Improving the Pathway to the BA

An Examination of the Associate Degree for Transfer

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Author Biographies and Acknowledgements

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Executive Summary

Ten years after major policy reform to improve transfer pathways between California Community Colleges and the state's four-year universities, our analysis shows positive gains for students and identifies areas where greater gains could be made. The Associate Degree for Transfer (ADT) framework gives many students a more seamless pathway between CCCs and CSUs by establishing much-needed statewide uniformity of requirements for degree and transfer. ADTs define a set of courses that are similar at all CCCs and are accepted as lower division course work at all CSU campuses that offer the same degree. The goal of this reform was twofold: to increase associate degree receipt and improve efficiency in baccalaureate degree completion. Results to date suggest the reform is by and large working as designed. We found:

Significant expansion:

- ADT majors offered grew fourfold from nine fields of study to nearly 40 over an eight-year period.
- Campus ADT offerings grew from an average of one in 2011 to 20 by 2018.
- Over the same period, the number of ADTs earned grew both overall from 800 to 60,000 granted and across all student subgroups.
- Latinx students are much more likely to transfer to a CSU with an ADT (nearly 50% in recent years) compared to other racial/ethnic groups.

Greater efficiency on the path to the BA/BS at the California State University across all groups:

- 42% of CCC transfers to the CSU enter with an ADT
- Within three years of transfer to CSU, ADT earners achieve a BA/BS at a higher rate (70%) than AA/AS earners (62%) or those who transferred with no degree (59%).
- ADT earners spend fewer terms at CSU an average of 4.5 semesters compared to those with AA/AS degrees (4.9 semesters) and those who transfer with no degree (5 semesters).

Inequity of opportunity:

- Access to the ADT remains uneven by campus and by field of study, and many students face limited offerings depending on the community college campus they attend.
- Community colleges that offer fewer ADTs have larger Black and Asian populations than the statewide CCC population; campuses that offer more ADTs have larger Latinx populations. These differences have implications for which students can earn ADTs.
- Students face barriers in the usability of the ADT across fields and campuses at the CSU.

As with any reform, there is room for improvement, including:

- Increasing student awareness of the benefits. Many students with ADTs don't indicate they have earned them upon applying to CSU, potentially foregoing some efficiency advantages.
- Attending to inequities, both by campus and subject matter, so that more students have broader opportunity to earn ADTs in their region.
- Growing the number of subject offerings in areas, such as STEM, where CCC-CSU coordination has been slower.
- Expanding the ADT to the University of California and private universities.
- Establishing an integrated higher education data structure for a more comprehensive understanding of transfer pathways.

Background and Context

California's three-segment system of public higher education, each with its own mission and purview, is designed to serve the varied and dynamic needs of California citizens. This structure has contributed to California's high rates of college enrollment, but it has also resulted in a number of challenges for the many BA-bound students that begin their studies at a community college. California Community Colleges (CCCs) provide common lower-division coursework to prepare students for transfer to a California State University (CSU) or University of California (UC) campus. Prior to 2011, a cumbersome system of unique bilateral articulation agreements between individual CCCs and CSUs specific to each major produced a difficult transfer process for many students. This system resulted in numerous undesirable outcomes:

many students never transferred; many students who did transfer did so without first earning an associate degree; and most successful transfer students accumulated far more credits at their CCC than necessary and then ended up repeating numerous lower division courses in their major at a CSU.

Nearly a decade ago, California Senate Bill 1440 established a statewide framework for a more seamless pathway between the CCCs and CSUs through the Associate Degree for Transfer (ADT) program. In this report we evaluate the availability of this important pathway across California's Community Colleges over time. First, we place the ADT within the larger community college transfer context. Next, we explore differences in who receives an ADT, as compared to completing other transfer pathways, by investigating both individual and campus-level differences in ADT receipt. We present most results disaggregated by race/ethnicity, given the strong goals of California's public higher education system to address pernicious inequities that exist in educational pathways and outcomes. We then explore whether the ADT has led to improvements in BA1 outcomes for students who transfer to CSU by exploring who completes a BA and students' time-to-degree. We also offer some observations about the CCC transfer pathway more generally (i.e., to UC and other four-year institutions). Finally, we close with a policy discussion about the importance of strengthening the promise of the ADT in our current context, pulling from the broader literature on postsecondary transfer alignment and degree completion.

GLOSSARY OF TERMS

Associate Degree for Transfer (ADT)

A type of community college associate degree that guarantees the holder admission to a California State University with junior standing. An ADT is earned by completing 60 semester units of CSU-required general education courses and the specified lower division courses required for a chosen major. ADT holders cannot be required to repeat courses at the CSU that are similar to those they have already completed in earning an ADT at a CCC.

Articulation Agreement

An official arrangement between two colleges, often a community college and a four-year university, that ensures that a specific course completed by students at one institution will be accepted for credit upon transfer to another.

Transfer Model Curricula

A consistent, statewide framework for the major component (i.e. biology or economics) of an ADT, developed jointly by CCC and CSU faculty who teach in each major, that details the classes that will be included in the ADT.

¹ Throughout this report we use the term BA as an umbrella that includes the BS degree.

Community Colleges and the Transfer Function

The transfer function has always been an essential component of the mission of community colleges; in the current environment, it has become even more important. Financial and capacity constraints have limited access to many four-year universities, making community colleges the primary entry point into higher education for many students. Moreover, many BA-bound students prefer (or require) the openaccess, increased flexibility, and lower cost that community colleges provide.² As such, transfer between two-year and four-year colleges has become a critical pathway to a baccalaureate degree. In California, the role of the community colleges is particularly important, as CSU and UC restrict community college upper division transfers to only those students who completed the equivalent of two years of full-time coursework at the CCC.

The complexity of the transfer process has been well documented in prior literature. The administrative costs of transferring to a four-year college are prohibitive for many community college students. Students face a number of structural, financial, and informational barriers, including a lack of coherent coordination between their community colleges and four-year institutions and limited information about which courses transfer for credit and which do not. A key obstacle to transfer is the lack of systemwide articulation agreements between the two-year and four-year segments of higher education. For decades, hundreds of institution-to-institution and subject-by-subject or even course-by-course agreements have governed which courses from the community college count towards BA requirements.

Even when students do successfully transfer to a four-year institution, many do so without an associate degree and often with a lack of certainty over whether their courses will "count." Nationally, less than one-third of community college students earn an associate degree before they transfer. Everal studies have documented the significant credit loss community college transfer students face when they transfer to four-year institutions. Data from nationally representative samples suggest that only 58% of community college transfer students were able to transfer the majority of their credits to the receiving four-year institution, and that this has significant consequences on students' likelihood of graduation. Studies have also found that students of color are more likely to experience credit loss as compared to White students. Moreover, prior work has demonstrated that the magnitude of the credit loss varied across both the sending and receiving institutions. Finally, students may be able to transfer credits, but these do not necessarily transfer to degree program requirements, and can significantly delay bachelor's completion.

Articulation and Alignment: What Do We Know from Prior Work?

State articulation policies aim to facilitate smooth transitions for students transferring from community colleges to public four-year colleges. These policies have two main goals: to ensure access to BA-granting institutions for community college students and to improve efficiency in BA attainment by reducing credit loss between the two sectors. Statewide policies, as compared to individual agreements between pairs of campuses, aim to simplify the transfer process by removing the ability for individual BA-granting campuses within a state to establish their own determinations of credit applicability and major-ready status.

² In fall 2018, 66,803 first-time students entered the CSU and 46,684 entered at UC. At the CCC, it is hard to quantify which students are BA-seeking. A liberal definition would be any student who expresses transfer intent. Using a relatively strict definition (traditional age, full-time enrollment in first term, indicated intent to transfer), we estimate that 69,913 BA-intending students entered the CCC in fall 2018.

The scope of these policies varies across states. For example, some policies cover all campuses in a state, while others apply only to community colleges, and some only to a subset of colleges in the state. Some state policies provide detailed guides (such as California's ADTs), while others provide only a general structure.^x

The specific focus of policies also varies across states. Some states have systemwide common general education requirements; by completing a "common core" (such as California's IGETC and CSU GE-Breadth), students are exempt from needing to take any additional general education courses upon transfer. Some state policies, such as California's ADTs, specify a set of courses that fulfill the lower-division coursework in a specific major across all four-year campuses within a system. In other states and systems, policies may ensure that lower-division courses transfer, but receiving institutions within the state still have the power to determine whether students are "major-ready." Some state policies ensure common course numbering across community colleges and four-year colleges; California does not.

Studies from other states consistently demonstrate that students who transfer with an associate degree (or the equivalent) are more likely to complete their bachelor's degree.xii

Yet, prior studies that have evaluated the impact of specific state articulation policies have found mixed results. A national study of articulation policies found positive effects of such policies on BA degree attainment, though not necessarily on likelihood on transfer or reduced time-to-degree. A recent study of North Carolina's revised articulation policy was found to positively increase bachelor's degree receipt by 3-5 percent, but found no effects on likelihood of transfer or time-to-degree. In evaluating Ohio's transfer articulation policy, researchers found that students who completed the transfer module (i.e., a prescribed set of courses) are more likely to transfer, to earn an associate degree, and to transfer to a four-year university, when compared to students who did not complete the module; however, this did not translate to a shorter time-to-degree for the BA. This may not be surprising given the goals of such agreements are to reduce credit loss and not necessarily to expedite transfer in its own right.

The Associate Degree for Transfer

The Student Transfer Achievement Reform Act, (Senate Bill 1440), which became law September 29, 2010, stipulates that a student may earn a designated "Associate Degree for Transfer," granting admission for transfer with junior status into a California State University (and priority admission to their local CSU campus) when two requirements are met: completion of a specific set of lower division major-required courses plus CSU-transferrable general education courses (60 semester units or 90 quarter units) and a minimum grade point average of 2.0. Mandated implementation of Senate Bill 1440 began in the fall of the 2011-12 academic year.

In enacting Senate Bill 1440, the State Legislature affirmed the following: (1) the need to increase the state's supply of college graduates; (2) the role of the California Community Colleges in preparing students to transfer to a four-year university as dictated by the 1960 Master Plan for Higher Education; and (3) acknowledgment that the current system often fails to reward community college students who complete transfer requirements with an associate degree and with a more direct route to the state's four-year institutions.

The aim of Senate Bill 1440 was to establish statewide consistency in order to simplify transfer from any community college to any CSU campus. To meet this goal, a statewide framework for the major component of a community college degree was developed jointly by the faculty who teach at community colleges and at CSU, for each major. These Transfer Model Curricula (TMCs) are intended to identify common statewide courses at the CCC level. A primary tenet underlying the design of these degrees is that CSU campuses cannot require students who earn ADTs to repeat courses that are similar to those already taken at the community college; students who earn ADTs should be able to complete the baccalaureate degree within 60 units once at CSU. Though the provisions of the legislation are relatively straightforward on paper, the actual implementation was much less simple. The faculty in some individual majors (or concentrations within majors) at various CSU campuses consider the ADT to be not well-enough aligned with the major for acceptance. We provide some specific examples later in this paper.

ADTs differ from local AAs in that within majors their curricula are common across all CCCs (i.e., the classes taken to fulfill the requirements for an ADT in Psychology should be the same across all CCCs), they fulfill the lower-division requirements at all CSUs that accept that ADT (while AA requirements in a given field do not always overlap entirely with lower-division requirements at the CSU), and they confer some CSU admissions advantages to students who earn them. When they started to offer ADTs in a given field, some CCCs stopped offering their local AA in that field. Other CCCs continue to offer both local AAs and ADTs in the same field. We address some implications of that later in the report.

In prior work we explored the early effects of the ADT on California's Community College students. Specifically, we demonstrated that the introduction of the ADT in particular fields led to a significant increase in the number of students earning associate degrees in those fields and to higher transfer rates from CCCs that offered more ADTs.** We also documented the growth in the ADT across the California Community College system. In this report we extend our prior investigations, exploring more recent data and providing a more detailed analysis of transfer and BA outcomes. There have been several reports in recent years that have also explored the ADT more closely, in particular The RP Group's *Through the Gate** report and The Campaign for College Opportunity's *10 Years After Historic Transfer Reform.* Our analyses and those presented in each of those reports may vary a bit by both sample construction and specific measures, but the overall trends we find are largely the same; we note when findings diverge in any meaningful way.

Investigating the ADT Transfer Pathway: Trends and Outcomes

Results for this section are drawn from a rich dataset comprised of administrative records shared with the researchers through a longstanding partnership with the CCC Chancellor's Office (CCCCO) and the California State University (CSU). The data include the census of all California community college students enrolled from 1992-2019 across the state's community college campuses. We investigate detailed information on units earned, degrees earned, student transfers, and student and campus characteristics. Data on student transfers are collected by the CCCCO from the National Student Clearinghouse, University of California, and California State University systems.

Availability of ADTs

Since they were first offered in 2011, ADTs have been introduced in an increasing number of fields. Before a campus can offer an ADT in a given field to students, a model curriculum in that field must be developed at the state level and the campus must develop its own course requirements to match the state guidelines. There has been a steady increase in the number of fields in which ADTs are offered (from fewer than 10 in 2011 to almost 40 in 2018, shown in Figure 1).

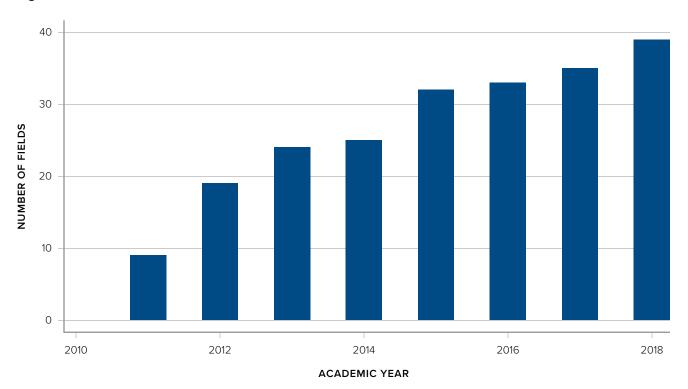


Figure 1. Total Number of Fields in Which ADTs are Offered

Source: CCCCO administrative data.

Note: We consider a campus to have offered an ADT in a given subject in a given year if at least one student earned an ADT that year. Thus, our counts might underestimate the actual on-the-books availability of ADTs, but capture programs that were successfully graduating students. This figure shows approximate counts by year. There are a few nuances in the way data are collected that complicate the creation of this statistic. First, different CCCs use different TOP codes for the same ADT. For example, there are three TOP codes that are all considered an ADT in Elementary Teacher Education. Second, some ADTs encompass multiple TOP codes (e.g. the Social Justice ADT has multiple specific focuses – gender, race/ethnicity, etc.) We collapse the TOP codes to match the categories presented on the site: ADegreeWithAGuarantee.com.

In Table 1, we show the number of campuses that offered ADTs in each field and the number of students who earned ADTs in each field for four years. Table 1 illustrates two key points: (1) the year in which ADTs were first introduced varies across fields (e.g. ADTs were first offered in Biology four years after they were first offered in Psychology and Mathematics), and (2) growth in offering was quick; 28 campuses offered ADTs in Business Administration in 2013 but by 2015, 91 campuses offered the same degree.

Table 1. Number of Campuses at Which Each ADT is Offered and Number of Students Who Earned Each ADT, 2013, 2015, 2017, 2019

	2013		20	15	20	17	2019	
DEGREE	# Camp.	# Deg.						
Administration of Justice	30	444	73	1,824	91	3,639	97	4,950
Agriculture Animal Science					1	12	6	31
Agriculture Business					5	35	14	133
Agriculture Plant Sciences					2	6	11	90
Anthropology	1	1	37	177	72	486	83	729
Art History	7	28	56	290	90	788	96	1,404
Biology					35	197	68	849
Business Administration	28	872	91	5,982	110	10,462	111	13,487
Chemistry					10	27	21	126
Child & Adolescent Development/Education	21	65	61	525	94	1,279	114	2,395
Communication Studies	68	668	87	2,018	100	3,096	102	4,003
Computer Science			10	33	22	136	33	374
Economics			11	55	51	945	73	1,867
English	20	108	66	561	102	1,279	104	1,744
Film, Television, and Electronic Media					5	71	28	288
Studio Arts	8	14	34	105	52	207	68	343
Geography			23	61	42	164	51	184
Geology	2	2	10	13	25	44	33	58
History	20	142	72	645	92	1,234	98	1,759
Hospitality Management							1	2
Global Studies							5	18
Journalism	1	5	24	98	44	290	50	405
Kinesiology	13	62	57	482	79	1,173	92	1,745
Law, Public Policy & Society							4	5
Mathematics	58	315	93	1,032	107	1,750	108	2,622
Music	1	2	18	52	40	137	61	257
Nutrition & Dietetics					5	17	33	157
Philosophy			23	62	49	186	65	297
Physics	12	32	51	350	71	675	78	1,136
Political Science	12	68	57	508	84	1,183	91	1,624
Psychology	54	1,672	84	3,953	105	6,420	108	8,996
Public Health Science							17	105
Social Justice Studies							15	63
Sociology	58	705	78	1,740	99	3,144	104	4,686
Spanish			22	40	63	323	72	551
Theatre Arts	8	12	37	101	53	220	68	401

Source: CCCCO administrative data.

Availability by Campus

Variation in the fields in which campuses offer degrees, as well as differences in the speed with which campuses developed course plans to match the state's Transfer Model Curricula has resulted in great variation in the number of ADTs offered on each campus. This variation is illustrated in Figure 2. In 2011, each college campus offered, on average, about one ADT; by 2018 that number was closer to 20 (shown by the orange triangles in Figure 2). However, this average masks considerable variability across the system. In 2017-2018, some CCCs offered 30 ADTs while others offered very few.

The variability is partly, though not entirely, explained by the size of the campus (in Figure 2, the size of the bubbles represent the total number of degrees awarded each year). While larger campuses tend to offer more ADTs, some very large campuses (those that grant thousands of associate degrees each year) offered fewer than 15 ADTs in 2017-2018.

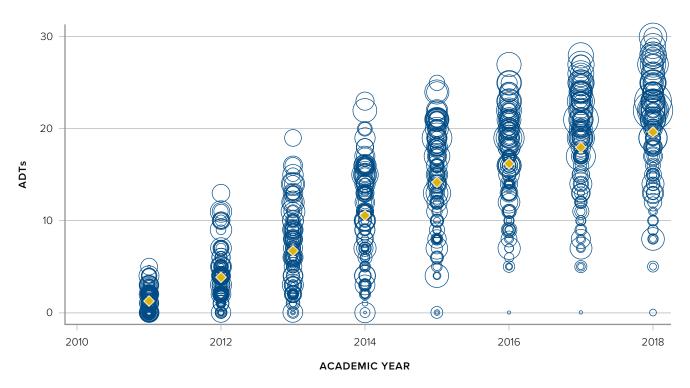


Figure 2. Number of ADTs Offered

Each Circle Represents One CCC; Circles Sized by Total Associates Granted

Represents Average Number of ADTs Offered

Source: CCCCO administrative data.

Of course, campus size is not the only determinant of the number of ADTs a campus offers in a given year. For example, some large campuses might not offer as many ADTs as expected because they have large Career Technical Education programs. Indeed, variability in the number of ADTs offered might be partially explained by differences in transfer rates across campuses. We investigate this in Figure 3 below; campuses that have higher transfer rates tend to offer more ADTs, but this relationship is not particularly strong. As Figure 3 shows, some colleges with very high transfer rates offer relatively few ADTs, and some campuses with relatively low transfer rates offer many ADTs.

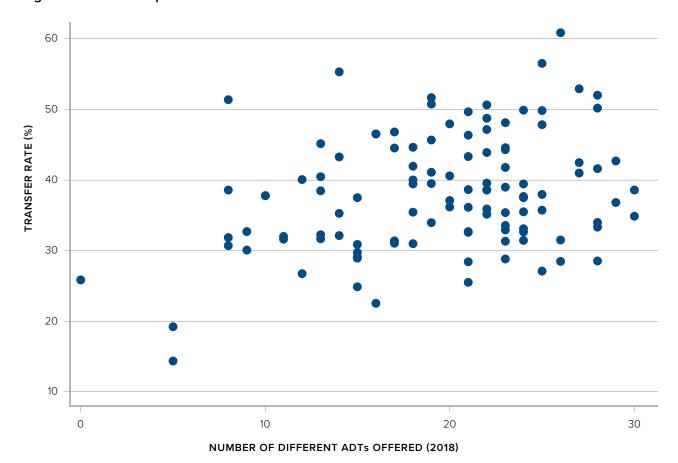


Figure 3. Relationship Between ADTs Offered and Transfer Rate

Source: CCCCO Datamart.

Note: Each dot in this figure represents a single CCC campus. The transfer rate is calculated by tracking all first-time students in CCCs six years after their initial enrollment. Students who exhibit "behavioral intent to transfer" are placed into the Transfer Velocity Cohort. The transfer rate computed is the number of students who transferred within six years divided by the total number of students in the cohort, for the 2012-2013 Transfer Velocity Cohort.

Students have differential access to ADTs depending on the community college they attend. These patterns in access are correlated with, but not entirely explained by, the size of the campus and the transfer focus of the student body.

Such differential access by CCC campus is an important consideration given the sorting of students, for example, by race/ethnicity and socioeconomic status, across campuses. Table 2 presents the overall demographic characteristics of students attending CCCs, the demographic characteristics of CCCs that offer relatively few ADTs (which we define as fewer than 15 ADTs, 24 campuses) and the demographic characteristics of CCCs that offer many ADTs (which we define as more than 25 ADTs, 17 campuses). Campuses that offer fewer ADTs have larger Black and Asian populations (as compared to their representation in CCC enrollment overall), while campuses that offer more ADTs have larger Latinx populations. These differences have implications for which students earn ADTs, which we discuss in the next section.

Table 2. 2018-2019 Demographic Characteristics of Students Attending All CCCs, CCCs Offering Few ADTs, and CCCs Offering Many ADTs

STUDENT CHARACTERISTICS	ALL CCCs	CCCs OFFERING <15 ADTs	CCCs OFFERING >25 ADTs
Female	54.44%	53.93%	53.70%
African-American/Black	6.06%	9.76%	3.91%
American Indian/Alaskan Native	0.46%	0.49%	0.71%
Asian	11.61%	14.81%	9.51%
Filipino	3.01%	2.63%	2.17%
Latinx	47.85%	44.45%	52.17%
Multi-Ethnicity	4.15%	4.29%	3.77%
Pacific Islander	0.41%	0.46%	0.34%
White Non-Hispanic	26.45%	23.12%	27.42%
California College Promise Grant (CCPG)	48%	49.77%	48.56%
Number of Campuses	114	24	17

Source: CCCCO administrative data.

Note: These racial categories are those that the CCCCO uses in all official data collection.

ADT Receipt

ADTs represent a growing proportion of total awards granted by California Community Colleges. Figure 4 presents the total number of AA/AS degrees and ADTs granted in each year. In 2018-2019, the CCC system granted almost 130,000 AA/ASs and almost 60,000 ADTs. In contrast, in 2010-2011, the first year that students could earn ADTs, fewer than 800 ADTs were granted. It is important to note that this is number of degrees earned, not number of unique students earning each degree. But for ADT earners each year, the majority of students only earn one ADT.³

 $^{^{3}}$ In 2018-19, 8% of students earned multiple ADTs in that year. In previous years, this rate ranged from 1-6%.

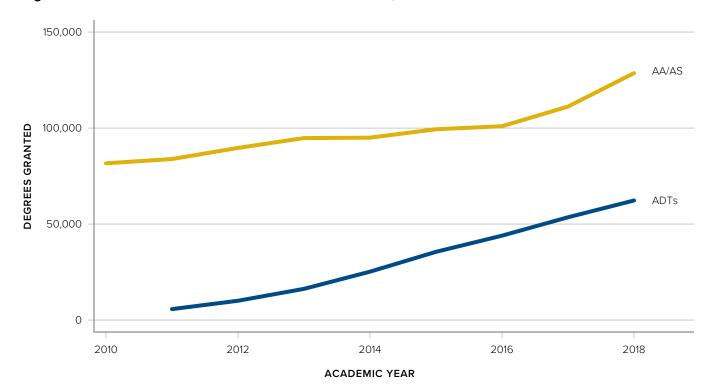


Figure 4. Number of AA/AS and ADTs Granted Statewide, 2010-2018

Source: CCCCO administrative data.

Table 3 presents summary statistics describing student characteristics for the cohort of students who earned an AA/AS or ADT degree or who had completed at least 60 units in the 2017-18 academic year. Each column represents a different population of students by community college degree attainment. Note that about a third of students who earn an ADT also earn at least one AA or AS (column 4 in Table 3).

There are significant demographic differences between these groups of students. Female students are overrepresented among degree recipients and are particularly likely to earn an AA/AS, as compared to an ADT. Latinx students are more likely than their peers from other racial/ethnic groups to earn a degree, particularly an ADT. Asian students and White students are more likely than other groups to *not* earn a degree. Students who earn ADTs have higher CCC GPAs, and are younger, on average, than students who earn AAs and those who earn 60+ units without earning an award.

Table 3. Characteristics of 2017-18 CCC Students with 60+ Units, by Degree Type

STUDENT CHARACTERISTICS	(1) NO CCC DEGREE MEAN	(2) AA/AS ONLY MEAN	(3) ADT ONLY MEAN	(4) AA/AS + ADT MEAN
Female	51%	62%	56%	60%
White	26%	29%	25%	24%
Black	4%	5%	3%	3%
Asian	17%	11%	12%	10%
Latinx	42%	43%	49%	53%
Filipino	3%	4%	3%	3%
Native American/Hawaiian	0%	0%	0%	0%
Pacific Islander	0%	0%	0%	0%
California College Promise Grant	70%	78%	75%	79%
CCC Age at Exit	23.9	26.98	23.93	24.59
CCC GPA at Exit	2.94	2.99 3.03		3.08
Total CCC Units	77.69	91.86	85.35	90.98
Student-Year Observations	292,231	52,188	24,296	13,341

Source: CCCCO administrative data

Note: Column 1 is comprised of students who started in the CCC system in 2012 or later and completed 60+ units by the 2017-18 academic year, but had not earned an AA/AS or ADT degree. These represent unique students. In 2017-18, 18,406 students earned more than one AA/AS degree and 2,911 students earned more than one ADT.

Some of these differences could be driven by variability in access to ADTs. As we described in the section above, CCCs that offer fewer ADTs have larger Black and Asian student populations than the average CCC, while CCCs that offer more ADTs have higher Latinx student enrollment than the average CCC. However, these differences in availability across campuses do not fully explain differences in receipt. We still find that when comparing students in the same community college, male students are more likely than their female peers to earn ADTs as compared to AA degrees, and Latinx students are more likely than their peers to earn an ADT as compared to an AA or no degree. Asian students are less likely than their peers to earn an ADT as compared to no degree.

ADTs that Don't Transfer

It is important to note that not all ADT earners transfer. Among students who earned an ADT in 2015-16, 82% transferred to a four-year university within three years (Table 4). Rates varied somewhat by race—83% of Latinx and White students transferred to a four-year institution, compared to 77-79% of Black and Asian students.⁵

⁴ Results from these regression analyses are available by request from the authors. Additional differences, including by region, are available in The RP Group's report, Through the Gate: Mapping the Transfer Landscape for California Community College Students (2017).

⁵ We highlight only these race/ethnicity groups, as the sample sizes for other sub-groups of students are small, such that differences might not be statistically, or meaningfully, different.

Table 4. ADT Earners in 2015-16 Three-Year Transfer Rates, by Race

	NO TRA	NSFER	TRANSFER		
	N	%	N	%	
Asian	564	21.12	2,106	78.88	
Black/African American	169	22.56	580	77.44	
Filipino	113	15.92	597	84.08	
Latinx	1,819	16.53	9,185	83.47	
Native American	21	30.88	47	69.12	
Pacific Islander	17	21.79	61	78.21	
Two or More Races	122	14.25	734	85.75	
White	1,106	17.43	5,239	82.57	
Unknown	342	41.71	478	58.29	
Total	4,273	18.34	19,027	81.66	

Source: CCCCO administrative data

Note: "No Transfer" is defined as a student not entering a four-year institution before the 2018-19 academic year. It is possible that they transferred in 2019-20, but it is not available in these data.

Transfer Destinations

In this report, we focus mainly on CCC-CSU transfers, as that is the intended pathway for ADT earners. However, we note that many students who earn ADTs, and many students who transfer to CSU without an ADT, also considered transferring to another sector, such as the UC. Treating these transfer decisions and processes as separate could lead to a misleading and simplistic understanding of how structures and policies affect students' decisions. For that reason, we first provide a brief overview of CCC transfer destinations and a description of the transfer options and pathways for CCC students to UC.

Among all CCC students earning at least 60 units who transferred in the 2017-18 academic year, 56% enrolled at a CSU, 14% in a UC campus, and 22% in a private in-state or out-of-state college or university (Table 5). The four-year destination of the remaining 8% is unknown. Among Latinx students, 63% transferred to CSU and 11% transferred to UC, while 50% of White students transferred to CSU and 15% transferred to UC (Table 5). Black students had lower rates to CSU (46%) and UC (9%), but higher rates to out-of-state institutions (24%). Asian students had the highest rates of transfer to the UC (29%).

Among ADT earners who first enrolled at a four-year institution in the 2017-18 academic year, 71% enrolled at a CSU, 12% at a UC, and 7% at a private in-state or out-of-state college or university (Table 6). Similar to overall transfer, Latinx students with an ADT had the highest rates of transfer to CSU (75%) and Asian students with the ADT still had the highest rates of transfer to UC (19%).

⁶ For 8% of CCC to four-year transfers, the first four-year college is not recorded in the CCCCO data. This is a data collection challenge resulting from reliance on external data sources (e.g. NSC) for this information, and highlights the importance of better intersegmental data structures.

Table 5. Overall CCC Four-Year Transfer Destination in 2017-18, by Race/Ethnicity

	CSU	IN STATE PRIVATE	OUT OF STATE	uc	UNKNOWN
Asian	51.11	5.42	6.72	28.8	7.94
Black	46.48	12.18	24.17	8.52	8.65
Filipino	55.13	10.26	13	11.54	10.08
Latinx	63.18	9.42	9.59	10.67	7.13
Native American	49.81	14.79	25.29	7.78	2.33
Pacific Islander	44.88	7.92	28.38	9.57	9.24
Two or More Races	51.64	7.87	14.11	15.58	10.79
White	49.61	9.21	19.06	14.55	7.56
Unknown	50.89	8.42	19.67	13.55	7.48
Total	55.62	8.91	13.38	14.4	7.69
N	40,812 ⁷	6,536	9,814	10,566	5,646

Source: CCCCO administrative data

Note: This table includes students who earned at least 60 CCC units and first enrolled in a four-year institution in 2017-18.

Table 6. ADT Earners Four-Year Transfer Destination in 2017-18, by Race

	CSU	IN-STATE PRIVATE	OUT OF STATE	UC	UNKNOWN
Asian	67.39	1.70	1.55	19.56	9.80
Black	69.07	4.38	7.35	9.02	10.18
Filipino	71.70	2.40	2.27	10.28	13.35
Latinx	75.21	3.41	2.75	10.32	8.32
Native American	73.77	4.92	8.20	9.84	3.28
Pacific Islander	69.70	4.04	4.04	10.10	12.12
Two or More Races	64.57	3.42	5.44	12.70	13.87
White	67.31	4.10	5.93	12.79	9.87
Unknown	70.94	2.49	3.63	13.58	9.37
Total	71.43	3.39	3.74	12.09	9.35
N	17,105	812	895	2,895	2,238

Source: CCCCO administrative data

Note: This table includes students who earned at least 60 CCC units, received an ADT degree and first enrolled in a four-year institution in 2017-18

⁷ This number is lower than the 53,647 CCC transfer students entering in Fall 2017 reported by the CSU. Our numbers are based on the first four-year enrollment date and first four-year segment reported in the CCCCO HF First table, and do not perfectly correspond to what the CSU and UC systems report. When we examine these groups without restricting the sample to students who have earned at least 60 units, our numbers are very similar to what both the CSU and UC systems report.

Transfer to the University of California

As noted above, a significant number of California community college students transfer to the University of California. Among those students that earned at least 60 units and transferred in 2017-18, 14% transferred to a UC. Among students who earned an ADT and transferred in 2017-2018, 12% transferred to a UC. The number of UC transfer students has also been steadily on the rise—both in applications and in admission.

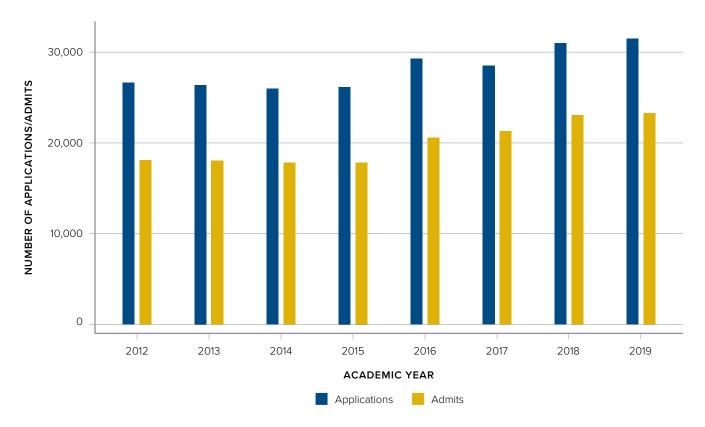


Figure 5. UC Transfer Applications and Admits, CA Residents

Source: University of California Office of the President (UCOP), Transfer Admissions Summary, available at: universityofcalifornia.edu/infocenter/transfer-admissions-summary

There are some notable patterns by race/ethnicity in the UC transfer applicant pool and among admits. UC experienced an increase of over 60% in representation of Latinx applicants within the UC transfer applicant pool (from 6,299 applicants in 2012 to over 10,000 in 2019). There has also been an overall increase (53%) in Black UC transfer applicants, from 1,306 applicants in 2012 to 2,000 in 2019. All transfer groups experienced increases in admit rates, which were universally greater than the increase in applicants for the same period. The trend of UC transfer admits increasing at a faster rate than transfer applicants may reflect the expansionary measures UC campuses have taken with regards to increasing accommodation for CCC transfers in recent years.

Like CCC to CSU transfer, transferring from a CCC to a UC has historically lacked statewide coherence and uniformity, which has made it complicated and difficult for students to navigate. Although the ADT does not apply to UC transfer, the University of California offers its own efforts at greater articulation between community colleges and UC.8 First, the Intersegmental General Transfer Curriculum (IGETC), "a comprehensive pattern of courses that prospective transfer students from California community colleges can complete to satisfy lower division General Education requirements at both UC and CSU," provides students with statewide course guidance for completing general education requirements.9 However, these courses require approval for consideration and are not always consistent with specific lower-division courses needed for some majors, particularly in STEM. As such they may not offer campus-major-specific articulation.

Second, UC has, in the past decade, developed UC Transfer Pathways, which are similar in concept to ADTs.¹⁰ These curricular maps provide guidance on classes that will fulfill lower division major coursework across all nine undergraduate UC campuses. While on their surface these course maps appear similar to ADTs, they are different in at least two important ways: (1) because the UCs have not standardized lower division major coursework, the Transfer Pathway course maps do not necessarily increase efficiency as they might induce students to take more classes than is necessary for transfer to a specific UC; and (2) these course maps are not always aligned with the degree requirements for associates degrees, and thus are not as likely to increase AA receipt.

UC transfer requirements often do not align with ADT requirements. Computer Science offers one clear example of the misalignment. Sequences in multivariable calculus, linear algebra, differential equations, and data structures are not outlined in ADT requirements but are necessary for UC Transfer Pathways eligibility. This may add up to a year of additional coursework for students who wish to both pursue an ADT and fulfill UC Transfer Pathway requirements in this field.

Next, we turn to a closer investigation of the transfer outcomes of ADT earners at CSU.

⁸ We do not include the Transfer Admission Guarantee (TAG) program in this discussion, as they are not statewide (i.e., they are UC-specific) and thus do little to reduce the potential inefficiencies of applying to multiple four-year campuses. We do note that since TAG requirements do not typically overlap completely with ADT requirements, which represents another example of the complexities faced by students attempting to transfer from a CCC to a four-year public institution in California.

See: ucop.edu/transfer-articulation/understanding-articulation/systemwide-articulation/igetc.html

 $^{^{10}\,\}text{See: admission.} university of california. edu/admission-requirements/transfer-requirements/transfer-pathways admission. The property of the propert$

Transfers to CSU

CSU campuses represent the largest transfer destination for CCC students and particularly for those who earned an ADT. Table 7 presents the characteristics of students that transfer from a CCC to a CSU by prior CCC degree status.

Table 7. Average Characteristics of 2017-18 CSU Transfers, by CCC Degree

	(1) NO CCC DEGREE	(2) AA/AS ONLY	(3) ADT ONLY	(4) AA/AS+ADT
Female	46%	63%	56%	60%
White	30%	26%	26%	24%
Black	3%	5%	3%	4%
Asian	17%	10	11%	9%
Latinx	38%	49%	51%	54%
CCPG	74%	82%	79%	83%
CCC Age at Exit	23.24	24.76	23.10	24.34
CCC GPA at Exit	2.84	2.95	2.96	3.01
Total CCC Units	86.87	93.71	85.88	94.27
Number of Students	11,485	12,342	10,441	6,705

Source: CCCCO administrative data

Note: These figures, based on CCCCO data, are calculated for students who earned at least 60 CCC units, received an ADT degree and first enrolled at the CSU in 2017-18.

Similar to the demographic differences between the CCC students that earn an ADT as compared to 60+ units and no degree or an AA/AS, we also note demographic differences in the CCC-CSU transfer group by prior degree. Table 7 presents the racial/ethnic, gender, and financial aid composition of CCC students who transferred to CSU in the 2017-18 academic year. Again we note that ADT earners are disproportionately Latinx, as compared to students who transfer after having earned an AA/AS or no award. Female students are more likely than their male peers to earn an award before transferring, and Asian students are less likely than their peers to earn an award before transferring. Students who earn AA/AS (alone or with an ADT) earn about eight more units than students who earn ADTs and those who transfer without having earned a degree.

Students who have earned ADTs represent a growing proportion of this population of students. Figure 6 shows the CCC degree type (AA/AS, ADT, or no degree) of students who transferred to a CSU in 2012-2017. The percent of CCC to CSU students transferring with an ADT has been growing steadily over time.¹¹

¹¹ As we noted earlier, some CCCs stopped offering their local AA when they introduced an ADT in a given field, while others continued to offer both the AA and the ADT. In some cases, students only need to complete one or two additional classes to earn an AA once they have earned an ADT. The decision to retain local AAs could be related to the new funding formula, which awards funding for every degree earned, rather than every student who earns a degree.

In the 2012 entering CSU transfer cohort, about 5% of students had earned an ADT, and by 2017, about 42% of entering CCC-CSU transfer students had earned ADTs.¹²

25.000 20,000 NUMBER OF STUDENTS 15,000 10,000 5,000 0 2012 2013 2014 2015 2016 2017 **ACADEMIC YEAR** AA/AS Only AA/AS + ADT ADT Only No Degree

Figure 6. CCC-CSU Transfer by CCC Degree Type

Source: CCCCO administrative data

Note: These are counts of students within each category. As such, these figures undercount the number of degrees granted, as some students earn more than one AA/AS, or more than one ADT.

Figure 7 illustrates increases in the percent of CCC-to-CSU transfer students who have earned an ADT, for the four largest racial/ethnic subgroups. Of all subgroups, Latinx CCC-to-CSU transfer students are the most likely to have an ADT. Asian students have the lowest rates of ADT receipt among CCC-to-CSU transfers, despite having the highest overall community college transfer rate.¹³

¹² Our numbers for ADT CSU transfer are slightly higher than those presented in The Campaign for College Opportunity's, *10 Years After Historic Transfer Reform* July 2020 report, which indicates that 34% of 2017 CSU Transfers had earned an ADT. This discrepancy is likely due to differences in data sources (i.e., CCCO versus CSU source data) and analytic sample construction in identifying CCC-CSU transfers.

¹³ Recent data from the CCCCO's transfer velocity cohort on DataMart show overall 6-year transfer rates at close to 40%. Asian students transfer at higher rates (57%) then Black students (36%), Latinx students (32%), and White students (45%). Additionally, student-level CCC data show there are important differences in the destinations of CCC transfer students from different racial/ethnic groups. For example, Asian CCC transfer students are the most likely to transfer to a UC (29%, as compared to 15% of White CCC transfer snd 11% of Latinx CCC transfers). Latinx CCC transfer students are the most likely to transfer to a CSU (63% as compared to 50% of White CCC transfer students and 51% of Asian CCC transfer students).

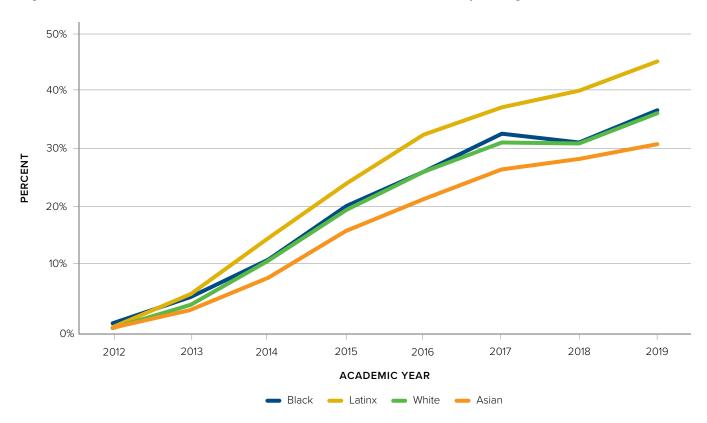


Figure 7. Percent of CSU Transfer Students from California Community Colleges with an ADT

Source: California State University Chancellor's Office, Institutional Research & Analyses

Note: The data used for this figure are drawn from a slightly different sample than what we use throughout the rest of this report, resulting in numbers that are not directly comparable to other figures and tables in this report.

Because the majority of ADT earners transfer to CSU, we focus more closely on three cohorts of students who transferred from a CCC to a CSU. Past work has shown that the introduction of ADTs increased the number of students earning associate degrees and increased the number of CCC students transferring.** A key goal of the ADT was to increase probability of and efficiency in BA completion at CSU among community college transfers. Therefore, next we turn to investigating the BA outcomes of students who have successfully transferred from a CCC to a CSU campus.

These following results use data from the California State University (CSU) Chancellor's Office on the universe of applications, enrollments and degree files for the 23 campuses between 2011 and 2017. These data are matched to the CCC data using individual identifiers. We include CCC transfer students who entered the CSU in 2012, 2013, or 2014 (to allow for sufficient time to observe their CSU outcomes). Almost all of CCC-CSU transfers who do ultimately earn a degree do so within four years at the CSU.¹⁴

For the Fall 2012 cohort, 80% of CCC-CSU transfers earned a degree within seven years. But 62.5% earned a BA or BS within three years and 74% earned a degree within four years.

Examining BA Completion Outcomes of ADT Earners at CSU

Comparing CCC-CSU transfers who have earned an ADT to other CCC-CSU transfers, we note higher 3-year BA/BS completion rates for ADT earners (Figure 8). About 70% of students who transferred with an ADT (either with or without an AA in addition to the ADT) earned a BA/BS within three years, compared to 62% of students who transferred with only an AA/AS and 59% of students who transferred with no degree. (We focus on 3-year completion rates to allow for equal comparisons across the three cohorts we include.)

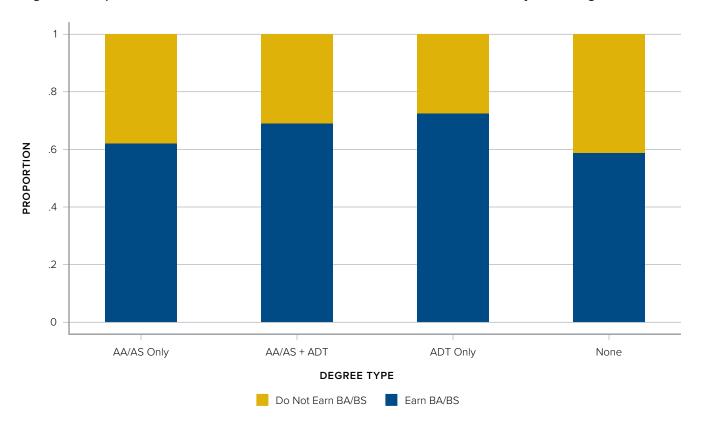


Figure 8. Proportion of CCC-CSU Transfers Who Earn BA/BS within 3 Years, by CCC Degree

Source: CCCCO administrative data matched to CSU administrative data

Students with an ADT also enroll in a fewer number of terms at CSU. Students who enter with an ADT are enrolled at CSU for an average of 4.5 semesters, while students who enter with an AA/AS are enrolled for 4.9 semesters and students who enter with no degree are enrolled at CSU for an average of 5.0 semesters.¹⁵

These differences, while striking, must be interpreted with caution. Such differences in BA completion could be explained by differential availability of ADTs across CSU campuses or across majors. For example, CSU campuses with higher BA attainment rates might offer more ADT transfer pathways. Or, majors with higher BA attainment rates might offer more ADTs (e.g., Speech and Communication offered more ADTs than Business Administration). To interrogate this further, we next examine differences in semesters enrolled and total units earned within majors and within colleges.

¹⁵ Because we only compare students in these groups who have earned a BA/BS within three years of CSU entry, our data are censored. We do not observe outcomes for students who earn a BA/BS in more than three years. This likely deflates the differences between these four groups.

These differences in outcomes (BA receipt and total semesters enrolled at CSU) hold across the five fields that had the largest number of CCC-CSU transfers with ADTs (Figures 9 and 10). That is, in all cases we note that when compared to transfer students with an associate degree or no transfer degree, transfer students who have earned ADTs are more likely to earn their BA/BS within 3 years, and enroll at CSU for fewer semesters.

.8 .6 PROPORTION .2 0 Business Speech and Administration Psychology Sociology Administration Communication of Justice **DEGREE TYPE** AA/AS Only AA/AS + ADT ADT Only No Degree

Figure 9. Proportion Earning BA/BS within 3 Years, by Major, by Prior Degree

Source: CCCCO administrative data matched to CSU administrative data

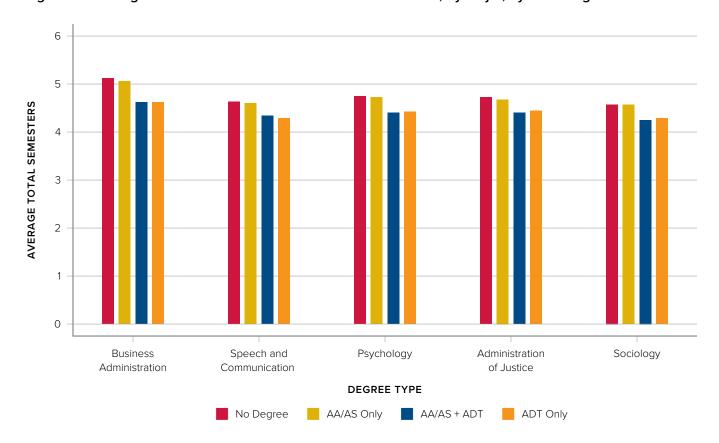


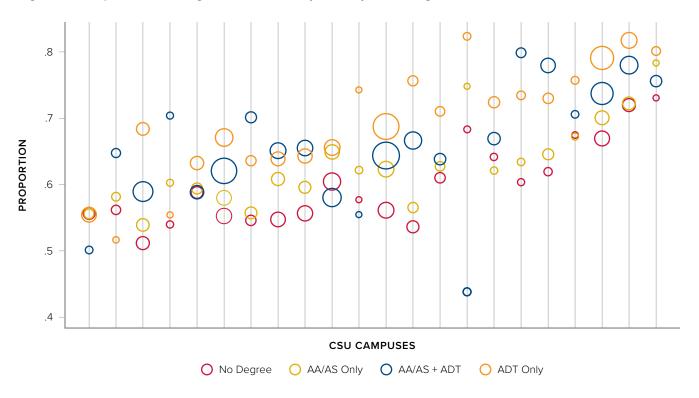
Figure 10. Average Total CSU Semesters Enrolled at Graduation, by Major, by Prior Degree

We also find that these general trends hold when examining these same groups (transfers with no CCC degree, transfers with AAs, transfers with AA+ADT, and transfers with ADTs) within CSU campuses. While there is certainly some variation, students who enter a given CSU with an ADT are more likely to earn a BA/BS than students who enter with an AA or with no degree (Figure 11), and they were enrolled for fewer semesters when they graduate (Figure 12).

We also see that students who earn ADTs (alone or in combination with an AA/AS) graduate, on average, with fewer total units (CCC units + CSU units) than students who transfer with no degree or with an AA/AS (shown in Figure 13). In future work we will examine these unit efficiency gains more closely to see if the credit reductions are driven by CCC or CSU (or some combination), and if they are constant across disciplines.

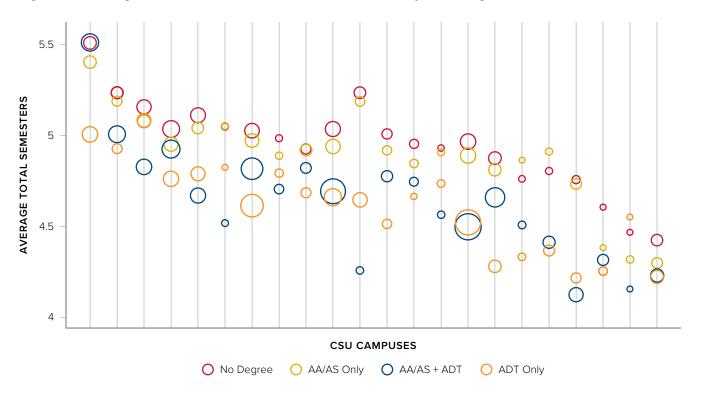
Thus, these analyses indicate that students who earn ADTs have better outcomes, on average, than students who enter CSU with no CC degree or with an AA/AS. And these differences are not entirely due to differences across fields or differences across campuses.

Figure 11. Proportion Earning BA/BS within 3 years, by CCC Degree



Note: CSU campuses (vertical lines) arranged by mean BA/BS receipt. Bubbles sized by number of transfer students who entered with that degree.

Figure 12. Average Total Semesters Enrolled at Graduation, by CCC Degree



Note: CSU campuses (vertical lines) arranged by mean terms enrolled at graduation. Bubbles sized by number of transfer students who entered with that degree.

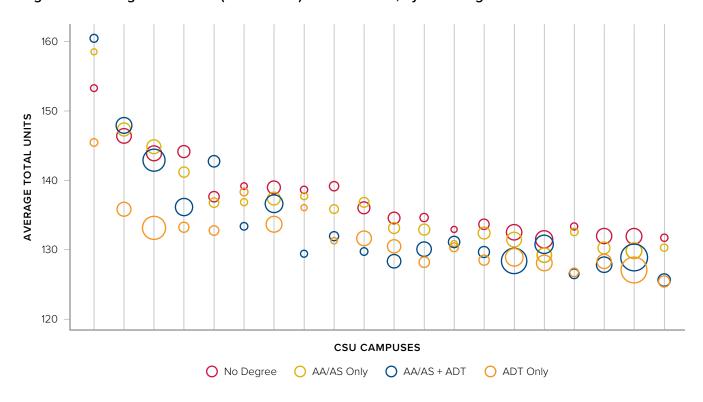


Figure 13. Average Total Units (CCC + CSU) at Graduation, by CCC Degree

Note: CSU campuses (vertical lines) arranged by mean units earned at graduation. Bubbles sized by number of transfer students who entered with that degree.

Causal Analysis of the Impact of ADT on BA Outcomes

The descriptive analyses above are not conclusive, because even looking within CSU campuses and within majors, students might be sorting into transfer pathways in meaningful ways that we cannot directly observe. The most motivated, well-informed, or best-connected students might opt into ADTs at higher rates than their peers. Thus, this analysis does not confirm that ADTs lead to better outcomes for students, rather differences observed may reflect circumstantial and/or direct sorting of students into different transfer pathways.

We conduct further analyses that take advantage of the fact that ADTs were introduced across majors and across campuses over time. That is, depending on their CCC campus, their major, and the year they entered, similar community college students had different access to ADTs. Two students who entered the same major at the same CCC one year apart might have different access to ADTs. Or students who entered neighboring CCCs in the same major in the same year might have differential access to ADTs. Or students who entered similar majors at the same CCC in the same year might have differential access to ADTs. Models that account for this differential access allow us to account for anything that is unique about a given CCC, a given major, and a given entering cohort.¹⁶

¹⁶These models, details of which are available at California Ed Lab (education.ucdavis.edu/cel-research), predict BA receipt and semesters-enrolled-at-degree using the availability of an ADT in a student's general field of study (defined as the first two digits of the CSU first major) as the key predictor. The models also include control variables that represent the students' CCC major, CCC campus, CSU year of entry, CSU major, and CSU campus. Thus, the models control for differences in outcomes that are due to major, year, and campus, which allows us to estimate the extent of difference that is due to a student's access to an ADT.

Analyses that use this difference in availability echo the positive descriptive effects we outlined above, though the magnitude of the effects is smaller. We do not find strong evidence that access to ADTs led to a significant increase in BA receipt. We do, however, find that access to ADTs led to small but significant decreases in the number of semesters at graduation. These analyses indicate that ADTs led to more efficient BA completion for transfer students.

Importantly, we do not see evidence that ADTs were differentially helpful for certain groups of students. The availability of ADTs is associated with more efficient BA receipt (that is, fewer semesters of enrollment at graduation) across all race groups that we examine (Latinx, Asian, White, and Black), for both male and female students, and for students with both above- and below-mean community college GPAs. While this is generally positive – more advantaged subgroups are not increasing their advantage due to the introduction of ADTs – it does suggest that ADTs have not closed Latinx-White and Black-White gaps in BA attainment.

Looking Ahead: Realizing the Promise of the Associate Degree for Transfer

The transfer pathway has been long criticized for being too cumbersome and opaque. In an effort to improve transfer outcomes, California Senate Bill 1440 created a new Associate Degree for Transfer (ADT), which established a statewide framework for more seamless pathways between the CCCs and CSUs. The ADT established a defined set of courses for different majors that are similar at all CCCs and are accepted as lower division course work at all CSU campuses that offer the same degree. As such, the goal of the ADT was twofold: (1) To increase associate degree receipt and (2) to improve efficiency in baccalaureate degree completion.

Ten years after the passage of Senate Bill 1440, we are seeing promising results. Our analysis of students' transfer pathways and degree outcomes reveals important positive findings:

- 1. A growing number of ADT options across fields and across community colleges
- 2. Growth in ADT receipt overall, and across all subgroups
- 3. Improved efficiency in baccalaureate degree completion and reduced time to degree

Our study also reveals areas in Senate Bill 1440 that demand closer investigation. First, access to the ADT remains uneven—both by campus, and by fields of study. The number of ADT pathways, while rising, remains limited at quite a few campuses, and as a result for many students. Campuses that offer fewer ADTs have larger Black and Asian populations (as compared to their representation in CCC enrollment overall), while campuses that offer more ADTs have larger Latinx populations.

Beyond availability is *awareness* of the ADT. A key piece of evidence that awareness of the ADT needs to be improved is the fact that many CSU transfer students do not apply to CSU with the ADT, despite the fact that their community college records suggests they obtained it. Relatedly, we find the need for better data and *transparency* to understand credit loss through transfer. Students with the ADT completed a BA/BS

at higher rates than their non-ADT counterparts, but not necessarily with fewer credits. Finally, institutional differences in the *fidelity* of Senate Bill 1440 implementation from both sending community colleges and receiving CSUs is evident in the fact that outcomes continue to differ for students with similar majors across different institutional contexts. For example, even among ADT earners, we note large differences in BA receipt and terms enrolled depending on the CSU of attendance.

Addressing these key areas is critical to equalizing opportunities in the transfer pathway for the diverse population of California students. As we look ahead to a new decade of ADTs, particularly amidst the current context of the COVID-19 pandemic and the accompanying economic crisis, we offer important policy directions to strengthen California's Community College transfer pathway and realize the full potential of the ADT.

Expansion of the ADT

Importantly, the intent of the ADT was to increase the number of students who successfully transfer by establishing a defined set of classes that are similar at all CCCs and are accepted as lower division course work at all CSU campuses that offer the same degree. Doing so required the coordination of CCCs and CSUs across diverse disciplines. But challenges remain to build a 60 semester (90 quarter) unit cap for the ADT in some fields of study, particularly STEM,^{xxi} and across many of CSU's impacted majors where the guarantee for admission is much more tenuous. There are many fields that are not as well represented in ADT availability and receipt, and CCCs and CSUs need to continue to equalize and expand offerings.

There is also an opportunity for expansion beyond CSU. California's public four-year institutions are facing incredible financial and capacity constraints. Many CSU campuses and majors are intensely impacted, which poses challenges for transfer students. California community college students are transferring to UCs and private institutions at higher rates. This sentiment is shared by the Faculty Senate of the Community Colleges, to align lower division expectations of students such that completion of a single degree pathway will allow students to transfer to either CSU or UC.¹⁷ Thus, the need to extend the ADT's reach beyond CSU would further smooth the BA path for more community college students. Such an effort would be consistent with prior work from national studies that finds a greater likelihood of transfer in states where the agreement included more students in private institutions.^{xxii}

Beyond the need to expand ADTs within and beyond the CSU, uptake of ADTs could be expanded by simplifying the process for students. To illustrate the complexities of navigating ADTs for students, we present two examples. First, while the curricula for ADTs are set and constant across the state, some CSU campuses advise interested CCC transfer students to take additional courses—above the ADT requirements—to be more competitive in the applicant pool. This undermines the ability of the ADT to reduce excess credit accumulation. Second, some ADTs are only accepted in particular concentrations within a major. For example, students wanting to earn an ADT in business and transfer to San Diego State University (SDSU) have two options for concentration: financial services and general business. There are ten other business administration concentrations at SDSU that are not deemed similar majors for the purposes of the ADT. These kinds of exceptions to the rule dampen the potential of ADTs.

 $^{^{17}}$ See: asccc.org/content/intersegmental-transfer-%E2%80%93-progress-report#fn1 $\,$

The ADT within a Broader Transfer Culture that is Focused on Equity

There's a lot that remains unknown about why some students obtain an ADT and others do not; and how students make sense of its potential benefits in their educational goals. Importantly, students do not end up on an educational path inadvertently; the paths they take into and through an institution is a function of their interests traversed with a host of educational experiences, information and supports (or lack their of) that lead them to different—and often unequal—educational destinations. The ADT is one part of a larger set of forces that impact transfer.

Streamlining the transfer process requires attending to the mechanisms that can lead to weak transfer in the first place. This requires attention to the host of information barriers and opportunities that some students face in mapping out their educational plans. Addressing the "cafeteria style" approach to community college course participation has been the focus of current reforms (i.e., Guided Pathways) to chart out a clearer path to the associate degree and to transfer for those who seek a BA.xxiii As part of this effort, prior research has highlighted the importance of creating a stronger transfer culture, which includes prioritizing transferability in advising, course availability, and resources and supports.xxiv Moreover, to address inequities in transfer outcomes among different sub-groups of students (e.g., by race/ethnicity, socioeconomic status, first-generation students, etc.) demands attention to the inequities in access to such transferability information, resources, and supports.

Increased Flexibility and Transparency through the ADT

To improve transfer alignment between community college and BA-granting institutions requires an intentional focus on "credit mobility." Recent policy reports suggest that statewide transfer and articulation reform rests on "four key elements: (1) a common general education package, (2) common lower division pre-major pathways, (3) credit applicability, and (4) junior status upon transfer." xxv

In a multi-state study of transfer credit loss, researchers interviewed students to illuminate the transfer experience, revealing a frustrating and even "adversarial system" of obstacles to get credit for prior coursework.xxvi They conclude that credit loss is particularly high for students who enter college with less certainty—both in what they want to study and where they want to transfer. Students who either couldn't decide on, or switched, their major often accumulated an excess of general education credits, but not necessarily the right pre-major courses/credits. Uncertainty about students' transfer destination also leads to excess credits, as many institutions differ in their requirements for transfer and what it means to be "major-ready" requiring students to at best keep track of these individual requirements, and at worst, take more courses than may be necessary to satisfy multiple institution's individual requirements. Creating a lower-division/general education core for a set of meta-majors (under Guided Pathways) could strengthen the transfer pathway for more students less certain of their transfer major.

A number of states utilize common course numbering and credit by assessment to facilitate the transfer of credits and account for prior learning.**

Common course numbering could address students' confusion over which community college courses are transferable and to where, as well as provide greater standardization in how receiving institutions consider lower-division units from community colleges. Moreover, CSU could facilitate further consistency in transfer preparation and expectations across departments, particularly in fields of study where upper division major curricula are very similar. Such flexibility and transparency could reduce credit loss and improve efficiency in baccalaureate completion.

Research and Evaluation Constraints

Lastly, we would be remiss if we did not mention the data issues that prevent a more complete investigation of ADT and other transfer pathways. In particular, there are important challenges in accounting of credit accumulation across segments, which is necessary to fully examine the efficiency goals of ADT and other articulation efforts in the state. An integrated data system could allow California's colleges and universities to access valuable information about their students and to create an intersegmental education plan that could be revised along students' educational trajectories, and ultimately help more students graduate. In addition, uncovering the ways in which ADTs (and other transfer options) are introduced to students through advising and degree planning at both sending community colleges and receiving four-year institutions is critical, and largely unobserved. To smooth the transfer pathways for students requires a clearer understanding of the challenges faced in course and program options, advising, and credit mobility. As such, better protocols for data collection on these elements across segments would go a long way to ensuring the ADT has met its intended goals.

A Final Note

We write this report amidst a global pandemic that has thrust our society into a deep health, economic, and social crisis. This crisis is being disproportionally felt by communities of color and by low-income students and their families, the very groups for whom community colleges have, and will continue to be, a primary post-secondary destination. Now, more than ever, as students and their families struggle to sustain college enrollment, greater flexibility in course and credit transfer across our higher education institutions is essential to prevent credit loss and ease degree completion. Our students, their families, and our economy demand it.

Appendix A

CCC-CSU Transfers by Campus and ADT Receipt: Fall 2019

CSU CAMPUS	TOTAL CCC TRANSFER STUDENTS	TOTAL NUMBER OF STUDENTS ENTERING WITH ADT	% OF STUDENTS ENTERING WITH ADT	NUMBER OF STUDENTS ENTERING ON ADT PATHWAY	% STUDENTS ENTERING ON ADT PATHWAY	NUMBER OF STUDENTS ENTERING NOT ON ADT PATHWAY	% STUDENTS ENTERING NOT ON ADT PATHWAY
Bakersfield	1,486	594	39.97%	309	20.79%	285	19.18%
Channel Islands	1,224	641	52.37%	204	16.67%	437	35.70%
Chico	1,570	496	31.59%	298	18.98%	198	12.61%
Dominguez Hills	3,480	1,246	35.80%	449	12.90%	797	22.90%
East Bay	2,229	752	33.74%	413	18.53%	339	15.21%
Fresno	1,996	1,010	50.60%	730	36.57%	280	14.03%
Fullerton	4,001	2,018	50.44%	1,745	43.61%	273	6.82%
Humboldt	810	217	26.79%	107	13.21%	110	13.58%
Long Beach	4,816	2,342	48.63%	1,440	29.90%	902	18.73%
Los Angeles	2,933	1,574	53.67%	1,040	35.46%	534	18.21%
Maritime	83	0	0.00%	0	0.00%	0	0.00%
Monterey Bay	981	522	53.21%	245	24.97%	277	28.24%
Northridge	6,005	2,731	45.48%	994	16.55%	1,737	28.93%
Pomona	3,507	928	26.46%	398	11.35%	530	15.11%
Sacramento	3,823	1,767	46.22%	676	17.68%	1,091	28.54%
San Bernardino	2,749	1,115	40.56%	650	23.64%	465	16.92%
San Diego	4,146	1,220	29.43%	1,220	29.43%	0	0.00%
San Francisco	3,563	1,358	38.11%	510	14.31%	848	23.80%
San Jose	4,363	993	22.76%	696	15.95%	297	6.81%
San Luis Obispo	783	107	13.67%	95	12.13%	12	1.53%
San Marcos	1,888	650	34.43%	504	26.69%	146	7.73%
Sonoma	734	325	44.28%	212	28.88%	113	15.40%
Stanislaus	1,354	674	49.78%	358	26.44%	316	23.34%

Source: CSU Institutional Research & Analyses

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