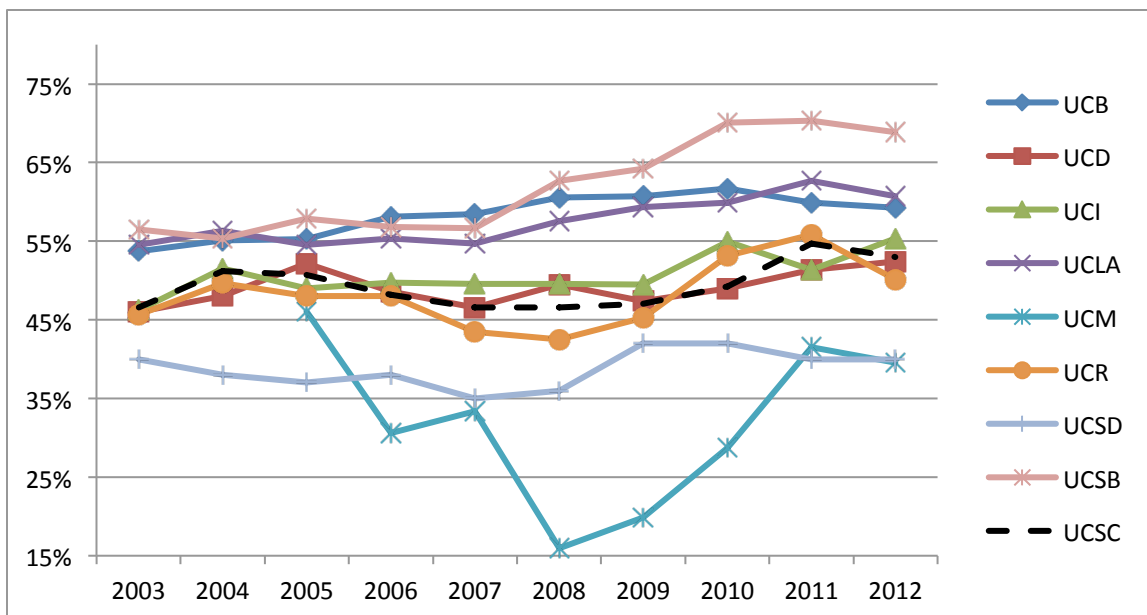
⁶ UCOP data is through 2009 entering cohorts.

Figure 4: Six-Year Cohort Graduation Rates for entering frosh, by UC Campus



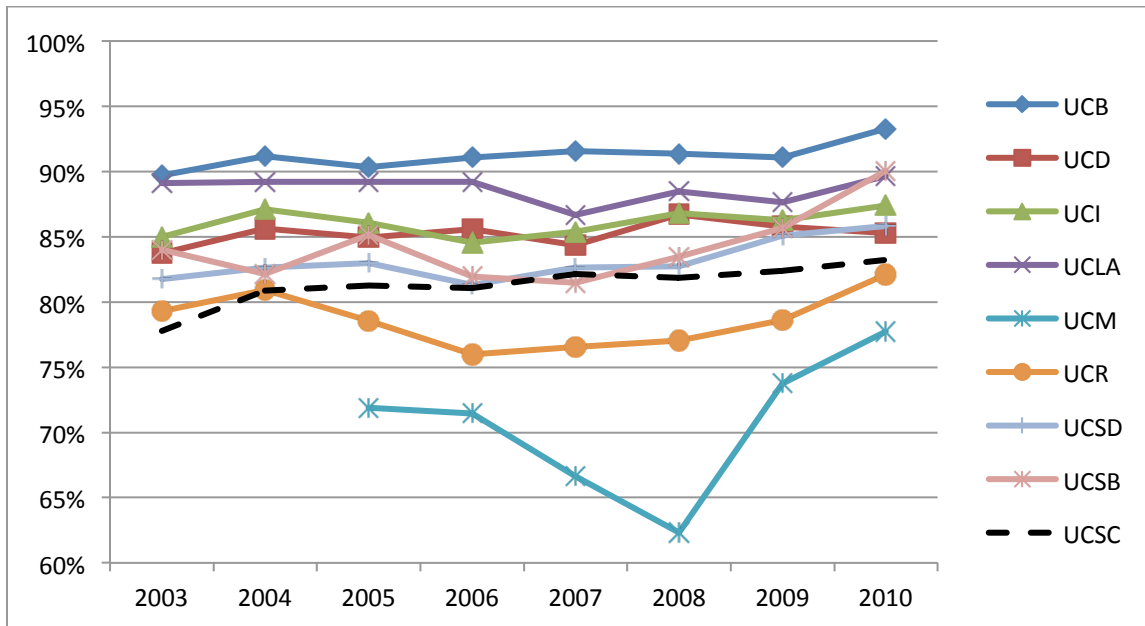
Similar trends can be seen in transfer student graduation rates (Figure 5 and Figure 6).⁷ UC Santa Cruz's two-year transfer graduation rate is on par with other campuses' rates, such as Davis, but the four-year transfer graduation rate falls below most other campus rates, except for Riverside and Merced.

Figure 5: Two-Year Cohort Graduation Rates for Transfers, by UC Campus



⁷ Data for Figures 3-6 collected by UC Office of the President. The transfer rates give credit to the originating institution for inter-UC transfers.

Figure 6: Four-Year Cohort Graduation Rates for Transfers, by UC Campus



Some UC Santa Cruz students begin their college careers at UC Santa Cruz and then transfer and sometimes graduate from other institutions. Figure 7 below shows enrollment and graduation among entering UC Santa Cruz frosh in the 2007 cohort. After six years, 77% of these students had graduated from UC Santa Cruz, 8% had graduated from an institution other than UC Santa Cruz, 6% continued to be enrolled at another institution, 1% were still enrolled at UC Santa Cruz, and it is unknown where the remaining 8% had gone.⁸ Figure 8 provides similar information for transfer students. After four years at UC Santa Cruz, 82% of these students had graduated from UC Santa Cruz, 2% had graduated from another university, 3% were still enrolled in UC Santa Cruz, 5% were enrolled elsewhere, and 8% were unknown.

⁸ Data from the Student Achievement Measure:
<http://www.studentachievementmeasure.org/participants/110714>.

Figure 7: Enrollment and Graduation at UCSC and Other Institutions, 2007 Frosh Cohort

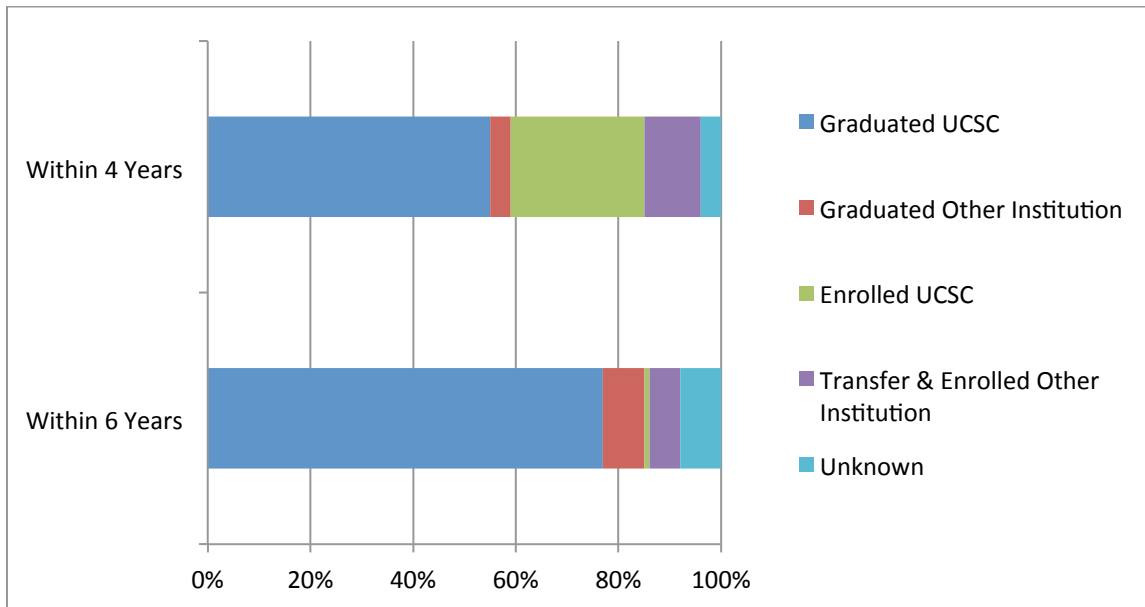
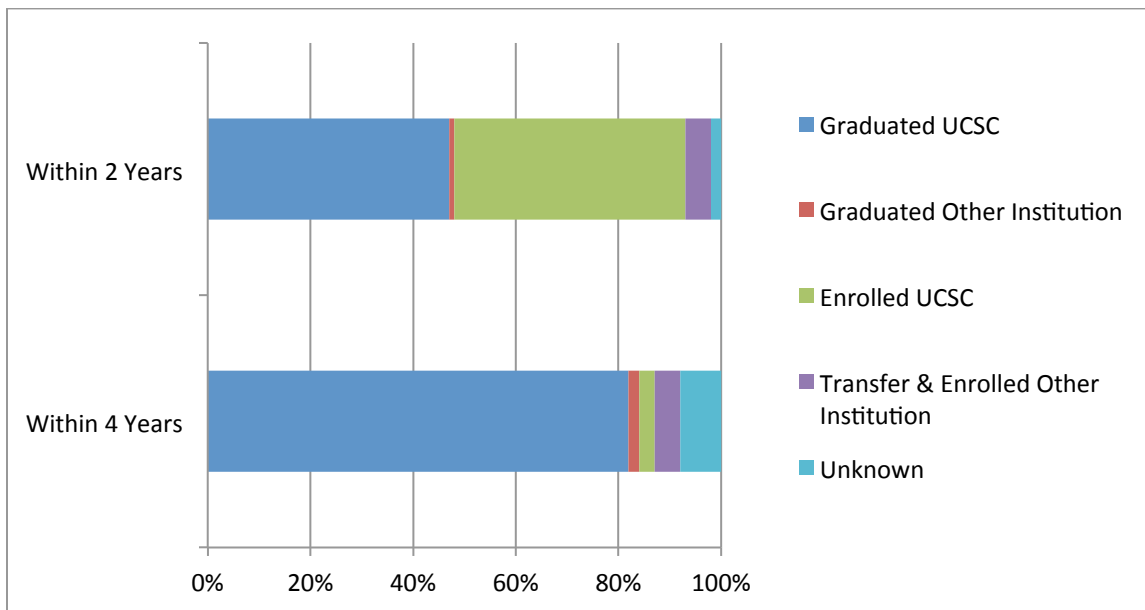


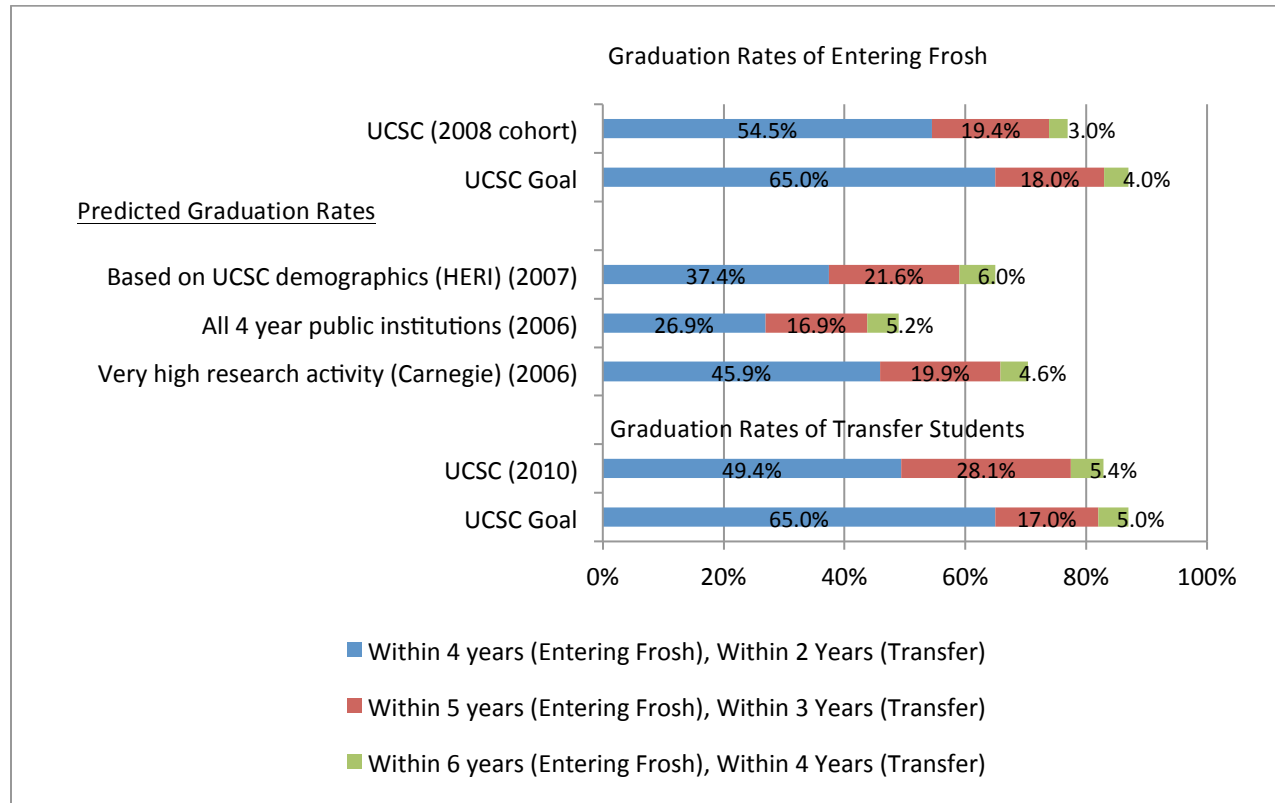
Figure 8: Enrollment and Graduation at UCSC and Other Institutions, 2007 Transfer Cohort



Finally, Figure 9 shows UC Santa Cruz’s graduation rates for frosh relative to other actual and predicted models from comparison groups. UC Santa Cruz outperforms its predicted graduation rate based on a model (due to the Higher Education Research Institute) that accounts for student demographics and other factors. In other words, judging by comparison institutions, given the challenges faced by our student population they should graduate at lower rates than they do. The campus also outperforms in comparison to all public universities nationwide, and even in comparison to all universities with very high research activity (based on the Carnegie classification).

By these measures, graduation rates at UC Santa Cruz are strong. It is our goal all the same to raise them, to the levels also indicated in Figure 9 (shown for both entering frosh and transfer students).

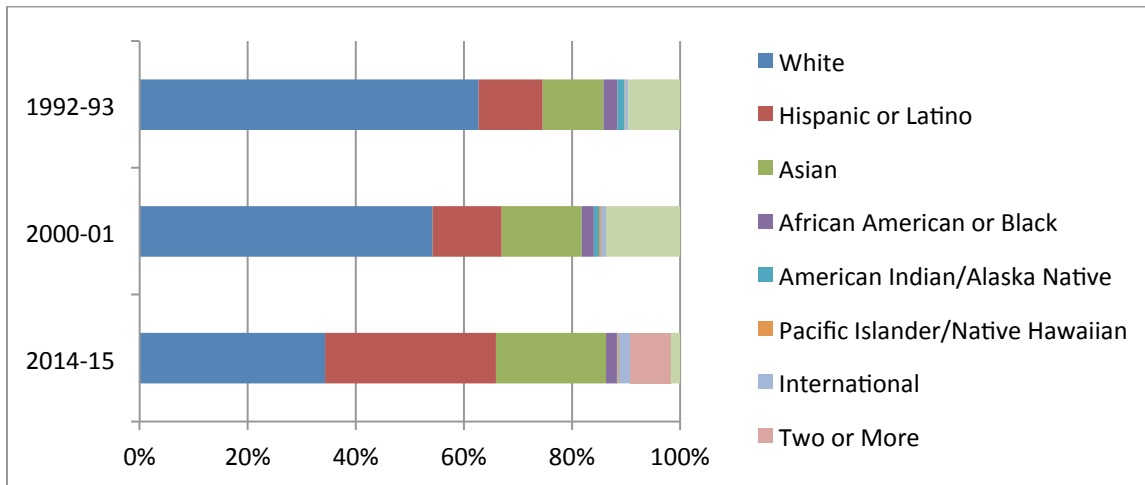
Figure 9: UCSC Graduation Rates in Relation to Other Institutions and UCSC Goals



Graduation rate gaps

Our recent increases in graduation rates were accompanied by large changes in student composition at UC Santa Cruz. Figure 10 shows that over the past 20 years, the racial/ethnic composition of students has changed dramatically, following the overall trend in the California population. There was a large increase in the proportion of undergraduates who are Latino, an increase in the proportion who are Asian, and a commensurate decline in the proportion of students who were White. Although not shown in the chart, these changes have been accompanied by increases in students who are first generation college students and the children of immigrant families.

Figure 10: Change over Time in Undergraduate Student Race/Ethnicity



Looking at the graduation rates for students in these various demographics, Figure 11 shows that among those entering UC Santa Cruz as Frosh, Asians and Whites graduate at higher rates (in 6 years) than Latinos and African Americans. Although the graduation trends tend to vary, among these cohorts the gaps between the highest rates of graduation (Asians and Whites) and the lowest rates (African Americans and Latinos) have grown slightly over time. Among transfer students (Figure 12) Whites and Asians have comparable 4-year graduation rates, with Latinos slightly below them and African-Americans even lower. However, the trends vary considerably due to the low number of African-American transfer students at UC Santa Cruz (less than 20 in any year).

Figure 11: Six-Year Completion Rates for Frosh Cohorts, by Race/Ethnicity

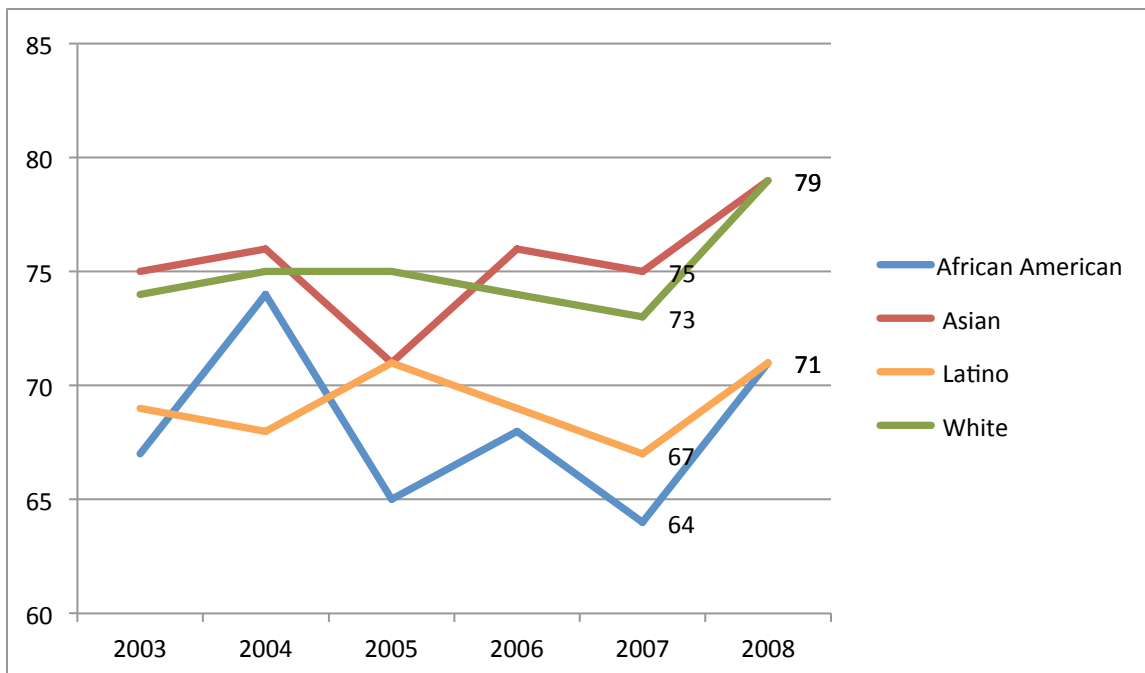
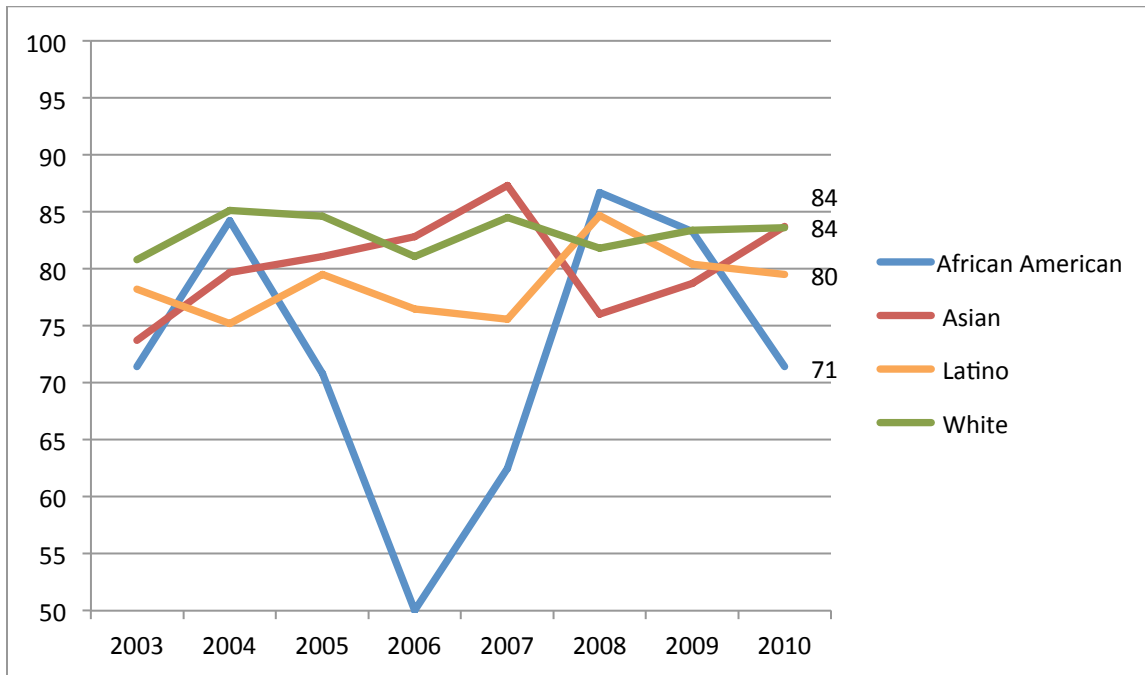


Figure 12: Four-Year Completion Rates for Transfer Cohorts, by Race/Ethnicity



Combining across three cohorts, which offers more stability in graduation rates, Figure 13 shows the gaps for frosh and transfers between Whites and African American and Latino students. Gaps are greater for 4-year than 6-year graduation, indicating that African American and Latino students are taking longer to complete their degrees than White students. Among entering frosh, African American students are 7.5 percentage points less likely to graduate in 6 years than Whites, and Latinos are 6.2 points less likely to graduate. For transfer students, the gaps are much smaller, with African American students 2.5 points less likely to graduate than White students and Latino students 1.4 points less likely to graduate in 6 years than Whites.

Entering frosh who are Pell Grant recipients, a rough indicator of low-income status, are less likely to graduate in 4 years than non-Pell Grant recipients (by 9.9 points)⁹, but just as likely to graduate in 6 years (0.7 points higher). For transfer students, those receiving Pell Grants are 12.0 points less likely to graduate in 2 years than non-Pell recipients, but just 1.2 points less likely to graduate in 4 years. First generation entering frosh are 8.6 points less likely to graduate in 4 years and 5.2 points less likely to graduate in 6 years, while transfers are 7 points less likely to graduate in 2 years, but only 1 point less likely to graduate in 4 years.

An important observation here is that graduation gaps are almost always greater for 4-year than for 6-year (frosh) and for 2-year than for 4-year (transfer). In other words, there are time-to-degree gaps independent of 6-year graduation gaps.

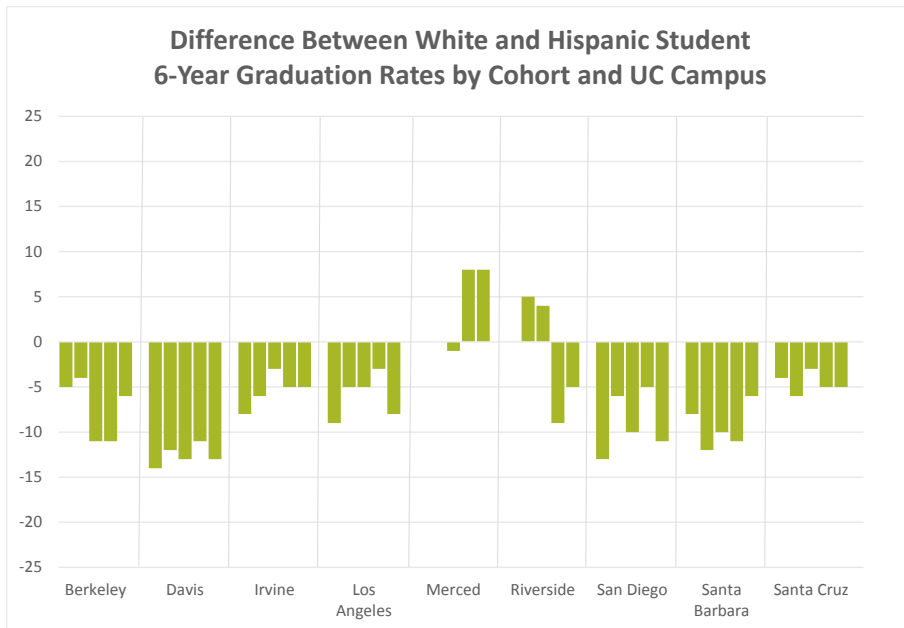
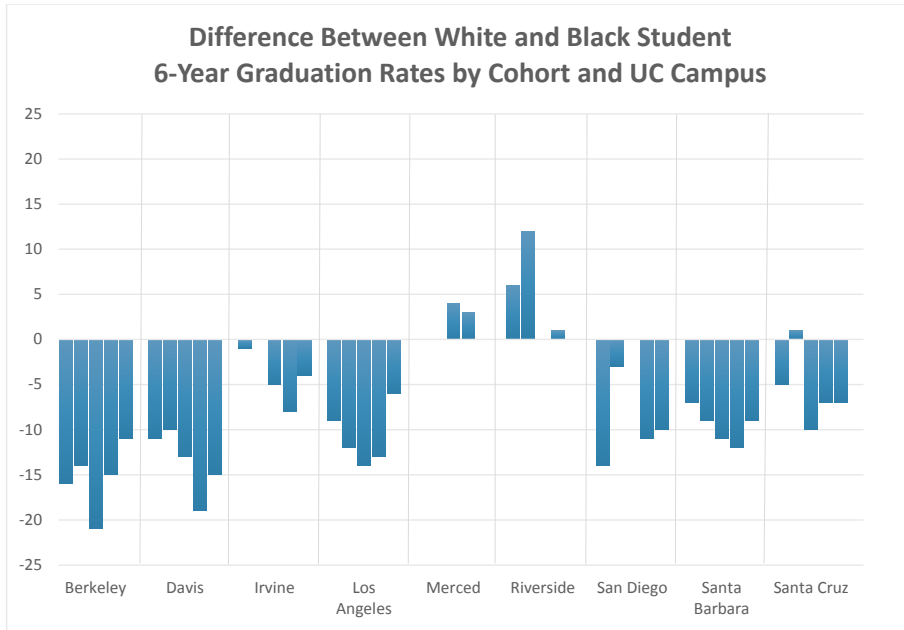
⁹ The comparison is to students who also do not receive Stafford Loans.

Figure 13: Gaps in UCSC Graduation Rates for Underrepresented Minority and Low-Income Students (3-year averages)

Frosh	4-year graduation rate	Gap	6-year graduation rate	Gap
African American	46.7%	-12.0	67.8%	-7.5
Latino	42.5%	-16.3	69.0%	-6.2
White	58.8%		75.2%	
Pell Grant	47.9%	-9.9	74.3%	0.7
Non-Pell Grant	57.8%		73.6%	
First Generation	48.9%	-8.6	71.0%	-5.2
Non-First Generation	57.5%		76.2%	
Transfer	2-year grad rate	Gap	4-year grad rate	Gap
African American	57.3%	2.2	80.5%	-2.5
Latino	46.2%	-8.9	81.5%	-1.4
White	55.1%		82.9%	
Pell Grant	45.8%	-12.0	81.1%	-1.2
Non-Pell Grant	57.9%		82.2%	
First Generation	48.8%	-7.0	81.2%	-1.0
Non-First Generation	55.8%		82.2%	

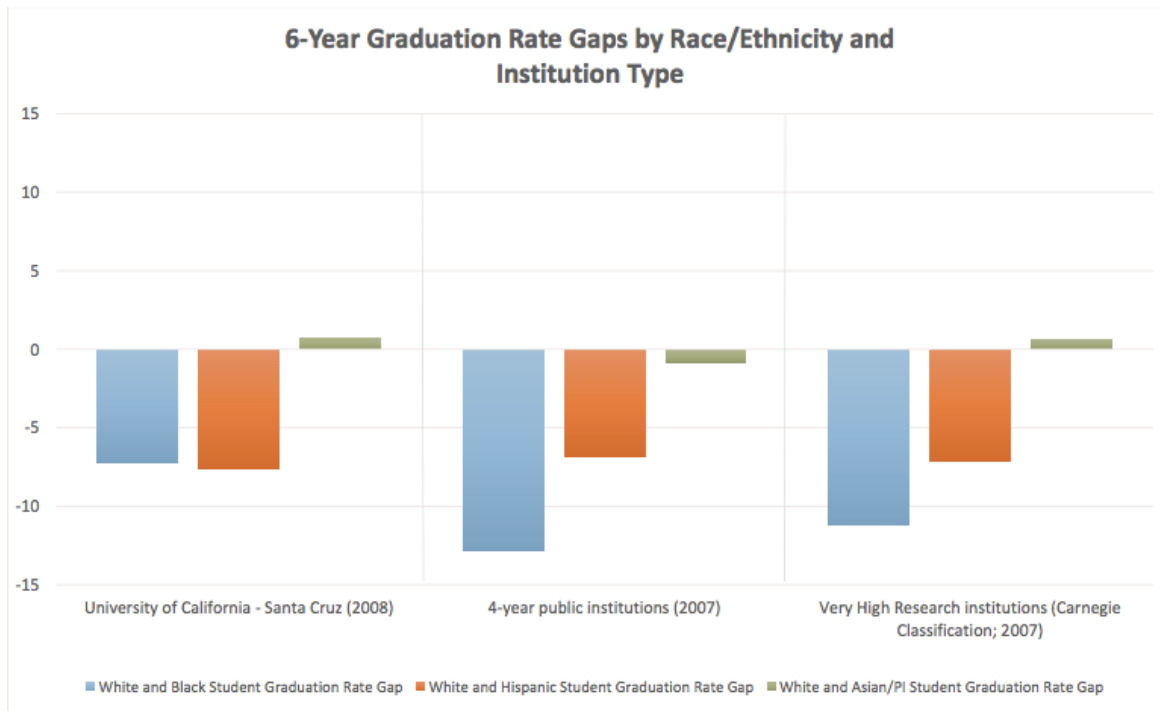
Relative to many other UC campuses, UC Santa Cruz graduation rate gaps are modest. Figure 14 shows the gaps in 6-year graduation rates between African Americans and Whites and Latinos and Whites, for 2003-2007 cohorts across UC campuses. Figure 15 shows the same gaps, and that between Asian / Pacific Islander and White students, for UC Santa Cruz, all public 4-year institutions, and very high research institutions.

Figure 14: Gaps in 2007 UC Campus Graduation Rates for Latino and African American Students, Relative to White Students



*2003-2007 Cohorts

Figure 15: Gaps in Graduation Rates for Latino, African American, and Asian/PI Students, Relative to White Students, by Institution Type



Student Success Goals

The Student Success Steering Committee has studied these data and agreed on a set of goals that are in line with those of both President Napolitano and the UC Santa Cruz campus leadership. The three goals are to:

- Increase overall graduation rates
- Decrease time to degree, and
- Eliminate disparities in graduation rates between African American and Latino students as compared to White students, as well as low income students relative to their non-low income peers.

Figure 16 shows the actual cohort graduation rates for the most recent cohorts we can follow through to six years (four years for transfer students) and the graduation rate goals that the committee set for 2019. This is an ambitious agenda requiring increases of 10 percentage points in 4-year graduation rates for incoming frosh and 15 point increases for 2-year graduation rates for transfer students in just five years. The increases required to meet the 2019 goals for frosh 6-year graduation and transfer 4-year graduation are lesser because of the emphasis on reducing time to degree.

Figure 16: UCSC Actual Graduation Rates and 2019 Goals for Frosh and Transfer Students

Students Entering as Frosh			Students Entering as Transfers		
2008 Cohort 4-Yr Grad Rate	2008 Cohort 5-Yr Grad Rate	2008 Cohort 6-Yr Grade Rate	2010 Cohort 2-Yr Grad Rate	2010 Cohort 3-Yr Grad Rate	2010 Cohort 4-Yr Grade Rate
55%	74%	77%	52%	78%	83%
2019 Goal 4- Yr Grad Rate	2019 Goal 5- Yr Grad Rate	2019 Goal 6- Yr Grad Rate	2019 Goal 2- Yr Grad Rate	2019 Goal 3- Yr Grad Rate	2019 Goal 4- Yr Grad Rate
65%	83%	85%	65%	83%	87%

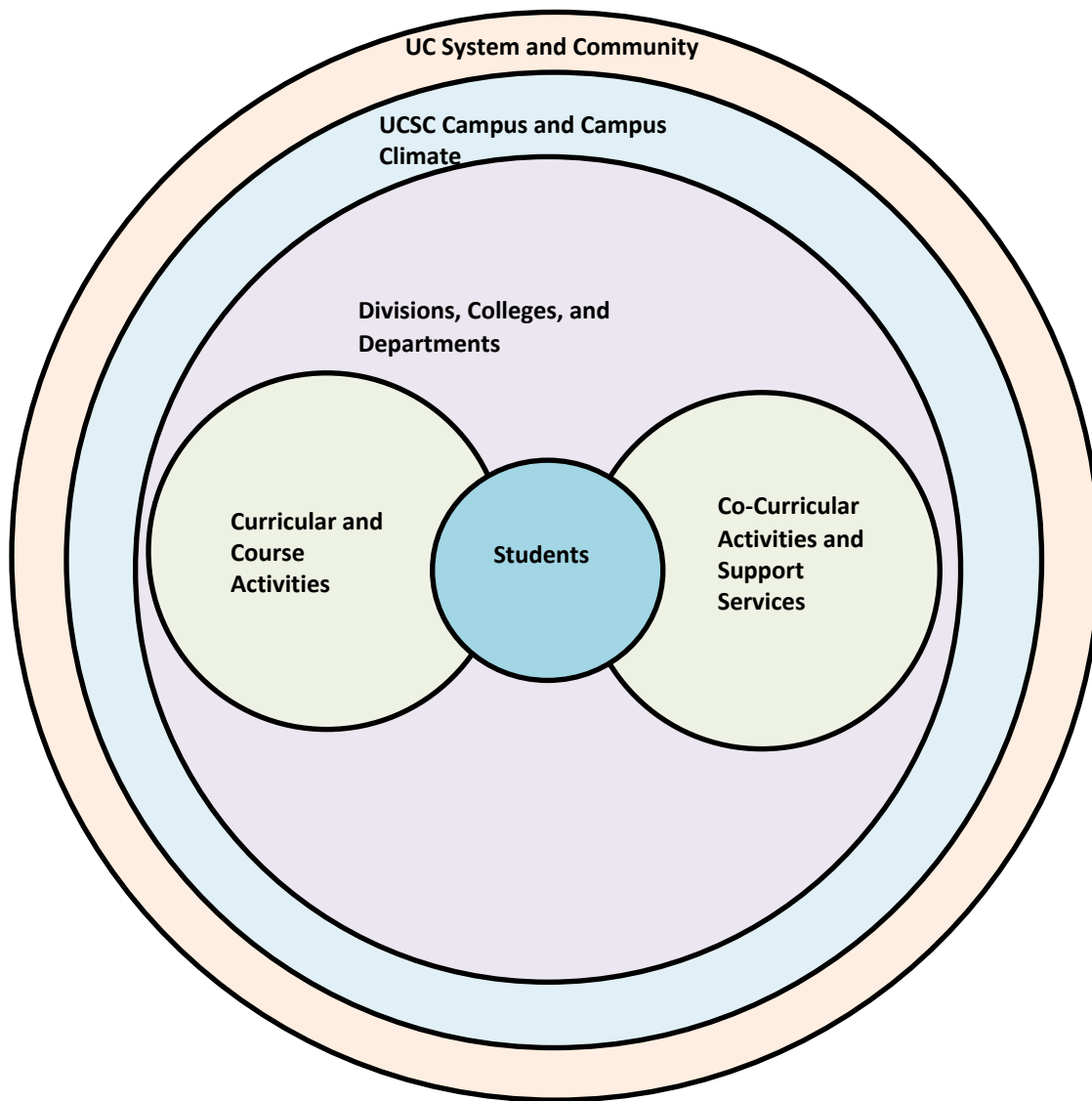
To eliminate these gaps by 2019 requires substantial reductions each academic year; the greatest gains to be made are for African American students in their 4- and 6-year graduation rates, Latino students' 4-year graduation rates, and low income transfer students' 2-year graduation rates.

Framework for Change

To achieve these ambitious goals, the SSSC and the divisions, departments and units represented by its members have spearheaded a variety of interventions and initiatives aimed at student success. The SSSC acknowledges that in order to achieve meaningful change in student success, these interventions and initiatives must occur at all levels of university operations. Student success is not only the individual responsibility of students; campus policies, processes, and resources available to students—particularly the ones at highest risk—play a large role in their ultimate success.

The SSSC's planning to reach these student success goals therefore embeds itself at multiple levels within the university, shown in Figure 17. Based on a social-ecological model, this framework identifies the various levels of intervention required to support student success and shows these as mutually reinforcing—for instance that policies and practices at the campus level feed into student experiences, and that students themselves, and what they bring to campus in terms of their strengths and challenges, should inform how the campus serves them.

Figure 17: UCSC Student Success Levels of Accountability



At the core of the model are individual **students**, who bring with them to their higher education experience both their own individual and family backgrounds as well as their prior educational and community experiences. They also bring their talents, interests, and challenges. A host of studies have shown that student and family background characteristics are key factors in students' educational success, though many of these characteristics are not levers for change in a higher education setting. Others, such as students' feelings that they may not belong or fit in on campus, or prior educational gaps, can be addressed with supports or interventions.

The student experience shapes and is shaped by **curricular and course activities** as well as **co-curricular activities and support services**. This means their courses; sections; advising, tutoring, or modified supplemental instruction sessions; and residence halls, on the one hand, as well as the faculty, teaching assistants, staff, and students with whom they directly interact on the other. These shape the core of

their college experiences and offer multiple points of intervention for students who are in need of academic or other types of support.

Students and contextual settings influence and are influenced by policies and programs at the **division, college, or department level**. For example, policies governing who is eligible to declare a major and the requirements for that major are determined at the department level. Divisions may work across departments to align course availability or requirements for students. These, in turn, may affect the courses offered to students and the supports available to them through the course.

All these, in turn, affect and are affected by **campus-wide systemic** initiatives, policies, and climate. Interventions and policies include campus strategic plans, guidance and leadership about campus-wide goals, as well as campus investments in systems that support student success. These campus-level interventions may seem removed from students, but the formative and summative assessments that accompany various interventions may assist administrators in making decisions that directly bear on student experiences and success. Campus climate includes perceptions of students, staff, and faculty about how welcoming and accepting campus is to those with a variety of ethnic backgrounds, income levels, sexual orientations, and other personal characteristics.

Finally, the **California and University of California policy context as well as the community context** in which UC Santa Cruz exists are important contributors to students' experiences at UC Santa Cruz.

Current and New Interventions

Students

Interventions at the student level focus on what students themselves bring to the academic experience—their personal and family background, prior educational experiences, personal and academic interests, and feelings about themselves as learners in the college environment. Not all students come to UC Santa Cruz ready to tackle the most challenging college-level material, and some, particularly those who do not have family members with university degrees, may struggle with feelings about whether they are right for the university environment and whether the university environment is right for them. Family financial background also plays a major contributory role in what students bring to the university experience in that it affects students' need for financial aid and whether they need to supplement aid with employment.

Many of these factors are not malleable, but UC Santa Cruz has launched several initiatives that attempt to address students' initial experiences on campus.

1. *College Transition Collaborative*. As discussed in an influential New York Times Magazine article, recent exciting research suggests that academic success can be improved through brief, crafted interventions that address sense of belonging in a university environment.¹⁰ UC Santa Cruz has joined the College Transition Collaborative (CTC), a research collaborative of 13 universities established by David Yeager of University of Texas Austin and colleagues at other universities, working together to create, deliver, evaluate and disseminate these interventions.¹¹ The

¹⁰ Who gets to graduate? http://www.nytimes.com/2014/05/18/magazine/who-gets-to-graduate.html?_r=0.

¹¹ The College Transition Collaborative. <https://p3.perts.net/ctc>.

interventions, which can be as brief as 45 minutes, are designed to prepare students to be more resilient given initial setbacks, such as failing a test, and to help students see that it may take time for them to feel like they belong on campus. Importantly, they learn they are not the only students with these feelings or concerns. The first intervention was delivered to the entering Frosh class of 2015 and will be evaluated by the CTC team using a randomized controlled experiment design.

2. *Summer Academy: Frosh.* The first Frosh Summer Academy launched in Summer 2015. This 7-week residential program required 9 credits of work in three areas: math preparation, writing for STEM fields, and Navigating the Research University, a university acculturation course discussed below. The Academy also incorporated co-curricular social and cohort-building programming to strengthen students' sense of community and belonging. The program targeted students who would place into pre-calculus courses. Students who placed into Math 2, for example, were positioned to take Math 3 in Fall 2015 and so are predicted to have improved time to degree.

In addition, the UC Santa Cruz Math instructor who taught at the Academy used the small-class Academy setting to pilot a new rubric to assess math learning outcomes, which can then be scaled up to the larger academic year offerings of Math 2.

[Need the other 2 summer academies here too.]

3. *Navigating the Research University course.* Established in 2013, this 2-credit course offered exclusively to first-year students explores first-year issues and success strategies and ways to participate in the institution's academic life, and guides students in clarifying educational goals (including deciding on a major) and devising a plan for success.

Academic and Academic Support Settings

Student success is shaped by students' experiences in their courses and in other contexts that aim to support learning; their professors, peers in class, teaching assistants, academic advisors, tutors, and supplemental instruction instructors all play important roles. For those living on campus, residence hall experiences also play a role. The SSSC and its members are already committed to providing support to students around their coursework, and toward that end the campus is already engaged in much of this work. There are also several new initiatives.

4. *Maximizing Achievement through Preparedness and Advising (MAPA).* In 2015 UC Santa Cruz received \$3.6 million in Title V funding, most of this devoted to the MAPA Project. MAPA is designed to reduce disparities between Hispanic / Latino students and others by implementing four research-based, data-driven, interwoven activities putting into place the systemic supports that Hispanic students need to successfully navigate the university experience. MAPA's efforts are organized around: redesigning of gateway math courses; developing a Summer Reading for College Writing Institute; deepening academic coaching/advising; and strengthening sense of belonging. Examples of specific outcomes are: a five-year 15% improvement in pass rates in gateway math courses for Hispanics; a five-year 20% increase in Hispanic students passing the Entry Level Writing Requirement; an additional 150 Hispanic students graduating via the

Crossing the Finish Line intervention; 80% of gateway course faculty and 100% of advisors/coaches completing MAPA professional development activities.

5. *Educational Opportunity Programs (EOP)*. EOP has provided student success services for over 30 years to students who are low-income, first-generation, or people of color – almost 40% of the UC Santa Cruz student body. From 2002 to 2012, the overall UC Santa Cruz population increased by 21% while that of EOP students increased by 225%. Programs run by EOP include the following:

- Bridge First Year Experience. This is an advising and community building program for students at very high risk. The Bridge Program includes the Bridge Academy in math and writing preparation before classes begin, team-building, and advising, tutoring/workshops. Bridge students receive priority course enrollment through the first year.
- Early alert and intervention. Advising triggered when a student's grades or progress fall below a threshold at the end of any term.
- iMap (Improving My Academic Progress). Interventions designed to reach and stabilize students on academic probation. This involves workshops that address common barriers, tutoring, and follow-up advising.
- Crossing the Finish Line. Implemented in 2012, this program coaches students who are very near to graduation but have stopped out or been denied graduation due to a missed requirement. Peer mentors help students develop action plans toward re-applying for graduation.
- Pathways to Research. Developed in 2012, this program introduces 50 EOP students to research beginning in their sophomore years. The program utilizes graduate student mentors to introduce and guide EOP students into research.

6. *Learning Support Services*. This unit runs tutoring and supplemental instruction for the campus.

- Modified Supplemental Instruction (MSI). Undergraduate Assistants lead sessions of 12 students, supporting their learning in specific courses. MSI supported 145 courses in 2013-14, and was used on average by 22% of the students in a course.
- Small group tutoring. Tutoring sessions specific to classes, run by students who have done well in the relevant course. Tutoring was used in 2013-14 by 11% of undergraduates.
- Weekly and drop-in writing tutoring; drop-in math tutoring.

LSS programs were used by more than one third of students in 2013-14. While EOP students (see above) accounted for 37% of undergraduates, they used 53% of the contact hours for tutoring and MSI programs.

7. *Services for Transfer and Re-Entry Students (STARS)*. This unit provides a range of services to students:

- Advising by professional staff and peer advisors.
- A "Successful Transfer to Research University" course, introducing students to university culture and effective academic reading, writing and research strategies.
- Coordination of study group communities; events connecting students to faculty.
- Support for veterans: priority enrollment, dedicated housing, and peer mentoring.
- Smith Renaissance Society, which supports current and former foster youth, homeless and runaway youth, orphans, and wards of the court. The Smith Renaissance Society connects students to adult mentors and emotional support, provides financial aid, helps with

navigating the university's systems, and affords priority enrollment, year-round housing, and social activities.

8. *Resource Centers.* African American Resource and Cultural Center; American Indian Resource Center; Asian American/Pacific Islander Resource Center; Chicano Latino Resource Center; Women's Center; Cantú Queer Center; Disability Resource Center. Provide community, support and belonging; connect students to resources/leadership/professional development opportunities.
9. *Undergraduate Research Office.* Established in 2012 and staffed by a new position of Undergraduate Research Coordinator, the office is a resource to undergraduate students interested in or engaged in original research, including maintaining a large database of research opportunities on campus. [Needs updating.]

Divisions, Colleges, and Departments

Many of the policies that affect student academic experiences are made in the departments, divisions, and colleges at UC Santa Cruz.

10. *Residential Colleges.* A distinctive property of UC Santa Cruz is its residential college system. All first-year students live on campus, choosing to live at one of 10 colleges each having its own character and academic theme, overseen by a faculty Provost. Advising, unless specific to a major, is done within the college. Co-curricular activities and social events are college-based. Perhaps most important, all students take a college-based Core Course during their first year. These courses reflect the colleges' themes. They are small section (capped at 22 students) and emphasize writing skills, satisfying university writing requirements. They address "big ideas" and introduce students to university-level discourse and thinking skills. The colleges were from the start a student success initiative. They provide a smaller living-learning community within a large research university setting. Learning communities are known to increase retention, GPA, credit hours earned, and student satisfaction. The colleges may help explain why our graduation rates outperform comparison institutions with similar student demographic profiles, and why first- and second-year retention rates for under-represented minorities are comparable to those of other students.
11. *Academic Advising.* Each student has at least **two** staff advisers while enrolled at UC Santa Cruz. **College advisers** and **preceptors** are "generalist" advisers who help students understand campus-wide requirements such as general education, academic progress, and time-to-degree policies. They can also help students identify majors that may be a good fit for them. Students are affiliated with their college advisers from admission through graduation. **Program, major, or department advisers** focus on a specific program. They can help students understand major qualification and graduation requirements, and academic planning for the major. They help students identify appropriate faculty mentors and enrichment opportunities within and related to the program. Students are affiliated with their program advisers from the time they indicate interest in the major until the time of graduation. There are other staff across the campus who do advising or academic advising-related work with specific student populations or specific student programs, such as the Career Center, Educational Opportunity Programs (EOP), and Services for Transfer and Re-Entry Services (STARS).

12. *Early Major Advising and Declaration.* Students often enter the university with unclear ideas about what they will do, or committed to a pathway that may not reflect their abilities or interests. This becomes a retention and time to degree issue when students fail coursework or decide late in the game to switch majors. For these reasons, we instituted major qualification by the end of a student's second year (or second quarter in the case of transfer students), requiring students to demonstrate early an ability to succeed in a major, and we eliminated a practice of disqualifying students from majors for poor academic performance, which sometimes occurred late in a student's career. In addition, students in many of our college core courses for frosh must now participate in major and career assessments sponsored by the career center.
13. *Major preparation for transfers.* Similarly, we now require more major preparation for transfer students in Economics, Psychology, and certain STEM fields. This makes it more likely that entering transfers will succeed in these majors and finish their degrees within 2 years.
14. *Major Level Reports.* Effective last academic year, UC Santa Cruz is producing reports on graduation rates and time to degree by major. The reports also give information about movement between majors. Of the students who do not complete their degree at UC Santa Cruz, as many leave after the second year as after the first year, and nearly as many again depart after their third year. This is the period when students are choosing and pursuing majors. In order to improve these numbers, we must engage the interest of academic departments in what is happening to their majors. This is only possible if departments have current and user-friendly information. Now that this is in hand, we are raising expectations of departments to consider student success issues specific to their programs and to respond creatively.
15. *Three-year Degrees Using Summer Session.* A UC-wide initiative, we are asking 10 of our largest 15 departments to devise curricular plans that would allow students to finish the degree in three years instead of four, by capitalizing on summer session. A recent survey on campus found that 44% of students who entered as frosh said they would be interested in such a fast track version of their major.
16. *Pared-Down Degree Programs.* As part of another UC-wide initiative, we are asking every program on campus to review its degree requirements and, where possible, to reduce them. (The ideal target for upper-division requirements is 45 units.) Some students falter in very challenging majors after having progressed a good deal toward their degrees. We are also asking departments to consider creating alternative degree programs that capitalize on the requirements such students have satisfied, allowing them a path to a degree without severe back-tracking.
17. *Adaptive Learning in Mathematics.* UC Santa Cruz is piloting the use of ALEKS-PPL to i) allow incoming students to place higher in early math courses than they would have and to help them succeed in these courses; and ii) be used in a re-designed offering of developmental math. ALEKS-PPL is an adaptive learning system that assesses students and then tailors instruction to their specific needs, in an iterative fashion. During Summer 2015, newly admitted frosh used ALEKS-PPL to get an initial math placement result. Then they worked to improve their understanding of math, many ultimately placing into a higher math course before matriculating in the Fall. Thus many students who had placed into Math 2, College Algebra, re-placed into Math 3, Pre-Calculus, or even into a calculus course. Many of those who had placed initially into

courses higher than Math 2 also re-placed at higher levels. This project, called Airlift, has a web presence [here](#).

18. *Flipping Introductory Courses in Biology, Chemistry, and Physics.* In May 2014 UC Santa Cruz was awarded \$1.5 million from the Howard Hughes Medical Institute to create new “flipped” active learning versions of introductory courses in these STEM areas. The goals of this initiative are 1) to increase the number of science, technology, engineering and mathematics (STEM) graduates, with those graduates reflecting the diversity of UC Santa Cruz’s student population, 2) to increase the proportion of those diverse graduates who move on to STEM careers, and 3) to build an institutional culture that sustains learner-centered, inclusive, evidence-based STEM education. In the re-designed classes, students will go online to access course material traditionally delivered in a lecture, while class time will be devoted to active learning through experiments, problem solving, and group projects. Because active learning has been shown repeatedly to improve student success, we expect that these course re-designs will lead more students to pass and position them more strongly to progress further in STEM majors.

19. *Campus-Community Engagement.* Another impediment to the success of some underprivileged students is the cultural divide they feel between their home and community on the one hand and their academic community on the other. In another partnership, with the researchers at the University of Minnesota, CUNY, and several other institutions, the Provost of UC Santa Cruz’s Oakes College has received First in the World grant funding to develop, implement, and evaluate enhanced community-based learning experiences within academic programs, with the goal of increasing academic engagement and a sense of belonging among underserved students. These programs are intended to improve persistence by increasing engagement and sense of belonging. Here at UC Santa Cruz the effort will build on the existing Oakes College Service-Learning and Community Justice Program. Oakes College, one of 10 colleges at UC Santa Cruz, admits about 450 students per year, largely students of color. Either using a propensity score matching approach to identify a comparison group or splitting the group to provide internal comparisons, the program will implement new approaches adapting practices the group identifies during the planning year. As a product the researchers will develop a guide for universities to use in building sustainable community partnerships and embedding within them community-based learning initiatives that have been successful in improving educational outcomes of underrepresented students.

UC Santa Cruz Campus

There are several campus-wide initiatives aimed at creating systems to support students’ success. The first set of these have to do with data systems needed to support new initiatives and assess their effects more stringently than previously possible. The second set focuses on setting up campus-wide oversight for student success that work across departments, divisions, colleges, and administrative units.

20. *Case Management System for Advisors.* Student advisors are dispersed over many campus units, including the colleges, the academic departments, the Educational Opportunity Programs office, Financial Aid, Residential Life, and the Disability Resource Center. UC Santa Cruz has invested in SSC Campus, which will improve our ability to effectively intervene or respond on students’ behalf. Piloting of SSC Campus begins in Winter 2016. All advisors will be linked in such a system, allowing for fast and coordinated responses to student issues. The platform includes other

functionality that should free up adviser time for more meaningful work, including functionality for scheduling appointments and for easily reaching out to a targeted group of students.

21. *Early Alert System.* An early alert system is also part of SSC Campus. This will allow us to flag students who are struggling in selected high-stakes classes, and to do this early in the term, allowing for timely intervention.
22. *Predictive Analytics.* Predictive analytics systems analyze pre-admissions data, data from the student information system, and other data sources to compute for every student a risk of dropping out. At-risk students are then flagged for intervention. These systems go beyond early alert in their reach, for example flagging students who are not making progress to qualify for a major or to graduate. Again, this is a feature of SSC Campus.
23. *Student Exit Survey.* We have created the first campus-wide exit survey that must be completed by all students who apply for a leave of absence or to withdraw. This survey will allow us to collect nuanced data on why students leave UC Santa Cruz. The survey is being piloted Fall 2015.
24. *HSI Designation.* UC Santa Cruz has recently been designated as an Hispanic-Serving Institution by the U.S. Department of Education. This opens up opportunities for special funding streams only available to HSIs, such as that described in 4 above.
25. *Diversity training.* The Office for Diversity, Equity, and Inclusion advances the University's teaching, research and service mission and commitment to excellence by working collaboratively with others throughout the institution to promote a campus climate that values diversity, equity and inclusion and is free of bias and harassment. It offers training that promotes career development and academic and staff employee retention, and provides diversity and compliance education. Among its nine focus areas is student diversity and inclusion programs.

UC System and Community

The University and its students are influenced by other community, political, and social contexts that affect operations and students. UC-wide policies, state and national policies on higher education, state budgets for higher education, and how the university engages with the community all have a bearing on student success. UC Santa Cruz is working with key stakeholders outside the university to influence student success.

26. *UCOP funding to support student success.* The University of California Office of the President has provided \$1.6 million annually for an undetermined amount of time. These funds are essential for putting into place many of the programs and interventions described here, which we see as essential for reaching student success goals.
27. *Santa Cruz County College Commitment 7th Grade College and Career Summit.* Underserved students may feel they do not belong at a college or university because they have few family or friends with college experience, and so simply do not "see" themselves there. Outreach initiatives that counter this sense of exclusion in school children address the sense of belonging before students go to college, and are thereby likely also to boost graduation rates.

During March of last year (2014-5), UC Santa Cruz hosted 1,126 seventh graders and their teachers in a day of college exploration and preparation. The event represented the first year of a new initiative, in partnership with CSU Monterey Bay, Cabrillo Community College, and the Santa Cruz County and City school districts, to ensure that every student enrolled in one of the twelve main public middle schools of Santa Cruz County takes part in a “college & career” day at CCC, CSUMB or UC Santa Cruz. Students, teachers, and parent volunteers toured UC Santa Cruz, learned about admissions requirements and ways to prepare for college, and engaged with current college students. An analysis of matched pre- and post-surveys found that the experience had the desired outcome for the 7th grade participants. For example, they were more likely after the event to say they know they must take and pass A-G courses in order to attend a CA 4-year public university (by 10 percentage points), more likely to say they expect to attain a 4-year degree (by 9 points), and more likely to say they know the steps needed to accomplish their career goals (by 14 points).

Tracking Progress

Student Success Steering Committee

The SSSC meets monthly or more often as an entire group and sometimes more often in subgroups focused on specific student success initiatives. This body will be responsible for ensuring that efforts undertaken are achieving the expected results through both assessment and evaluation of interventions and activities as well as close monitoring of UC Santa Cruz retention and graduation rates. We are developing a logic model for the work that identifies the key strategies for improving student success, the indicators we will use to ensure the strategies are being implemented, and the short- and long-term goals we anticipate from these endeavors. The responsibility for gathering the information needed to ensure that programs and interventions are meeting their targets (outputs or indicators, in the logic model) is dispersed throughout campus. We recommend a centralized system for tracking and monitoring.

Plans for Assessment

There are currently three major assessments of student success initiatives completed or under way.

Learning Support Services: With support from the SSSC, student success research advisor Rebecca London and doctoral student Brandon Balzer-Carr worked with the Director and Assistant Director of LSS to examine MSI and tutoring usage and outcomes from 2010-2014. The analysis focused on: (i) describing the students reached by LSS, (ii) characterizing their extent of participation in various LSS activities; (iii) examining the course grades and graduation rates associated with LSS participation; and (iv) understanding how LSS affects students’ trajectories in major declaration in two of the largest UC Santa Cruz majors. This assessment can be found [HERE](#).

Summer Academy: The same researchers above carried out a qualitative assessment of the inaugural 2015 Summer Academy: Frosh, to understand how the program was received by participants and their views about how the summer experience affected their first year at UC Santa Cruz. This assessment can be found [HERE](#).

College Transition Collaborative: The CTC researchers will use a randomized controlled trial methodology to understand how the belonging and growth mindset intervention offered to entering frosh affects their subsequent feelings of belonging, growth mindset, and academic outcomes. UC Santa Cruz will receive customized reports detailing students' participation and their outcomes.

Suggestions for Future Assessment

It is the hope of the SSSC that UC Santa Cruz faculty and researchers whose research interests focus on student success will collaborate with the committee to align their research agendas with the student success strategic plan, as appropriate. To the extent possible, the SSSC will offer support to faculty and other researchers and, as a body intended to act, provide a policy audience for those analyses. There are numerous tracks that future assessment could take. Below are several options.

SSC Campus Implementation Assessment

As UC Santa Cruz rolls out the SSC Campus student success platform, it will be important to track key implementation goals as well as take advantage of the wealth of data collected by the system to better understand the ways that UC Santa Cruz resources can improve students' success at the university. The platform will function best if the faculty and staff who can access and benefit from it work together to harness its potential power. This will necessitate training for faculty and staff as well as the culture change associated with embracing any new system. Implementation monitoring could include simple metrics such as percent of faculty or staff using the system, or more complex issues such as stakeholders' views of the platform, its usability, and its utility to the university. Other analyses might include assessing the extent to which students use the system to follow the referrals and recommendations made by their advisors and follow their subsequent academic pathways; whether the early alert system allows students to stay in their courses and its effect on the grades they earn; and ultimately whether the system has allowed the campus to target and serve students as it expected in an effort to improve retention and graduation.

EOP Programs

EOP serves students with a variety of programs and resources, documented above. Future research could examine the extent of services provided and students' academic trajectories in a manner similar to the recent analysis of LSS. Of particular interest might be the EOP Summer Bridge program, which creates a cohort of students and offers support throughout the school year. This cohort model is one that has been discussed in a variety of contexts in the SSSC and studying the cohort experiences of students might provide relevant information upon which to make future decisions.

Analyses of Other Programs

Similar to the LSS program analysis, future research could examine who takes part in services offered by a multitude of other offices on campus – the Disability Resource Center, STARS, and the Resource Centers on campus.

Link Between Health Services and Academic Outcomes

The SSSC understands that key challenges to individual students' success include students' health, mental health, and substance abuse problems. Yet UC Santa Cruz has not been able to document the number of students who exit UC Santa Cruz or who fail courses due to these problems or to examine, in aggregate, the relationship between health, mental health, and substance abuse diagnoses and services

and students' academic success. Data exist on campus that would allow for such an analysis. If agreements can be made for secure transfer of either health or academic data, this type of analysis is possible.

Academic Excellence Program (ACE)

ACE is an academic support program that is dedicated to increasing the diversity of UC Santa Cruz students earning bachelors' degrees in science, technology, engineering, and mathematics. Students apply to the program and then receive intensive support for courses that lead to STEM majors. This is a more intensive approach to student support services than is offered through LSS. An analysis similar to the LSS analysis could be conducted to understand the effects of participating in ACE on students' academic outcomes.

Student Success Services Documentation

There are a multitude of opportunities for students to obtain academic support. A research project could document these programs and services as well as the number and type of students served in each. If possible, it would be illuminating to examine the extent to which students participate in multiple types of services, or none at all.

Pedagogical Changes

As discussed previously, faculty are experimenting with using a flipped class model in various STEM courses. In addition, the online adaptive learning platform ALEKS-PPL is being used on campus for math assessment and online learning. Both these endeavors could be assessed through formal or informal means. Informally, faculty and students could be surveyed to hear their views of the effectiveness of these practices. Formally, an assessment of the effects of these practices relative to previous practices could be conducted using institutional data and examining course grades as outcomes.

Other Research Ideas

As we continue to implement interventions to support student success, we will make course corrections and potentially identify new areas of research. Two that may come to light focus on our writing course and programs and the Navigating the Research University course. SSSC members or other faculty may also bring their own important research ideas to the table for discussion.