

# AIDING SUCCESS

THE ROLE OF FEDERAL AND STATE FINANCIAL AID IN SUPPORTING CALIFORNIA COMMUNITY COLLEGE STUDENTS



**ACCT**  
ASSOCIATION OF  
COMMUNITY COLLEGE TRUSTEES

*in collaboration with*  
the institute for  
**college  
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*The views expressed in this publication are those of the authors and do not necessarily represent those of Lumina Foundation, its officers or employees.*

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# EXECUTIVE SUMMARY

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Community colleges enroll more students, from more diverse backgrounds, than any other sector in the American postsecondary system. Although tuition and fees at community colleges are less expensive than in other sectors, students still struggle to cover their full cost of attendance, which totals approximately \$17,000 per year.<sup>1</sup> There is a growing body of research showing that students' ability to pay non-tuition costs during college – including textbooks, transportation, food, and housing – is an important factor in student success.<sup>2</sup> Students whose resources do not stretch far enough to cover these costs must make choices that undermine their academic success, such as foregoing required textbooks or working long hours rather than studying.<sup>3</sup> Financial aid from federal, state, and even institutional sources can help students cover expenses while avoiding harmful tradeoffs, and research consistently demonstrates that aid facilitates student enrollment and success.<sup>4</sup>

ACCT and TICAS partnered with the California Community Colleges Chancellor's Office (CCCCO) to further investigate the role of financial resources and financial aid in supporting student success. The CCCCCO has been a national leader in data transparency and measuring student achievement. The system's Student Success Scorecard tracks and makes public how well colleges are doing in remedial instruction, job training programs, retention of students, and graduation and completion rates. This paper uses CCCCCO data to go beyond existing analyses and identify interactions between federal and state financial aid programs, student resources, and academic success.

## Key Findings:

- **Low-income students face challenges to college completion.** Only 30 percent of students with an 'expected family contribution' of zero – the federal government's estimate of what they can afford to pay for college – graduated or transferred within six years. Notably, the majority of California Community Colleges (CCC) students who applied for federal aid had an expected family contribution of zero.
- **Financial aid supports student success.** Low-income students who received more financial aid in their first year succeeded at much higher rates than those who received less. For example, among students with no financial resources of their own, 49 percent of those who received at least \$7,501 in financial aid graduated or transferred compared to 17 percent of those who received between \$1,001 and \$2,500.
- **Federal, state, and institutional aid work together to support low-income students.** Virtually all financial aid recipients received one of just four combinations of federal and state awards, and those who received federal, state, and institutional grants/waivers had the highest rates of success: 47 percent of these students graduated or transferred within six years, including 67 percent of students flagged as academically prepared.
- **College placement policies may thwart low-income student success.** Four out of five students who received a financial aid package that included a state Cal Grant (in addition to an institutional fee waiver and a federal Pell Grant) were placed into developmental coursework, despite having met merit criteria required for the award, and they were 25 percentage points less likely to have graduated or transferred than those who were not.

The report includes policy recommendations for the federal government, state legislatures, and colleges. States must reinvest in public higher education and better support the students in their two-year colleges. The federal government must explore ways to promote these investments, and lead the way by strengthening need-based funding for students. Our finding that low-income students who receive more aid succeed at higher rates should serve to encourage others to delve deeper into the causal relationship between aid and student success, particularly as they relate to other factors including academic preparation and enrollment intensity.

# INTRODUCTION

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The community college sector is the largest in the U.S. postsecondary education system, enrolling a remarkably diverse group of nine million undergraduates.<sup>5</sup> In 2013-14, half of all Latino undergraduates and four in ten African American undergraduates enrolled in a community college.<sup>6</sup> Nearly forty percent of community college students are the first in their families to attend college.<sup>7</sup> More than half of students have dependents, and nearly 20 percent are single parents.<sup>8</sup> After completing high school, one third of community college students delayed college enrollment by at least a year, and most typically more than three years.<sup>9</sup> Four in 10 community college students take at least one remedial course,<sup>10</sup> which can significantly delay or even thwart completion.

While the open access nature and low-tuition structure of community colleges facilitate the enrollment of a markedly diverse student body, it also means that community colleges are tasked with helping students overcome significant challenges in terms of enrollment, persistence, and completion. Despite relatively low tuition prices, many of the challenges community college students face are financial. More than half of full-time financial aid applicants at community colleges have an “expected family contribution” (EFC) of zero: In other words, their family incomes are so low that the U.S. Department of Education estimates these students cannot afford to put any money toward paying for college.<sup>11</sup> Unfortunately, the estimated total college cost of community college is more than \$17,000 per year.<sup>12</sup> The majority of these expenses are not tuition, but rather the textbooks, transportation, food, and housing expenses required in order for students to be successful.

Despite their need for aid and the substantial costs they face, community college students are much less likely than public or nonprofit four-year college students to receive most forms of financial aid, including state and institutional grants, and the grants that they do receive are relatively small.<sup>13</sup> Federal loans can help fill the gap, though relatively few community college students choose to borrow and some community colleges do not even make federal loans available.<sup>14</sup> When community college students’ resources from savings, earnings, and grants are not enough to cover their costs – as is the case for virtually all low-income students at community colleges – students must make choices that undermine their academic success, including working long hours, not purchasing required textbooks, or taking fewer courses per term. Financial aid is a key policy lever because it can help students cover expenses while avoiding harmful tradeoffs, and research consistently demonstrates that it facilitates student enrollment and success.<sup>15</sup>

## About this Report and the California Community Colleges

The California Community Colleges (CCC) are comprised of 113 colleges across 72 districts which together form the largest system of higher education in the United States.<sup>16</sup> The 2.1 million students enrolled represent two-thirds of undergraduates in the state of California and one-tenth of all undergraduates nationally.<sup>17</sup> Tuition (referred to as fees in the CCCs) is the lowest in the country at \$46 per credit, and a system-wide financial aid program known as the Board of Governor's Fee Waiver (BOGFW) waives tuition charges for students who demonstrate financial need.

Although tuition costs are less of a barrier for CCC students than in other states or colleges because tuition is low and also frequently waived, non-tuition costs are significant: the California Student Aid Commission estimates the non-tuition costs of college for California students exceeds \$18,000 annually for those living independently.<sup>18</sup> Unlike many state grant programs, California's Cal Grant program does provide resources to help students with non-tuition costs, but the purchasing power of the grants has declined sharply over time and those grants now hold just one-quarter of their original value.<sup>19</sup> The vast majority of aid CCC students receive to cover non-tuition costs of college comes from the federal Pell Grant program, available to students at all types of colleges. Pell Grants are a critically important resource, but with a maximum grant that covers less than one-third of students' non-tuition costs, Pell Grants alone cannot bring the cost of college within reach for low-income students. Federal loans help some students, but few borrow. Many factors contribute to low borrowing rates, especially in California, where less than three percent of students borrow a federal loan. Some colleges do not promote loans due to concerns about student default rates, students may be hesitant to borrow, and some colleges do not participate in the federal loan program, effectively prohibiting students from borrowing.

Notably, just 32% of CCC students enrolled full time in fall 2013, among the lowest rates of full-time enrollment in community colleges nationally.<sup>20</sup> High costs and insufficient aid are key drivers of students' enrollment statuses, because students who cannot afford college costs must spend their time earning money instead of credits. In a recent survey of CCC students, most students said that their need to work for pay kept them from enrolling in as many courses as they wanted to take.<sup>21</sup> Enrollment status in turn is a key driver of student success, as students who enroll full time are far more likely to graduate than those who do not.<sup>22</sup> Respondents in that same study overwhelmingly said that, with additional grant aid, they would enroll in more courses and spend more time on school-related activities, such as studying or visiting the library.<sup>23</sup>

Given the importance of increasing community college completion rates, ACCT and TICAS partnered with the CCC system to better understand the role that financial obstacles can play in community college student success. The CCC Chancellor's Office's Student Success Scorecard is a performance measurement system that tracks college-level student success by gender, age, and ethnicity, so that colleges, students, and the public can assess college performance and whether achievement gaps are narrowing. Student success is measured for cohorts of students who first enrolled in a particular year and who completed at least six credits within three years, including attempting any math or English course. ACCT and TICAS expanded upon the Scorecard methodology to investigate student success based on students' financial characteristics, including both their relative financial strength and the amount and types of aid received, with a goal of developing recommendations for how state and federal financial aid policy can promote student success.

## Types of Financial Aid for California Community College Students

In 2014-15, California Community College (CCC) students received \$3 billion in financial aid from federal, state, institutional, and private sources. The greatest sources of financial aid for CCC students, which collectively represent 96% of all aid received in 2014-15, are described below. Award amounts listed are for the 2016-17 academic year.

- The **Federal Pell Grant** program (58% of aid received) is the largest grant program in the country, and provides up to \$5,815 in need-based financial aid per year to full- and part-time students. Most recipients have family incomes of \$40,000 or less. Students must complete the Free Application for Federal Student Aid (FAFSA) to receive a Pell Grant, and can apply at any time during the school year.
- **The CCC Board of Governor's Fee Waiver (BOGFW)** (27% of aid received) is available to low-and moderate-income students by applying through the FAFSA or through a separate application. The BOGFW waives all community college enrollment fees but provides no additional cash assistance. Fee waivers are provided to all Pell and Cal Grant recipients.
- **California's Cal Grant** program (4% of aid received) provides up to \$1,670 per year in need-based financial aid to community college students attending at least half time (6 credits or more). Recent high school graduates with a 2.0 high school GPA are entitled to Cal Grants if they apply by March 2. A limited number of grants are available after this point for older applicants and those who missed the March deadline. Applicants must complete the FAFSA.
- **Federal student loans** (6% of aid received) are available to CCC students regardless of income, though relatively few students borrow. For students who need to borrow to pay for college, experts agree that students should tap federal student loans first. Twenty-two CCCs, enrolling 13 percent of CCC students, do not participate in the federal loan program, which prevents their students from borrowing federal loans.

## CCCCO Scorecard Data

The Chancellor's Office collects a significant amount of data from its institutions each year, which it uses, among other things, to measure student success at each college and across the system. Its Student Success Scorecard Completion Rate tracks graduation and transfer outcomes for first-time students who completed at least six credits within their first three years of enrollment, and who attempted at least one math or English course.<sup>24</sup> While the publicly available CCCCCO College Scorecard tool provides some information to consumers, including success rates for annual cohorts by certain demographic and academic characteristics, the data system also contains information about each student's financial characteristics and financial aid receipt. The analyses in this paper use these underlying data, focusing specifically on the 2009-10 cohort.

ACCT and TICAS analyzed Student Success Scorecard Completion Rate data for the 2009-10 cohort, which follows these students through the 2014-15 year. To be included in a cohort, students must be a first-time student, hold a valid Social Security Number, attempt at least one math or English class, and earn at least six credits over the first three years of study.<sup>25</sup>

We limited our analysis to California residents, as we are interested in how students use state financial aid.<sup>26</sup> This restriction produced a cohort of 184,705 students. A primary goal of this report was to measure students' ability to pay for college and examine how financial strength correlates to success. This is typically represented by unmet need, which is calculated as students' cost of attendance minus both their expected family contribution (EFC, or the amount the federal government estimates the student and their family can contribute to college costs) and all grant/scholarship aid. While the data points needed to calculate unmet need are collected by the CCCCO, they are infrequently used in CCCCO analyses and thus receive less scrutiny than other data collected. ACCT and TICAS determined that the data were not sufficiently reliable to use, so instead we chose to measure students' financial resources, represented as the sum of their EFC and aid received, less work-study awards (which must be earned and may not be readily available to students at the point in which they are needed). We define success as completing a certificate or associate degree program and/or transferring to a four-year college. This differs from the completion rates on the Student Success Scorecard, which include students who are "transfer-prepared" in the numerator.

For additional nuances of the data used in this report, see the Data Appendix (page 26).

# COHORT CHARACTERISTICS AND SUCCESS RATES

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Like the CCC system, the 2009-10 cohort includes a diverse group of students. Table 1 describes several demographic characteristics of the students represented in this report. Consistent with community colleges throughout the country,<sup>27</sup> we find that few students enrolled exclusively full time. More than 95 percent of students were part time for at least some of their enrollment. Students who were consistently enrolled part time were about half as likely to succeed as their peers who were consistently enrolled full time. However, the 61 percent of 2009-10 cohort students who were enrolled full-time for some terms and part-time for other terms—which we refer to as mixed enrollment intensity—succeeded at a rate slightly higher than those who consistently enrolled exclusively full time.

Placement in developmental education (also referred to as basic skills or remedial education) is a significant barrier to success for community college students, and this factor proves to be an important differentiating factor in the success rates of students studied in this report. The CCC system defines students as academically unprepared if they first enrolled in a course below transfer level in English, mathematics, or English as a Second Language. Overall, we find that 75 percent of the cohort falls into this category. Academically prepared students had the highest success rate of any group in this table and were about twice as likely to be successful as academically unprepared students. Unsurprisingly, with well-documented correlations between income and academic preparation,<sup>28</sup> academically unprepared students were also more likely to receive financial aid; more than half of unprepared students received aid compared with 33 percent of prepared students.

The expected family contribution, or EFC, is a figure generated by U.S. Department of Education after a student completes the Free Application for Federal Student Aid (FAFSA). It represents how much a student and his or her family can afford to pay annually for college. In California, students may receive a Board of Governor's fee waiver (BOGFW) without filing a FAFSA, which means that some students who receive a BOGFW are missing an EFC. We observe that just over half of the 2009-10 cohort did not apply for federal financial aid, as indicated by a missing EFC. These students may not have needed financial aid to afford college, may not have been eligible for financial aid or may have believed themselves ineligible for aid, or they may not have understood the application process. We cannot differentiate among students who did not apply for these varied reasons, but we do find that non-applicants' rates of success were generally higher than those of students who applied for aid, which may suggest that they largely could afford college without assistance.

**TABLE 1: Characteristics and Success Rates of 2009-10 California Community College Students**  
(N = 184,705)

<b>Overall Cohort</b>	<b>Number in cohort</b>	<b>Share of cohort</b>	<b>Received any aid</b>	<b>Success rate</b>
All Students	184,705	100.0%	50.1%	40.1%
<b>Enrollment Intensity</b>	<b>Number in cohort</b>	<b>Share of cohort</b>	<b>Received any aid</b>	<b>Success rate</b>
Consistently enrolled full-time	8,454	4.6%	54.0%	46.3%
Consistently enrolled part-time	63,918	34.6%	46.6%	22.5%
Mixed enrollment intensity	112,333	60.8%	51.8%	49.7%
<b>Level of Preparation</b>	<b>Number in cohort</b>	<b>Share of cohort</b>	<b>Received any aid</b>	<b>Success rate</b>
Academically prepared	45,860	24.8%	32.5%	63.3%
Academically unprepared	138,845	75.2%	56.0%	32.5%
<b>Estimated Family Contribution (EFC)</b>	<b>Number in cohort</b>	<b>Share of cohort</b>	<b>Received any aid</b>	<b>Success rate</b>
Missing EFC	97,983	53.1%	6.2%	45.5%
Zero	53,066	28.7%	99.8%	30.2%
\$1-\$1,000	7,403	4.0%	99.9%	38.7%
\$1,001-\$2,500	8,037	4.4%	99.9%	37.3%
\$2,501-\$5,000	8,071	4.4%	99.8%	39.0%
\$5,001-\$10,000	7,354	4.0%	99.8%	43.2%
\$10,001+	2,791	1.5%	98.6%	47.5%
<b>Race/Ethnicity</b>	<b>Number in cohort</b>	<b>Share of cohort</b>	<b>Received any aid</b>	<b>Success rate</b>
Asian	17,575	9.5%	51.6%	55.7%
Black	10,537	5.7%	69.7%	29.6%
Latino	55,911	30.3%	62.2%	31.7%
American Indian	979	0.5%	56.1%	36.6%
Native Hawaiian/Pacific Islander	975	0.5%	52.7%	32.2%
White	52,394	28.4%	34.3%	45.1%
Two or more races	13,651	7.4%	41.2%	40.0%
Filipino	4,591	2.5%	38.3%	46.0%
Race unknown	28,092	15.2%	53.3%	41.3%
<b>Dependency Status</b>	<b>Number in cohort</b>	<b>Share of cohort</b>	<b>Received any aid</b>	<b>Success rate</b>
Dependent	46,678	25.3%	99.7%	37.3%
Independent	17,148	9.3%	99.8%	25.0%
Dependency status unknown	120,879	65.4%	23.9%	43.4%
<b>Age</b>	<b>Number in cohort</b>	<b>Share of cohort</b>	<b>Received any aid</b>	<b>Success rate</b>
Under 20	150,757	81.6%	45.9%	43.2%
20-24	15,465	8.4%	65.9%	26.7%
25-39	11,587	6.3%	72.1%	25.8%
40 and over	6,896	3.7%	70.0%	27.6%

Source: California Community Colleges Chancellor's Office Management Information System.

Note: All values are based on 2009-10 data.

Six in 10 students who applied for federal aid had an EFC of zero; in other words, the federal government estimated that these students had no financial resources with which to pay for college. Less than one-third of students with a zero EFC transferred or completed within six years, a result that is indicative of the significant challenges low-income students face in college. We find that success rates generally increase with EFC, consistent with research on completion gaps by income.<sup>29</sup> Success rates were similar for students with EFCs between \$1 and \$5,000, and students with EFCs of higher than \$5,000 were more likely to succeed than their lower-income peers. However, just over 10,000 students had EFCs in this higher range, representing only 5.5 percent of the cohort and 11.7 percent of the cohort with an EFC.

Data in the 2009-10 Student Success Scorecard also show how aid receipt and completion rates vary by racial and ethnic identity. Latino and White students are the two most numerous racial/ethnic groups represented in the cohort, comprising 30 and 28 percent respectively. Black and Latino students were more likely than other racial or ethnic groups to receive financial aid, but least likely to succeed; less than one-third of students in each group completed or transferred within six years. Asian, White, and Filipino students were more likely to succeed than their peers in other groups.

Dependency status is an important factor in the determination of financial aid eligibility and financial need. Dependent students are typically “traditional” students – recent high school graduates – who are more likely to be supported by their families. Independent students, however, are more commonly found in community colleges than four-year institutions. Students 24 years of age or older, those who are married or have dependents, or who serve or have served in the military are deemed independent. Their EFCs are based on their incomes, – including their spouses’, but not their parents’ – and they are eligible to borrow a greater amount of federal loans. Unfortunately, the dependency status data in the CCCCO Scorecard is missing for 65 percent of the cohort. This is partly due to dependency status data only being available for those who apply for federal aid, and 53 percent of the cohort is missing an EFC and therefore may not have applied for federal aid. It is unclear why dependency status is missing for the remaining students. Similar to the higher success rates among students who did not receive aid, students without dependency status information (the vast majority of whom did not apply for aid) were more likely to succeed. Among the students for whom data are available, we find that dependent students succeeded at higher rates than independent students.

Although dependency status is missing for most students, we do have more complete information on students’ ages. Surprisingly, 82 percent of students in the cohort enrolled before age 20, whereas 42 percent of community college students nationwide enroll before 20.<sup>30</sup> Not surprisingly, the youngest group of students were also most likely to succeed and the least likely to receive aid. These students were likely coming directly from high school and may be more likely to receive financial support from their parents, both of which could contribute to low rates of aid usage and higher rates of success.

# AID TYPES RECEIVED BY CCC STUDENTS

Our analyses focus primarily on students’ financial situation and aid in 2009-10, as students’ initial experiences with financial aid may inform their academic trajectories. However, many students who did not receive financial aid in 2009-10 did receive aid in other years, as shown in Table 2. As described on page 6, four financial aid programs detailed below account for 96 percent of the aid dollars received by CCC students. The most common form of financial aid for CCC students was the BOGFW, with about half (49 percent) of the cohort receiving a waiver in 2009-10, and almost two-thirds (64 percent) of students receiving a BOGFW at any point. Federal loans were the least common aid type among CCC students, with only 2 percent of the cohort receiving loans in 2009-10. About one-third (35 percent) of the cohort never received aid at any point while enrolled.

Success rates were similar among students who receive BOGFWs, Pell Grants, or federal loans, and were between 32 and 34 percent for students who received these types of aid in 2009-10. Among students who received aid at any point during enrollment, 36 percent of BOGFW and Pell Grant recipients succeeded, as did 39 percent of federal loan recipients. Cal Grant recipients succeeded at markedly higher rates, with 50 percent of students who ever received a Cal Grant earning a credential or transferring. Importantly, Cal Grant eligibility is limited to students who meet academic merit standards, and most students who receive Cal Grants have transitioned directly from high school to college.<sup>31</sup>

Students who did not receive financial aid were more likely than most aid recipients to graduate or transfer within six years. Virtually all students who applied for aid at a CCC received at least a BOGFW. Thus, with few exceptions, students who did not receive any aid were very likely non-applicants. While some low-income students, at the CCCs and elsewhere, do not know how or whether to apply for aid and thus leave available resources on the table, we cannot differentiate such students from those who did not apply because they could afford college costs without aid. Indeed, given the relationship between family resources and college attainment, the most likely explanation for the relatively high rates of success among unaided students is that students in this group are fairly well-resourced.<sup>32</sup>

**TABLE 2: Distribution of Aid Received by California Community College Students, in 2009-10 and at Any Point During Enrollment (N=184,705)**

Aid Type	Number in cohort receiving in 2009-10	Share of cohort receiving in 2009-10	Success rate for cohort receiving in 2009-10	Number in cohort receiving in any year	Share of cohort receiving in any year	Success rate for cohort receiving in any year
BOGFW	90,992	49.3%	33.4%	118,207	64.0%	36.2%
Pell	61,185	33.1%	33.4%	83,486	45.2%	36.4%
Cal Grant	10,573	5.7%	46.9%	17,915	9.7%	50.1%
Federal Loans	3,956	2.1%	32.1%	7,876	4.3%	38.8%
Aid Status	Number receiving no aid in 2009-10	Share receiving no aid in 2009-10	Success rate for cohort not receiving aid in 2009-10	Number never receiving aid while enrolled	Share never receiving aid while enrolled	Success rate for cohort never receiving aid
No Aid	92,112	49.9%	46.6%	64,538	34.9%	46.8%

Source: California Community Colleges Chancellor’s Office Management Information System.

Note: The counts in this table are not exclusive, meaning students may be counted in multiple categories.

# AID PACKAGES RECEIVED BY CCC STUDENTS

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As noted in Table 2, we find that BOGFWs, Pell Grants, Cal Grants, and federal loans were the most commonly received forms of financial aid by CCC students. Most aided students relied on a combination of state-funded and federally-funded financial aid. In Table 3 we identify aid packages comprised of one or more of these four programs that at least one percent of our sample received in 2009-10.

The only aid package with a median EFC greater than zero belonged to students receiving only a BOGFW, with a median EFC of \$2,217. This indicates that students in this group had greater resources outside of financial aid to put towards college costs than peers in other groups. The most common aid package was a BOGFW and Pell Grant, which more than half of the 2009-10 cohort with an EFC received.

Students who received BOGFWs, Pell Grants, and Cal Grants had both the highest success rate and lowest average EFC; their success rate was at least 12.5 percent higher than any other group. In spite of their low EFC, the higher success rate of this group may be due to their young age, making them especially likely to stretch aid dollars further by living with family to reduce living costs. As noted above, there is a merit component of the Cal Grant, where students must have a minimum grade point average of 2.0. Data from the California Student Aid Commission show that new CCC Cal Grant recipients in 2009-10 had an average GPA of 3.0.<sup>33</sup>

Students who received BOGFWs, Pell Grants, and federal loans had the lowest success rate of any group. Further study is needed to contextualize these findings, as this group may face barriers not encountered by peers with other aid packages. However, the average age of this group may provide context to their lower success rate: the median age of students receiving this aid package was 8.6 years higher than that of the cohort as a whole. Due to their age, students in this group were likely independent and may have incurred higher living costs than their younger, dependent peers. These costs may have been too high to cover with available aid, posing a significant barrier to success. This group also has particularly high rates of remedial placement. While our analysis shows a low success rate for students receiving this aid package, other research has shown a positive correlation between receiving student loans and student success.<sup>34</sup>

**TABLE 3: Aid Packages Received by California Community College Students in 2009-10**  
(N=84,390)

Aid Package	Number in Cohort	Share of Cohort	Mean EFC (Median EFC)	Mean aid received (Median aid received)	Mean Age (Median Age)	Success Rate
BOGFW only	24,151	27.8%	\$4,027 (\$2,217)	\$464 (\$468)	20.4 (18)	34.6%
BOGFW + Pell Grant	47,079	54.3%	\$582 (\$0)	\$3,870 (\$3,761)	21.8 (18.5)	30.7%
BOGFW + Pell Grant + Cal Grant	10,265	11.8%	\$198 (\$0)	\$6,463 (\$6,922)	18.2 (18)	47.1%
BOGFW + Pell Grant + Federal Loans	2,895	3.3%	\$388 (\$0)	\$9,470 (\$8,918)	30.8 (27)	27.5%

Source: California Community Colleges Chancellor's Office Management Information System.

Notes: The N for this table is restricted to students with an EFC in 2009-10. These four aid packages account for 97.3% of the 09-10 cohort with an EFC.

Table 4 includes the same financial aid award packages as Table 3, but is disaggregated by level of academic preparation. While the relative comparisons between aid package recipients appear similar to those shown in Table 3, comparisons of students within each category of preparation show that, for recipients of each aid package, prepared students succeeded at a rate at least 22 percentage points higher than unprepared students.

Table 1 shows that 75 percent of the 2009-10 cohort enrolled in developmental coursework, and this share is higher among financial aid recipients: 71,131 of the 84,390 students who received one of the aid packages listed in tables 3 and 4 in 2009-10, or 84 percent, took developmental coursework. Financial aid recipients' greater likelihood of taking developmental coursework is not surprising given well-established relationships between income and academic preparation.<sup>35</sup> Within each aid package, academically unprepared students had lower EFCs than prepared students. The difference for students receiving a BOGFW only was particularly substantial: prepared students had a mean EFC of \$4,791 compared to \$3,827 for unprepared students receiving the same form of aid.

As seen in Tables 2 and 3, students who received a Cal Grant succeeded at higher rates than other aid recipients, which may be driven in part by the academic merit that Cal Grant recipients must demonstrate. Yet despite having met and typically exceeded the program's GPA requirement, four out of five recipients of an aid package including a Cal Grant (in addition to a BOGFW and Pell Grant) had taken developmental coursework, suggesting that they had been assessed by their colleges as having been unprepared. That developmental coursework was so prevalent among a group of students who have demonstrated academic merit raises questions about the accuracy of colleges' assessments of students' abilities to succeed in college-level work. Research has shown that assessment or placement tests may assign students to developmental coursework unnecessarily, and that such remediation can delay and even thwart student success.<sup>36</sup> Students who received the Cal Grant package and enrolled in developmental coursework had a success rate 25 percentage points lower than those who had not taken developmental coursework. Further underscoring the importance of this issue, students receiving the aid package including federal loans were most likely to have taken developmental coursework (91 percent, or 2,636 of the 2,895 students who received this aid combination). Given these students' need to repay loans after they leave college, it is particularly important that unnecessary barriers, such as overly aggressive placement into developmental coursework, are removed to increase students' odds of graduating or transferring.

**TABLE 4: Aid Packages Received by California Community College Students in 2009-10, by Academic Preparedness**  
(N=84,390)

<b>Academically Prepared Students (N=13, 259)</b>					
<b>Aid Package</b>	<b>Number in Cohort</b>	<b>Share of Cohort</b>	<b>Mean EFC (Median EFC)</b>	<b>Mean aid received (Median aid received)</b>	<b>Success Rate</b>
BOGFW only	5,010	5.8%	\$4791 (\$4159)	\$528 (\$572)	56.9%
BOGFW + Pell Grant	5,995	6.9%	\$819 (\$0)	\$4,045 (\$4,013)	54.8%
BOGFW + Pell Grant + Cal Grant	1,995	2.3%	\$207 (\$0)	\$6,755 (\$7,525)	67.0%
BOGFW + Pell Grant + Federal Loans	259	0.3%	\$758 (\$0)	\$8,986 (\$8,761)	47.9%
<b>Academically Unprepared Students (N=71,131)</b>					
<b>Aid Package</b>	<b>Number in Cohort</b>	<b>Share of Cohort</b>	<b>Mean EFC (Median EFC)</b>	<b>Mean aid received (Median aid received)</b>	<b>Success Rate</b>
BOGFW only	19,141	22.1%	\$3827 (\$1702)	\$448 (\$442)	28.8%
BOGFW + Pell Grant	41,084	47.4%	\$547 (\$0)	\$3,845 (\$3,740)	27.1%
BOGFW + Pell Grant + Cal Grant	8,270	9.5%	\$196 (\$0)	\$6,392 (\$6,828)	42.3%
BOGFW + Pell Grant + Federal Loans	2,636	3.0%	\$351 (\$0)	\$9,518 (\$8,974)	25.5%

Source: California Community Colleges Chancellor's Office Management Information System.

Notes: The N for this table is restricted to students with an EFC in 2009-10 who received one of the four listed aid packages. Mean and median aid receipt only includes aid from BOGFW, Pell Grants, Cal Grant, and federal loans.

# ASSESSING STUDENTS' FINANCIAL RESOURCES

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A student's financial resources – which we describe as the sum of their EFC and total financial aid received<sup>1</sup> – can help us understand the link between aid receipt and success. Table 5 describes the success rates of academically prepared and unprepared students, grouped by their financial resources in 2009-10. Success rates substantially increased when students had at least \$5,000 in resources in both levels of preparedness. Students with between \$5,000 and \$10,000 in financial resources were the largest group in each level of preparedness. Notably, the success rates for unprepared students with more than \$10,000 in resources fell slightly, though are within one percentage point of students who received between \$5,000 and \$10,000. Although these students had more funding at their disposal, it is possible that they were older, independent students who could not rely on (or may have supported) other family members, which could have prolonged enrollment and completion.

As is described in Table 4, academically prepared students succeeded at much higher rates than students who were underprepared. Across all financial resources categories in Table 5, academically prepared students had success rates at least 1.7 times those of academically unprepared students. For those with no more than \$5,000 in financial resources, success rates were at least twice as high in the academically prepared group. These students were more likely to transfer than their underprepared peers, suggesting they may have used community college as a stepping stone to a four-year college, whereas the underprepared group may have enrolled seeking a certificate or skills.

While one may expect a linear increase in completion rates as students' financial resources increase, this trend does not hold in either level of preparedness; success rates among students with \$5,000 or less in resources had similar success rates, above which point success rates increased. There are several conceivable explanations for this observation, including that anything less than \$5,000 in financial resources per year strained students' abilities to succeed in the California Community College system. Additional explanations are described in greater detail in the **EFC, Financial Aid, and Student Success** section of this paper.

<sup>1</sup> Aid received is not restricted to BOGFW, Pell Grants, Cal Grants, and federal loans; it includes smaller federal, state, institutional, and private programs. Work-study awards are not included.

**TABLE 5: Total Financial Resources of California Community College Students in 2009-10, by Academic Preparedness and Success Type (N=86,722)**

<b>Academically Prepared Students (N=13,939)</b>						
<b>Financial Resources</b>	<b>Number in Cohort</b>	<b>Completed Certificate</b>	<b>Completed Associate</b>	<b>Transferred</b>	<b>Transferred with Credential</b>	<b>Total Success Rate</b>
\$0 - \$1,000	1,686	1.1%	4.0%	30.3%	11.2%	46.5%
\$1,001 - \$2,500	974	1.5%	4.0%	26.5%	13.8%	45.8%
\$2,501 - \$5,000	2,688	1.6%	4.7%	24.1%	13.5%	43.9%
\$5,001 - \$10,000	7,289	1.3%	5.8%	32.0%	26.4%	65.6%
\$10,001 +	1,302	0.9%	6.8%	32.0%	26.7%	66.5%
Total	13,939	1.3%	5.4%	29.9%	21.2%	57.8%
<b>Academically Unprepared Students (N=72,783)</b>						
<b>Financial Resources</b>	<b>Number in Cohort</b>	<b>Completed Certificate</b>	<b>Completed Associate</b>	<b>Transferred</b>	<b>Transferred with Credential</b>	<b>Total Success Rate</b>
\$0 - \$1,000	9,549	2.0%	2.6%	11.8%	4.9%	21.4%
\$1,001 - \$2,500	6,950	2.8%	3.2%	8.2%	4.9%	19.0%
\$2,501 - \$5000	19,095	2.2%	3.8%	9.5%	5.9%	21.5%
\$5,001 - \$10,000	32,996	2.5%	6.5%	14.9%	14.0%	37.9%
\$10,001 +	4,193	3.1%	6.1%	15.4%	12.2%	36.9%
Total	72,783	2.4%	4.9%	12.5%	9.7%	29.5%

Source: California Community Colleges Chancellor's Office Management Information System.

Notes: The N for this table is restricted to students with an EFC in 2009-10. Total financial resources include EFC, fee waivers, grants, scholarships, and loans.

Table 6 also describes students' financial resources but restricts the sample to those with a zero EFC. These students represent nearly one-third of our cohort. A similar discrepancy between success rates for prepared and underprepared students appears in Table 6 as did in Table 5. Students who were academically prepared were at least 1.7 times more likely to succeed compared to their underprepared peers. We also generally observe that students who received more aid succeeded at higher rates, with the highest success rates appearing for students with \$5,000 to \$10,000 in financial resources in both the academically prepared and unprepared groups. Again, this financial resources category represents the largest number of students across both levels of preparation.

We observe that the success rate decreased for students who received more than \$10,000 in aid compared to the group that received between \$5,000 and \$10,000 in aid. Compared to the cohort as a whole, the group of students receiving more than \$10,000 was older: three-quarters of the students in this group were over the age of 25. Their average age also suggests that they, as independent students, were eligible to receive more federal student loan funding than their dependent counterparts, and their higher aid amounts suggest they were borrowing loans. As we describe in Table 3, we observed that students who borrowed have a significantly lower success rate than those who received other aid but did not borrow, likely driven in part by high rates of placement into developmental coursework. Older students may have also lacked access to parental support and may indeed have supported other people, such as parents, a spouse, or children, which strained their ability to focus on coursework and stay enrolled in college.

We also see that in both the academically prepared and unprepared groups, the success rate was higher for students with resources totaling under \$1,000 than it was for students with resources between \$1,000 and \$2,500. This trend is also observed in Table 5 and is more thoroughly discussed in the next section of this paper.

**TABLE 6: Total Financial Resources of California Community College Students with a Zero EFC in 2009-10, by Academic Preparedness and Success Type (N=53,066)**

<b>Academically Prepared Students (N=6,849)</b>						
<b>Financial resources</b>	<b>Number in Cohort</b>	<b>Completed Certificate</b>	<b>Completed Associate</b>	<b>Transferred</b>	<b>Transferred with Credential</b>	<b>Total Success Rate</b>
\$0 - \$1,000	1,497	1.0%	4.0%	29.7%	11.4%	46.2%
\$1,001 - \$2,500	458	1.5%	4.6%	19.2%	10.3%	35.6%
\$2,501 - \$5000	1,421	1.6%	4.2%	20.8%	13.2%	39.8%
\$5,001 - \$10,000	3,352	1.4%	5.8%	29.9%	26.8%	63.9%
\$10,001 +	121	0.0%	6.6%	19.0%	29.8%	55.4%
Total	6,849	1.3%	5.0%	27.1%	19.6%	53.0%
<b>Academically Unprepared Students (N=46,217)</b>						
<b>Financial resources</b>	<b>Number in Cohort</b>	<b>Completed Certificate</b>	<b>Completed Associate</b>	<b>Transferred</b>	<b>Transferred with Credential</b>	<b>Total Success Rate</b>
\$0 - \$1,000	8,822	2.1%	2.6%	11.6%	5.0%	21.3%
\$1,001 - \$2,500	4,892	2.9%	3.1%	6.1%	3.5%	15.6%
\$2,501 - \$5000	12,503	2.3%	3.8%	8.5%	5.4%	20.0%
\$5,001 - \$10,000	18,886	2.8%	6.6%	13.6%	13.8%	36.8%
\$10,001 +	1,114	5.1%	6.0%	8.7%	9.9%	29.7%
Total	46,217	2.6%	4.7%	11.0%	8.7%	26.9%

Source: California Community Colleges Chancellor's Office Management Information System.

# EFC, FINANCIAL AID, AND STUDENT SUCCESS

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Table 7 elaborates on students' financial resources described in Table 6. Here, we present success rates for the 86,722 students with a 2009-10 EFC based on students' own financial strengths (EFCs) and the amount of resources they received from all financial aid programs.<sup>2</sup> Similar to the tables above, we observe that students with greater resources succeeded at higher rates, in line with research showing the role of family financial strength in determining college outcomes as well as research documenting the positive effect of financial aid – particularly need-based grant aid – on student success. In this table, some cell sizes represent small groups of students, more so than the other tables in this report.

Generally, success rates for students within an EFC band increased as aid increased, and success rates for students who received similar amounts of aid also increased as EFC increased. Whereas 30 percent of students with a zero EFC graduated or transferred (shown in Table 1), the rates of zero EFC student success were far greater for those who received at least \$5,000 in financial aid, climbing to 49 percent for students with at least \$7,501 in aid. This underscores the ability of financial aid to boost the success of even the most financially disadvantaged students whose college outcomes are far from certain.

Table 7 also shows relatively high success rates for students with particularly low EFCs (\$2,500 or less) who received little aid (\$1,000 or less). These groups of students have success rates at odds with the trends discussed above. The majority of these students received only a BOGFW, and it is unclear why students in these lower EFC groups did not also receive a federal Pell Grant, for which eligibility is primarily determined by having such an EFC. It is possible that the EFCs reported by colleges for some BOGFW-only students do not reflect a federally calculated EFC, but rather a less robust estimate by the college of the students' financial strength. CCCs allow students to receive a BOGFW without completing the federal aid application required for Pell Grants, Cal Grants, and federal loans, and while students who did not complete a federal aid application should not have an EFC in the data, misreporting is possible. For instance, students whose eligibility for a BOGFW is clear but who cannot begin or finish the federal aid application process may be assigned an EFC of zero by the college whereas a more robust federal determination of EFC would derive a higher amount. Given the unexpectedly low grant aid received by these groups of students, along with their higher than expected success rates, the authors and CCCCO believe misreporting of EFCs for this group to be the most likely explanation for these anomalies.

<sup>2</sup> Aid received is not restricted to BOGFW, Pell Grants, Cal Grants, and federal loans; it includes smaller federal, state, institutional, and private programs. Work-study awards are not included.

**TABLE 7: Success Rates for California Community College Students, by EFC and Total Aid Received in 2009-10**

N=86,722

Success Rate (Student Count)		Total aid received in 2009-10					
		\$0-\$500	\$501-\$1,000	\$1,001-\$2,500	\$2,501-\$5,000	\$5,001-\$7,500	\$7,501 +
<b>Estimated Family Contribution in 2009-10</b>	<b>\$0</b>	20.5% (6,486)	32.3% (3,833)	17.3% (5,350)	22.0% (13,924)	37.1% (16,637)	48.6% (6,836)
	<b>\$1 - \$1,000</b>	27.4% (825)	39.8% (689)	25.7% (795)	29.8% (2,066)	49.7% (2,528)	57.2% (500)
	<b>\$1,001 - \$2,500</b>	28.5% (1,094)	38.3% (859)	24.9% (1,455)	39.1% (3,524)	57.8% (937)	44.6% (168)
	<b>\$2,501 - \$5,000</b>	25.5% (1,455)	38.6% (1,909)	34.3% (2,585)	54.8% (1,913)	53.8% (132)	41.6% (77)
	<b>\$5,001 - \$10,000</b>	31.0% (2,777)	50.0% (3,965)	59.2% (289)	49.8% (213)	43.2% (74)	63.9% (36)
	<b>\$10,001 +</b>	35.2% (1,007)	55.5% (1,249)	55.4% (177)	46.8% (186)	56.1% (123)	49.0% (49)

Source: California Community Colleges Chancellor's Office Management Information System.

Note: Cells contain success rates (percentages) and student counts in parentheses.

# CONCLUSION

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Every year, more than one million students rely on a combination of federal and state aid to enroll in a California Community College. This aid is a lifeline for students whose eventual success in college is far from guaranteed. More aid enables low-income students to afford more of their college costs, leading to higher rates of success. We also identified remedial placement as a significant barrier to student success for lower-income financial aid recipients.

While it is heartening to observe the role that financial support can play in student success, it is worth noting that, with just 40 percent of students graduating or transferring within six years, success rates for all students need improvement. As with community colleges across the nation, the CCCs have increased their focus on student success in recent years. Yet for all of the focus on issues of critical importance to community college student success, very little has been done to document the role of financial aid in supporting community college students through graduation and transfer, with national and multi-state success focused initiatives generally, and inaccurately, taking affordability for granted.

This study is one small step toward better understanding how community college students benefit from state and federal financial aid. Our finding that low-income students who receive more aid succeed at higher rates should serve to encourage others to delve deeper into the causal relationship between aid and student success, particularly as they relate to other factors including academic preparation and enrollment intensity. We encourage researchers to use this study as context for future inquiry, both in California and other states.

# POLICY RECOMMENDATIONS

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Community colleges are the workhorses of higher education, enrolling students of all ages, backgrounds, and academic experiences with goals ranging from learning a skill, to earning a workforce credential, to transferring to a four-year college. Importantly, community colleges attempt to meet students' diverse needs with fewer per-student resources than public or private universities, and the situation is worsening. State investment in public colleges has declined substantially over the last decade, with funding levels totaling nearly \$10 billion less nationally than before the Great Recession.<sup>37</sup> In all, 46 states spent less per pupil in 2016 than in 2008.<sup>38</sup> While increasing tuition and fees to offset state funding cuts is common at public universities, it is not typically an option at community colleges. This leaves colleges with few choices beyond cutting course offerings, reducing services, and turning to lower-cost instructors, all of which hamper students' educational experiences.<sup>39</sup> States must stop this trend and better support the students in their two-year colleges. Additional recommendations for the federal government, states legislatures, and institutions are below.

## Federal Recommendations:

### **1. Prioritize funding for low-income students, especially Pell Grants.**

Federal need-based aid is a vital resource for students, regardless of the institution in which they enroll. More community college students receive Pell Grants than any other sector, and while the maximum Pell Grant covers tuition charges at most community colleges, other college costs remain a barrier to student success. Cutting grant amounts or reducing student eligibility means a less affordable education for the neediest students. Given the importance of grant aid to student success, improving college affordability and completion requires investing in the Pell Grant program and other need-based aid programs.

Congress can also change the way that campus-based federal aid program funds are distributed across colleges. Supplemental Educational Opportunity Grants (SEOG) and Federal Work-Study allocations should be based primarily on student need rather than the institution's historical participation in each program. There are also several ways that the American Opportunity Tax Credit (AOTC) can be strengthened and better targeted to better support community college students, including increasing the refundable amount and studying ways to deliver the benefits at the time students incur expenses, as opposed to when they file taxes, which does not correspond to most academic calendars.

### **2. Encourage state investment in institutions and students.**

More than 70 percent of students enroll in public institutions of higher education, including two-thirds of all Black students and four out of five Hispanic students.<sup>40</sup> Many public colleges – especially community colleges - rely on state funding to provide a high-quality education and appropriate services to students at a reasonable cost. However, during times of economic stagnation, funding for postsecondary education is typically the first on the chopping block. Despite significant economic recovery, average state funding per-student remains 18 percent lower than before the recession.<sup>41</sup> When states disinvest from postsecondary education, public colleges are expected to do more with less, and students ultimately bear the burden of these cuts through increased costs and decreased services.

Congress must explore ways to promote robust state investment in public higher education, prioritizing the enrollment of and affordability for students with financial need. For example, legislation could include strong maintenance of effort provisions to ensure that new federal dollars sent to states do not supplant state and other forms of higher education funding and financial aid.

### **3. Simplify the federal aid application process.**

The U.S. Department of Education has simplified the federal aid application process significantly in recent years, by employing skip-logic in the online application, allowing applicants to import their IRS data into the application, and using the tax data available when students typically apply to college to determine aid eligibility. However, the federal aid application process remains an intimidating prospect for a first-time college student. We recommend further simplifying the application by eliminating burdensome questions that cannot be automatically answered using IRS data and that require students to collect detailed financial information from multiple sources, as well as minimizing requirements for applicants to verify their application information unnecessarily.<sup>42, 43</sup>

### **4. Collect, secure, and analyze student, institutional, and state-level data.**

The U.S. Department of Education's National Center for Education Statistics collects a significant amount of data on postsecondary education through surveys of students and reports submitted by institutions. The Office of Federal Student Aid and Office of Postsecondary Education also house administrative data on institutions and student aid programs. While collective knowledge about our postsecondary education system can be improved by making incremental changes to existing data and making more administrative data publicly available, a federal student unit record data system is the best way to address gaps in our understanding. Yet the Higher Education Opportunity Act of 2008 explicitly banned the creation of such a system. Given bipartisan interest in evidence-based policymaking, Congress should repeal the unit record ban and create a secure student-unit record system that protects student privacy and provides policymakers and researchers the opportunity to better understand the structure of our system and impact of our policies.

## **State Recommendations:**

### **1. Offer robust need-based grant programs.**

At the state level, need-based grant aid can promote enrollment and increase affordability for low-income students. Yet state aid programs often include parameters that disadvantage community college students. These include early application deadlines that have passed by the time community college students enroll in college, age restrictions, awarding grants on a first-come, first-served basis, or prohibiting grants from being spent on the non-tuition costs that compose the vast majority of community college students' expenses. Many state grant aid programs also allocate awards based on academic merit, rather than financial need: in 2014-15, 24 percent of state grant aid dollars were awarded to undergraduate students without regard to their financial circumstances.<sup>44</sup> As a result, only 23 percent of low-income community college students nationally received state grant aid in 2011-12, compared to 39.6 and 40.2 percent at public and nonprofit universities, respectively, and their award sizes were far smaller.<sup>45</sup>

While virtually all state grant programs rely upon a combination of deadlines, age limits, and merit requirements to ration available dollars, these programs should be evaluated carefully to ensure that the lowest-income students in the state, and community college students in particular, are not effectively shut out because of these criteria. It is also important for states to provide students with resources to cover costs beyond tuition and fees, especially when targeting aid toward community college students.

## **2. Strengthen state requirements around developmental education placement.**

Three out of four California community college students in our sample attempted math or English coursework below transfer level at a CCC, signaling that they had been assessed as being unprepared for college-level coursework. The same is true for 81 percent of students who received a financial aid package with a BOGFW, Pell Grant, and Cal Grant, which is particularly surprising given the academic merit standards students must meet to receive a Cal Grant. While college readiness is a real problem throughout higher education, the placement of meritorious Cal Grant students into developmental coursework suggests a broader disconnect and underscores the importance of assessment policy. Research suggests that many students placed into developmental coursework could succeed in college-level courses, rendering the developmental coursework unnecessary.<sup>46</sup> This is particularly troubling as students who take developmental coursework have lower odds of success, and those who do succeed take more time to graduate. These are particularly problematic issues for financial aid recipients, given strict limits on the number of years students can receive federal Pell Grants or state Cal Grants.

Within California, developmental placement policies have undergone reforms in recent years, but more remains to be done. For example, the Common Assessment Initiative (CAI) spurred the creation of a system-wide standardized placement test, CCCAssess, but did not implement uniform placement policies, reducing the efficacy of having a standardized exam. The state should consider how to strengthen assessment policies and increase uniformity across the system including investigating the efficacy of CCCAssess scores and placements. California, as well as other states, should consider mandating that campuses use multiple measures, such as high school transcripts, grades, and test scores, to determine students' placement into developmental coursework.<sup>47</sup>

## **3. Support community colleges in establishing clear and coherent pathways to student completion.**

Research suggests that students are more likely to graduate on time if they identify a major early in their enrollment, have a clear outline of the courses required for completion, and are provided consistent ongoing guidance and support throughout their program of study.<sup>48</sup> As previously noted, graduating on time is particularly important for financial aid recipients whom have limits on the number of years of grant awards. Community colleges can facilitate on-time completion by providing students with degree maps that clearly explain progressions through their program of study, especially for students placed into remedial education. To make transfer more straightforward for students, states can develop articulation agreements between two-year and four-year institutions, which can smooth pathways and promote faster completion of a bachelor's degree for students who transfer from a two-year college.

California has made important strides in improving student outcomes and increasing completions at community colleges through providing student intake and guidance services, requiring colleges to focus on closing achievement gaps, improving basic skills instruction and placements, providing enhanced student services for remedial students, and streamlining and simplifying the transfer process. Despite these state-level requirements and financial investments, many colleges have struggled to use funding strategically and to coordinate programs and services, meaning the impact on student success has been limited.<sup>49</sup>

Strategic, one-time state investments in smoothing students' pathways to transfer and completion, combined with guidance and technical assistance, would support community colleges in California and beyond in creating a coherent framework for integrating critical success-focused programs and bringing existing pathways to scale.

## Institutional Recommendations:

### **1. Support students in covering costs beyond tuition and fees.**

Although community colleges often charge low tuition and fees compared to other sectors, the living costs faced by community college students are comparable to those of students at four-year colleges.<sup>50</sup> When students' living costs are not covered by financial aid, they may opt to work more or to take fewer courses, delaying completion and ultimately increasing the likelihood of dropping out.

One way colleges can help students access more funding is by participating in the federal Direct Loan program. When students need access to funding yet lack the ability to borrow, they may turn to private loans or credit cards, which are costlier and riskier than federal student loans. Students who cannot borrow may also opt to work more, prolonging their enrollment and attainment and increasing the likelihood of dropping out. While community college leaders are understandably concerned about what happens to both their schools and students when borrowers cannot repay their federal loan debt, targeted outreach to and support of student borrowers can help to ensure that students stay on track to graduate - vastly decreasing their risk of student loan default - and colleges stay on sure footing.<sup>51</sup>

### **2. Encourage students to apply for federal and state aid.**

Many community college students cannot afford the total cost of college out of pocket. Federal and state aid can help bring college costs within reach and help students complete, but many students who could benefit from aid do not apply for it. Colleges can help students by promoting the importance of financial aid, shining light on how aid can help students reduce work hours to focus more on school, supporting students through the application process, and reminding students to apply each year. While increasing aid awareness should be seen as a campus-wide priority, financial aid administrators must be particularly proactive in these efforts, and college leaders should ensure that they have adequate staffing and technology resources to engage in this outreach.

### **3. Encourage students to take another class.**

Nationally, 64 percent of community college students enroll in college exclusively part-time.<sup>52</sup> Students in this study who enrolled exclusively part time had success rates that were less than half that of their peers who enrolled full time for at least some terms. While many students may not be able to enroll full time due to college costs or family responsibilities, it is clear that increased enrollment intensity increases student success and decreases time to completion. Where possible, institutions should encourage students to increase their enrollment intensity. Half of all California community college students enroll in fewer than nine credits per term. Full-time enrollment (12 credits or more) may not be feasible for these students, but taking one more course might be, and shifting from six to nine credits per term will still reduce students' time to degree by a third. To support these efforts, colleges can offer more flexible course schedules that work around students' schedules, participate in the loan program to provide better access to funding for students who may work to pay their cost of attendance, provide low- or no-cost child care to students, or offer credit for workplace-based experiences in acknowledgement that students gain skills and knowledge outside the classroom. Such efforts may help more students and be more effective at reducing time to degree than attempting to incentivize or require full-time enrollment.

### **4. Carefully assess students' level of preparedness via multiple measures.**

Given that placement into developmental coursework has the potential to serve as a substantial barrier to student success, college leaders must ensure current policies do not place students into developmental coursework unnecessarily, causing undue hardship for their most vulnerable students. Specifically, we strongly encourage colleges to use multiple measures – including high school transcripts and test scores - to assess students in order to reduce the likelihood of placing students into developmental coursework unnecessarily. Colleges can also ensure that students receive targeted support and counseling they need after students are placed into developmental coursework, so they understand their progression out of remediation into and through a program of study.

# DATA APPENDIX

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## Data Agreements with CCCCCO

ACCT and TICAS received data from CCCCCO in August 2016 through a secured file transfer protocol (sFTP) site and analyzed data on non-networked computers to preserve data security. Data were delivered in the form of nine separate data sets, merged by ACCT and TICAS staff using de-identified unique student identifiers.

## CCCCCO Data Sets Used by ACCT and TICAS

Cohort Data File	Individual, college, and cohort year identifiers and outcomes data
EOPS Data Elements	Eligibility data on students participating in Extended Opportunity Programs and Services
Program Awards Data Elements	Subject area, program level, and date of award earned
Student Characteristics Data Elements	Race, age, family status, dependency status, credits earned, education level, residency, GPA, CalWORKS participation, academic standing, and day/evening student
Student Term Derived Data Elements	Academic disadvantage, disability, and ESL needs/course-taking
Student Financial Aid Data Elements (2 data sets)	One data set covering aid application data; a second data set including aid types and amounts
Special Populations Data Elements	Military, foster care, and first generation status
Student Success Data Elements	Student major, orientation status, educational goals, use of support services

## Cohort Definition

CCCCCO Student Success Scorecard data analyzed by ACCT and TICAS follow the 2009-10 cohort of students at California Community Colleges through the 2014-15 year. To be included in a CCCCCO cohort, students must be a first-time student, hold a valid Social Security Number, and establish behavioral intent to earn an award, credential, or transfer. The office defines behavioral intent as attempting at least one math or English class over the first three years of study and completing a minimum of six credit hours over the same time frame.

## Student Characteristics Over Time

In our analyses of student characteristics and success rates, we use students' age group, dependency status, race, and EFC in 2009-10, though data in subsequent years may be different in each of these categories. Although we received data on other student characteristics, such as foster care status, military status, first generation status, and status as a student with dependents, we deemed this information to be either unreliable or the group too small to be presented in Table 1. We did not receive data on student gender.

## Limitations

Although we received data on student budgets, the estimates proved to be unreliable. Cost of attendance includes the sticker price of tuition and fees, as well as living expenses including room and board, transportation, books, and other expenses. Researchers often subtract student resources - including EFC and financial aid - from cost of attendance to determine unmet need. Without consistent cost of attendance data, we were unable to calculate unmet need and instead opted to use financial resources, as defined by expected family contribution, types and amounts of financial aid, as a measure of students' ability to pay for college.

## Data Element Definitions

**Academic preparation:** Our Cohort Data File includes an indicator variable identifying students as prepared or unprepared for college-level coursework. This indicator is derived from data on student courses and sorts students based on the lowest level of math or English course attempted. This definition of academic preparation is based on the CCCCO's recommendation during the preparation of our formal data request.

**Age group:** The Student Characteristics Data Elements file contains a variable designating student age at term. Student age at term places them into one of four age groups each term.

**Awards:** Students in our data were recorded as receiving 9,570 awards with an amount of \$0, each a BOG Fee Waiver. The CCCCO indicates that students who were initially eligible for a fee waiver but dropped all courses within the institutional refund period will show a fee waiver amount of \$0. Thus, we exclude all \$0 awards from our analyses. While we received financial aid data from the 2015-16 year, we excluded these data from our analyses.

**BOG Fee Waivers:** We include the three main types of BOG Fee Waivers (BOGFW), as well as special case fee waivers. BOG A is available to those receiving TANF, SSI, or other general assistance. BOG B is awarded to those who earn below the annual income threshold. BOG C is available for students who qualify for federal or state need-based aid. A student may also receive a Special Fee Waiver if she is the dependent child of deceased law enforcement/fire suppression personnel, deceased or disabled veteran, or the dependent spouse or child of a deceased or disabled California National Guard member. While fee waivers are available to recipients of the Congressional Medal of Honor and their dependent children, as well as the spouse and children of individuals who died in the terrorist attacks of September 11, 2001. However, no students in our sample received waivers under those eligibility criteria.

**Cal Grant:** Three types of Cal Grants exist, but only two are available to students at community colleges. Cal Grant B, received by the clear majority of students in our sample accessing Cal Grants, provides aid to all eligible low-income students at a variety of public and private 2- and 4- year institutions. Cal Grant C offers aid to students pursuing career and technical education and is a competitive grant. While Cal Grant B requires a 2.0 GPA to be eligible, Cal Grant C has no such merit component.

**Dependency status:** Dependency status data from the Student Financial Aid Data Elements are missing for 65.44 percent (120,879 students) of our sample and 30.62 percent (26,561 students) of those with an EFC in 2009-10. Students report dependency status on their FAFSA for the year, meaning missing dependency status data for students without an EFC is to be expected. Analyses should be interpreted with caution.

**Enrollment intensity:** Using the local credits attempted variable in the Student Characteristics Data Elements file, we created a variable to flag all terms with 12 or more credits attempted as full-time. From there, we created a variable indicating whether all terms associated with a unique student id were flagged as full-time or whether no terms were flagged as full-time. Students whose credits per term were neither exclusively flagged as part-time or as full-time were coded as having mixed enrollment intensity.

**Expected Family Contribution (EFC):** We assume that missing EFC values indicate that a student did not apply for financial aid.

**Federal Loans:** We include all federal student loan programs in our analysis: Perkins Loans, Stafford Subsidized Loans, Stafford Unsubsidized Loans, Direct Subsidized Loans, Direct Unsubsidized Loans, and Parent PLUS Loans.

**Mean/Median Age:** Values represent the mean or median age of a student for each year, derived from the student age at term variable in the Student Characteristics Data Elements file.

**Pell Grant:** To receive a Pell Grant, students must fill out the FAFSA and have an EFC below the maximum threshold, based on cost of attendance and enrollment intensity.

**Race:** Our race categories correspond with those used in the CCCC Student Success Scorecard.

**Remedial flag:** Our remedial flag variable is derived from the Student EOPS Eligibility Factor variable in the Student EOPS Data Elements file. Students eligible for the EOPS program due to previous remedial education or not being prepared for college-level English or math are flagged as needing remediation.

**Success:** We define success as completing a certificate or associate’s degree, transferring to any four-year institution, or earning a credential and transferring within six years of beginning study at a California community college. Using award data from the Student Program Awards Data Elements file, we created a variable indicating the type of success a student achieved and coded students who completed certificate or associate programs by type of credential earned. We separately coded the success of students indicated to have transferred per the transfer flag variable in the Cohort Data file. After merging data files, we flagged students who had both completed a credential and transferred. Using this measure of success derived from transfer and completion data, our success rates necessarily differ from those on the CCCC Student Success Scorecard. The chart below details differences in success rates by various measures used by the Chancellor’s office and our definition used in this report.

### Comparison of Student Success Measures and Sources

Type of Success Measure	Variable Source	Definition	Success Rate
Transfer-Prepared	CCCCO	Completed at least 60 credits eligible for transfer to UC or CSU with a minimum 2.0 GPA	30.7%
Transfer	CCCCO	Transferred to a four-year institution within six years	33.9%
Persistence	CCCCO	Enrolled in three consecutive semesters	73.4%
Degree/Transfer Outcomes	CCCCO	Earned an award, credential, transferred, or was transfer-prepared	46.6%
Success	ACCT/TICAS	Earned a credential, transferred, or both	40.2%

Source: California Community College Chancellor’s Office Management Information System.

Note: Success rates taken from the CCCC Student Success Scorecard include non-California residents. While ACCT and TICAS exclude non-California residents from our sample used in the report, success rates reported in this chart include non-California residents to remain consistent with CCCC Scorecard figures in this table.

Success rates are from ACCT/TICAS staff analysis of CCCC Scorecard Data.

**Total Resources:** Our analyses of total student resources combine aid received in 2009-10 from all fee waivers, grants, scholarships, and loans, regardless of source.

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1101 17th Street NW | Suite 300 | Washington, D.C. 20036  
202.775.4667 | [www.acct.org](http://www.acct.org)

the institute for  
college  
access & success

405 14th Street | Suite 1100 | Oakland, CA 94612  
510.318.7900 | [www.ticas.org](http://www.ticas.org)