Education
Insights Center

Coming Full Circle:
Final Report on the Progress of Students in Sacramento State's Full Circle Project

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Acknowledgments

Executive Summary

With a grant from the U.S. Department of Education, California State University, Sacramento implemented a program aimed at increasing retention and graduation rates for Asian American and Pacific Islander (AAPI) students. Through the Where Opportunity Comes Full Circle Project (Full Circle Project, or FCP, for short), the university provided enhanced services and activities to selected students, largely drawn from AAPI populations historically underserved in higher education. The Education Insights Center (EdInsights), a research and policy center located on the campus, tracked the progress of participating students through intermediate milestones on the pathway to degree completion, over the period from academic year 2012-13 through 2015-16. This report summarizes findings from those analyses and from focus groups conducted with participating students. The analyses revealed that FCP students generally reached milestones at somewhat higher rates than other AAPI students in their cohorts, even though FCP students were more likely to be low-income and need remediation. Compared to their peers, FCP students appeared:

- more likely to persist;
- more likely to complete more credits;
- at least as likely to complete important gateway courses; and
- more likely to engage in behaviors that correlate with success, like attending full time, enrolling in a freshman seminar, and completing courses successfully.

FCP students self-selected into the program and the analyses were largely descriptive, so we cannot make causal claims. However, students in the focus groups described the distinct FCP experience, which they characterized as providing a strong community that increased their comfort and engagement on campus. They believed that the program enabled their success. FCP students pointed to several institutional barriers to their academic success. In particular, they reported that they could not enroll in some key prerequisite courses, or even get on waitlists, which put them off track for timely completion. They also noted financial challenges, and desired more help with finding on-campus jobs and navigating the financial aid system. These are challenges common to many students at the university, and campus administrators have recently prioritized steps to address course registration problems. The FCP's prominent status on campus gives it the unique position to advocate on behalf of all students for greater course capacity and more effective financial aid programs.

Introduction

In 2011, California State University, Sacramento (Sacramento State) received a grant from the U.S. Department of Education's Asian American Native American Pacific Islander Serving Institutions (AANAPISI) program to support a project aimed to improve progress and outcomes for Asian American and Pacific Islander (AAPI) students through enrollment in learning communities; enhanced student services; and participation in leadership, service, and other extra-curricular activities. Sacramento State enrolls a diverse population of AAPI students, and the Where Opportunity Comes Full Circle Project (Full Circle Project, or FCP, for short) aimed to improve recruitment, retention, and graduation among historically underrepresented AAPI groups.

The Education Insights Center (EdInsights, formerly the Institute for Higher Education Leadership & Policy, or IHELP) collected and analyzed data on the progress of FCP students through milestones on the pathway to degree completion, and examined academic and enrollment patterns known to correlate with student progress and success. EdInsights is a research and policy center at Sacramento State devoted to student success in K-12 and broad-access public postsecondary education, particularly for underserved student populations. This report summarizes findings from those analyses, and from focus groups conducted with participating students.

The report is organized into four sections: 1) brief descriptions of the elements of the FCP, our processes for data collection and analysis, and the characteristics of FCP students; 2) a summary of progress toward degree completion among FCP students over the period of the grant, in the context of the progress made by other students in the same entering cohorts; 3) a summary of program participants' experiences, as revealed in focus group discussions with students and interviews with program staff; and 4) a conclusion summarizing the possible connection of the patterns revealed through the quantitative and qualitative analyses to current policies and practices at Sacramento State that may either impede or support student success.

Structure of FCP Offerings

As outlined in the original program design, FCP students were provided with a set of enhanced services and activities, including:

- enrollment in a learning community in their first semester that paired a freshman seminar course with a course in either Ethnic Studies or Asian American Studies (followed by enrollment in a second Ethnic Studies or Asian American Studies course during the second semester);
- access to a dedicated program counselor who coordinated various services and activities including educational workshops, faculty advising, and peer mentoring;
- participation in leadership development workshops and events (as part of the Leadership Initiative) with the potential to earn a series of certificates; and
- opportunities to engage in community service through the 65th Street Corridor Project, providing tutoring and mentoring services to middle and high school students.

Beyond what was described in the original proposal, the FCP also organized various events for students. These events were wide-ranging in their goals, from career panels to celebratory cultural festivals.

Data Collection and Analysis

To analyze students' progress toward a degree, the university's Office of Institutional Research (OIR) provided us with student-level administrative records. We received data on students' demographic characteristics, academic

preparation, attendance patterns, course enrollments, and degrees earned through Spring 2016. The data covered four entering cohorts of incoming freshmen, those enrolling in Fall 2012 through Fall 2015, and included the records for each term through Spring 2016. The tracking period therefore varied, ranging from one year for students who initially enrolled in Fall 2015 to four years for those who enrolled in Fall 2012. The data sets included records for the entire entering cohorts of freshmen at Sacramento State over those four years (N = 13,993); FCP staff provided the identifier numbers for the students who participated in the project (N = 348).

We used the data from OIR to examine students' progress in attaining particular milestones, including:

- retention to successive years, defined as enrollment in the following Fall semester;
- completion of required English composition courses (with grade of C- or better), including freshman composition and a second required composition course;
- completion of a college-level math course that meets general education (GE) requirements (with grade of C- or better);
- completion of GE requirements, reflecting Sacramento State's requirements for 39 units of lower-division GE coursework and nine units of upper-division GE coursework;
- completion of threshold numbers of college-level (non-remedial) credits – 30 credits (equivalent to sophomore standing), 60 credits (junior standing) and 90 credits (senior standing); and
- graduation with a bachelor's degree.

Many of these milestones were only "proxy" measures. For example, the GE milestones indicated whether a certain number of GE-applicable credits had been completed, but did not take into account whether specific distributional requirements across subject areas had been completed. It was difficult to assess whether students had met specific requirements

for several reasons, including the possibility of having met a particular requirement through Advanced Placement (AP) credits (prior to attending Sacramento State) or community college coursework (either prior to or concurrently with enrollment at Sacramento State), and the university's regulations about how courses can be applied to both GE requirements and the requirements for a particular major. The issue of AP and community college courses would also have affected the other coursework-based milestones (i.e., English and math). That is, the share of students estimated to have reached those milestones would understate the actual share to the extent that some students had met those requirements by transferring in community college coursework or being exempted based on AP credits. Likewise, the share of students that had completed a threshold number of credits would be an underestimate if some students had transferred in community college credits they earned while in high school or while attending Sacramento State.

We also analyzed data to examine students' enrollment patterns for particular "success indicators," or academic patterns and behaviors that are associated with a greater likelihood of degree completion.[1] The success indicators included high course completion ratio (successful completion of at least 80 percent of units attempted, indicating a low rate of courses dropped or failed); completing college-level English and math within the first year; and completing a freshman seminar course. We examined the progress of FCP students in the context of all entering students in their cohorts and the subset of AAPI students. We also conducted descriptive analyses and tests of mean-level differences (e.g., t-tests and chi-square tests) to examine differences in academic behaviors and outcomes between the FCP students and a comparison group of AAPI students with similar characteristics. We selected the comparison group for the statistical analyses by using case-

control matching. We created a comparison group that was an exact match to the FCP students based on race/ethnicity, parental education, and income (see Appendix A for more details).

FCP staff were concerned about the progress of the 2014 cohort based on students' grades in the FCP-required courses (i.e., freshman seminar and Ethnic Studies courses). To better assess that cohort's experiences in the FCP, we collected qualitative information through student focus groups in May 2015. A total of 58 FCP students from this cohort participated in one of six focus groups that lasted approximately one hour. We conducted the focus groups during a class meeting required for FCP students in this cohort. To understand if there were differences for FCP students who participated in the Educational Opportunity Program (EOP), we split the focus groups into EOP and non-EOP students.[2] We asked students about their:

- engagement and experiences with FCP-related activities and programs;
- reflections on the barriers they face to being successful as college students; and
- opinions on the strengths and weaknesses of the FCP with regard to helping them make academic progress.

We also used information from interviews with four FCP staff members to help develop the student focus group protocols and get staff perspectives on the project and on students' progress. Interview questions focused on the engagement of staff with students, the FCP's role in promoting student progress, and how the FCP could strengthen its activities and support services. To allow interviewers to focus on engaging with participants during interviews, and to enable better facilitation of the focus groups, we used an audio recorder and had the recordings transcribed. Interviewers additionally wrote summary notes immediately after interviews and focus groups, noting any observations that would not be adequately captured from an audio recording. We used content analysis to uncover main themes and patterns from the interviews and focus groups.

FCP Students

Table 1 shows the demographic characteristics and educational background of FCP students in the context of all students in the 2012 to 2015 cohorts. Approximately two-thirds of FCP participants were female, exceeding the share of female students among all first-time freshmen (58%) and the subset of AAPI students (54%). A higher share of FCP students were from underrepresented sub-populations compared to the total AAPI population in the cohorts. Eighty-seven percent of FCP students were from low-income families compared to 65 percent of all AAPI students and 56 percent of all students in the cohorts.[3] Sixty-three percent of FCP students were first-generation college students compared to 44 percent of AAPI students and 38 percent of all students. About 11 percent of FCP students had parents with at least a bachelor's degree, about half the share among all students in the cohorts and the subset of AAPI students. FCP students had a slightly higher GPA in high school than all entering freshmen, but lower SAT scores. FCP students were more likely to be deemed in need of remediation at the time of enrollment (71%) compared to all AAPI students (57%) and all freshmen in the cohorts (56%). One-third of FCP students required remediation in both English and math, compared to about a quarter of all entering freshmen. In summary, FCP students overall had characteristics that would suggest a greater risk of failure to persist and graduate from college than the general student population at Sacramento State, and the population of AAPI students.

Table 1. Characteristics of the Student Population

	FCP Students (N = 348)	All AAPI Students (N = 3,662)	All Students (N = 13,993)
STUDENT CHARACTERISTICS			
Gender (% female)	68.4%	53.6%	57.6%
Age	18.0	17.9	18.0
Race/ethnicity			
AAPI	97.7%	100.0%	26.2%
Asian	22.1%	34.4%	9.0%
Filipino	13.5%	22.2%	5.8%
Pacific Islander	4.0%	5.7%	1.5%
Southeast Asian	58.1%	37.7%	9.9%
Black	-	-	8.4%
Hispanic/Latino	-	-	29.5%
White	-	-	25.1%
Multi-racial	1.7%	-	6.7%
Other	0.3%	-	4.2%
US Citizen	94.3%	94.2%	94.3%
Low income	87.3%	64.9%	55.8%
EDUCATIONAL AND ACADEMIC BACKGROUND			
First-generation college student	63.2%	44.4%	37.8%
Parents education			
Mother w/BA or above	11.1%	22.4%	23.3%
Father w/BA or above	11.3%	21.8%	21.6%
High school GPA	3.42	3.35	3.27
SAT score	885.6	941.2	951.9
Remedial need at entry			
None	28.7%	42.9%	44.3%
Math only	3.7%	8.2%	13.5%
English only	34.2%	24.8%	17.2%
Both math and English	33.3%	24.1%	25.0%

Note: This table describes the characteristics of the students in the 2012 through 2015 cohorts, combined. See Tables B-1 to B-4 in Appendix B for the characteristics of students in each cohort.

Summary of Student Progress toward Degree Completion

Descriptive analyses of the administrative data for each cohort indicate that FCP students reached some of the intermediate milestones at higher rates than others in their cohorts. We did not conduct statistical tests of differences between FCP students and all students or all AAPI students in the cohort (with the exception of comparisons to a group of AAPI students matched on some demographic characteristics). Figures 1 through 4 display the share of students in each cohort that reached various milestones as of Spring 2016. The milestones shown in each figure vary somewhat, as not all milestones were reachable within the timeframe that each cohort was tracked (data on milestone attainment by various sub-groups of FCP students are summarized in Appendix C).

Figure 1. Attainment of Milestones for the 2012 Cohort as of Spring 2016
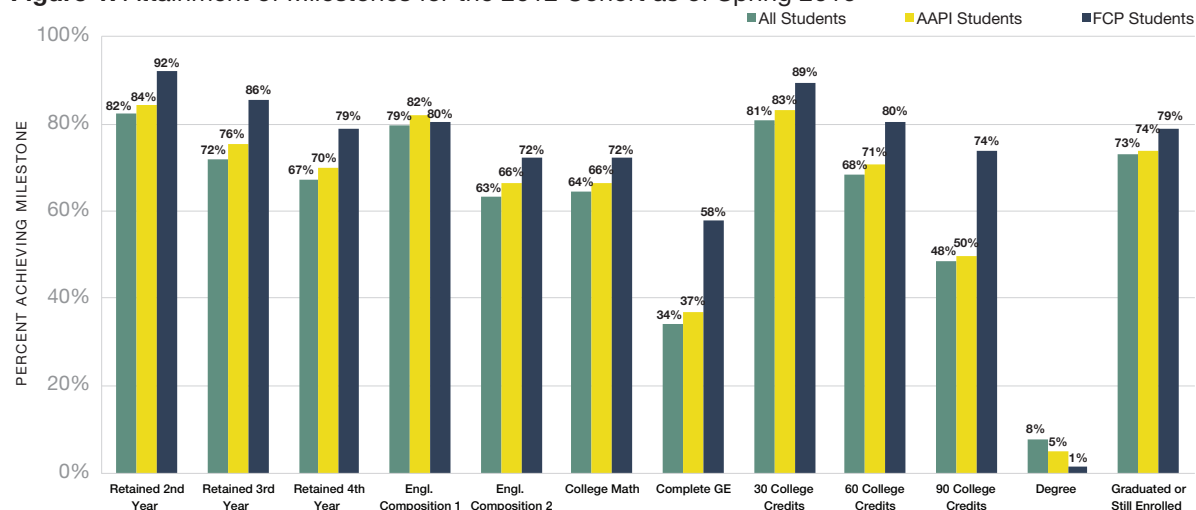
Figure 2. Attainment of Milestones for the 2013 Cohort as of Spring 2016
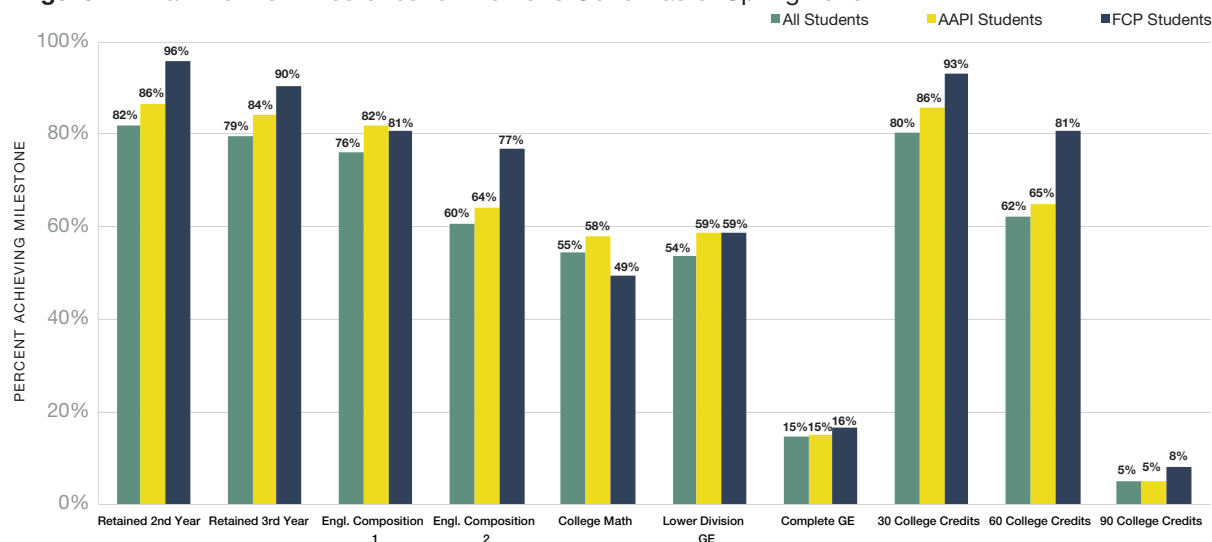
Figure 3. Attainment of Milestones for the 2014 Cohort as of Spring 2016

Legend: ■ All Students ■ AAPI Students ■ FCP Students

Milestone	All Students	AAPI Students	FCP Students
Retained 2nd Year	80%	80%	84%
Engl. Composition 1	79%	80%	89%
Engl. Composition 2	36%	36%	49%
College Math	37%	39%	32%
Lower Division GE	18%	21%	17%
30 College Credits	76%	77%	84%
60 College Credits	8%	6%	11%

(Y-axis: PERCENT ACHIEVING MILESTONE, 0%–100%)

Figure 4. Attainment of Milestones for the 2015 Cohort as of Spring 2016
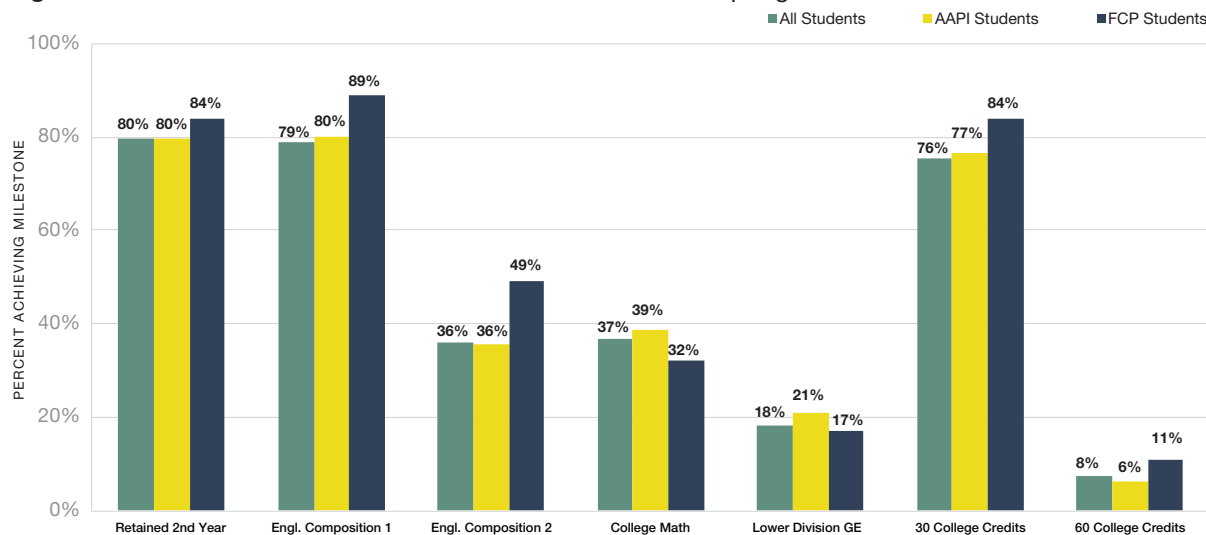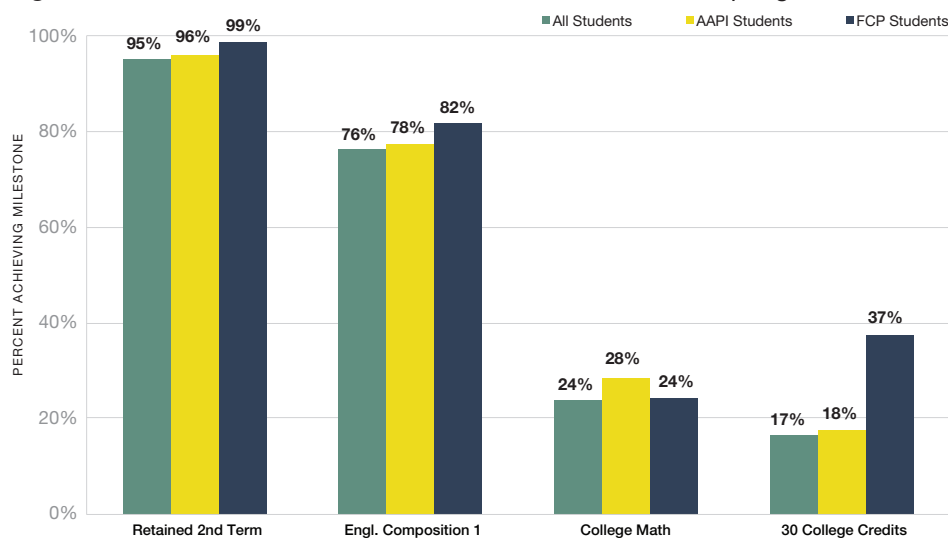
Legend: ■ All Students ■ AAPI Students ■ FCP Students

Milestone	All Students	AAPI Students	FCP Students
Retained 2nd Term	95%	96%	99%
Engl. Composition 1	76%	78%	82%
College Math	24%	28%	24%
30 College Credits	17%	18%	37%

(Y-axis: PERCENT ACHIEVING MILESTONE, 0%–100%)

FCP Students Persisted at High Rates

For all four cohorts, rates of retention appeared somewhat higher for FCP students compared to all AAPI students and all students in the cohort. For the 2012 and 2013 cohorts, retention to the second year was approximately 82 percent for all students but over 90 percent for FCP students, although second-year retention was lower for the 2014 cohort of FCP students (84%, which was still slightly above the 80% among all students). About 72 percent of all students in the 2012 cohort and 79 percent of those in the 2013 cohort returned for a third year, while among FCP students the rate of retention to the third year was 86 percent for the 2012 cohort and 90 percent for the 2013 cohort. Nearly 80 percent of the 2012 cohort of FCP students persisted to the fourth year, compared to only 67 percent of all students and 70 percent of AAPI students.

FCP Students Earned More Credits

Rates of reaching the various credit accumulation milestones (i.e., 30, 60 and 90 credits) appeared consistently higher for FCP students. For example,

74 percent of FCP students in the 2012 cohort had earned at least 90 credits after four years compared to about half of all students in the cohort. Over 80 percent of FCP students in the 2013 cohort had accumulated at least 60 credits after three years compared to 62 percent of all students in the cohort and 65 percent of all AAPI students. These higher rates of credit accumulation for the earlier FCP cohorts were, in part, a reflection of their higher retention over time, as more of the FCP students continued to enroll and earn credits.

FCP Students Completed Important Gateway Courses at Similar or Somewhat Higher Rates

Early completion of college-level English and math courses is considered an important indicator of students' likely success in broad-access postsecondary institutions, as those courses serve as a gateway to other areas of the curriculum.[4] As shown in Figures 1 through 4, FCP students were as likely as other students (or a little more likely) to have completed the first required English composition course (generally taken by freshmen). Figure 5 shows the share of students who completed the course within their first year of enrollment at Sacramento State, with FCP students slightly more likely to have done so despite, as shown earlier in Table 1, more of them requiring remediation in English (67%) compared to all entering students (42%). FCP students in

each cohort were more likely to have completed the second required English composition course, likely related, at least in part, to their higher retention rate and faster accumulation of credits, as that course is generally taken by sophomores (not shown for the 2015 cohort since they have only been enrolled one year).

While FCP students in the 2012 cohort were slightly more likely than students in the cohort overall to have completed a college-level math course by Spring 2016, FCP students' rate of having completed math was lower than other students in the 2013 and 2014 cohorts that have been enrolled for less time, suggesting a somewhat slower pace to completing college math among FCP students. As shown earlier in Table 1, FCP students overall were about as likely as other students to require math remediation (37%). However, among students who did require remediation in math across the cohorts, more of the FCP students (75%) compared to all students (60%) required two semesters of remedial math coursework rather than one semester. Despite that, the share of FCP students completing a college-level math course within their first year of enrollment was not much different than the share among all students across the four cohorts, at about one quarter (Figure 5), perhaps related to many students at Sacramento State choosing to delay enrollment in college-level math or being unable to get a seat in the math course they need during registration.

Figure 5. Early Completion of Gateway Courses in English and Math, All Cohorts Combined

Education Insights Center at California State University, Sacramento
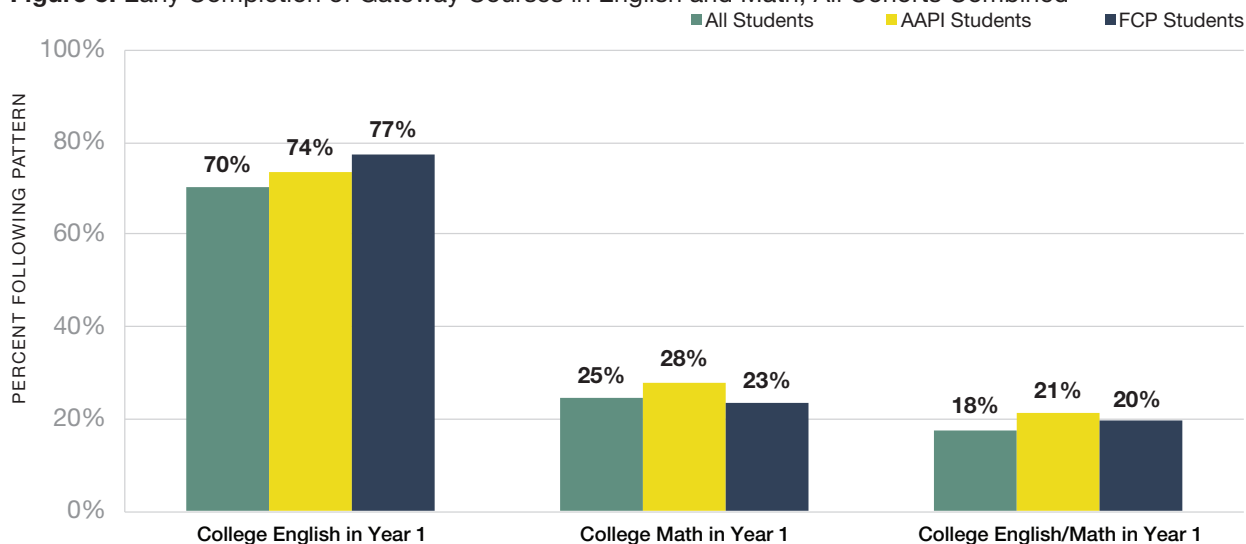
FCP Students Demonstrated Enrollment and Academic Patterns Associated with Success

In addition to early completion of gateway courses in English and math, several other early indicators of success in broad-access postsecondary institutions include completing a freshman seminar/student success course, having a low rate of dropping or failing courses, maintaining an adequate GPA, and attending full time.[5] Nearly all FCP students completed a freshman seminar course, as that was included as part of the program's learning communities. Across the four cohorts, about 40 percent of all students (and of AAPI students) completed a freshman seminar. Eighty-five percent of FCP students across the cohorts completed at least 80 percent of the credits they enrolled in (i.e., they dropped or failed courses representing no more than 20% of credits), slightly above the 80 percent of all students across the cohorts who did so. Across the cohorts, FCP students' cumulative GPA was 2.87, compared to 2.72 for all AAPI students and 2.69 for all students in the cohorts. While most undergraduate students at Sacramento

State enroll full time (defined as 12 or more credits), FCP students carried somewhat higher credit loads than other students, which contributed to their higher credit accumulation. For example, as shown earlier in Figure 4, more than a third (37%) of FCP students who began in Fall 2015 had accumulated 30 college-level credits to reach sophomore standing after one academic year, more than twice the rate for all students (17%). On average, FCP students in the 2015 cohort enrolled in 15.6 credits each semester and earned 14.1, compared to an average of 14.1 and 12.8, respectively, for the entire cohort (Figure 6). This pattern of FCP students carrying somewhat higher credit loads, and earning more credits per term, was consistent across the four cohorts. Average credits per term were somewhat lower for earlier cohorts, in part reflecting the longer period of time they have been enrolled in college, with more opportunities to vary their credit load and to earn fewer credits due to dropping or failing courses. In addition, the earlier cohorts enrolled during more difficult budgetary years for Sacramento State, characterized by more competition for seats in courses, which may have reduced their credit loads compared to the later cohorts.

Figure 6. Average Credits Attempted and Completed Per Semester, by Cohort
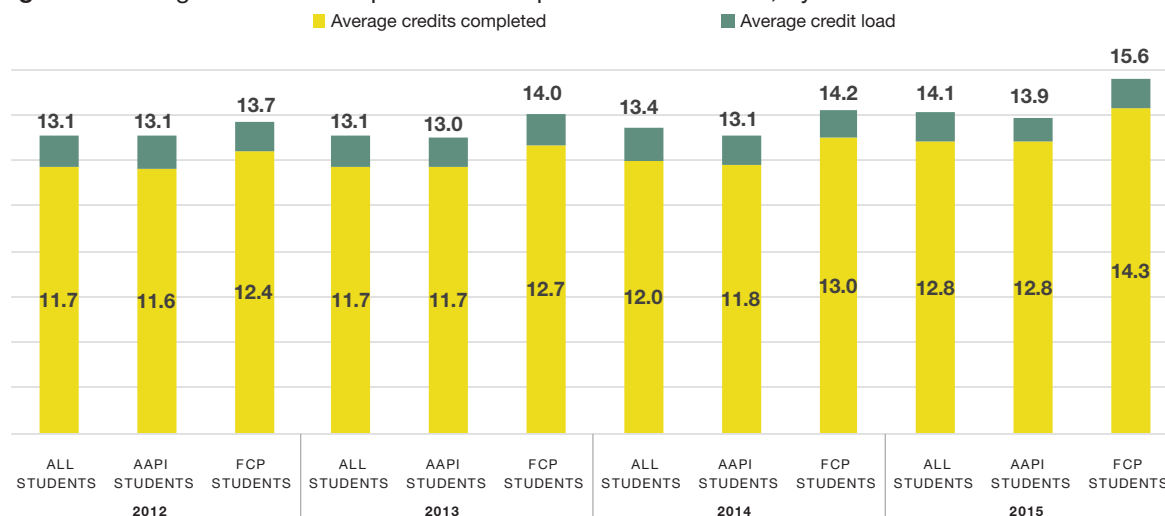
Grant Timeline Too Short to Draw Conclusions about Graduation Rates

Only the 2012 cohort was tracked over the full four-year period required to reach graduation. Only eight percent of all students in that entering cohort had graduated by Spring 2016. While six-year graduation rates at Sacramento State have increased somewhat in recent years, growing from 41 percent for the cohort entering in Fall 1999 to 46 percent for the 2009 cohort, four-year graduation rates remain low, ranging from approximately seven to 10 percent in recent years.[6] An even smaller share of FCP students had graduated — only one of the 76 FCP students in the 2012 cohort earned a degree by Spring 2016. While remedial needs can often slow students' progress to graduation and, overall, FCP students had greater needs for remediation than other Sacramento State students, that was not the case for the 2012 cohort. The proportion of 2012 FCP students requiring remediation was similar to all entering freshmen at about 56 percent (see Table B-1 in Appendix B). As shown in Figure 1, a slightly higher share of FCP students in the 2012 cohort remain enrolled at Sacramento State. FCP students' decisions about what major to pursue could be one factor slowing progress to graduation (discussed below).

FCP Students Participating in Educational Opportunity Program Made More Progress

Overall, about 40 percent of FCP students participated in Sacramento State's EOP, ranging from 30 percent for the 2012 cohort to 47 percent for the 2014 cohort. Across the cohorts, students in EOP generally appeared to reach the milestones at higher rates than those not in EOP. Figure 7 shows milestone attainment for the 2012 cohort of FCP students (figures for all cohorts are shown in Table C-1 in Appendix C). One EOP student from the cohort graduated, and all others remained enrolled at Sacramento State after four years, with nearly all of them having earned at least 90 credits to attain junior standing. Among the FCP students in that cohort who were not in EOP, 72 percent remained enrolled after four years, and about two thirds had achieved junior standing. FCP students who were not in EOP appeared more likely than all students in the 2012 cohort (regardless of EOP participation) to reach some of the milestones, including retention to subsequent years and the accumulation of threshold numbers of credits (as can be seen by comparing the "not in EOP" columns in Figure 7 to the "all students" columns in Figure 1). But the degree of difference in outcomes was smaller than when comparing all FCP students to the entire cohort (as shown in Figure 1). Participation in EOP appeared to bolster the effects of the FCP.

Figure 7: Milestone Attainment as of Spring 2016 by Participation in EOP, 2012 Cohort of FCP Students (N = 76)
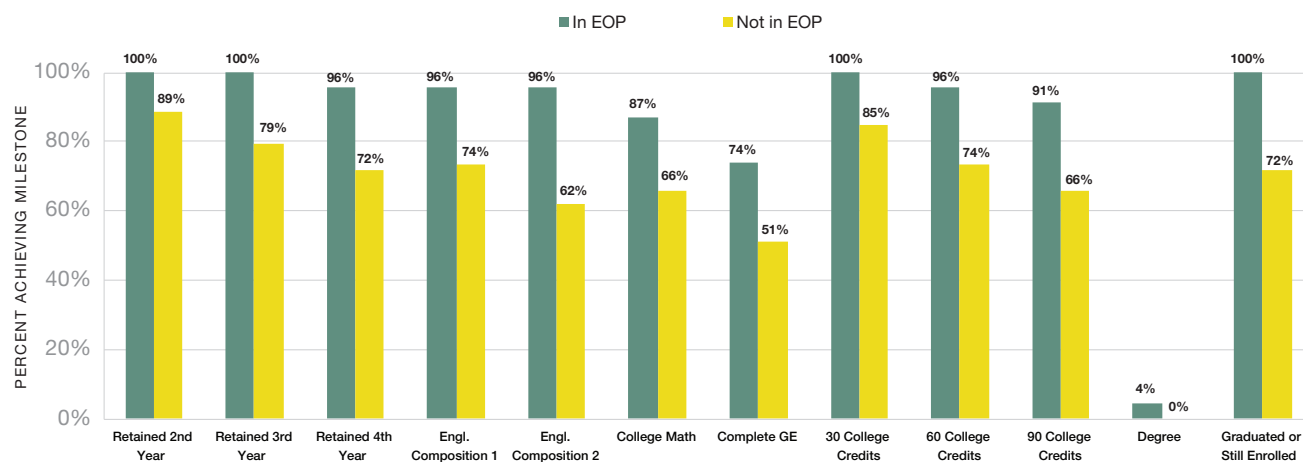
Major Choices Could Affect Time to Graduation

Entering freshmen at Sacramento State can indicate their preference for a major at the time of admission, although students are not formally admitted into a major until they have completed all required lower-division major preparation courses and achieved a minimum GPA. Requirements for admission into majors vary substantially. The records from OIR indicated students' major preference each term, though no data were available to determine whether or at what point students were formally accepted into a particular major. Table 2 shows the five most popular majors as reflected in the records, both at the time students first indicated a major preference (other than "undeclared") and as of Spring 2016 or the last semester students were enrolled, for all four cohorts combined. Across all groups of students, nursing was the most common major choice, with FCP students even more likely than other students to indicate their interest in that major. Nursing is a highly competitive major that admits less than one quarter of the students who formally apply based on a system that awards points for GPA in prerequisite courses, scores on a nursing exam,

and other criteria (e.g., bilingualism, experience in a health care setting). The competitiveness of the nursing major is reflected in a drop in the share of students indicating that choice (i.e., between First Major and Last Major). Choice of major could be one factor slowing progress to graduation for the 2012 cohort of FCP students, as nearly a third of them had indicated their intent to pursue nursing at the time they enrolled.

Across the cohorts, approximately one quarter of students who had indicated a major preference (i.e., something other than "undeclared") changed their major choice at some point during the period they were tracked. The percentage of students who changed their major choice varied by cohort, with students who had been enrolled for a longer period of time more likely to have changed majors (Table 3). Over 40 percent of students in the 2012 cohort had changed their major, compared to less than 10 percent of students in the 2015 cohort. The most common initial majors associated with a change were nursing, kinesiology, and biology, accounting for nearly 40 percent of students who changed their major. The graduation rate was somewhat higher among students in the 2012 cohort who changed majors (Figure 8).

Table 2. Most Popular Majors

|	**FCP Students** (N = 348)	**All AAPI Students** (N = 3,662)	**All Students** (N = 13,993)
First Major	Nursing (22%) Biology (9%) Chemistry (5%) Child Dev. (5%) Accounting (4%)	Nursing (18%) Biology (9%) Computer Sci. (6%) Chemistry (5%) Mechanical Eng. (4%)	Nursing (13%) Biology (8%) Criminal Justice (6%) Psychology (5%) Kinesiology (5%)
Last Major	Nursing (16%) Biology (8%) Child Dev. (5%) Psychology (4%) Criminal Justice (4%)	Nursing (14%) Biology (7%) Computer Sci. (7%) Chemistry (4%) Mechanical Eng. (4%)	Nursing (10%) Biology (6%) Criminal Justice (6%) Psychology (4%) Mechanical Eng. (4%)

Note: The percentages in parentheses indicate the share of students with that major preference noted in their records. Excludes "undeclared" (which represented the second-highest share of students in each group for Last Major, and the third highest for First Major).

Table 3. Share of Students with a Change in Major

Cohort	FCP Students	All AAPI Students	All Students
2012	46.5%	41.5%	42.3%
2013	37.5%	33.7%	33.0%
2014	15.2%	19.3%	21.3%
2015	10.3%	10.0%	7.9%
All Cohorts Combined	25.8%	26.1%	25.6%

Note: Moving from "undeclared" to a specific major preference was not considered a "change" in major, but moving from a specific major choice to "undeclared" was, assuming that another major would be chosen at some point.

Figure 8. Graduation Rate by Major Change Status, 2012 Cohort
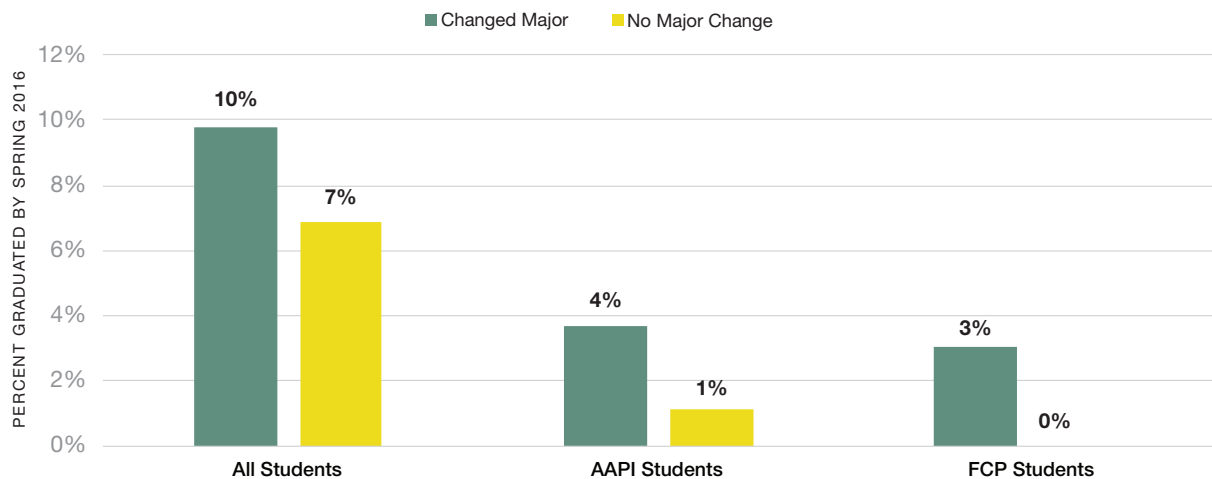
Statistical Tests of Differences Confirm Some Positive Effects of FCP Participation

When we tested for differences in milestone attainment between the FCP students and a comparison group of AAPI students matched on similar characteristics, the general patterns of findings were consistent with the descriptive analyses presented earlier. Given the small sample sizes and lack of power, statistical tests did not yield many significant differences between the two groups. However, the direction of patterns revealed that, across the cohorts, FCP students generally appeared to make better progress toward reaching academic milestones compared to the matched groups of students (Figures 9-12).

Despite the lack of statistical power, several findings reached significance. For the 2012 cohort, we found that FCP students displayed significantly higher rates of retention (by the fourth year) and credit accumulation than the comparison group. In particular, FCP students were significantly more likely than the comparison group to complete 60 college-level credits, 90 college-level credits, and GE requirements by Spring 2016. For the 2014 cohort, FCP students were significantly more likely than the comparison group to have completed the second required English composition course. The FCP students in the 2015 cohort were significantly more likely than the comparison group to have completed 30 college-level

credits within the year they had been enrolled. In general, we were unable to analyze the impact of the various components of FCP participation due to limited data and the small numbers of FCP students. We did examine students' academic performance in the context of their participation in the Leadership Initiative, finding a positive correlation between students' GPA and the total number of leadership workshops and events they attended ($r = .23$, $p < .01$). FCP students attended between one and 56 (with an average of 23) leadership workshops and events. However, there was no significant relationship between earning a leadership certificate and GPA (data on certificate completion were only available for the 2015 cohort). Students had to apply for one of the four types of certificates after attending the type and number of events required to be eligible. Participation in the events and workshops may have been a better indicator of the impact than whether or not students followed through with applying for a certificate.

Figure 9. Attainment of Milestones for FCP Students and Matched Comparison Group, 2012 Cohort (tracked 4 years)

Note: * $p < .05$ ** $p < .01$ *** $p < .001$
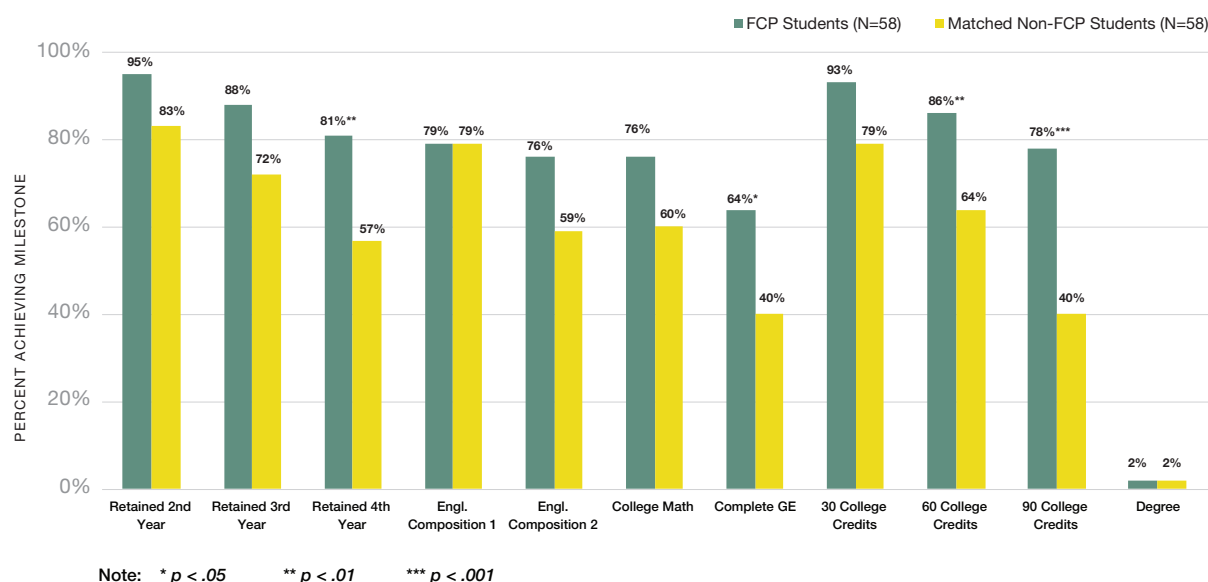
Figure 10. Attainment of Milestones for FCP Students and Matched Comparison Group, 2013 Cohort (tracked 3 years)

Note: * $p < .05$ ** $p < .01$ *** $p < .001$
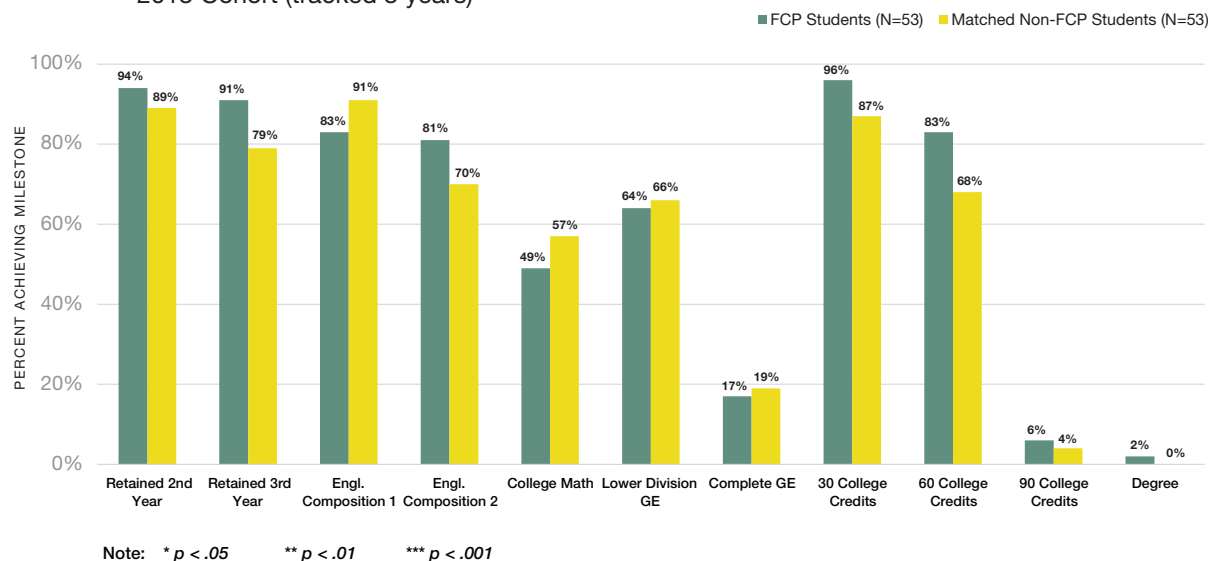
Figure 11. Attainment of Milestones for FCP Students and Matched Comparison Group, 2014 Cohort (tracked 2 years)

Note: *p < .05 **p < .01 ***p < .001

Figure 12. Attainment of Milestones for FCP Students and Matched Comparison Group, 2015 Cohort (tracked 1 year)

Note: *p < .05 **p < .01 ***p < .001

Summary of FCP Students' Experiences

The focus groups conducted with FCP students from the 2014 cohort revealed that students had a good understanding of the services and supports they were receiving as a result of participating in the program. They appreciated the program's role in providing a supp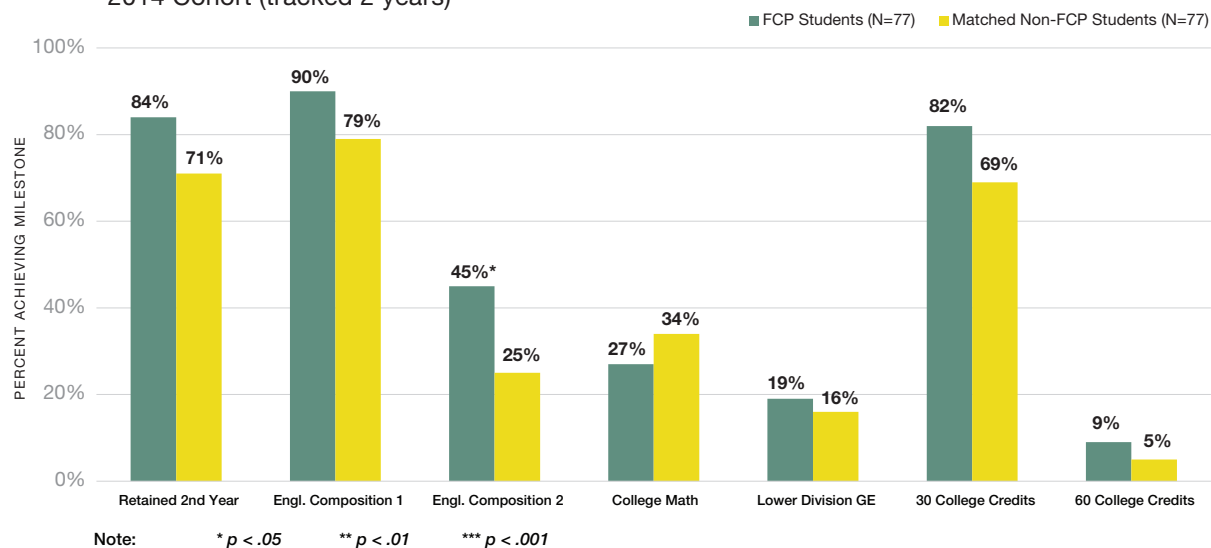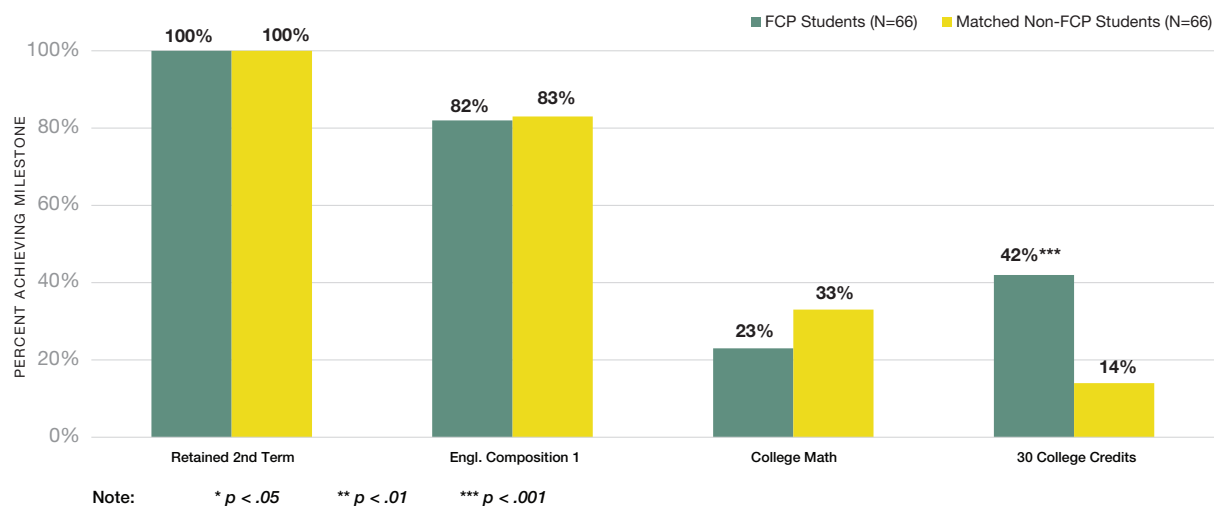ortive community for them at Sacramento State, and believed that participating in the program was helping them to be successful.

Students Understood the Goals of FCP and Appreciated Its Various Components

When asked to describe the Full Circle Project, students noted the program's academic, service, leadership, social, and general support components. They correctly identified FCP's overarching goal of increasing student retention and graduation rates. They commonly noted the role of faculty, staff, and peer mentors in providing resources and support to help students make better academic progress. One student explained that FCP, "provides an opportunity because we don't necessarily know how to do certain things when it comes to college." Students provided mostly positive feedback about the various components of the program.

Learning Communities. During the discussions, many students brought up the courses that were part of the program – Introduction to Ethnic Studies, Introduction to Asian American Studies, and the freshman seminar. Students described the courses as difficult but enjoyable, and noted that the courses were rewarding because they helped the students understand their racial and ethnic identity, gave them an early opportunity to succeed as college students, and developed their interest in social change.

The Leadership Initiative. The Leadership Initiative received overwhelmingly positive feedback from students. Students discussed how the Leadership Initiative helped them come out of their shell, identify their own type of leadership, and improve their leadership skills. Moreover, students said that the Leadership Initiative helped increase their involvement in on-campus activities. They noted that the Leadership Initiative was time consuming and could be difficult to finish because of conflicts with classes, but they found it to be worth the effort.

Community Service Component. By and large, FCP students who participated in the focus groups said that they did not participate in the service opportunity offered through the 65th Street Corridor Program. Most students said they were too busy or just not interested. A few students said they participated in it because they were offered extra credit in a class for doing so.

Career Development. FCP students frequently noted that FCP participation helped them develop their career interests and build networks to support these interests. They talked about the program's career workshops and panels featuring alumni speaking about their careers. They described the role FCP played in sharing information about job openings, providing networking opportunities, and connecting students to off-campus resources to support their career interests.

Social Aspects. Students noted the importance of the social aspects of participating in FCP. They mentioned the receptions held after mandatory events, the free food, and the fall celebration. These events helped them make friends and provided "a lot of social support." However, some students commented that they sometimes had conflicts with the social events, needed to do homework, or just wanted "to go home and sleep." Students frequently mentioned the role of the FCP Student Association (FCPSA)

in helping to build connections across the four FCP cohorts, and with faculty and staff. Moreover, FCPSA provided a way for students to stay involved in FCP after their first year.

General Support and Community. Students frequently discussed the FCP community and how the participants supported each other. They cited the cultural events, such as the Pacific Islander Cultural Night; the events that highlighted AAPI history, such as the visit to Angel Island; the networking events, such as the alumni panels; and the conferences. They mentioned the FCP office as being a home base for them where they could go to "hang out" or get help. Students sometimes referred to FCP as a "family." The community or family that was frequently mentioned stemmed from the supports that FCP students and staff provided each other. FCP "gets everybody coming together to participate" and to "help each other out."

FCP Students Had Multiple Definitions for Success in College

We asked students what success at Sacramento State meant to them, and their responses indicated that they valued various academic, social, civic, and psychological outcomes of attending college. Students most often pointed to academic forms of success, such as getting good grades, selecting a major (or two), and graduating in four years. They also mentioned non-academic forms of success, including somewhat vague but important personal goals such as "to feel accomplished," to find their identity, to figure out what they love to do, and to better themselves. Students also mentioned social goals, such as meeting other students or joining a student organization. A number of them noted civic goals such as "giving back to the community." Finally, students often mentioned that their goal in attending college was to find a job.

Students most often cited their professors as instrumental to helping them meet their academic goals. They indicated that their professors were very close to them, advising them on classes

to take and majors to pursue, and sharing and explaining resources like scholarship opportunities. Students also noted that their peers helped them to be successful, including both the peer mentors and students in previous FCP cohorts. They said their peers helped by providing assistance in studying for exams and selecting courses.

FCP Students Identified Several Barriers to Achieving Academic Success

Students overwhelmingly cited the inability to enroll in key courses as a barrier to their academic success. They reported that they could not enroll in some key prerequisite courses, which put them off track for timely completion. Students noted that they often could not even get on the waitlist for needed courses, as the waitlists were already full.

FCP students also mentioned struggling with time management. Competing demands on their time from school, work, and their personal lives made it difficult for students to find enough time to study. In addition to making time management difficult, these other demands were barriers in and of themselves. The lack of money to pay for school and life forced students to work more hours and the lack of funds was very stressful. One student explained, "when you don't have money, you can't keep calm." And the instability of funds made their academic lives difficult; as one student said, "Even if it's covered, it's just like what about next semester; I have it covered now, but what about next time?" Students said that money was a major hurdle, even with financial aid.

Students Found FCP to be an Important Resource Helping them Overcome Obstacles

Students cited a wide range of ways that FCP had assisted them. They pointed to the relationships they had developed with FCP professors and staff as well as their FCP classmates as critical to the success they had achieved so far. They noted that the learning community courses had helped them get to know other FCP students, the professors,

and the staff in a more formal way, which allowed them to turn to those people as resources and sources of support. Moreover, the course content was mentioned as a key factor in helping the students appreciate their cultural identity.

Students also identified the FCP culture of community and family as a key component of their success. Students noted that the FCP community was always there to support them through difficult academic and personal circumstances. One student explained, "The amount of support; I didn't think people would support you that much, but they're always like, 'how are you doing?'" Students mentioned that just having a space to "chill" (the FCP office) along with the sponsored events made the program feel more like a family than other university programs that focused less on building relationships with students. The students perceived that FCP students supported each other, and they took this responsibility seriously, with one noting that, "We don't all know each other, but we all know that, no matter what, we got each other's backs if it came down to it."

FCP's social events helped students feel more confident and independent. Participation in the events led them to not be afraid to "go out and get resources" and be involved on campus. Students also mentioned that the frequent events to celebrate academic achievements, like grades, helped to motivate them to focus on their academic performance.

Students also mentioned their civic development through participating in FCP as important to their success. They noted the trip to Angel Island, which taught the students about "the struggle" and made them feel proud. They said that FCP's focus on social justice also helped to develop their confidence in their own ability to be successful. FCP students also pointed to the leadership and professional supports as ways that participating in the program helped them to succeed. They mentioned the role of the Leadership Initiative in helping them build confidence and learn about

various campus resources. They described various guest speakers and panels that allowed the students to hear about the journey of people who had been on the same path before them. Through the various activities, students said they learned accountability and responsibility, which pushed them to make a path for themselves.

FCP Students Offered Suggestions for Improving the Program

While students were overwhelmingly happy with their experience participating in FCP, they provided some recommendations for how the program could be improved, related to the FCP-required courses, class registration, and financial assistance. When asked about what FCP should revise or drop, students most commonly mentioned the instruction and content for the required courses. Students noted that they did not find one of the instructors to be effective; they described the instructor as providing too little structure in the curriculum and lesson plans, and as too focused on discussing the negative aspects of being a minority rather than a more balanced perspective. Students also noted that the two Ethnic Studies courses had overlapping content, and they recommended expanding the faculty so students could have a wider network.

Student also frequently mentioned that they would prefer FCP to help them with course registration, especially since they had less flexible schedules related to the required enrollment in the Ethnic Studies courses. They noted that some students on campus receive priority registration, and they would like to have similar access to register for classes early. The students also suggested that FCP should provide assistance with financial aid. They noted that their struggles to make ends meet made it difficult to fully participate in FCP activities and to be successful in their classes. They believed that providing formal supports to help students find on-campus jobs or to better navigate the financial aid system would be useful, as would scholarships for participating students.

Conclusion and Implications for Sacramento State

FCP Students Outpace Their Peers, Despite Facing Greater Disadvantage

FCP students achieved milestones and indicators of success at high rates, even though a large share of FCP students were low-income and needed remediation. Compared to their peers, FCP students appeared more likely to persist, more likely to complete more credits, and at least as likely to complete important gateway courses. FCP students also appeared more likely to engage in behaviors that correlate with success, like enrolling in a freshman seminar, completing courses successfully, and enrolling fulltime.

Moreover, we found that certain components appeared to help make FCP students even more successful. FCP students who also participated in EOP appeared more successful than FCP students who did not participate in EOP. This is striking because EOP targets students who are low-income or first-generation, which describes most FCP students but is not a requirement. FCP students who participated in more leadership activities had positive academic outcomes.

Our analyses were largely descriptive, and therefore we cannot make any causal claims. The students participating in FCP self-selected into the program and likely were distinct from their peers in non-trivial ways. However, given that FCP students were lower-income and needed more remediation than their peers, the apparent success of FCP is promising. Students in the focus groups described the distinct FCP experience that impacted their comfort and engagement on campus, and claimed that this experience enabled their success.

FCP Built a Strong Community, but Students Need More Supports to Navigate University Barriers

FCP built a strong community among participating students, faculty, and staff. This community provided resources, social and emotional support, and strong networks on- and off-campus. When FCP's 2014 students were asked specifically what the program could do better, their responses largely honed in on university-wide issues of course registration and financial aid. However, they also described one of their professors as being an ineffective instructor.

EdInsights recommends that FCP continue its course, but seek the ability to provide FCP students with priority registration and work to understand students' particular financial needs and why financial aid packages are proving to be inadequate.

Students' comments about the ineffective instructor, if accurately reflecting this instructor's teaching practices, highlight a tension in FCP. FCP administrators did not have access to the instructors' teaching evaluations. In the future, EdInsights recommends that all instructors hired to teach FCP core courses be required to share their teaching evaluations with program administrators and allow for at least one visit from FCP staff to observe a class session. These evaluations could be used both to provide the instructor formative feedback and to determine whether an instructor should continue to teach these critical courses.

FCP's Leadership Role in Reforming Campus Policies

FCP's prominent status on campus gives it a unique position from which to advocate on behalf of all Sacramento State students for greater course capacity and more effective financial aid programs. Sacramento State has made addressing the issues FCP students highlighted around course registration a priority. University administrators are rolling out a new software program that allows students to plan their courses more easily and allows departments to better predict course

demand. Recent state legislation (SB 412, Chapter 436, Statutes of 2016) aimed at increasing four-year graduation rates in the California State University (CSU) system recognized the challenge students face in gaining access to needed courses. Under the California Promise program, participating CSU campuses will guarantee students priority registration in exchange for a commitment to complete 30 units per year, with a focus on serving low-income, underrepresented, and first-generation students. This statewide focus on the issue, combined with the technical support Sacramento State is developing and its stated willingness to devote more resources to reducing students' registration obstacles, provides a window for FCP to become more active in the implementation and scaling of these efforts. Concerns about financial aid are not at the top of the university administration's agenda as is the issue of course registration. FCP could play a pivotal role in bringing this issue to the forefront. University administration has been leading reforms around issues that impact low-income students, such as food insecurity and homelessness, so raising awareness about issues related to FCP students' needs for additional financial aid aligns well with Sacramento State's current priorities. Also, while financial aid policy is largely a system- and state-level issue, Sacramento State could play a leadership role in highlighting the issues students face that may be less apparent to system and state policymakers.

Appendix A

Description of Methods for Comparison Group Selection and Analysis

Since FCP students were not randomly selected into the program, there were no "treatment" and "control" groups to test the impact of participating in the program. Therefore, we needed to utilize a quasi-experimental design, identifying a comparison group that was similar to the treatment group (i.e., FCP students) in order to account for confounding factors and selection bias.[7] Using case-control matching,[8] we created a comparison group that was an exact match to the FCP students based on key background characteristics. For each cohort, we drew from a sample of non-FCP first-time freshmen for the comparison group. We used SPSS to generate a comparison group in which each student was an identical match to an FCP student, based on race/ethnicity, parental education, and income (see tables A-1 and A-2). We matched 58 (out of 76) FCP students in the 2012 cohort, 53 (out of 73) FCP students in the 2013 cohort, 77 (out of 100) FCP students in the 2014 cohort, and 66 (out of 99) FCP students in the 2015 cohort to the comparison groups.

Table A-1. Matched Variables of FCP Students and Comparison Group

	2012 COHORT		2013 COHORT		2014 COHORT		2015 COHORT	
	FCP (N=58)	MATCHED NON-FCP (N=58)	FCP (N=53)	MATCHED NON-FCP (N=53)	FCP (N=77)	MATCHED NON-FCP (N=77)	FCP (N=66)	MATCHED NON-FCP (N=66)
RACE/ETHNICITY								
Asian	27.6%	27.6%	30.2%	30.2%	15.6%	15.6%	15.2%	15.2%
Filipino	12.1%	12.1%	5.7%	5.7%	3.9%	3.9%	18.2%	18.2%
Pacific Islander	3.4%	3.4%	1.9%	1.9%	1.3%	1.3%	3.0%	3.0%
Southeast Asian	53.4%	53.4%	62.3%	62.3%	77.9%	77.9%	60.6%	60.6%
Multi-ethnic	3.4%	3.4%	0.0%	0.0%	1.3%	1.3%	1.5%	1.5%
Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	1.5%
ANNUAL INCOME								
<$24,000	50.0%	50.0%	52.8%	52.8%	56.6%	56.6%	30.6%	30.6%
$24,000-$35,999	20.7%	20.7%	28.3%	28.3%	26.3%	26.3%	11.3%	11.3%
$36,000-$47,999	10.3%	10.3%	5.7%	5.7%	6.6%	6.6%	19.4%	19.4%
$48,000-$59,999	3.4%	3.4%	7.5%	7.5%	4.0%	4.0%	8.1%	8.1%
$60,000-$71,999	3.4%	3.4%	3.8%	3.8%	1.3%	1.3%	4.8%	4.8%
>$72,000	12.1%	12.1%	1.9%	1.9%	5.3%	5.3%	25.8%	25.8%

Note: Groups matched precisely for each variable.

Table A-1 Continued. Matched Variables of FCP Students and Comparison Group

	2012 COHORT		2013 COHORT		2014 COHORT		2015 COHORT	
	FCP (N=58)	MATCHED NON-FCP (N=58)	FCP (N=53)	MATCHED NON-FCP (N=53)	FCP (N=77)	MATCHED NON-FCP (N=77)	FCP (N=66)	MATCHED NON-FCP (N=66)
MOTHER'S EDUCATION								
No high school	38.6%	38.6%	41.5%	41.5%	57.1%	57.1%	31.8%	31.8%
Some high school	14.5%	14.5%	11.3%	11.3%	11.7%	11.7%	7.6%	7.6%
High school graduate	24.6%	24.6%	26.4%	26.4%	19.5%	19.5%	18.2%	18.2%
Some college	5.3%	5.3%	9.4%	9.4%	6.5%	6.5%	12.1%	12.1%
Associate degree	3.5%	3.5%	3.8%	3.8%	1.3%	1.3%	4.5%	4.5%
Bachelor's degree	10.5%	10.5%	7.5%	7.5%	3.9%	3.9%	24.2%	24.2%
Graduate degree	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	1.5%
FATHER'S EDUCATION								
No high school	33.3%	33.3%	41.5%	41.5%	53.2%	53.2%	33.3%	33.3%
Some high school	19.3%	19.3%	11.3%	11.3%	13.0%	13.0%	12.1%	12.1%
High school graduate	26.3%	26.3%	26.4%	26.4%	22.1%	22.1%	18.2%	18.2%
Some college	8.8%	8.8%	15.1%	15.1%	5.2%	5.2%	16.7%	16.7%
Associate degree	1.8%	1.8%	3.8%	3.8%	0.0%	0.0%	3.0%	3.0%
Bachelor's degree	10.5%	10.5%	1.9%	1.9%	5.2%	5.2%	13.6%	13.6%
Graduate degree	0.0%	0.0%	0.0%	0.0%	1.3%	1.3%	3.0%	3.0%

Table A-2. Background Characteristics and Academic Preparation Comparisons

	2012 COHORT		2013 COHORT		2014 COHORT		2015 COHORT	
	FCP (N=58)	MATCHED NON-FCP (N=58)	FCP (N=53)	MATCHED NON-FCP (N=53)	FCP (N=77)	MATCHED NON-FCP (N=77)	FCP (N=66)	MATCHED NON-FCP (N=66)
STUDENT CHARACTERISTICS								
Gender (% female)	67.2%	56.9%	67.9%	56.6%	74.0%	61.0%	63.6%	53.0%
Low-income	84.5%	81.0%	92.5%	92.5%	92.2%	88.3%	78.8%	72.7%
ACADEMIC BACKGROUND AND PREPARATION								
First-generation college student	70.7%	70.7%	67.9%	67.9%	80.5%	80.5%	59.0%	59.0%
Need remediation	56.9%	62.1%	67.9%	67.9%	85.7%*	71.4%	66.7%*	45.5%
High school GPA	3.56*	3.39	3.37	3.29	3.39	3.35	3.42	3.33
SAT verbal score	434.2	442.6	434.0	434.6	394.4**	424.7	381.7	426.1
SAT math score	474.9	472.0	467.4	463.7	449.6	460.1	434.1	441.2
SAT composite score	909.1	914.6	901.4	898.3	844.0	884.8	815.8	867.3

*Note: * = p < .05, ** = p < .01*

Appendix B

Characteristics of the Student Cohorts

Table B-1. Characteristics of the 2012 Cohort

	FCP Students (N = 76)	All AAPI Students (N = 895)	All Students (N = 3,151)
STUDENT CHARACTERISTICS			
Gender (% female)	65.8%	53.5%	57.1%
Age	18.0	17.9	18.0
Race/ethnicity			
AAPI	97.7%	100.0%	28.4%
Asian	30.3%	32.2%	9.1%
Filipino	17.1%	21.5%	6.1%
Pacific Islander	5.3%	6.6%	1.9%
Southeast Asian	44.7%	39.8%	11.3%
Black	-	-	8.5%
Hispanic/Latino	-	-	25.7%
White	-	-	27.5%
Multi-racial	2.3%	-	6.5%
Other	-	-	3.4%
US Citizen	92.1%	94.3%	94.2%
Low income	84.2%	69.7%	56.1%
EDUCATIONAL AND ACADEMIC BACKGROUND			
First-generation college student	60.5%	48.5%	39.6%
Parents education			
Mother w/BA or above	10.7%	21.1%	23.2%
Father w/BA or above	12.0%	21.7%	22.9%
High school GPA	3.49	3.35	3.26
SAT score	921.3	938.2	959.6
Remedial need at entry			
None	44.7%	40.5%	44.3%
Math only	2.6%	9.2%	13.4%
English only	27.6%	25.7%	18.5%
Both math and English	25.0%	24.7%	24.1%

Table B-2. Characteristics of the 2013 Cohort

	FCP Students (N = 73)	All AAPI Students (N = 884)	All Students (N = 3,366)
STUDENT CHARACTERISTICS			
Gender (% female)	68.5%	56.2%	58.9%
Age	18.0	17.9	18.0
Race/ethnicity			
AAPI	100.0%	100.0%	26.2%
Asian	30.1%	35.5%	9.3%
Filipino	9.6%	19.7%	5.2%
Pacific Islander	6.9%	7.0%	1.8%
Southeast Asian	53.4%	37.8%	9.9%
Black	-	-	8.3%
Hispanic/Latino	-	-	28.7%
White	-	-	25.3%
Multi-racial	-	-	7.1%
Other	-	-	4.4%
US Citizen	93.2%	94.5%	94.6%
Low income	93.1%	68.3%	59.1%
EDUCATIONAL AND ACADEMIC BACKGROUND			
First-generation college student	60.3%	43.9%	39.7%
Parents education			
Mother w/BA or above	6.9%	19.6%	22.3%
Father w/BA or above	7.0%	20.6%	21.8%
High school GPA	3.37	3.24	3.25
SAT score	893.1	932.8	951.6
Remedial need at entry			
None	27.4%	44.6%	46.8%
Math only	2.7%	6.9%	11.7%
English only	42.5%	27.3%	17.7%
Both math and English	27.4%	21.3%	23.8%

Table B-3. Characteristics of the 2014 Cohort

	FCP Students (N = 100)	All AAPI Students (N = 964)	All Students (N = 3,695)
STUDENT CHARACTERISTICS			
Gender (% female)	75.0%	53.2%	57.4%
Age	18.0	17.9	18.0
Race/ethnicity			
AAPI	98.0%	100.0%	26.1%
Asian	15.0%	34.0%	8.9%
Filipino	8.0%	23.0%	6.0%
Pacific Islander	3.0%	4.5%	1.2%
Southeast Asian	72.0%	38.5%	10.0%
Black	-	-	8.9%
Hispanic/Latino	-	-	30.1%
White	-	-	23.9%
Multi-racial	2.0%	-	6.8%
Other	-	-	4.2%
US Citizen	94.0%	93.7%	94.6%
Low income	91.0%	63.7%	59.1%
EDUCATIONAL AND ACADEMIC BACKGROUND			
First-generation college student	74.0%	44.4%	36.4%
Parents education			
Mother w/BA or above	7.1%	21.3%	21.7%
Father w/BA or above	7.4%	21.8%	20.8%
High school GPA	3.41	3.35	3.27
SAT score	850.0	935.5	945.9
Remedial need at entry			
None	16.0%	40.%	41.1%
Math only	4.0%	8.2%	13.9%
English only	42.0%	24.3%	18.1%
Both math and English	38.0%	26.9%	26.9%

Table B-4. Characteristics of the 2015 Cohort

	FCP Students (N = 99)	All AAPI Students (N = 919)	All Students (N = 3,781)
STUDENT CHARACTERISTICS			
Gender (% female)	63.6%	51.6%	56.9%
Age	18.0	17.9	18.0
Race/ethnicity			
AAPI	96.0%	100.0%	24.3%
Asian	17.2%	35.9%	8.7%
Filipino	19.2%	24.3%	5.9%
Pacific Islander	2.0%	5.0%	1.2%
Southeast Asian	57.6%	34.8%	8.5%
Black	-	-	8.3%
Hispanic/Latino	-	-	32.6%
White	-	-	24.2%
Multi-racial	2.0%	-	6.3%
Other	2.0%	-	4.3%
US Citizen	97.0%	94.6%	94.2%
Low income	81.8%	58.3%	53.8%
EDUCATIONAL AND ACADEMIC BACKGROUND			
First-generation college student	56.5%	41.0%	34.5%
Parents education			
Mother w/BA or above	21.4%	27.5%	26.2%
Father w/BA or above	18.2%	23.3%	21.1%
High school GPA	3.42	3.36	3.30
SAT score	887.9	958.2	951.8
Remedial need at entry			
None	30.3%	46.1%	45.0%
Math only	5.1%	8.5%	15.0%
English only	25.3%	22.1%	15.0%
Both math and English	39.4%	23.3%	25.1%

Appendix C

Milestone Attainment for Sub-Groups of FCP Students

Table C-1. Milestone Attainment for AAPI Students in the 2012 Cohort

ALL AAPI STUDENTS			
	Southeast Asian (N = 356)	Asian (N = 288)	Filipino/Pac. Isl. (N = 251)
Retained to 2nd Year	82.0%	85.8%	85.7%
Retained to 3rd Year	70.5%	81.3%	76.1%
Retained to 4th Year	61.5%	75.0%	74.1%
English Composition 1	82.9%	79.5%	83.7%
English Composition 2	63.8%	68.4%	68.1%
College Math	64.3%	70.5%	64.9%
Completed GE	31.7%	35.8%	44.6%
30 College Credits	79.8%	86.1%	84.9%
60 College Credits	64.3%	76.4%	73.7%
90 College Credits	43.0%	55.6%	51.8%
Graduated	1.4%	8.7%	6.4%
Graduated or Still Enrolled	63.8%	81.6%	78.9%
FCP STUDENTS			
	Southeast Asian (N = 34)	Asian (N = 23)	Filipino/Pac. Isl. (N = 17)
Retained to 2nd Year	94.1%	91.3%	88.2%
Retained to 3rd Year	85.3%	82.6%	88.2%
Retained to 4th Year	76.5%	78.3%	88.2%
English Composition 1	85.3%	82.6%	64.7%
English Composition 2	82.4%	65.2%	70.6%
College Math	79.4%	65.2%	70.6%
Completed GE	64.7%	52.2%	52.9%
30 College Credits	91.2%	87.0%	88.2%
60 College Credits	85.3%	73.9%	82.4%
90 College Credits	76.5%	69.6%	82.4%
Graduated	2.9%	0.0%	0.0%
Graduated or Still Enrolled	88.2%	73.9%	76.5%

Table C-2. Milestone Attainment for AAPI Students in the 2013 Cohort

ALL AAPI STUDENTS

	Southeast Asian (N = 334)	Asian (N = 314)	Filipino/Pac. Isl. (N = 236)
Retained to 2nd Year	83.5%	91.4%	83.9%
Retained to 3rd Year	81.4%	87.3%	84.3%
English Composition 1	82.6%	81.2%	81.8%
English Composition 2	61.1%	67.5%	64.0%
College Math	52.7%	65.0%	55.5%
Completed Lower-Division GE	57.8%	61.2%	56.8%
Completed GE	13.8%	15.0%	15.7%
30 College Credits	83.2%	89.2%	84.8%
60 College Credits	63.8%	70.4%	58.9%
90 College Credits	2.1%	7.6%	5.1%
Graduated	0.0%	0.6%	0.0%
Graduated or Still Enrolled	73.1%	84.7%	75.0%

FCP STUDENTS

	Southeast Asian (N = 39)	Asian (N = 22)	Filipino/Pac. Isl. (N = 12)
Retained to 2nd Year	94.8%	95.5%	100.0%
Retained to 3rd Year	94.8%	86.4%	83.3%
English Composition 1	87.2%	77.3%	66.7%
English Composition 2	89.7%	72.7%	41.7%
College Math	38.5%	63.6%	58.3%
Completed Lower-Division GE	66.7%	45.5%	58.3%
Completed GE	18.0%	13.6%	16.7%
30 College Credits	97.4%	90.9%	83.3%
60 College Credits	84.6%	86.4%	58.3%
90 College Credits	2.6%	13.6%	16.7%
Graduated	0.0%	4.6%	0.0%
Graduated or Still Enrolled	87.1%	95.5%	66.7%

Table C-3. Milestone Attainment for AAPI Students in the 2014 Cohort

ALL AAPI STUDENTS

	Southeast Asian (N = 371)	Asian (N = 328)	Filipino/Pac. Isl. (N = 265)
Retained to 2nd Year	76.6%	83.8%	78.9%
English Composition 1	78.7%	83.2%	78.1%
English Composition 2	31.0%	38.7%	38.1%
College Math	34.0%	46.3%	35.9%
Completed Lower-Division GE	20.8%	17.7%	24.5%
30 College Credits	72.5%	80.8%	77.4%
60 College Credits	4.0%	8.5%	6.8%

FCP STUDENTS

	Southeast Asian (N = 72)	Asian (N = 15)	Filipino/Pac. Isl. (N = 11)
Retained to 2nd Year	84.7%	86.7%	72.7%
English Composition 1	88.9%	86.7%	90.9%
English Composition 2	45.8%	60.0%	63.6%
College Math	27.8%	33.3%	45.5%
Completed Lower-Division GE	15.3%	20.0%	27.3%
30 College Credits	83.3%	86.7%	81.8%
60 College Credits	11.1%	13.3%	9.1%

Table C-4. Milestone Attainment for AAPI Students in the 2015 Cohort

ALL AAPI STUDENTS			
	Southeast Asian (N = 320)	Asian (N = 330)	Filipino/Pac. Isl. (N = 269)
Retained to 2nd Term	97.2%	96.7%	93.7%
English Composition 1	76.9%	78.2%	77.7%
College Math	23.1%	36.4%	24.5%
30 College Credits	15.9%	18.8%	17.8%
FCP STUDENTS			
	Southeast Asian (N = 57)	Asian (N = 17)	Filipino/Pac. Isl. (N = 21)
Retained to 2nd Term	100.0%	100.0%	95.2%
English Composition 1	84.2%	88.2%	66.7%
College Math	21.1%	41,2%	9.5%
30 College Credits	43.9%	35.3%	19.1%

Table C-5. Milestone Attainment among FCP Students by Participation in EOP

2012 COHORT		
	In EOP (N = 23)	Not in EOP (N = 53)
Retained to 2nd Year	100.0%	88.7%
Retained to 3rd Year	100.0%	79.3%
Retained to 4th Year	95.7%	71.7%
English Composition 1	95.7%	73.6%
English Composition 2	95.7%	62.3%
College Math	87.0%	66.0%
Completed GE	73.9%	50.9%
30 College Credits	100.0%	84.9%
60 College Credits	95.7%	73.6%
90 College Credits	91.3%	66.0%
Graduated	4.3%	0.0%
Graduated or Still Enrolled	95.7%	71.7%
2013 COHORT		
	In EOP (N = 25)	Not in EOP (N = 48)
Retained to 2nd Year	92.0%	93.8%
Retained to 3rd Year	92.0%	89.6%
English Composition 1	88.0%	77.1%
English Composition 2	84.0%	72.9%
College Math	44.0%	52.1%
Completed Lower Division GE	72.0%	52.1%
Completed GE	24.0%	12.5%
30 College Credits	96.0%	91.7%
60 College Credits	92.0%	75.0%
90 College Credits	8.0%	8.3%

Table C-5 Continued. Milestone Attainment among FCP Students by Participation in EOP

2014 COHORT

	In EOP (N = 47)	Not in EOP (N = 53)
Retained to 2nd Year	89.4%	79.3%
English Composition 1	95.7%	83.0%
English Composition 2	57.5%	41.5%
College Math	29.8%	34.0%
Completed Lower-Division GE	12.8%	20.8%
30 College Credits	93.6%	75.5%
60 College Credits	19.2%	3.8%

2015 COHORT

	In EOP (N = 42)	Not in EOP (N = 57)
Retained to 2nd Term	100.0%	98.3%
English Composition 1	88.1%	77.2%
College Math	31.0%	19.3%
30 College Credits	59.5%	21.1%

Endnotes

1   Offenstein, J., Moore, C., & Shulock, N. (2010). *Advancing by degrees: A framework for increasing college completion*. Sacramento: Institute for Higher Education Leadership & Policy.

2   EOP is a program aimed at improving access and retention of low-income and educationally disadvantaged students. The program provides admission and academic assistance to participating students, and some students also receive supplemental financial assistance. Program capacity is limited, so not all students who meet eligibility requirements can participate.

3   As determined by an indicator included in the data provided by OIR, "low-income" students were those eligible for a Pell grant.

4   Offenstein, et al., 2010; Jenkins, D., Jaggars, S. S., Roksa, J., Zeidenberg, M., & Cho, S. W. (2009). *Strategies for promoting gatekeeper course success among students needing remediation: Research report for the Virginia community college system*. New York: Columbia University, Teachers College, Community College Research Center.

5   Offenstein et al., 2010

6   CSU Chancellor's Office Analytic Studies Division, California State University Graduation Rates Consortium for Student Retention Data Exchange (CSRDE), Graduation Rates by Campus, Ethnicity and Gender for First-time, Full-time Freshmen. Available at http://asd.calstate.edu/csrde/index.shtml.

7   Stuart, E. A., & Rubin, D. B. (2007). Best practices in quasi-experimental designs: Matching methods for causal inference. In J. Osborne (Ed.), *Best practices in quantitative social science* (pp. 155–176). Thousand Oaks, CA: Sage.

8   Taing, A., & Carollo, T. (2014, November). *Case-control matching with SPSS: A tool to reduce selection bias in common IR studies*. Presentation at the meeting of the California Association for Institutional Research, San Diego, CA.