



December 13, 2023

Dear Governor Newsom and Assembly Member Berman,

Pursuant to Education Code Section 66749.8, the Associate Degree for Transfer Intersegmental Implementation Committee (hereafter “AB 928 Committee”) is pleased to submit to the Legislature this report of recommendations to create a student-centered transfer ecosystem for all Californians. This report is the culmination of the first 18 months of work for the AB 928 Committee.

The AB 928 Committee was called upon to make recommendations to the Legislature in the areas of setting goals for increasing transfer rates, closing equity gaps, proposing a unit threshold for Science, Technology, Engineering, and Math (STEM) degree pathways, and reengaging Associate Degree for Transfer (ADT) earners who do not transfer. Additionally, overarching recommendations are presented which speak to creating the needed enabling conditions necessary for the recommendations to succeed, and call for a dramatically improved postsecondary policymaking environment in California. These recommendations emerged from many months of discussions and deliberations, were rooted in guiding premises, and bolstered by research and analysis.

The AB 928 Committee offers these recommendations emboldened by the strong belief that the state of California must dramatically improve equity in transfer student outcomes to sustain a productive workforce in California, improve the well-being of the state’s residents, and provide fair opportunity for social and economic mobility.

If you have any questions related to this report, please contact the Sova facilitation team through leslie.fischbeck2@sova.org.

Sincerely,

A handwritten signature in cursive script that reads "Aisha N. Lowe".

Aisha N. Lowe, Ph.D.
Chair of the AB 928 Committee
Executive Vice Chancellor, Office of Equitable Student Learning, Experience, and Impact (ESLEI)

Enclosure: Report

cc: Ben Chida, Chief Deputy Cabinet Secretary
Nichole Muñoz-Murillo, Office of the Governor
Lark Park, Office of Planning and Research
Joe Stephenshaw, Director for the Department of Finance
Chris Ferguson, Program Budget Manager for the Department of Finance
Jennifer Louie, Department of Finance
Ellen Green, Legislative Director for the Office of Assemblymember Marc Berman
Erika Contreas, Secretary of the Senate
Sue Parker, Chief Clerk of the Assembly
Office of Legislative Counsel
Speaker of the Assembly Robert Rivas – Attention: Mónica Henestroza
Senate President pro Tempore Toni G. Atkins – Attention: Andrew Medina
Assembly Budget Committee Chair Jesse Gabriel – Attention: Christian Griffith (Chief
Consultant)
Senate Budget and Fiscal Review Committee Chair Nancy Skinner – Attention: Elisa Wynne
(Staff Director)
Assembly Republican Caucus – Joseph Shinstock
Senate Republican Caucus – Kirk Feely
Assembly Higher Education Committee Chair Mike Fong – Attention: Jeanice Warden-
Washington (Chief Consultant)
Senate Education Committee Chair Josh Newman – Attention: Olgalilia Ramirez (Principal
Consultant)
Assembly Republican Caucus – Lyndsay Mitchell
Senate Republican Caucus – Amanda Richie

AB928 Associate Degree for Transfer Intersegmental Implementation Committee



2023 Final Report and Recommendations

Prepared by Sova for Submission to the
California Legislature
December 2023

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
A. INTRODUCTION	1
B. GUIDING PREMISES	2
C. RECOMMENDATIONS AREA: OVERARCHING NEEDS TO MEET THE INTENT OF AB928	4
D. RECOMMENDATIONS AREA: GOALS	6
E. RECOMMENDATIONS AREA: STEM	7
F. RECOMMENDATIONS AREA: REENGAGING ADT EARNERS	9
FULL REPORT	10
SECTION I: OVERVIEW OF THE AB928 ASSOCIATE DEGREE FOR TRANSFER INTERSEGMENTAL IMPLEMENTATION COMMITTEE	10
A. INTRODUCTION	10
B. LEADERSHIP	11
C. MEMBERSHIP	11
D. TIMELINE AND ARC OF THE WORK	15
SECTION II: RESEARCH AND RATIONALE SUPPORTING THE RECOMMENDATIONS	17
A. OVERARCHING NEEDS TO MEET THE INTENT OF AB928	17
B. GOALS	28
B. SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) DEGREE PATHWAYS	45
C. REENGAGEMENT OF ADT EARNERS	52
SECTION III: CONCLUSION AND NEXT STEPS	61
RESOURCES AND TOOLS	63
APPENDIX A: PREVIOUS COMMITTEE MEMBERS	75

GLOSSARY: A glossary of key terms, such as “Associate Degree for Transfer (ADT)” and “Transfer Model Curriculum (TMC),” can be found in the C-ID Handbook (Fall 2022 Revision)¹ available for download at: <https://c-id.net/page/1>

¹ Academic Senate for California Community Colleges. (Fall 2022 Revision). *C-ID Handbook*. Retrieved December 8, 2023, from <https://c-id.net/page/1>

EXECUTIVE SUMMARY

A. INTRODUCTION

In 2021, the California State Legislature created the AB928 Associate Degree for Transfer Intersegmental Implementation Committee² (hereafter “AB928 Committee” and/or “Committee”) and called upon it to make recommendations to the Legislature in the following areas:

- Goals: “Identifying annual goals for increasing transfer rates in California and closing racial equity gaps in transfer outcomes to be adopted by the state.”
- Science, Technology, Engineering, and Mathematics (STEM): “Proposing a new unit threshold for STEM degree pathways that meet the requirements for admission to the California State University and the University of California.”
- Reengaging ADT earners: “Reengaging [Associate Degree for Transfer (ADT)] earners who do not transfer or apply for transfer into a four-year postsecondary educational institution.”

While the Committee was tasked with making recommendations in these three specific areas, the Committee was also oriented by the broader purposes of the Committee as outlined in legislation:

“(b) The Associate Degree for Transfer Intersegmental Implementation Committee is hereby established for the following purposes:

1) To serve as the primary entity charged with the oversight of the associate degree for transfer for the sole purpose of strengthening the pathway for students and to ensure it becomes the primary transfer pathway in California between campuses of the California Community Colleges and the University of California, the California State University, and participating independent institutions of higher education defined in subdivision (b) of Section 66010, so that more students can avail themselves of the pathway’s benefits. The oversight shall include, but is not limited to, all of the following:

² California State Legislature. (2021). *Assembly Bill No. 928, Student Transfer Achievement Reform Act of 2021: Associate Degree for Transfer Intersegmental Implementation Committee*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB928

(A) Ensuring a reduction in the number of excess units accumulated by California Community College students before transferring to four-year postsecondary educational institutions.

(B) Eliminating repetition of courses at four-year postsecondary educational institutions taken by California Community College students who successfully transfer into four-year postsecondary educational institutions.

(C) Increasing the number of California Community College students who transfer into a four-year postsecondary educational institution through an ADT pathway.”

This Executive Summary provides a high-level introduction to and overview of the AB928 Committee’s recommendations. The full report, which follows, describes the Committee and provides further research and rationale in support of its recommendations.

The recommendations were voted on by the Committee at its November 30, 2023 public meeting. The full report was developed and submitted by Sova. While the Committee had ample opportunity to review and comment on the report, the Committee did not vote on the report. The Committee’s voting was confined to the specific tasks laid out in legislation regarding the development of recommendations.

Details about the votes taken at the November 30, 2023 meeting can be found in the Meeting Minutes at <https://www.ab928committee.org/>. Additional information about the AB928 Committee, including its meeting agendas and materials, can be found at its website: <https://www.ab928committee.org/>

B. GUIDING PREMISES

The AB928 Committee’s work was guided by in-depth data and evidence about persistent equity gaps in transfer student outcomes, in particular by race and ethnicity, income and region (as documented in the Full Report, Section II: Research and Rationale Supporting the Recommendations). Based on rigorous analysis and discussion, the Committee’s recommendations elevate closing equity gaps by race and ethnicity as the first priority and as a theme underlying all subsequent recommendations. The Committee also urges attention be paid to the unacceptable inequities in postsecondary attainment based on other factors critical to the success of California’s students, such as income and region.

The AB928 Committee’s work was also animated by a strong belief that increasing baccalaureate attainment and beyond, through improved transfer, can improve the well-being of California’s residents, fulfill the demands of the workforce, and provide fair and equitable opportunity in the labor market. A robust body of research demonstrates that equitable opportunities for postsecondary credential attainment—and in particular attainment of baccalaureate degrees—deliver a variety of benefits to both individuals and the state, ranging from increased tax revenues to a fulfilled workforce, increased civic engagement, and economic and social mobility for individuals and families.³

Recognizing that the state of California is facing tough economic conditions, the Committee’s recommendations include a mix of low- or no-cost strategies, as well as strategies that will require investment if the state is to achieve the goal (set by Governor Newsom) that 70% of the adult population, ages 25-64, will have a postsecondary credential—college degree, certificate, industry-recognized certification, or other credential of value—by 2030.⁴ Due to the critical nature of these recommendations, and in light of the existing Roadmap and Compacts between Governor Newsom’s Administration and the public segments,⁵ the AB928 Committee urges the state to operationalize these recommendations regardless of the potential for new state appropriations by utilizing and reprioritizing existing revenue streams.

³ Cuellar Mejia, M., Perez, C.A., Hsieh, V. & Johnson, H. (2023). Is College Worth It? Public Policy Institute of California. Retrieved October 27, 2023, from <https://www.ppic.org/publication/is-college-worth-it/>; McKinsey & Company. (2023). *Fulfilling the Potential of US Higher Education*. Retrieved August 11, 2023, from <https://www.mckinsey.com/~media/mckinsey/industries/education/our%20insights/fulfilling%20the%20potential%20of%20us%20higher%20education/fulfilling-the-potential-of-us-higher-education.pdf>; Postsecondary Value Commission. (2021). *Equitable Value: Promoting Economic Mobility and Social Justice through Postsecondary Education*. Institute for Higher Education Policy and the Bill & Melinda Gates Foundation. Retrieved August 11, 2023, from <https://www.postsecondaryvalue.org/wp-content/uploads/2021/05/PVC-Final-Report-FINAL.pdf>; Trostel, P., and Smith, M.C. (2017.) *It’s Not Just the Money: The Benefits of College Education to Individuals and Society*. University of Maine and Lumina Foundation. Retrieved September 21, 2203, from <https://www.luminafoundation.org/wp-content/uploads/2017/08/its-not-just-the-money.pdf>; Gallup and Lumina Foundation. (2023.) *Education for What?* Retrieved September 21, 2023, from <https://www.gallup.com/analytics/468986/state-of-higher-education.aspx>

⁴ See, for example, Office of Governor Newsom. (n.d.) “California Blueprint.” Retrieved August 1, 2023, from <https://www.gov.ca.gov/wp-content/uploads/2022/01/Higher-Education-Fact-Sheet.pdf>

⁵ Office of Governor Newsom. (2022, May). “Multi-Year Compact Between the Newsom Administration and the California State University.” Retrieved April 18, 2023, from <https://dof.ca.gov/wp-content/uploads/sites/352/Programs/Education/CSU-Compact-May-2022.pdf>; Office of Governor Newsom. (2022, May). “Multi-Year Compact Between the Newsom Administration and the University of California.” Retrieved April 18, 2023, from <https://dof.ca.gov/wp-content/uploads/sites/352/Programs/Education/UC-Compact-May-2022.pdf>; Office of Governor Newsom. (2022, May). “Multi-Year Roadmap Between the Newsom Administration and the California Community Colleges.” Retrieved April 18, 2023, from <https://dof.ca.gov/wp-content/uploads/sites/352/Programs/Education/CCC-Roadmap-May-2022.pdf>

The AB928 Committee's recommendations seek to chart a bold path forward. The Committee aspires to disrupt the status quo and achieve the maximum of what is possible for the state of California and its residents.

C. RECOMMENDATIONS AREA: OVERARCHING NEEDS TO MEET THE INTENT OF AB928

Following over a year of public meetings, discussion and analysis, the AB928 Committee concluded that the only way to deliver on the promise of its recommendations and achieve the state's 70% postsecondary attainment goal is to call for a dramatically changed postsecondary policymaking environment in California. The following overarching recommendations are designed to create the conditions that are necessary if these recommendations are to succeed, and the intent of the AB928 legislation is to be met.

Please see the Full Report, Section II: Research and Rationale Supporting the Recommendations for far more details, research and analysis.

Recommendation 1. Resource an Intersegmental Course Articulation and Pathways Development infrastructure, building upon existing structures, to oversee and facilitate the process of course review, pathways development, and determinations of similarity.⁶ This infrastructure would include incentives for the full participation from and leadership by faculty, and active membership of students to provide input, from the California Community Colleges (CCC), the University of California (UC), California State University (CSU) and Association of Independent California Colleges and Universities (AICCU) member institutions to maximize the potential of the Associate Degree for Transfer (ADT) and its guarantee of admissions at participating four-year institutions.

Recommendation 2. Permanently establish within state structures, and resource with ongoing funding, a Higher Education Intersegmental Council. This Council's make-up should include students, senior administrative and academic senate leaders from all of the segments, K12 representatives, workforce experts and equity advocates (mirroring

⁶ Currently, after a Transfer Model Curriculum (TMC) template is created or revised in a major, each CSU campus determines if there is a baccalaureate degree in a similar major to the TMC. This determination of "similarity" ensures that students who earn the Associate Degree for Transfer (ADT), that is created under the parameters of that TMC, are guaranteed admission in that similar major at one of the CSU campuses offering that major and will be required to complete no more than 60 units after transfer to earn the baccalaureate degree that is deemed "similar" to the major of the ADT if the student stays on that ADT pathway.

in many ways the representation on the AB928 Committee), and should seek to meet the following goals:

- Develop a detailed plan, that outlines the roles and responsibilities of each segment, for how the state will increase credential production and transfer attainment to meet the state's 70% attainment goal, while closing equity gaps, particularly by race and ethnicity, income and region;
- Build and resource statewide infrastructure for intersegmental coordination and collaboration, breaking down existing siloes;
- Create a new venue for addressing policy barriers, responding to new policies, and aligning and streamlining resources and investments;
- Assess educational program alignment to workforce demand and engage industry to align education and training programs;
- Develop a shared definition of regional service areas and alignment of equitable opportunity;
- Deepen understanding of student affordability through collaboration with critical entities such as the California Student Aid Commission (CSAC) and aligned affordability efforts such as college savings accounts and Free Application for Federal Student Aid (FAFSA) for All;
- Provide oversight for assessing the success of efforts recommended by the AB928 Committee (such as the Intersegmental Course Articulation and Pathways Development infrastructure, the monitoring of goals, including equity and transfer improvements, and the Transfer Reengagement Initiative for Associate Degree Holders (TRIAD)) in collaboration with those engaged in those efforts; and
- Generate policy recommendations grounded in relevant data made available by the K-12 and postsecondary segments, as well as workforce studies.

Recommendation 3. Invest in the accelerated completion of the Cradle-to-Career data system, with active participation of representatives from the four segments of higher education to inform data and information needs.⁷ Ensure that the data system can provide ongoing monitoring of the goals and activities outlined by the AB928 Committee, and provide, at a minimum, data and analysis that is finely disaggregated by race and ethnicity (e.g., disaggregated by subpopulation within groups such as Asian), income, and region of at least the following metrics and areas of analysis:

⁷ The Cradle to Career longitudinal data system was created by AB132 and is expected to improve the availability of intersegmental data. California State Legislature. (2021). *Assembly Bill No. 132, Postsecondary education trailer bill*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB132

- Outcomes for transfer students who start at community colleges, including data on who gets prepared for transfer, finishes the ADT, applies to transfer, is accepted for transfer, enrolls and then completes the bachelor's degree (and other credentials);
- Outcomes for students who start in four-year institutions and transfer to other institutions (e.g., to community college colleges, other four-year institutions, etc.), including data on who applies to transfer, is accepted for transfer, enrolls and then completes credentials;
- Total time and units to degree for transfer students;
- Labor market outcomes for transfer students;
- The effects of impaction/redirection;
- Intra- and inter-regional transfer patterns;
- Intersectional identities of transfer students and related success patterns; and
- Earned college course units that are repeated, or not accepted, in the transfer process.

Recommendation 4. Commission a comprehensive landscape analysis of regional workforce and educational needs, resources, opportunities and gaps.

Recommendation 5. Provide ongoing funding for the holistic strategies needed to ensure that marginalized and historically minoritized students succeed at the levels required to deliver on the promise of equitable economic mobility and meet the state's 70% postsecondary degree and credential attainment goal for working-age Californians, with intentional monitoring of impact to ensure they are improving outcomes and achieving equity.

D. RECOMMENDATIONS AREA: GOALS

"Identifying annual goals for increasing transfer rates in California and closing racial equity gaps in transfer outcomes to be adopted by the state."

Please see the Full Report, Section II: Research and Rationale Supporting the Recommendations for far more details, research and analysis.

Recommendation 6. Adopt and monitor the following goals, designed to prioritize first and foremost closing equity gaps by race and ethnicity in transfer outcomes:

- By 2030, close equity gaps by race and ethnicity in the outcomes of students who begin in the CCC and seek to transfer; and

- By 2030, close equity gaps by race and ethnicity in the outcomes of students who begin in the CCC and seek to apply, be admitted, enroll and graduate from the UC and CSU systems.

Recommendation 7. Adopt and monitor the following goal: To meet the state’s 70% postsecondary credential attainment goal (set by Governor Newsom) by 2030, increase statewide attainment by 2% each year from the current statewide baseline of 56% while closing equity gaps by race and ethnicity to ensure all of California meets the 70% goal. The AB928 Committee shall establish a clear numeric goal for closing equity gaps in the state attainment rate by the end of 2024.

Recommendation 8. Adopt and monitor the following goal: By 2030, 100% of the entering CCC students who intend to (and meet the academic requirements for) transfer will successfully transfer (apply to transfer, be admitted, and enroll) and will complete a bachelor’s degree within four years of transfer at any accredited non-profit institution in- or out-of-state.

Recommendation 9. Adopt and monitor the following goal: By 2030, close regional opportunity gaps to access ADT pathways and provide greater opportunities for students to transfer in their region and in the major in which they earned their ADT.

E. RECOMMENDATIONS AREA: STEM

“Proposing a new unit threshold for STEM degree pathways that meet the requirements for admission to the California State University and the University of California.”

Please see the Full Report, Section II: Research and Rationale Supporting the Recommendations for far more details, research and analysis.

Recommendation 10. Retain the 60-unit maximum requirement for ADTs while providing an option for up to an additional six units for high-unit STEM ADTs and require the submission of clear evidence and rationale for the higher units during the Transfer Model Curricula (TMC) approval process.

Recommendation 11. Require that by the end of the 2023-24 academic year, TMC drafts are in place for the fields of Engineering, Biology, Chemistry, Mathematics, Environmental Science, Physics, and Computer Science pathways that prepare students for transfer to both the CSU and UC systems and other four-year institutions that

choose to participate (such as members of AICCU and Historically Black Colleges and Universities (HBCUs) currently engaged with the California Community Colleges Chancellor's Office (CCCCO)). Where a single TMC to both UC and CSU is not possible, require the provision of clear rationale and evidence explaining why separate TMCs are needed.

Recommendation 12. As already required, within 18 months of TMC approval, California community colleges will create ADTs for each TMC adopted under Recommendation 11. Subsequently, within 12 months the CSU campuses will determine similarity, and the UC and AICCU campuses are encouraged to identify those TMCs that fulfill major preparation requirements for transfer admission.

Recommendation 13. Clarify that lower-division general education flexibility for STEM pathways is currently allowed and may be essential for some STEM TMCs, so that students can be fully prepared for Junior-year major requirements.

Recommendation 14. To support equitable student success in STEM pathways, invest in the scaled implementation of culturally responsive student supports and evidence-based academic/pedagogical improvements.

Recommendation 15. Provide funding for STEM Bridge programs for first-year CCC students and students who are transferring.

Recommendation 16. Require transparency concerning membership and composition of the Faculty Discipline Review Groups (FDRGs) and other intersegmental curriculum groups.

Recommendation 17. In light of the relevance of AB1291 University of California Associate Degree for Transfer Pilot Program (2023)⁸ to the goals of the AB928 Committee, require AB1291 be implemented in meaningful collaboration with the CCCs and that STEM TMCs be considered as essential building blocks.

⁸ California State Legislature. (2023). Assembly Bill No. 1291, University of California Associate Degree for Transfer Pilot Program. Retrieved November 2, 2023, from <https://legiscan.com/CA/text/AB1291/2023>

F. RECOMMENDATIONS AREA: REENGAGING ADT EARNERS

“Reengaging ADT earners who do not transfer or apply for transfer into a four-year postsecondary educational institution.”

Please see the Full Report, Section II: Research and Rationale Supporting the Recommendations for far more details, research and analysis.

Recommendation 18. Invest in the creation, and assign responsibility for implementation, of a Transfer Reengagement Initiative for Associate Degree Holders (TRIAD), a comprehensive plan organized into two overarching areas of focus:

- Strategies to reduce the number of students who get close to transfer and do not transfer or apply to transfer:
 - Build a common transfer application platform designed to be inclusive of all segments;
 - Identify, monitor and elevate the visibility of students vulnerable to experiencing difficulties in transfer processes including but not limited to Black, Latine, American Indian, Alaskan Native, Asian Pacific Islander and any other disproportionately impacted groups;
 - Streamline processes and remove unnecessary barriers;
 - Study the impact of financial aid; and
 - Build a regional infrastructure for coordinating admissions across segments and online offerings to ensure placebound students can stay in their preferred region.
- Strategies to reengage students who already hold the ADT and did not transfer or apply to transfer:
 - Launch a reengagement campaign that is carefully designed for success and inclusive of:
 - Reengagement scholarships that provide reduced or free tuition and fees for returning students;
 - Bridge programs that support students as they reenter postsecondary education;
 - Easily accessible coaching services so students can quickly and easily receive customized support; and
 - Funding levers and metrics that can incentivize institutions' focus on increased student enrollment, persistence, and completion.

FULL REPORT

SECTION I: OVERVIEW OF THE AB928 ASSOCIATE DEGREE FOR TRANSFER INTERSEGMENTAL IMPLEMENTATION COMMITTEE

The AB928 Committee’s recommendations were voted on by the Committee at its November 30, 2023 public meeting. This full report was developed and submitted by Sova. While the Committee had ample opportunity to review and comment on the report, the Committee did not vote on the report. The Committee’s voting was confined to the specific tasks laid out in legislation regarding the development of recommendations. Details about the votes taken at the November 30, 2023 meeting can be found in the Meeting Minutes at <https://www.ab928committee.org/>.

A. INTRODUCTION

In 2021, the California State Legislature (via [AB928](#)) created the Associate Degree for Transfer Intersegmental Implementation Committee (hereafter “AB928 Committee”) and called upon it to:

[S]erve as the primary entity charged with the oversight of the associate degree for transfer for the sole purpose of strengthening the pathway for students and to ensure it becomes the primary transfer pathway in California between campuses of the California Community Colleges and the University of California, the California State University, and participating independent institutions of higher education.

The AB928 Committee began its work on July 1, 2022 and will work through June 30, 2025. The legislation clearly outlined the Committee’s areas of focus for 2023, which are to make recommendations to the Legislature in the following areas:

- Goals: “Identifying annual goals for increasing transfer rates in California and closing racial equity gaps in transfer outcomes to be adopted by the state.”
- STEM: “Proposing a new unit threshold for STEM degree pathways that meet the requirements for admission to the California State University and the University of California.”
- Reengaging ADT earners: “Reengaging ADT earners who do not transfer or apply for transfer into a four-year postsecondary educational institution.”

B. LEADERSHIP

Dr. Aisha Lowe, Executive Vice Chancellor of the California Community Colleges, is the AB928 Committee's first Chair, serving a two-year term. AB928 states that:

The first chair of the committee shall be the representative from the Office of the Chancellor of the California Community Colleges and shall serve a two-year term. Following the first chair's two-year term, the committee shall elect a chair from its members to serve a two-year term. A member shall not serve consecutive terms as chair of the committee and the position of chair shall rotate among the members of the committee.

The facilitator, Sova, will design an election process for 2024 to ensure a timely transition.

C. MEMBERSHIP

Current Members

The members of the AB928 Committee, as of the writing of this draft, are:

(i) Designating/appointing entity: The Office of the Chancellor of the California Community Colleges

Aisha Lowe
Executive Vice Chancellor, Equitable Student Learning, Experience and Impact Office
CA Community Colleges Chancellor's Office

(ii) Designating/appointing entity: The Office of the Chancellor of the California State University

Laura Massa
Interim Associate Vice Chancellor, Academic and Faculty Programs
Office of the CSU Chancellor

(iii) Designating/appointing entity: The Office of the President of the University of California

Yvette Gullatt
Vice President and Vice Provost, Graduate, Undergraduate and Equity Affairs
University of California, Office of the President

(iv) Designating/appointing entity: The Association of Independent California Colleges and Universities

Tanaz Arteaga
AICCU Sector Representative

(v) Designating/appointing entity: The State Department of Education

Peter Callas
Director, Career and College Transition Division
California Department of Education

(vi) Designating/appointing entity: The Student Senate for the California Community Colleges

John "Jay" Doherty
Student
Los Rios Community College District

(vii) Designating/appointing entity: The California State Student Association

Samantha Alvarez Chavarria
Student
Vice President of Legislative Affairs

(viii) Designating/appointing entity: The University of California Student Association

William Chao
Student
University of California, Los Angeles

(ix) Designating/appointing entity: The Academic Senate for the California Community Colleges

Virginia May
Past President
Academic Senate for California Community Colleges

(x) Designating/appointing entity: The Academic Senate of the California State University

Beth Steffel
Chair
Academic Senate of the California State University

(xi) Designating/appointing entity: The Academic Senate of the University of California

Susan Cochran
Immediate Past Chair
Academic Senate, University of California

(i) The Senate Committee on Rules shall appoint one member from the workforce sector with expertise in the fields of science, technology, engineering, or mathematics.

Rose-Margaret Itua
Professor of Engineering
Ohlone College

(ii) The Speaker of the Assembly shall appoint one member with a background in higher education research that includes scholarship on student transfer issues in the state.

Cecilia Rios-Aguilar
Professor and Associate Dean of Equity, Diversity and Inclusion
School of Education and Information Studies
University of California, Los Angeles

(iii) The Lieutenant Governor shall appoint one member from an educational equity and social justice organization.

Mike Muñoz
Superintendent-President
Long Beach City College

(iv) The Governor shall appoint one member from an educational equity and social justice organization.

Jessie Ryan
Executive Vice President
Campaign for College Opportunity

(v) The Governor shall appoint one member who is a California community college student.

David Ramirez
Student
University of California, Los Angeles

Please see Appendix A for the history of any changes in representatives.

Membership Criteria

The membership requirements of the AB928 Committee are outlined in the legislation. AB928 states that "the membership of the committee shall reflect its intersegmental function by including a cross-section of the stakeholders who will be needed to fulfill the committee's responsibilities," and stipulates one representative from each of the following entities:

- The Office of the Chancellor of the California Community Colleges.
- The Office of the Chancellor of the California State University.
- The Office of the President of the University of California.
- The Association of Independent California Colleges and Universities.
- The State Department of Education.
- The Student Senate for the California Community Colleges.
- The California State Student Association.
- The University of California Student Association.
- The Academic Senate for the California Community Colleges.
- The Academic Senate of the California State University.
- The Academic Senate of the University of California.

The legislation further states that "Designating entities [as named above] shall fill vacancies when their representative member positions on the Committee are vacant." Appointing entities were asked by both Sova and the Committee Chair to promptly notify them of any vacancies and new appointments.

AB928 additionally stipulates that five members of the Committee shall be appointed as follows:

- “The Senate Committee on Rules shall appoint one member from the workforce sector with expertise in the fields of science, technology, engineering, or mathematics.
- The Speaker of the Assembly shall appoint one member with a background in higher education research that includes scholarship on student transfer issues in the state.
- The Lieutenant Governor shall appoint one member from an educational equity and social justice organization.
- The Governor shall appoint one member from an educational equity and social justice organization.
- The Governor shall appoint one member who is a California community college student.”

The legislation further states that “Appointing entities [as described above] shall fill vacancies when their appointed member positions on the Committee are vacant. Members appointed...shall serve at the pleasure of their respective appointing entities.” Appointing entities were asked by both Sova and the Committee Chair to promptly notify them of any vacancies and new appointments.

D. TIMELINE AND ARC OF THE WORK

During 2022-23, the AB928 Committee held seven public meetings:

- October 13, 2022
- December 7, 2022
- January 26, 2023
- April 25, 2023
- June 12, 2023
- September 18, 2023
- November 30, 2023

Meeting agendas and materials are available here: <https://www.ab928committee.org/>

In addition, study groups reviewed research, heard from experts, and requested additional data (through the AB928 Committee's data partner Student-Ready Strategies).

SECTION II: RESEARCH AND RATIONALE SUPPORTING THE RECOMMENDATIONS

The AB928 Committee’s recommendations emerged from a year of discussion and deliberation bolstered by research and analysis. The following section outlines the research and analysis supporting the AB928 Committee’s recommendations.⁹

A. OVERARCHING NEEDS TO MEET THE INTENT OF AB928

Following over a year of public meetings, discussion and analysis, the AB928 Committee concluded that the only way to deliver on the promise of its recommendations and achieve the state’s 70% postsecondary attainment goal is to call for a dramatically changed postsecondary policymaking environment in California. The following overarching recommendations, with aligned research and rationale, are designed to create the conditions that are necessary if these recommendations are to succeed, and the intent of the AB928 legislation is to be met.

While undertaking its work to develop recommendations, the AB928 Committee operated with a set of guiding premises. They are:

Overarching guiding premises.

- California is the most racially diverse state in the nation. Unfortunately, California also has persistent equity gaps by race and ethnicity in postsecondary attainment.¹⁰ Closing equity gaps in postsecondary attainment will deliver benefits and improve the well-being of all of the state’s residents, while also ensuring fair opportunity.¹¹ The AB928 Committee’s recommendations thus elevate closing racial equity gaps as the first priority and as a theme underlying all subsequent recommendations. The Committee also urges attention be paid to addressing unacceptable inequities in postsecondary attainment based on

⁹ A glossary of key terms, such as “Associate Degree for Transfer” and “Transfer Model Curriculum,” can be found in Academic Senate for California Community Colleges. (Fall 2022 Revision). *C-ID Handbook*. Retrieved December 8, 2023 from <https://c-id.net/page/1>

¹⁰ Lumina Foundation. (2021). “A Stronger Nation: Learning Beyond High School Builds American Talent.” Retrieved April 19, 2023, from <https://www.luminafoundation.org/stronger-nation/report/#/progress>

¹¹ McKinsey & Company. (2023). *Fulfilling the Potential of US Higher Education*. Retrieved August 11, 2023, from <https://www.mckinsey.com/~media/mckinsey/industries/education/our%20insights/fulfilling%20the%20potential%20of%20us%20higher%20education/fulfilling-the-potential-of-us-higher-education.pdf>; Postsecondary Value Commission. (2021). *Equitable Value: Promoting Economic Mobility and Social Justice through Postsecondary Education*. Institute for Higher Education Policy and the Bill & Melinda Gates Foundation. Retrieved August 11, 2023, from <https://www.postsecondaryvalue.org/wp-content/uploads/2021/05/PVC-Final-Report-FINAL.pdf>

other factors critical to the success of California’s students, such as income and region.¹²

- In order to sustain a productive workforce in California, improve the well-being of the state’s residents and provide fair and equitable opportunity for social and economic mobility, a higher percentage of Californians must attain a postsecondary degree or workforce credential. To that end, the state of California has a goal (set by Governor Newsom) that 70% of the adult population, ages 25-64, will have a postsecondary credential—college degree, certificate, industry-recognized certification, or other credential of value—by 2030.¹³
- An effective and efficient system of college transfer, in which students complete the first two years toward a bachelor’s degree at one of California’s community colleges and then transfer to a university for the remaining coursework, will be necessary to help the state meet its 70% goal. Many transfer partners, such as a number of CSU institutions and in-state members of the AICCU do have additional capacity and an interest in enrolling more transfer students.
- In California, only one in four students who start at a community college with a transfer goal successfully transfers within five years.¹⁴
- There are pervasive, unacceptable inequities in transfer outcomes based on race, region, and income. For example, according to an analysis by the Public Policy Institute of California (PPIC), 56 percent of freshmen who enrolled in a California Community College in 2016 were Latine, African American, or Native American, but only 47 percent of CSU transfers and 32 percent of UC transfers were from these populations.¹⁵
- Despite the creation of guaranteed-transfer pathways such as the ADT and the UC Transfer Pathways, the transfer system remains unnecessarily complex and contains too many contingencies to be considered universally accessible.¹⁶

¹² California Competes. (n.d.). *Pathways to Prosperity*. Retrieved April 18, 2023, from <https://californiacompetes.org/p2p>; Lumina Foundation. (2021). *A Stronger Nation: Learning Beyond High School Builds American Talent*. Retrieved April 19, 2023, from <https://www.luminafoundation.org/stronger-nation/report/#/progress>

¹³ See, for example, Office of Governor Newsom. (n.d.) “California Blueprint.” Retrieved August 1, 2023, from <https://www.gov.ca.gov/wp-content/uploads/2022/01/Higher-Education-Fact-Sheet.pdf>

¹⁴ Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers*. Public Policy Institute of California. Retrieved April 18, 2023, from <https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf>

¹⁵ Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers*. Public Policy Institute of California. Retrieved April 18, 2023, from <https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf>

¹⁶ Student-Ready Strategies. (2023, January 26). “Understanding Transfer: Current Research in California.” Presentation for the Associate Degree for Transfer Intersegmental Implementation Committee. Retrieved April 18, 2023, from <https://www.ab928committee.org/meetings/january-26-2023>

- There are, however, signs of improvement, and evidence backing the AB928 Committee’s focus on the ADT. A 2023 analysis by PPIC found that:
The percentage of successful transfer students who earned an ADT before transferring doubled for all racial groups when comparing those who transferred in 2021–22 to those who transferred in 2015–16. The increase was particularly significant among Latino students, with the percentage of successful transfers with an ADT rising from 25 to 53 percent. For Black students, the percentage of successful transfers with an ADT increased from 14 to 36 percent.¹⁷
- To meet state workforce needs and achieve greater educational and economic equity, California’s postsecondary transfer system must transform in dramatic and meaningful ways.

Additional Information

How Course Articulation in California is Currently Conducted

Presently, the course articulation process (i.e., the determination that a community college course is equivalent to a CSU, UC or AICCU-member course and will therefore be accepted as meeting a CSU, UC or AICCU-member course requirement) has separate and differing requirements, processes and procedures by segment. In the public segments, while general education courses are centrally evaluated for similarity by the CSU Chancellor's Office (CSUCO) and the University of California Office of the President (UCOP), those reviews are not coordinated across segments. Therefore, community colleges must submit the same courses to both CSUCO and UCOP at different times, with different processes, and based on different standards. This means that the same community college course may be approved as similar by one segment, but not the other. Additionally, major preparation courses and any other course requirements undergo a decentralized course-to-course articulation process for which each community college must submit courses to each CSU and UC campus for which they want the course deemed similar. This process is individualized per CSU and UC campus, and is determined by each campus' discipline faculty. The result is a complex web of course articulations that apply to some campuses, but not all. This makes it very difficult to establish statewide degree pathways, and, even where such pathways exist (i.e., the ADT), those pathways are not uniformly accepted as sufficient transfer preparation across CSU and UC campuses, or only certain courses within the pathway are accepted.

¹⁷ Cuellar Mejia, M., Johnson, H., Perez, C.A. & Jackson, J. (2023). Strengthening California’s Transfer Pathway. Public Policy Institute of California. Retrieved October 27, 2023, from <https://www.ppic.org/publication/strengthening-californias-transfer-pathway/>

In order to fulfill the goals set forth in AB928 to improve transfer attainment and ADT access and completion, in general and particularly for STEM pathways, this decentralized and campus-specific course articulation process can and must be improved.

With the above guiding premises and information in mind, the AB928 Committee offers the following recommendations, research and rationale.

Recommendation 1. *Resource an Intersegmental Course Articulation and Pathways Development infrastructure, building upon existing structures, to oversee and facilitate the process of course review, pathways development, and determinations of similarity.¹⁸ This infrastructure would include incentives for the full participation from and leadership by faculty, and active membership of students to provide input, from the California Community Colleges (CCC), the University of California (UC), California State University (CSU) and Association of Independent California Colleges and Universities (AICCU) member institutions to maximize the potential of the Associate Degree for Transfer (ADT) and its guarantee of admissions at participating four-year institutions.¹⁹*

As described above in the section entitled “How Course Articulation in California is Currently Conducted,” in order to fulfill the goals set forth in AB928 to improve transfer attainment and ADT access and completion, in general and particularly for STEM pathways, the current decentralized and campus-specific course articulation process can and must be improved. The AB928 Committee thus recommends the state establish and resource an Intersegmental Course Articulation and Pathways Development infrastructure to oversee the process of course review, pathways development, and determinations of similarity.

AB928 calls for this Committee to strengthen “the [ADT] pathway for students and to ensure it becomes the primary transfer pathway in California between campuses of the California Community Colleges and the University of California, the California State

¹⁸ Currently, after a Transfer Model Curriculum (TMC) template is created or revised in a major, each CSU campus determines if there is a baccalaureate degree in a similar major to the TMC. This determination of “similarity” ensures that students who earn the Associate Degree for Transfer (ADT), that is created under the parameters of that TMC, are guaranteed admission in that similar major at one of the CSU campuses offering that major and will be required to complete no more than 60 units after transfer to earn the baccalaureate degree that is deemed “similar” to the major of the ADT if the student stays on that ADT pathway.

¹⁹ California Community Colleges. (n.d.). “Associate Degree for Transfer.” Retrieved November 2, 2023, from <https://icangotocollege.com/associate-degree-for-transfer#:~:text=What%20is%20an%20Associate%20Degree,California%20and%20outside%20the%20state>

University, and participating independent institutions of higher education.” For this purpose to be achieved, collaboration among all three systems of California higher education as well as independent institutions is critical.

An intersegmental infrastructure for ongoing collaboration among discipline faculty must be supported with resources to grow with the goal that STEM pathways are streamlined and do not include excess units or repetition of courses.

This infrastructure should: provide accountability for ensuring that work is being completed; include faculty from UC, CSU, CCC and AICCU institutions; be designed to ensure that diverse and sufficiently representative faculty participation is incentivized, both through the provision of resources and through formal recognition of faculty participation in intersegmental curricular work in promotion and tenure; and incentivize student participation.

***Recommendation 2.** Permanently establish within state structures, and resource with on-going funding, a Higher Education Intersegmental Council. This Council's make-up should include students, senior administrative and academic senate leaders from all of the segments, K12 representatives, workforce experts and equity advocates (mirroring in many ways the representation on the AB928 Committee), and should seek to meet the following goals:*

- Develop a detailed plan, that outlines the roles and responsibilities of each segment, for how the state will increase credential production and transfer attainment to meet the state's 70% attainment goal, while closing equity gaps, particularly by race and ethnicity, income and region;
- Build and resource statewide infrastructure for intersegmental coordination and collaboration, breaking down existing siloes;
- Create a new venue for addressing policy barriers, responding to new policies, and aligning and streamlining resources and investments;
- Assess educational program alignment to workforce demand and engage industry to align education and training programs;
- Develop a shared definition of regional service areas and alignment of equitable opportunity;
- Deepen understanding of student affordability through collaboration with critical entities such as the California Student Aid Commission (CSAC) and aligned affordability efforts such as college savings accounts and Free Application for Federal Student Aid (FAFSA) for All;
- Provide oversight for assessing the success of efforts recommended by the AB928 Committee (such as the Intersegmental Course Articulation and Pathways

Development infrastructure, the monitoring of goals, including equity and transfer improvements, and the Transfer Reengagement Initiative for Associate Degree Holders (TRIAD)) in collaboration with those engaged in those efforts; and

- Generate policy recommendations grounded in relevant data made available by the K-12 and postsecondary segments, as well as workforce studies.

As the AB928 Committee considered each legislative requirement, a recurring theme emerged: the need for long-term commitment across the segments of higher education in California to engage in the ongoing problem-solving required for successfully removing barriers to equitable opportunities and outcomes for transfer students.

Since the dissolution of the California Postsecondary Education Commission (CPEC) in 2011, California has lacked a mechanism for true intersegmental coordination.²⁰ At the moment, each segment makes the majority of its own policy in siloes. Informal and voluntary venues exist, such as the Intersegmental Coordinating Committee, but achieving the 70% goal will require a much higher level of authority, commitment and resources.

The AB928 Committee recognizes that the work of achieving equity for transfer students, as called for by AB928, and reaching the state's goal that 70% of the adult population will have a postsecondary credential by 2030, is not work that can be accomplished through legislation or through any simple solution or 'magic bullet.'²¹ Real progress for students will be made only to the extent that stakeholders from across the segments are supported to engage in the long-term work of building and maintaining clear and equitable pathways for transfer students. Transfer student success is everyone's work and while there is much effort to recognize and achievement to build on, there is a long road ahead that will require durable commitment to intersegmental collaboration from stakeholders at every level. While a wide range of key stakeholders, including faculty, staff, and administrators, are implicated in this long-term work, the AB928 Committee also recognizes the necessity of ensuring

²⁰ Observers suggest that CPEC was dissolved due to issues with its design, such as its charge "to serve both as a part of the state's higher education infrastructure and as an objective analyst of it." However, nearly every other state in the country has a functioning coordinating or governing body for postsecondary education. An expert study is needed to design a coordinating entity that learns from the lessons of the past. See for example California Legislative Analyst's Office. (2003, January). CPEC: A Review of Its Mission and Responsibilities. Retrieved August 1, 2023, from https://lao.ca.gov/2003/cpec/CPEC_0103.pdf; Governor's Office of Planning and Research. (2018). The Master Plan for Higher Education in California and State Workforce Needs: A Review. Retrieved August 3, 2023, from https://opr.ca.gov/docs/20181226-Master_Plan_Report.pdf

²¹ See, for example, Office of Governor Newsom. (n.d.) "California Blueprint." Retrieved August 1, 2023, from <https://www.gov.ca.gov/wp-content/uploads/2022/01/Higher-Education-Fact-Sheet.pdf>

effective participation of students. Elevation of student voice and perspective is embedded into this ongoing collaborative work.

In particular, a new Higher Education Intersegmental Council should be charged with advancing the AB928 Committee's goal for a new vision for transfer and articulation in California that supports students in transferring from "one to all," meaning the infrastructure for faculty to design pathways would seek to provide students with maximum clarity and simplicity, ideally being able to easily and seamlessly transfer from one college or university to all of the California public and independent institutions. California is one of only 16 states that does not have a statewide guaranteed transfer of courses completed for an associate degree so that students enter with junior-level standing.²² While this is a massive undertaking, starting with the highest volume majors could help to serve a significant proportion of students in the short run while creating a workable process that could be scaled to other majors. This is an effort that will take time, but it has been accomplished in other states and there is no reason California cannot, with time, effort and resources, achieve it as well.²³

Of note, this effort should align with and support the forthcoming recommendations from the Common Course Numbering Task Force. That Task Force similarly makes a strong call for a new vision for transfer and articulation in California, and recommends developing a resourced infrastructure for intersegmental, statewide course articulation acceptance of California Community College (CCC) courses that are commonly numbered (in response to Assembly Bill No. 1111 (2021)).²⁴

If the postsecondary segments can begin to coordinate and collaborate in a new way, the state can achieve a new macro-level approach to policy development, review, refinement and continuous improvement. The goal is to intentionally connect the dots across the magnitude of legislation, initiatives and investments in play across the state.

²² Whinnery, E., & Peisach, L. (2022, July). 50-State Comparison: Transfer and Articulation Policies. Education Commission of the States. Retrieved August 10, 2023, from <https://www.ecs.org/50-state-comparison-transfer-and-articulation/>

²³ While California cannot look to another state as a "model," many states have valuable coordinating bodies in place and there are important resources that could be leveraged to build the right fit for California's context. See, for example, Pechota, D., Fulton, M., Broom, S. (2020). "50-State Comparison: State Postsecondary Governance Structures." Education Commission of the States. Retrieved August 8, 2023, <https://www.ecs.org/50-state-comparison-postsecondary-governance-structures/>; Bishop, B., Heckert, K. (2022). Membership Report, FY 2021. State Higher Education Executive Officers. Retrieved August 8, 2023, https://sheeo.org/wp-content/uploads/2022/08/SHEEO_FY21_Membership_Report.pdf

²⁴ California State Legislature. (2021). Assembly Bill No. 1111, Postsecondary education: common course numbering system. Retrieved August 2, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB1111

Recommendation 3. *Invest in the accelerated completion of the Cradle-to-Career data system, with active participation of representatives from the four segments of higher education to inform data and information needs.²⁵ Ensure that the data system can provide ongoing monitoring of the goals and activities outlined by the AB928 Committee, and provide, at a minimum, data and analysis that is finely disaggregated by race and ethnicity (e.g., disaggregated by subpopulation within groups such as Asian), income, and region of at least the following metrics and areas of analysis:*

- Outcomes for transfer students who start at community colleges, including data on who gets prepared for transfer, finishes the ADT, applies to transfer, is accepted for transfer, enrolls and then completes the bachelor's degree (and other credentials);
- Outcomes for students who start in four-year institutions and transfer to other institutions (e.g., to community college colleges, other four-year institutions, etc.), including data on who applies to transfer, is accepted for transfer, enrolls and then completes credentials;
- Total time and units to degree for transfer students;
- Labor market outcomes for transfer students;
- The effects of impaction/redirection;
- Intra- and inter-regional transfer patterns;
- Intersectional identities of transfer students and related success patterns; and
- Earned college course units that are repeated, or not accepted, in the transfer process.

The lack of an intersegmental data system in California seriously constrained the analysis that the AB928 Committee would have liked to have completed, and made clear the need for the accelerated completion of Cradle to Career, a longitudinal data system created by Assembly Bill 132 (2021). The AB928 Committee looks forward to collaborating with representatives from Cradle to Career to inform the development of metrics, monitoring mechanisms and dashboards related to transfer and credit mobility. In that collaboration, the Committee is eager to encourage Cradle to Career to appropriately and finely disaggregate data by race and ethnicity, ensuring that it is possible statewide to better understand the outcomes of, for example, the many subgroups of populations often grouped together as “Asian. Given the state’s dire

²⁵ The Cradle to Career longitudinal data system was created by AB132 and is expected to improve the availability of intersegmental data. California State Legislature. (2021). *Assembly Bill No. 132, Postsecondary education trailer bill*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=20210220AB132

need for improved data as soon as possible, the Committee calls for accelerated progress toward the creation and mobilization of Cradle to Career.²⁶

Relatedly, the AB928 Committee was called upon to set goals for improved and equitable transfer, but the state does not have an ongoing mechanism for monitoring progress against those goals. Ensuring that the forthcoming Cradle to Career longitudinal data system is able to produce valuable and actionable analysis and monitoring of transfer student outcomes is a priority.

Recommendation 4. *Commission a comprehensive landscape analysis of regional workforce and educational needs, resources, opportunities and gaps.*

In addition to establishing an intersegmental data system, a comprehensive plan to meet the 70% attainment goal should be supported by a holistic analysis of factors such as regional workforce demand, in-out migration, population growth, students attending out-of-state institutions, institutional capacity and changes needed by particular dates to meet the goal. Such an analysis has not yet been undertaken in California (there are other valuable state examples to explore to understand the stakeholders engaged, data sources used and analysis conducted).²⁷ The AB928 Committee thus calls for a comprehensive analysis of postsecondary supply and demand:

- *Demand:* Collaborate with an entity that has the skills and resources to conduct a comprehensive analysis of labor market needs, in- and out-migration, the role of online education and out-of-state providers, transfer and other means of increasing credentials to deepen the state's understanding of what level of postsecondary attainment is needed to meet the state's economic and workforce goals and ensure equitable opportunity for all California residents. This analysis must paint a picture of the level and types of credentials (e.g., how many Bachelor's in Computer Science) the state needs, aligned to workforce demand.

²⁶ California State Legislature. (2021). *Assembly Bill No. 132, Postsecondary Education Trailer Bill*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=20210220AB132

²⁷ See, for example, Texas Higher Education Coordinating Board. (2021). *2021 Texas Public Higher Education Almanac*. Retrieved August 8, 2023, <https://reportcenter.highered.texas.gov/agency-publication/almanac/2021-texas-public-higher-education-almanac/>; Massachusetts Department of Higher Education. (2023). *Strategic Plan for Racial Equity*. Retrieved August 8, 2023, from https://www.mass.edu/strategic/documents/Massachusetts%20Department%20of%20Higher%20Education%20Strategic%20Plan%20for%20Racial%20Equity_Updated_01242023.pdf

- Of note, this analysis should be clear-eyed that the world is changing quickly, and it is difficult if not impossible to plan for significant forces such as climate change and the evolution of artificial intelligence.
- *Supply*: Conduct a comprehensive analysis of statewide and regional capacity at the existing public and private institutions of postsecondary education in California to understand: the role of transfer in increasing credential attainment; which institutions have additional capacity to step in to support the goals; and the role of “impaction” at public universities. This analysis must have a strong regional/localized focus as well as a state lens.

Recommendation 5. *Provide ongoing funding for the holistic strategies needed to ensure that marginalized and historically minoritized students succeed at the levels required to deliver on the promise of equitable economic mobility and meet the state’s 70% postsecondary degree and credential attainment goal for working-age Californians, with intentional monitoring of impact to ensure they are improving outcomes and achieving equity.*

State leaders—who set the 70% attainment goal out of recognition for the ways that postsecondary education can improve the well-being of California’s residents and bolster the workforce—must also put in place the resources and funding needed to ensure students are able to take maximum advantage of the state’s rich postsecondary ecosystem.

To close equity gaps and dramatically improve transfer student success calls for intentional and holistic implementation of a range of evidence-based strategies, including but not limited to:²⁸

- A. As noted elsewhere, building a new vision for transfer and articulation in California that supports students in transferring from “one to all,” meaning the infrastructure for faculty to design pathways that seek to provide students with maximum clarity and simplicity, ideally being able to easily and seamlessly transfer from one college or university to all of the California public and independent institutions;

²⁸Scrivener, S., Weiss, M.J., Ratledge, A., Rudd, T., Sommo, C. and Fresques, H. (2015). *Doubling Graduation Rates: Three-Year Effects of CUNY’s Accelerated Study in Associate Programs (ASAP) for Developmental Education Students*. MDRC. New York, NY; Levesque, E.M. (2018). *Improving Community College Completion Rates by Addressing Structural and Motivational Barriers*. Brookings. Retrieved November 2, 2023, from <https://www.brookings.edu/articles/community-college-completion-rates-structural-and-motivational-barriers/>; Monaghan, B. & Attewell, P. (2015). “The Community College Route to a Bachelor’s Degree.” *Educational Evaluation and Policy Analysis*, 37(1), 70–91; Institute for College Access and Success. (2021). *Raising College Attainment: A National Proposal to Scale Student Success Strategies*. Retrieved November 2, 2023, from <https://ticas.org/wp-content/uploads/2021/04/Raising-College-Attainment-A-National-Proposal-to-Scale-Student-Success-Strategies.pdf>.

- B. Scaling equitable dual admission practices to give students an opportunity for certainty about their transfer destination;
- C. Creating equitable access to dual enrollment programs for students while in high school;
- D. Ensuring faculty and staff represent the diverse backgrounds of California's students (including key characteristics such as race and ethnicity, income, geography, gender identity and sexual orientation);
- E. Providing faculty with professional development in culturally-responsive pedagogy;
- F. Further partnering with the AICCU and its member institutions to sign Memoranda of Understanding to accept and apply ADTs to completion (with their articulation guarantees), as a way to address capacity and regional constraints and reduce the need for admissions redirection. Explore possible support, resources, and funding for these efforts, including improved marketing efforts to ensure students understand the independent sector as a valuable transfer option;
- G. Providing additional advising services with trained professionals;
- H. Providing additional career planning and support for workforce preparation;
- I. Addressing affordability for transfer students through a collaboration with the California Student Aid Commission;
- J. Implementing community college baccalaureate programs when relevant and appropriate;
- K. Expanding online course offerings and increasing awareness of online offerings by all types of institutions including independent institutions, and ensuring online course and program availability is incorporated into all student-facing transfer communications; and
- L. Establishing shared courses and programs in partnership across four-year colleges and universities and community colleges in underserved regions.

The forthcoming Cradle to Career data system should be leveraged to ensure intentional, ongoing monitoring of the effect of these strategies, with a particular focus on their effectiveness in closing equity gaps, with data disaggregated by at least race/ethnicity, income, age, program and region as well as by the credential levels and types needed to meet the state's workforce demands.

The AB928 Committee recognizes that many of its recommendations will require new investment. The Committee is also aware that the state currently faces budgetary constraints. The Committee's intent is not to just ask for new funding. Wherever

possible, the Committee encourages the segments as well as individual colleges and universities to intentionally:

- Leverage existing venues and initiatives, such as the Transfer Alignment Project;
- Align to the evidence about what is most effective in achieving equitable student outcomes, with the goal of maximizing resources available;
- Consider existing enrollment needs and prioritize better serving transfer students as a strategy for financial sustainability; and
- Braid together existing funding streams. For example, the AB928 Committee has a particular focus on reengaging ADT earners who did not apply for transfer or transfer. Colleges and universities already have state and federal funding to support re-enrolling students after the global pandemic which can be a valuable resource for serving an overlapping population.

B. GOALS

The California State Legislature called upon the AB928 Committee to identify “annual goals for increasing transfer rates in California and closing racial equity gaps in transfer outcomes to be adopted by the state.” Specifically, these goals shall include all of the following:

- “(A) Annual goals for improving transfer attainment needed to meet the state’s workforce demands;
- (B) Goals for closing gaps in transfer outcomes by race;
- (C) Goals for closing regional opportunity gaps to access ADT pathways; and
- (D) Annual goals to meet the statewide degree attainment goal of 70 percent.”

To that end, the AB928 Committee recommends a set of goals for California to meet state workforce needs and achieve greater educational and economic equity. California lacks an intersegmental data system that supports analysis of student movement across segments. As the new Cradle to Career longitudinal data system created by AB132 makes better data available, we encourage the state to commission an effort to revise and improve these goals.

While undertaking its work to set goals, the AB928 Committee operated with a set of guiding premises. They are:

The imperative to eliminate inequities in transfer outcomes by race.

- There is no acceptable level of racial inequity in California’s education system. Disaggregated data lay bare pervasive, unacceptable inequities in transfer outcomes based on race. PPIC found, for example, that “In terms of race and

ethnicity, we see large equity gaps among transfers.” Latine students represent 51 percent of students who declare a degree/transfer goal, but only 35 percent of those who transfer within four years. African American students represent 7 percent of those who intend to transfer and 5 percent of those who do.²⁹

- To achieve transfer equity, the demographics of successful transfer students should be consistent with the demographics of students entering a community college with the intent to transfer.

The need to increase credential production to meet the statewide degree attainment goal of 70 percent.

- As noted above, the state of California has a goal (set by Governor Newsom) that 70% of the adult population, ages 25-64, will have a postsecondary credential—college degree, certificate, industry-recognized certification, or other credential of value—by 2030.³⁰
- California’s population of people between 25 and 64 years of age is nearly 21 million, so each percentage point gain in the educational attainment rate requires that 210,000 more degrees or certificates be produced within the state.³¹
- California’s public and independent colleges and universities are implementing a number of efforts designed to improve student success, including CSU’s Graduation Initiative 2025, UC’s Capacity 2030 and CCC’s Vision for Success.³² California’s public colleges and universities have also set goals to increase enrollment, improve graduation rates and close equity gaps.
- These reforms and initiatives make it possible to set ambitious goals for increased degree production and postsecondary educational attainment.
- Efforts to increase credential production should be inclusive of a variety of ways that workers and learners can obtain credentials. For example, short-term credentials are critical vehicles for economic mobility with increases in earnings for each level of educational attainment and are an important starting point for

²⁹ Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers*. Public Policy Institute of California. Retrieved April 18, 2023, from <https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf>

³⁰ See, for example, Office of Governor Newsom. (n.d.) “California Blueprint.” Retrieved August 1, 2023, from <https://www.gov.ca.gov/wp-content/uploads/2022/01/Higher-Education-Fact-Sheet.pdf>

³¹ U.S. Census Bureau. (n.d.) “Quick Facts.” Retrieved April 19, 2023, from <https://www.census.gov/quickfacts/CA>

³² California State University. (n.d.) “Graduation Initiative 2025.” Retrieved April 18, 2023, from <https://www.calstate.edu/csu-system/why-the-csu-matters/graduation-initiative-2025/What-Is-Graduation-Initiative-2025>; California Community Colleges Chancellor’s Office. (2021). *Update to the Vision for Success*. Retrieved April 18, 2023, from <https://www.cccco.edu/-/media/CCCCO-Website/Reports/vision-for-success-update-2021-a11y.pdf>; University of California. (2022, July 22). *University of California 2030 Capacity Plan*. Retrieved April 18, 2023, from <https://regents.universityofcalifornia.edu/regmeet/july22/b5attach2.pdf>

students from low-income backgrounds, in particular adult learners as they begin their educational journey.³³

- A comprehensive plan to meet California’s 70% attainment goal should be supported by a holistic analysis—as yet not undertaken—of factors such as regional workforce demand, in-out migration, population growth, students attending out-of-state institutions, institutional capacity and changes needed by particular dates to meet the goal.

The need to improve transfer attainment to meet the state’s workforce demands.

- There is no acceptable level of inequity in transfer student outcomes in California’s education system. It should be no harder for a student who begins at a CCC to complete a bachelor’s degree as it is for a student who begins at a baccalaureate-granting institution.
- Many students transfer regardless of completing the requirements for transfer or completing the ADT, but at the same time far too few students transfer. There are many attrition points in the transfer system, including students not applying to transfer, not being admitted for transfer, and not enrolling even if admitted. To create a more equitable and effective system of transfer, attrition must be dramatically reduced at each of these points.
- Researchers at RP Group found that 156,999 students (roughly 8%) of an examined cohort were near the transfer gate, meaning that the students had earned ≥ 60 transferable units with a 2.0 GPA, however had not yet transferred as they were missing transfer-level English and/or math.³⁴ These students are a vital pool of talent for California, and institutions statewide—particularly those facing enrollment declines—should be actively working to conduct outreach to these students, proactively making them feel welcome and encouraging them to apply, transfer and complete their degrees.
- A labor market analysis conducted by WestEd’s Center for Economic Mobility, in collaboration with the National Center for Inquiry and Improvement, found that “bachelor’s degree attainment is the most reliable path by far to attaining a good job that pays a living wage.” California’s workforce is demanding bachelor’s degrees at the same time that many of its public four-year institutions are challenged by enrollment constraints. Improving the transfer function—ensuring students can start at a community college and complete a

³³ Tillery, R., Booth, K. & Johnstone, R. (2023). “Transfer, Credentials, and Employment in CA.” WestEd and National Center for Inquiry and Improvement.

³⁴ Cooper, D., Fong, K., Karandjeff, K., Kretz, A., Nguyen, A., Nguyen, K., Purnell-Mack, R., Schiorring, E. (2017). *Through the Gate: Mapping the Transfer Landscape for California Community College Students*. Retrieved August 10, 2023, from <https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Phase-I-Technical-Report.pdf>

bachelor's degree at a public or independent university, thereby reducing enrollment pressures on constrained four-year institutions—is absolutely essential to ensuring more California residents have the opportunity for a living wage job.³⁵

The need to close regional opportunity gaps to access ADT pathways.

- In a 2023 analysis of California, PPIC found persistent regional disparities in transfer student enrollments and outcomes, which “may be influenced by disparities in geographic access to the state’s four-year public institutions.” Multiple studies have documented that the majority of college students seek to stay close to home, and community college students are more likely to stay close to home than their peers attending bachelor’s-granting institutions. For California, PPIC found that “transfer students tend to enroll in campuses closer to home even when admitted to campuses further away.”³⁶ For many students in California, being able to continue to live, work and attend college in their region is a matter of necessity, allowing them to meet their familial, financial and work responsibilities.³⁷
- For placebound students, access to ADTs is maximally achieved when the ADT in that program of study is both offered by a community college and accepted as sufficient transfer preparation by an institution in the student’s region of residence.
- Statewide, there are more incomplete regional ADT pathways than there are complete pathways, between the CCCs and the CSU, that offer both the community college and university curriculum in a given region and program of study.³⁸

³⁵ Tillery, R., Booth, K. & Johnstone, R. (2023). “Transfer, Credentials, and Employment in CA.” WestEd and National Center for Inquiry and Improvement.

³⁶ Cuellar Mejia, M., Johnson, H., Perez, C.A. & Jackson, J. (2023). *Strengthening California’s Transfer Pathway*. Public Policy Institute of California. Retrieved October 27, 2023, from <https://www.ppic.org/publication/strengthening-californias-transfer-pathway/>

³⁷ Hillman, N. & Weichman, T. *Education Deserts: The Continued Significance of “Place” in the Twenty-First Century*. American Council on Education, retrieved June 21, 2023 from <https://www.acenet.edu/Documents/Education-Deserts-The-Continued-Significance-of-Place-in-the-Twenty-First-Century.pdf>; Carter, J. (Aug. 17, 2016). “College Students Prefer to Stay Close to Home, Data Finds.” *Higher Ed Dive*. Retrieved June 21, 2023 from <https://www.highereddive.com/news/college-students-prefer-to-stay-close-to-home-data-finds/424594/>; Wozniak, A. (March 22, 2018). “Going Away to College? School Distance as a Barrier to Higher Education.” *Econofact*, University of Notre Dame. Retrieved June 21, 2023 from <https://econofact.org/going-away-to-college-school-distance-as-a-barrier-to-higher-education>

³⁸ Student-Ready Strategies. (2023). “Regional Associate Degree for Transfer Analysis.” Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data from the California Community Colleges Chancellor’s Office and the California State University Transfer Model Curriculum website. Retrieved April 18, 2023, from <https://www.calstate.edu/attend/degrees-certificates-credentials/Pages/TMC-Search.aspx#page-2>

- WestEd’s Center for Economic Mobility reported “extremely little variation by region” in its finding that “bachelor’s degree attainment is the most reliable path by far to attaining a good job that pays a living wage.”³⁹
- Regional studies of associate degree and ADT production and transfer rates by the WestEd Center for Economic Mobility find that production of associates and ADT degree earners far exceeds the actual transfer rates into the California State University System for nearly all disciplines, sometimes by multiple factors, and that there are equity gaps in which students of color are disproportionately represented in degree pathways with much lower transfer rates such as interdisciplinary studies.⁴⁰
- Opportunity gaps in regional ADT access create an insurmountable barrier for many students, evidenced by the fact that only roughly one in 10 “redirected” transfer students enrolls at a CSU.⁴¹
- A disproportionate share of California’s Black students transfer to for-profit institutions, and many are concerned about inequities in how they are served by those institutions.⁴²
- Greater regional and programmatic alignment for ADT pathways will help many more students successfully transfer and improve the overall effectiveness of the transfer system.

With these guiding premises in mind, the AB928 Committee offers the following recommendations, research and rationale.

Recommendation 6. *Adopt and monitor the following goals, designed to prioritize first and foremost closing equity gaps by race and ethnicity in transfer outcomes⁴³:*

- *By 2030, close equity gaps by race and ethnicity in the outcomes of students who begin in the California Community Colleges (CCC) and seek to transfer; and*
- *By 2030, close equity gaps by race and ethnicity in the outcomes of students who begin in the CCC and seek to apply, be admitted, enroll and graduate from the University of California (UC) and California State University (CSU) systems.*

³⁹ Tillery, R., Booth, K. & Johnstone, R. (2023). “Transfer, Credentials, and Employment in CA.” WestEd and National Center for Inquiry and Improvement.

⁴⁰ Tillery, R., Booth, K. & Johnstone, R. (2023). “Transfer, Credentials, and Employment in CA.” WestEd and National Center for Inquiry and Improvement.

⁴¹ California State University. (2022). *Student Admissions and Impaction Policies Report 2022*. Retrieved April 18, 2023, from <https://www.calstate.edu/impact-of-the-csu/government/Advocacy-and-State-Relations/legislative-reports1/Student-Admissions-and-Impaction-Policies-Report-2022.pdf>

⁴² Campaign for College Opportunity. (2019). *State of Higher Education for Black Californians*. Retrieved April 18, 2023, from <https://collegecampaign.org/wp-content/uploads/2023/02/2019-State-of-Black-Californians-Full-Report-Final.pdf>

⁴³ Aligns to AB928’s call for “(B) Goals for closing gaps in transfer outcomes by race.”

It is imperative for the AB928 Committee to call for equity gaps to be fully closed by 2030 in measures that are aligned to critical steps along the student transfer pathway. The lack of an intersegmental data system in California constrained the ability of the AB928 Committee to analyze comprehensive data about transfer student outcomes. The recommended goals that follow are therefore presented in two groupings, aligned to the most robust data available for the Committee to study:

Goal A: By 2030, close equity gaps by race and ethnicity in the outcomes of students who begin in the CCC and seek to transfer.

As data in Figures 1-3 and Table 1 make clear, there are concerning inequities by race and ethnicity in:

- Who starts at the CCCs and transfers to any four-year institution within six years. For example, the percentage of AY 16-17 CCC entrants who transfer to any four-year institutions within six years is: 16% for Hispanic, 21% for African American, 26% for Asian and 28% for white Non-Hispanic. Data should be regularly monitored to ensure all populations are transferring at the same rate.
- Who starts at the CCCs and applies to transfer to the UC or CSU. For example, while 48% of all CCC entrants are Hispanic/Latine, Hispanic/Latine students represent 30% of the CCC students who applied to the UC for transfer in AY 18-19 and 43% of the CCC students who apply to the CSU for transfer in AY 18-19. Data should be regularly monitored to ensure all populations are applying to transfer at the same rate.

Goal B: By 2030, close equity gaps by race and ethnicity in the outcomes of students who begin in the CCC and seek to apply, be admitted, enroll and graduate from the UC and CSU systems.

As Tables 2 and 3 below make clear, there are concerning equity gaps by race and ethnicity for students who apply but are not admitted, are admitted but do not enroll, and enroll but do not graduate within four years.⁴⁴ At the CSU, for example, the percent of transfer students who apply and are not admitted is: 20% for Asian, 20% for Hispanic/Latine students, 21% for white students and 27% for African American/Black students. At the UC, the percent of transfer students who apply and are not admitted is: 23% for Asian, 27% for Hispanic/Latine students, 25% for White students and 38% for African American/Black students.

⁴⁴ Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

The CCC, UC and CSU systems are already engaged in and committed to implementing a number of efforts designed to improve student success and close equity gaps, including CSU's Graduation Initiative 2025, UC's Capacity 2030 and CCC's Vision for Success. Individual AICCU institutions are similarly focused on improving equitable student success. As a part of those efforts, CCC, UC, CSU and AICCU systems and institutions must look at this transfer data carefully and implement strategies now designed to close all equity gaps by 2030.

To meet these goals will require intentional and holistic resources for, and strong implementation of, a range of strategies that can improve equitable outcomes for transfer students (see Recommendation 5 for additional details).

Figure 1: Distribution of California Community College First-Year, First-Time Entrants in AY 16-17 by Race/Ethnicity

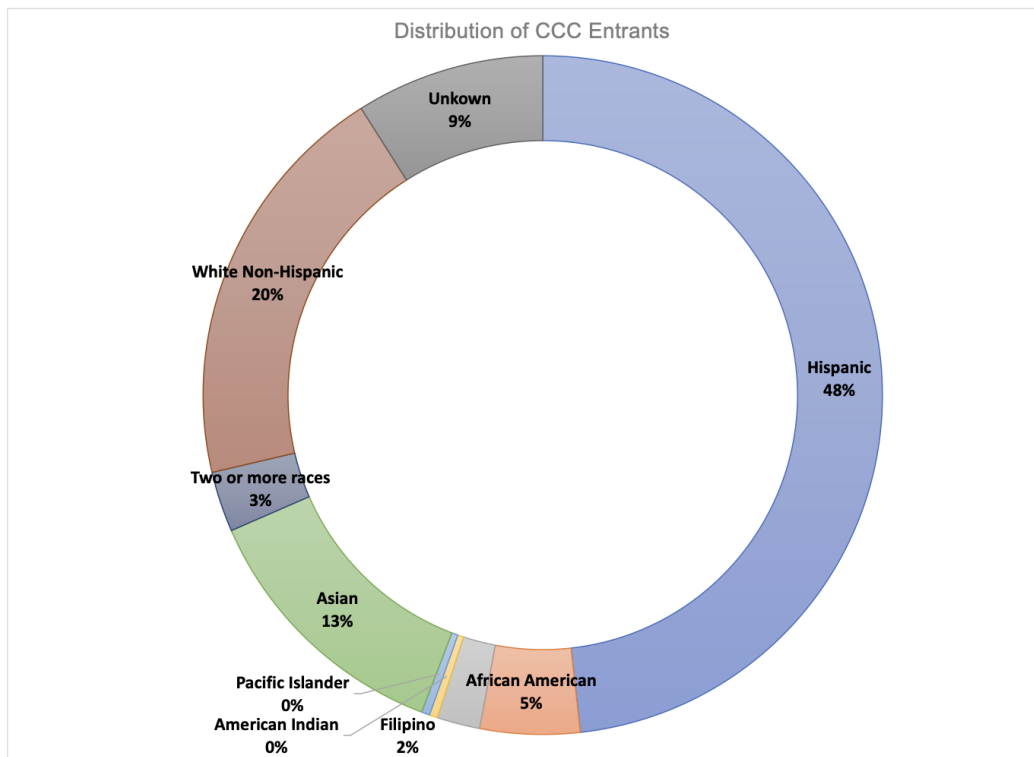


Table 1: Racial Distribution of CCC AY 16-17 First-Year, First-Time Entrants and Transfers

Race/Ethnicity	Number of students who enter (AY 16-17)	Racial distribution of entrants	Number of AY 16-17 entrants who transfer within 6 years	Racial distribution of transfers	Transfer Success Rate
African American	14,996	5%	3,206	5%	21%
American Indian	1,193	0%	202	0%	17%
Asian	39,945	13%	10,238	17%	26%
Filipino	6,460	2%	2,138	3%	33%
Hispanic	152,192	48%	24,639	40%	16%
Pacific Islander	1,249	0%	245	0%	20%
Two or more races	9,081	3%	3,147	5%	35%
Unknown	28,327	9%	899	1%	3%
White Non-Hispanic	62,098	20%	17,275	28%	28%
Total	315,541	100%	61,989	100%	20%

Figure 2: Distribution of CCC Transfer Applicants for AY 18-19 by Race/Ethnicity, UC

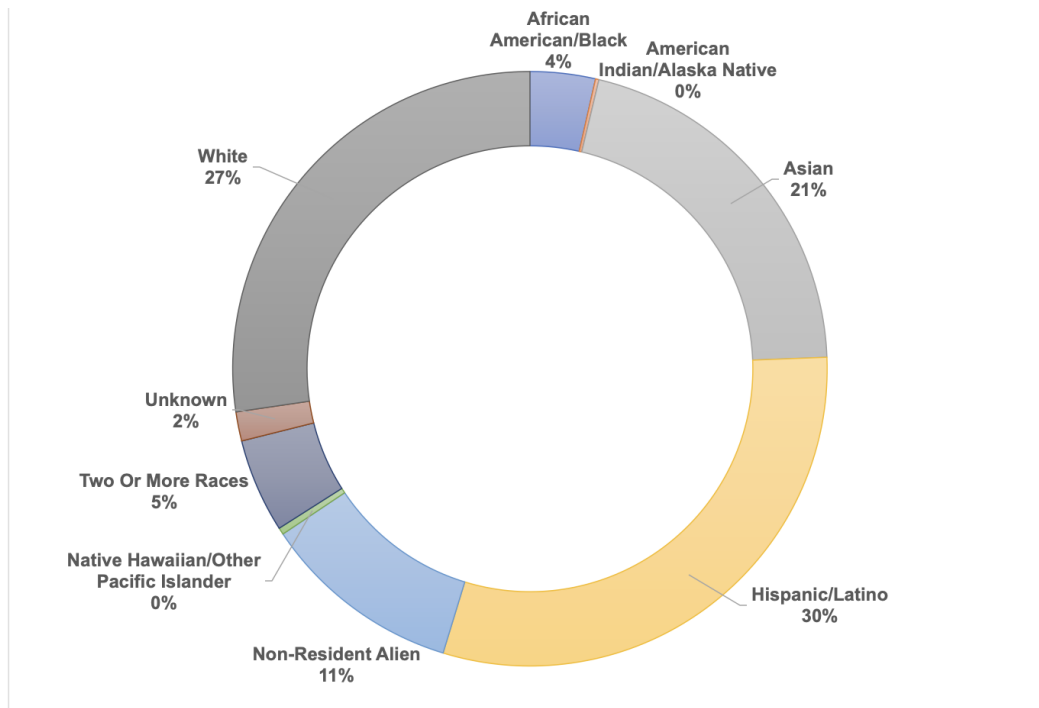


Figure 3: Distribution of CCC Transfer Applicants for AY 18-19 by Race/Ethnicity, CSU

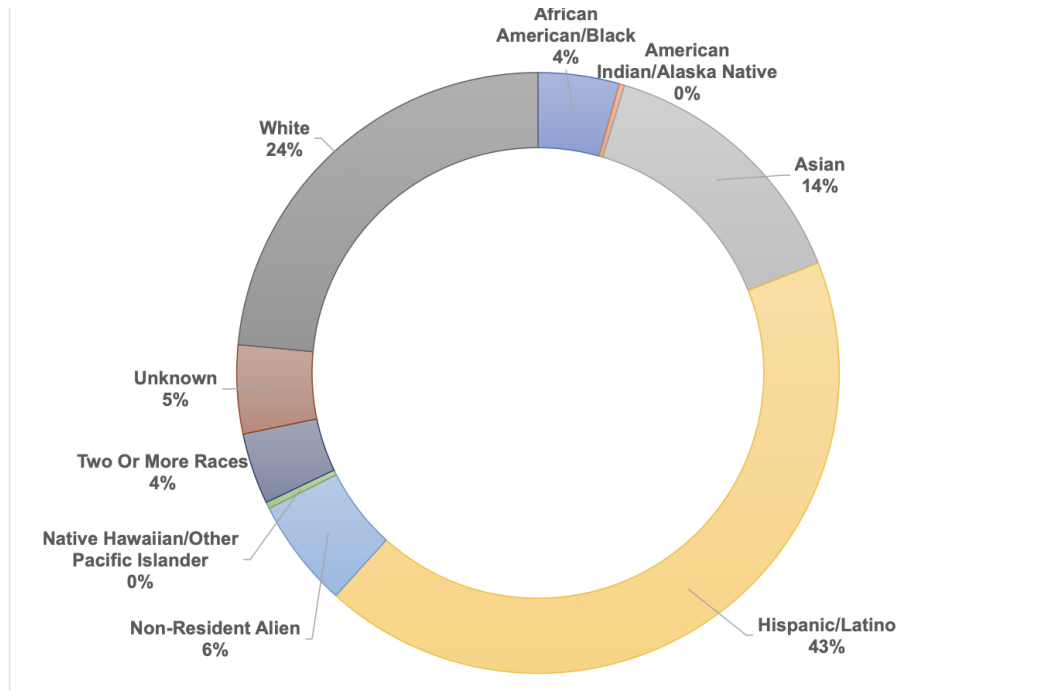


Table 2: Baseline Inequity Gaps by Race and Ethnicity in Transfer Attainment, AY 18-19, CSU⁴⁵

CSU	Applied	Applied but not admitted	Percent of Racial group	Admitted but not enrolled	Percent of Racial group	Enrolled but not graduated	Percent of Racial group
African American/Black	4,252	1,150	27%	1,185	28%	526	12%
American Indian/Alaska Native	268	63	24%	74	28%	32	12%
Asian	14,022	2,865	20%	4,039	29%	1,302	9%
Hispanic/Latino	41,569	8,463	20%	11,011	26%	4,457	11%
Non-Resident Alien	5,690	1,031	18%	1,666	29%	595	10%
Native Hawaiian/Other Pacific Islander	348	81	23%	106	30%	46	13%
Two Or More Races	3,732	800	21%	1,094	29%	366	10%
Unknown	4,645	1,035	22%	1,239	27%	498	11%
White	22,884	4,720	21%	6,134	27%	2,135	9%

⁴⁵ Student-Ready Strategies. (2023). "Transfer Attainment." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President and California State University Chancellor's Office. Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

Table 3: Baseline Inequity Gaps by Race and Ethnicity in Transfer Attainment, AY 18-19, UC⁴⁶

UC	Applied	Applied but not admitted	Percent of Racial group	Admitted but not enrolled	Percent of Racial group	Enrolled but not graduated	Percent of Racial group
African American/Black	1,289	489	38%	213	17%	127	10%
American Indian/Alaska Native	68	23	34%	11	16%	6	9%
Asian	7,510	1,726	23%	1,284	17%	551	7%
Hispanic/Latino	11,032	2,954	27%	2,350	21%	1,054	10%
Non-Resident Alien	3,962	695	18%	691	17%	261	7%
Native Hawaiian/Other Pacific Islander	134	47	35%	21	16%	7	5%
Two Or More Races	1,858	494	27%	333	18%	162	9%
Unknown	576	150	26%	99	17%	52	9%
White	9,936	2,459	25%	1,847	19%	686	7%

Recommendation 7. *Adopt and monitor the following goal: To meet the state’s 70% postsecondary credential attainment goal (set by Governor Newsom) by 2030, increase statewide attainment by 2% each year from the current statewide baseline of 56% while closing equity gaps by race and ethnicity to ensure all of California meets the 70% goal.⁴⁷ The AB928 Committee shall establish a clear numeric goal for closing equity gaps in the state attainment rate by the end of 2024.*

To accomplish this recommendation, the state must increase coordination, analysis, infrastructure, investments and resources to ensure California’s in-state public and independent institutions are able to increase access and credential completion at the level needed (see the recommendations under “Overarching Needs to Meet the Intent of AB928” for further details).

As noted earlier, the state of California has a goal that 70% of the adult population, ages 25-64, will have a postsecondary credential—college degree, certificate, industry-recognized certification, or other credential of value—by 2030.⁴⁸ At this time, California’s postsecondary attainment rate is 56%.⁴⁹ Achieving a 14% increase in the statewide attainment rate requires seeking to achieve, and intentionally monitoring, the following annual increases:

⁴⁶ Student-Ready Strategies. (2023). “Transfer Attainment.” Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor’s Office, University of California Office of the President and California State University Chancellor’s Office. Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

⁴⁷ Aligns to AB928’s call for “(D) Annual goals to meet the statewide degree attainment goal of 70 percent.”

⁴⁸ See, for example, Office of Governor Newsom. (n.d.) “California Blueprint.” Retrieved August 1, 2023, from <https://www.gov.ca.gov/wp-content/uploads/2022/01/Higher-Education-Fact-Sheet.pdf>

⁴⁹ Most recently available data is from 2021; see Lumina Foundation. (2021). A Stronger Nation: Learning Beyond High School Builds American Talent. Retrieved April 19, 2023, from <https://www.luminafoundation.org/stronger-nation/report/#/progress/state/CA>

Table 4: Attainment Increases by Year

Year	Attainment Rate
2023	56%
2024	58%
2025	60%
2026	62%
2027	64%
2028	66%
2029	68%
2030	70%

Fulfilling the statutory duty to set “Annual goals to meet the statewide degree attainment goal of 70 percent” required reviewing data and research on topics such as historical trends in credential production, current outcomes, and projections for meeting the 70% by 2030 goal.⁵⁰ The AB928 Committee’s analysis revealed that the state cannot meet the goal through the efforts of in-state public and private institutions of postsecondary education alone. Hard work by a variety of entities will be required, including employers that offer industry-based certifications with labor market value; out-of-state institutions such as the Historically Black Colleges and Universities that have signed transfer partnership Memoranda of Understanding with the CCCs; and the plethora of accredited, online program and degree offerings accessible to California residents.

The AB928 Committee is laser-focused on achieving racial equity, and thus simultaneously calls for closing equity gaps by race and ethnicity while meeting the

⁵⁰ Student-Ready Strategies. (2023, January 26). “Understanding Transfer: Current Research in California.” Presentation for the Associate Degree for Transfer Intersegmental Implementation Committee. Retrieved April 18, 2023, from <https://www.ab928committee.org/meetings/january-26-2023>; Student-Ready Strategies. (2023). “Goal-Setting Model.” Tool created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor’s Office, University of California Office of the President, California State University Chancellor’s Office, Association of Independent California Colleges and Universities, and the U.S. Census Bureau; Student-Ready Strategies. (2023). “Historical Credential Production.” Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor’s Office, University of California Office of the President, California State University Chancellor’s Office, and the Association of Independent California Colleges and Universities.

70% attainment goal. The intent is for all of the state’s populations to see their current attainment rates increase to 70%. The AB928 Committee recognizes this is an enormous undertaking that will require significant investment and resources, and dramatically increased coordination and collaboration. However, state leaders set the 70% goal because of the belief that it is required to meet the state’s workforce demand and ensure fair and equitable opportunity. Meeting the goal is imperative and the work required should be undergirded by the appropriate leadership, effort and investment (see the recommendations under “Overarching Needs to Meet the Intent of AB928” for further details).

The best baseline data available on current attainment rates, disaggregated by race and ethnicity, comes from Lumina Foundation and critically only focuses on degrees (i.e., does not include non-degree certificates, etc.). Data that includes non-degree certificates, is more finely disaggregated by race and ethnicity, and provides a more holistic picture of how the state can meet its 70% goal is not available at this time. In the absence of better data, the Committee offers the following best-available baseline data to ensure that some data is being monitored while the state continues to build the Cradle to Career data system:

Table 5: Baseline Attainment Rates by Race and Ethnicity

Racial and Ethnic Groups, California	2021 Attainment Rate, Age 25-64, Credentials included: graduate or professional degrees, bachelor’s degrees, and associate degrees ⁵¹
Hispanic	22.6%
Black	38.6%
Asian or Pacific Islander	66.3%
White	57.3%
American Indian or Alaska Native	28.5%

⁵¹ Short-term credentials are excluded as those data disaggregated by race or ethnicity are not available. Lumina Foundation. (2021). A Stronger Nation: Learning Beyond High School Builds American Talent. Retrieved April 19, 2023, from <https://www.luminafoundation.org/stronger-nation/report/#/progress/state/CA>

Recommendation 8.⁵² *Adopt and monitor the following goal: By 2030, 100% of the entering CCC students who intend to (and meet the academic requirements for) transfer will successfully transfer (apply to transfer, be admitted, and enroll) and will complete a bachelor's degree within four years of transfer at any accredited non-profit institution in- or out-of-state.*

As noted earlier, there is no acceptable level of inequity in transfer student outcomes in California's education system. It should be no harder for a student who begins at a CCC to complete a bachelor's degree as it is for a student who begins at a baccalaureate-granting institution.

While setting the goals at 100% of the cohort achieving these critical steps in the pipeline is ambitious, the Committee feels strongly that aiming lower would compromise its aspirations. Furthermore, these goals represent the underlying premise of the Master Plan (1960 Donahoe Act). Students are supposed to be able to progress in this way, and have an opportunity for a bachelor's degree in the system.⁵³

Due to the lack of an intersegmental data system in California, the data needed to track students as they move across the segments is lacking and it is extremely difficult to understand current baseline data for each of these steps. This analysis thus uses data from the CCCs related to students enrolling in and transferring out of the CCCs, and data from CSU and UC related to who applies, gets admitted, enrolls and graduates.⁵⁴

For the AY 16-17 cohort 315,541 students enrolled in the CCCs. Of those, 132,394 had an informed primary educational planning goal including transfer to a four-year institution. Within six years, 61,989 (20% of 315,541 and 47% of 132,394) transferred to any four-year institution (including in- and out-of-state, public/private, proprietary, etc.).

⁵² Aligns to AB928's call for "(A) Annual goals for improving transfer attainment needed to meet the state's workforce demands."

⁵³ California State Legislature. (1960). California Senate Bill No. 33, 1960 Donahoe Act, Amendment to the California State Education Code: Sections 22500-22705. Retrieved August 1, 2023, from https://oac.cdlib.org/view?docId=hb5b69n9fm&brand=oac4&doc.view=entire_text; Legislative Analyst's Office. (2009, November 12). "The Master Plan at 50: Assessing California's Vision for Higher Education." Retrieved August 1, 2023, from https://lao.ca.gov/2009/edu/master_plan_intro/master_plan_intro_111209.aspx

⁵⁴ Student-Ready Strategies. (2023). "Transfer Attainment." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President and California State University Chancellor's Office. As noted elsewhere, the lack of an intersegmental data system presents serious challenges to understanding transfer student trajectories and outcomes.

For transfer to the UC:

- Number of students who had previously attended a CCC who applied for transfer for AY 2018-2019 to UC: 36,365.⁵⁵
- Number of those students who were admitted to UC: 27,328.⁵⁶
- Number of those students who enrolled at UC: 20,479.⁵⁷
- Number of those students who enrolled and graduated with a bachelor's degree within 4 years⁵⁸ of transfer: 17,573.⁵⁹

For transfer to the CSU:

- Number of students who had previously attended a CCC who applied for transfer for AY 2018-2019 to CSU: 97,410.⁶⁰
- Number of those students who were admitted to CSU: 77,202.⁶¹
- Number of those students who enrolled at CSU: 50,654.⁶²
- Number of those students who enrolled and graduated with a bachelor's degree within 4 years⁶³ of transfer: 40,697.⁶⁴

Table 6, below, applies these numbers from the UC and CSU to the entering CCC cohort numbers from CCC (note that these students likely began at a community college in different academic years, which means this cohort is different from that submitted by the community colleges). This is an imprecise estimate, but it represents a good-faith effort to use the best-available baseline data for setting goals in the absence of an intersegmental data system.

⁵⁵ AICCU data not available; students who apply to both UC and CSU are counted in both numbers; unduplicated counts could not be constructed in absence of student-level data sharing between UC and CSU.

⁵⁶ AICCU data not available; students who are admitted to both UC and CSU are counted in both numbers; unduplicated counts could not be constructed in absence of student-level data sharing between UC and CSU.

⁵⁷ AICCU data not available; count assumes students enroll in either CSU or UC, not both.

⁵⁸ Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

⁵⁹ University of California (2021). "UC Opens Doors for Community Colleges." Retrieved August 8, 2023, from https://www.universityofcalifornia.edu/sites/default/files/2022-02/uc_transfer_onesheet_2021.pdf

⁶⁰ AICCU data not available; students who apply to both UC and CSU are counted in both numbers; unduplicated counts could not be constructed in absence of student-level data sharing between UC and CSU.

⁶¹ AICCU data not available; students who are admitted to both UC and CSU are counted in both numbers; unduplicated counts could not be constructed in absence of student-level data sharing between UC and CSU.

⁶² AICCU data not available; count assumes students enroll in either CSU or UC, not both.

⁶³ Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

⁶⁴ California State University. (n.d.). "CSU Graduation and Continuation Rates Dashboard." Retrieved August 8, 2023, from

https://tableau.calstate.edu/views/GraduationRatesPopulationPyramidPrototype_liveversion/SummaryDetails?iframeSizedToWindow=true&%3Aembed=y&%3Adisplay_count=no&%3AshowAppBanner=false&%3AshowVizHome=no

Table 6: Data Support for Goal-Setting for Transfer Attainment⁶⁵

	Public Sector Minimum (based on CSU data only)	Public Sector Maximum (based on CSU and UC data)	Additional Transfer Opportunities at Any Other In- or Out-of-State Public and Private Institutions
Estimated % of CCC cohort who <u>applied</u> for transfer to a California public 4-year institution for AY 18-19	30.9%	42.4%	Unknown, but must be taken into account when goal-setting
Estimated % of CCC cohort who were <u>admitted</u> to a California public 4-year institution for AY 18-19	24.5%	33.1%	Unknown, but must be taken into account when goal-setting
Estimated % of CCC cohort who <u>enrolled</u> in a California public 4-year institution in AY 18-19	16.1%	22.5%	Unknown, but must be taken into account when goal-setting
Estimated % of CCC cohort who <u>graduated</u> from a California public 4-year institution within 4 years ⁶⁶	12.9%	18.5%	Unknown, but must be taken into account when goal-setting

The AB928 Committee made a good faith effort to set the goals in Table 7 using the best-available data. The Cradle to Career longitudinal data system created by AB132 is expected to improve the availability of intersegmental data.⁶⁷ In the interim, the Committee considered the options available for setting goals:

- One option is to align to available data, which would limit which goals can be set.
- Another option, and the path chosen, was to set aspirational and developmental goals aligned to what would best support equitable student success.

The goals in Table 7 reflect the Committee’s effort to look at best-available data, estimate some of that which cannot be known (e.g., additional transfer opportunities at

⁶⁵ This table applies the AY 18-19 cohort numbers provided by UC and CSU to the AY 16-17 cohort numbers provided by CCC. AICCU data not available. This provides an imprecise but still useful estimate.

⁶⁶ Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

⁶⁷ California State Legislature. (2021). *Assembly Bill No. 132, Postsecondary education trailer bill*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB132

any other in- or out-of-state public and private institutions) and set aspirational, developmental goals. The AB928 Committee recognizes this is an enormous undertaking that will require significant investment and resources, and dramatically increased coordination and collaboration. However, providing equitable opportunity to transfer students, and supporting them for success, is imperative and the work required should be undergirded by the appropriate leadership, effort and investment (see the recommendations under “Overarching Needs to Meet the Intent of AB928” for further details).

An effort to align data and begin to monitor these goals is needed. When more comprehensive and accurate baseline data is available, the AB928 Committee reserves the right to modify these targets.

Table 7: Goals for Increased Transfer Attainment⁶⁸

	Goals to reach 2030 (transfer to any accredited non-profit institution in- or out- of state, including AICCU, UC & CSU)
Percent of entering CCC cohort who intend to transfer and meet academic qualifications and <u>apply</u> to transfer to any accredited non-profit institution in- or out- of state	2024: 50% 2025: 55% 2026: 60% 2027: 70% 2028: 80% 2029: 90% 2030: 100%
Percent who meet academic qualifications and apply to transfer and are <u>admitted</u> to any accredited non-profit institution in- or out- of state	2024: 40% 2025: 50% 2026: 60% 2027: 70% 2028: 80% 2029: 90% 2030: 100%
Percent who meet academic qualifications and apply to transfer and are admitted and <u>enroll</u> at any accredited	2024: 35% 2025: 45% 2026: 55% 2027: 65% 2028: 75% 2029: 85%

⁶⁸ Earlier, this document notes that an analysis of labor market needs, in- and out-migration, the role of online education and out-of-state providers, and notably transfer and other means of increasing credentials, is needed to deepen the state’s understanding of what level of postsecondary attainment is needed to meet the state’s 70% attainment goal. This analysis seeks to set aspirational goals but they are not directly tied to meeting the 70% attainment goal.

non-profit institution in- or out- of state	2030: 100%
Percent who meet academic qualifications and apply to transfer, are admitted, enroll and <u>complete</u> a bachelor’s degree within 4 years of transfer at any accredited non-profit institution in- or out- of state	2024: 25% 2025: 35% 2026: 50% 2027: 60% 2028: 75% 2029: 85% 2030: 100%

Recommendation 9. *Adopt and monitor the following goal: By 2030, close regional opportunity gaps to access Associate Degree for Transfer (ADT) pathways and provide greater opportunities for students to transfer in their region and in the major in which they earned their ADT.*⁶⁹

Of note, for its analysis the AB928 Committee used the regions as defined by California Competes as a neutral and respected third-party source.⁷⁰ Looking to the future, it would be helpful for the state if the segments could collaborate to define regions in a common way with respect to postsecondary education.

The intention to ensure that students can transfer in their region and in the major in which they earned their ADT would be met by achieving the following goals:

- There are sufficient ADTs available to students in every region (including online options);
- Opportunities for guaranteed admission for ADT earners are expanded to apply *in the region* (i.e., students who wish or need to stay in-region will have sufficient opportunities to not be redirected outside of their region, particularly for regions with inequitable opportunities for transfer);
- ADT earners are able to transfer with junior standing;
- ADTs offered and accepted as sufficient transfer preparation in a region will be aligned to workforce demand in the region and statewide, particularly high-wage, high-demand fields, and will not be limited by the region's current workforce demand. ADTs will be analyzed and:
 - Any ADTs and other associate’s degrees that do not result in high applicability for transfer or a labor market payoff, such as research

⁶⁹ Aligns to AB928’s call for “(C) Goals for closing regional opportunity gaps to access ADT pathways.”

⁷⁰ California Competes. (n.d.). Pathways to Prosperity. Retrieved April 18, 2023, from <https://californiacompetes.org/p2p>

suggests is true of the ADT in interdisciplinary studies, will be analyzed for redesign or elimination.⁷¹

- ADTs not currently in place for high-wage, high-demand fields within the state, such as in STEM pathways, will be prioritized for creation.

To meet these goals will require intentional and holistic funding for and implementation of a range of strategies that can improve regional opportunities for students and ensure students have equitable access to non-profit, accredited programs (see recommendations under “Overarching Needs to Meet the Intent of AB928” for additional details).

B. SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) DEGREE PATHWAYS

The California State Legislature called upon the AB928 Committee to propose “a new unit threshold for Science, Technology, Engineering, and Mathematics (STEM) degree pathways that meet the requirements for admission to the California State University and the University of California.” Specifically, in regards to STEM degree pathways, the recommendations shall comply with both of the following requirements:

“(A) The recommendations shall include sufficient evidence supporting a higher unit threshold for each STEM degree pathway, including an analysis of colleges that have succeeded in adopting similar pathways within the 60-unit framework for lower division units taken at the California Community Colleges.

(B) A recommendation for a differing unit threshold within a STEM degree pathway shall not recommend a change of more than six units.”

While undertaking its work for STEM degree pathways, the AB928 Committee operated with a set of guiding premises. They are:

- Degrees in STEM are in high demand in California’s economy and provide graduates with opportunities for high-wage careers after graduation.⁷²

⁷¹ Tillery, R., Booth, K. & Johnstone, R. (2023). “Transfer, Credentials, and Employment in CA.” WestEd and National Center for Inquiry and Improvement.

⁷² State of California Employment Development Department (2015). *California Labor Market Trends: Science, Technology, Engineering, and Math Jobs in California*. Retrieved April 19, 2023 from <https://labormarketinfo.edd.ca.gov/Publications/Trend-Reports/STEM-California-August-2015.pdf>

- Many STEM programs require students to earn a higher number of units including major preparation in the lower division before they transfer. These include areas such as Engineering, Physics, and Chemistry programs.⁷³
- Higher unit requirements in community college STEM programs generate the need for greater time to prepare, which costs students time and money on the path to transfer, making transfer pathways less accessible for students with limited financial resources. However, adequate preparation in the lower division also ensures timely graduation for the bachelor's degree.
- Increasing the number of college students who earn STEM credentials and enter STEM careers remains a national priority, as does the need to diversify the population of STEM workers by race/ethnicity, gender, and socioeconomic background. Postsecondary STEM credentials lead to some of the highest paying jobs in the labor market.⁷⁴
- Community colleges serve as an important entry point for those who want to pursue either a workforce-oriented STEM associate degree or lower-division coursework leading to transfer to a four-year college in a STEM major.
- Low-income students are less likely to enter STEM programs or to transfer in STEM fields than higher income students, and Black, Latine, and Native American students are underrepresented in all transfer-level STEM courses in community colleges. STEM fields have particular barriers to student entry and progression and different patterns of student underrepresentation than non-STEM transfer programs.⁷⁵
- Students struggle to navigate STEM program requirements, which require strict adherence to course sequences. Academic or career advising services are often under-resourced in community colleges. Students often attend more than one community college adding to complexities in taking year-long course sequences that are common to STEM programs.
- By all measures, the sheer scale and multi-system nature of the California education ecosystem makes problem-solving very complicated. The different segments are shaped by differences in resources, capacity, and expectations;

⁷³ Student Ready Strategies. (2023). "AB928 STEM Study Group Data Review." Data analysis created for the STEM Study group of the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President, California State University Chancellor's Office, and the Association of Independent California Colleges and Universities.

⁷⁴ National Center for Science and Engineering Statistics. (2023.) *Diversity and STEM: Women, Minorities, and Persons with Disabilities 2023. Special Report NSF 23-315*. Alexandria, VA: National Science Foundation. Retrieved August 17, 2023, from <https://nces.nsf.gov/wmpd>

⁷⁵ Wang, X. (2020). *On My Own: The Challenge and Promise of Building Equitable STEM Transfer Pathways*. Harvard Education Press, <https://www.hepg.org/hep-home/books/on-my-own>; Varty, A.K. (2022, Summer). "Promoting Achievement for Community College STEM Students through Equity-Minded Practices." *CBE Life Sci Educ*, 21(2): ar25.

learners' opportunities are shaped in part by the differing levels of preparation provided by different high schools.

- The work of creating seamless, equitable STEM transfer pathways for underrepresented students has many challenges and requires long-term commitment, but there is much progress to celebrate and an infrastructure to leverage and strengthen.

Additional Information and Caveats

High-Unit STEM Pathways: Identification and Caveats

The legislation calls for an analysis that cannot be conducted in the absence of a more robust data set or information. Despite the limitations, and based on data provided by the Academic Senate for California Community Colleges, the following STEM programs were identified as high-unit transfer pathways to both CSU and UC:

- Engineering;
- Chemistry;
- Physics;
- Environmental Science; and
- Math.

Following the September 18, 2023 public meeting of the AB928 Committee, based on feedback provided to the committee, the following programs were added to the previous list as ones possibly in need of flexibility to be able to go up to (but not beyond) the higher 66-unit threshold:

- Computer Science; and
- Biology.⁷⁶

It is important to note that "high-unit" is defined by the number of units required by the program to adequately prepare students for success, not the programs in which students accumulate the highest number of units.

Data Requests

In February 2023, Student-Ready Strategies (SRS), the data partner for the AB928 Committee, worked with the California Community Colleges Chancellor's Office (CCCCO) data team to pull outcomes data for STEM programs, based on the definition of STEM provided by the study group, following several conversations on the topic:

⁷⁶ Nursing and Information Technology are additional pathways to consider in the future; however, there are not at this time transfer pathways to UC in Nursing or Information Technology.

1. List of majors that require Calculus 1 AND 1 semester of Physics;⁷⁷
2. List of high-unit majors within that Calc1/1 semester of Physics (70 or more units) including but maybe not limited to Engineering, Public Health, Computer Science; and
3. Disaggregated data on retention/completion (rolled up) on ADTs, Transfer Admission Guarantees (TAGs), transfer pathways of CC to UCs and CSUs within the list of STEM majors identified in 1.

SRS then analyzed the data, identified key findings, and presented those findings to the study group.

In June 2023, the STEM study group asked SRS to make a second data request of the CCCC. This data request was further refined and included a different list of STEM programs than was originally queried (to broaden the focus to outcomes related to all STEM programs, not just those that are high-unit programs), along with requests for data on student enrollment, progression, and transfer outcomes in those programs. The group re-requested data, which CCCC had already advised was unavailable. The CCCC indicated that they still do not have a good mechanism available for differentiating ADTs from the local Associate Degree as a major.

With the above in mind, the AB928 Committee offers the following recommendations, research and rationale.

Recommendation 10. *Retain the 60-unit maximum requirement for ADTs while providing an option for up to an additional 6 units for high-unit STEM ADTs and require the submission of clear evidence and rationale for the higher units during the Transfer Model Curricula (TMC) approval process.*

Research demonstrates that students are more likely to complete postsecondary credentials when they have clarity about which courses to take, pathways are streamlined, the taking of extra courses that do not apply to completion is eliminated, and courses are applied to completion upon transfer.⁷⁸ Based on this research, the

⁷⁷ This is not a requirement of the current TMCs for math, it is an option.

⁷⁸Zhu, Z. (2022, July). "Improving Graduation Rates in the Two-to-Four Pathway to Bachelor's Degrees." *Education Finance and Policy*, 17 (3): 432–453; Scrivener, S., Weiss, M.J., Ratledge, A., Rudd, T., Sommo, C. and Fresques, H. (2015). *Doubling Graduation Rates: Three-Year Effects of CUNY's Accelerated Study in Associate Programs (ASAP) for Developmental Education Students*. MDRC. New York, NY; Levesque, E.M. (2018). *Improving Community College Completion Rates by Addressing Structural and Motivational Barriers*. Brookings. Retrieved November 2, 2023, from <https://www.brookings.edu/articles/community-college-completion-rates-structural-and-motivational-barriers/>; Monaghan, B. & Attewell, P. (2015). *The Community College Route to a Bachelor's Degree*. *Educational Evaluation and Policy Analysis*, 37(1), 70–91; Institute for College Access and Success. (2021). *Raising College Attainment: A National Proposal to Scale Student Success Strategies*. Retrieved November 2, 2023, from

AB928 Committee recommends that the large majority of ADTs should remain at 60 units. While some stakeholders assert that some ADTs—particularly STEM ADTs—warrant an additional 3-6 units, data to support that assertion is not yet available. A preliminary analysis of high-unit STEM programs conducted through the existing infrastructure of the Faculty Discipline Review Groups (FDRGs)⁷⁹ and informed by ongoing collaboration of discipline faculty in specific programs has commenced this fall. The goal is to deliver insights and recommendations to the Intersegmental Curriculum Council (formerly the Intersegmental Curriculum Workgroup) by early spring and share that information with the AB928 Committee. Going forward, additional analysis will be needed to evaluate the pathways of STEM students to understand whether they are meeting with equitable outcomes.

Recommendation 11. *Require that by the end of the 2023-24 academic year, TMC drafts are in place for the fields of Engineering, Biology, Chemistry, Mathematics, Environmental Science, Physics, and Computer Science pathways that prepare students for transfer to both the CSU and UC systems and other four-year institutions that choose to participate (such as members of AICCU and Historically Black Colleges and Universities (HBCUs)). Where a single TMC to both UC and CSU is not possible, require the provision of clear rationale and evidence explaining why separate TMCs are needed.*

The AB928 Committee recommends TMC drafts are approved through the existing, well-established TMC approval processes, while allowing for flexibility for some general education courses to be taken after transfer, and up to an additional six units for the ADT provided sufficient evidence and justification are provided.

Recommendation 12. *As already required, within 18 months of TMC approval, California community colleges will create ADTs for each TMC adopted under Recommendation 11. Subsequently, within 12 months the CSU campuses will determine similarity, and the UC and AICCU campuses are encouraged to identify those TMCs that fulfill major preparation requirements, for transfer admission.*

Once pathways are designed by discipline experts, institutions that agree to accept the ADT as sufficient transfer preparation must accept and apply all of the components of the curriculum. Any requests for exceptions must be made publicly and through a robustly documented process of justification.

<https://ticas.org/wp-content/uploads/2021/04/Raising-College-Attainment-A-National-Proposal-to-Scale-Student-Success-Strategies.pdf>.

⁷⁹FDRGs are a collaboration between CCC and CSU discipline faculty, led by the Academic Senate for California Community Colleges (ASCCC). See www.asccc.org for additional details.

Recommendation 13. *Clarify that lower-division general education flexibility for STEM pathways is currently allowed and may be essential for some STEM TMCs, so that students can be fully prepared for Junior year major requirements.*

STEM TMCs need to be designed with flexibility. Effective preparation for some STEM majors requires that more of the major preparation courses are taken earlier in the students' learning journey, which necessitates some general education courses are taken in the latter two years of the program. STEM programs need flexibility to replicate the curricular scope and sequence a first-year student at the university will receive. As such, STEM TMCs need to be designed with flexibility. Intersegmental collaboration should focus on building four-year pathways and then deciding how lower division general education requirements should be distributed across those pathways to ensure that students are able to take the needed major preparatory courses prior to transfer, which may result in some general education courses being taken after transfer.

Recommendation 14. *To support equitable student success in STEM pathways, invest in the scaled implementation of culturally responsive student supports and evidence-based academic/pedagogical improvements.*

The long-term goal of creating equitable STEM pathways will be reached not only through the elimination of excess units and unnecessary course repetition, its achievement will also depend on the scaling of culturally responsive, asset-minded approaches to supporting students and on the widespread adoption of evidence-informed approaches to creating equitable learning environments. Examples of critical needs include resources for early and comprehensive advising for students interested in STEM majors, effective student participation in informing the design of programs, and a scaled commitment to equity-minded pedagogy and curricular redesign.

Recommendation 15. *Provide funding for STEM Bridge programs for first-year CCC students and students who are transferring.*

STEM Bridge programs provide critical supports for students who are starting or transferring into STEM programs.⁸⁰ Research suggests positive impacts in areas ranging

⁸⁰ See, for example, Tomasko, D. L., Ridgway, J. S., Waller, R. J., & Olesik, S. V. (2013). "Association of Summer Bridge Program Outcomes with STEM Retention of Targeted Demographic Groups." *Journal of College Science Teaching*, 45(4), 90–99; Ashley, M., Cooper, K. M., Cala, J. M., & Brownell, S. E. (2017). "Building Better Bridges into STEM: A Synthesis of 25 Years of literature on STEM Summer Bridge Programs." *CBE-Life Sciences Education*, 16(4), 1–18; Brady, A. & Gallant, D. (July/August 2021). "STEM Bridge Program: Underrepresented Minority Students' Perceptions of Louis Stokes Alliance for Minority Participation Program Impact." *Journal of College Science Teaching* (Volume 50, Issue 6).

from college preparation to building confidence and fostering connections with peers. Truly advancing equity in outcomes for STEM transfer students will require dedicated services such as STEM Bridge programs designed to support their success.

Recommendation 16. *Require transparency concerning membership and composition of the Faculty Discipline Review Groups (FDRGs) and other intersegmental curriculum groups.*

This recommendation is designed to address concerns about whether faculty representatives in the FDRGs have sufficient expertise and awareness of the diversity of student challenges when majoring in STEM fields. Transparency about current membership will help stakeholders to assess whether changes are warranted.

Recommendation 17. *In light of the relevance of AB1291 University of California Associate Degree for Transfer Pilot Program (2023)⁸¹ to the goals of the AB928 Committee, require AB1291 be implemented in meaningful collaboration with the CCCs and that STEM TMCs be considered as essential building blocks.*

Assembly Bill 1291 (2023) creates the University of California Associate Degree for Transfer Pilot Program in the Donahoe Higher Education Act⁸²:

The bill would require the University of California, Los Angeles to declare at least 8 majors by the 2026–27 academic year, and at least 12 majors by the 2028–29 academic year, as similar to the transfer model curricula from select community colleges chosen by the University of California, Los Angeles and would require, by the 2028–29 academic year, the University of California to designate at least 5 campuses to declare at least 12 majors as similar to the transfer model curricula from select community colleges chosen by the applicable campus, except that the 12 major minimum would not apply to the University of California, Merced if designated. The bill would require the applicable campus to prioritize admission of a student who earns an associate degree for transfer and meets the requirements of one of the transfer model curricula and to determine the appropriate admissions preference. The bill would require, for a student who meets those requirements and other University of California admission requirements but is not granted admission to the applicable campus, that campus to redirect the student to other campuses of the University of California and the student to be offered admission to at least one other campus of the University of California.

⁸¹ California State Legislature. (2023). Assembly Bill No. 1291, University of California Associate Degree for Transfer Pilot Program. Retrieved November 2, 2023, from <https://legiscan.com/CA/text/AB1291/2023>

⁸² California State Legislature. (2023). Assembly Bill No. 1291, University of California Associate Degree for Transfer Pilot Program. Retrieved November 2, 2023, from <https://legiscan.com/CA/text/AB1291/2023>

Given the direct relevance of AB1291 to the work of the AB928 Committee, the Committee calls for AB1291 to be implemented in meaningful collaboration with the CCCs and that STEM TMCs, which will retain the 60-unit requirement for ADTs, with an option for up to an additional 6 units for high-unit STEM ADTs upon certification of clear evidence or rationale of need, be considered as essential building blocks.

C. REENGAGEMENT OF ADT EARNERS

The California State Legislature called upon the AB928 Committee to specifically identify how to support “reengaging ADT earners who do not transfer or apply for transfer into a four-year postsecondary educational institution.”

While undertaking its work on reengaging ADT earners, the AB928 Committee operated with a set of guiding premises. They are:

- The majority of students who start at a California community college with the intent to transfer do not go on to earn a baccalaureate degree, adding to the ranks of the nearly 1.8 million Californians with some college, but no degree.⁸³ PPIC found that 28,000 students, representing 27% of all students who started their community college journey between academic years 2014–15 and 2019–20 and earned an ADT, had not transferred as of fall 2022.⁸⁴ The AB928 legislation identifies that students who earned ADTs but did not transfer represent a key target for reengagement.⁸⁵
- Ensuring more students who complete the ADT, and improving the transfer function overall (i.e., ensuring students can start at a community college, earn the ADT and complete a bachelor’s degree at a public or independent institution), is absolutely essential to ensuring more California residents have the opportunity for a living wage job.⁸⁶

⁸³ Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers*. Public Policy Institute of California. Retrieved April 18, 2023, from <https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf>; Lumina Foundation (2022). *A Stronger Nation: Learning Beyond High School Builds American Talent*. Retrieved April 19 from <https://www.luminafoundation.org/stronger-nation/report/#/progress/state/CA>

⁸⁴ Cuellar Mejia, M., Johnson, H., Perez, C.A. & Jackson, J. (2023). *Strengthening California’s Transfer Pathway*. Public Policy Institute of California. Retrieved October 27, 2023, from <https://www.ppic.org/publication/strengthening-californias-transfer-pathway/>

⁸⁵ California State Legislature. (2021). *Assembly Bill No. 928, Student Transfer Achievement Reform Act of 2021: Associate Degree for Transfer Intersegmental Implementation Committee*. Retrieved April 18, 2023, from https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=20210220AB928

⁸⁶ Tillery, R., Booth, K. & Johnstone, R. (2023). “Transfer, Credentials, and Employment in CA.” WestEd and National Center for Inquiry and Improvement

- Opportunity gaps in regional ADT access create an insurmountable barrier for many students who wish or need to stay within their regions. Evidence shows, for example, that roughly one in 10 “redirected” transfer students enroll at a CSU, and so there must be an emphasis on broadening access to transfer opportunities within regions.⁸⁷ Transfer rates of community college students who enroll with the intent to transfer and remain in their home region should be comparable to transfer rates of CCC students who successfully transfer within the state.
- Californians can complete transfer degrees at institutions other than CSU and UC, including California independent institutions and 39 Historically Black Colleges & Universities (HBCU).⁸⁸
- There is a robust research base illuminating why students who are prepared for transfer do not necessarily do so, ranging from financial needs to the complexity of, and lack of clear information about, the transfer and articulation process. That research base should be leveraged for designing supports for ADT earners who do not apply for transfer or transfer.
- The state of California is home to many regional initiatives with transfer components from which important lessons can be learned. UC Riverside, Growing Inland Achievement and the Riverside County Education Collaborative are planning to develop “a pilot transfer pipeline that would automatically matriculate students from 12th grade to a partner CCC and then to UCR through its Transfer Admission Guarantee program.” In a similar vein, a collaboration of partners led by the Central Valley Higher Education Consortium is streamlining transfer pathways, developing wraparound supports for transfer students, and seeking to extend the ADT guarantee to UC Merced.⁸⁹ Good work is underway that can and must be leveraged.
- Given the growing recognition nationally that states must educate their adult populations to meet workforce needs, accompanied by a growing understanding of the increasing population of students with some college and no credential yet—which at last count numbers 6.6 million individuals in California alone—states have been building adult reengagement and Adult Promise (free

⁸⁷ California State University. (2022). *Student Admissions and Impaction Policies Report 2022*. Retrieved April 18, 2023, from <https://www.calstate.edu/impact-of-the-csu/government/Advocacy-and-State-Relations/legislativereports1/Student-Admissions-and-Impaction-Policies-Report-2022.pdf>

⁸⁸ California Community Colleges. (n.d.). “Enroll Now.” Retrieved August 10, 2023, from <https://icangotocollege.com/>

⁸⁹ Cuellar Mejia, M., Johnson, H., Perez, C.A. & Jackson, J. (2023). *Strengthening California’s Transfer Pathway*. Public Policy Institute of California. Retrieved October 27, 2023, from <https://www.ppic.org/publication/strengthening-californias-transfer-pathway/>

college) initiatives. Examples include: Tennessee Reconnect, Mississippi Complete to Compete and Indiana's You Can. Go Back.⁹⁰

- A well-executed statewide reengagement effort that helps returning students overcome known barriers will retroactively improve transfer outcomes for past cohorts.

With these guiding premises in mind, the AB928 Committee offers the following recommendations, research and rationale.

The California State Legislature called upon the AB928 Committee to specifically identify how to support reengaging ADT earners who do not transfer or apply for transfer into a four-year postsecondary educational institution. To that end, the AB928 Committee makes the following recommendations to address the systemic barriers that are creating obstacles for ADT earners who do not transfer or apply for transfer, with a keen eye to equitably serving populations not currently served well.

Recommendation 18. *Invest in the creation, and assign responsibility for implementation, of a Transfer Reengagement Initiative for Associate Degree Holders (TRIAD).*

There is no silver bullet or single strategy that will improve outcomes for ADT earners who do not transfer or apply to transfer. As such, the AB928 Committee recommends building a multi-faceted plan that seeks to comprehensively address the many barriers ADT earners face. Moreover, while the legislation calls for reengaging students who did not transfer or apply for transfer, the AB928 Committee wishes to simultaneously reduce the number of students who get close to transferring and then do not do so. As such, the AB928 Committee calls for the creation of a statewide Transfer Reengagement Initiative for Associate Degree Holders (TRIAD), a comprehensive plan that is organized into two overarching areas of focus:

⁹⁰ Causey, J., Gardner, A., Pevitz, A., Ryu, M., and Shapiro, D. (April 2023). *Some College, No Credential Student Outcomes, Annual Progress Report – Academic Year 2021/22*. Herndon, VA: National Student Clearinghouse Research Center; Weissman, S. (April 2023). "New Report Finds Increase in Students with Some College, No Credential." *Inside Higher Ed*. Retrieved August 10, 2023, from <https://www.insidehighered.com/news/students/retention/2023/04/25/some-college-no-credential-cohort-grows>; National Governors Association. (March 2021). *State Strategies to Re-engage Students with Some College and No Degree*. Retrieved August 10, 2023, from <https://www.nga.org/publications/state-strategies-to-re-engage-students-with-some-college-and-no-degree/>; State Higher Education Executive Officers. (2018). *The Power of a Promise: Implications and Importance of Adult Promise Programs*. Retrieved September 15, 2023, <https://sheeo.org/wp-content/uploads/2019/02/Adult-Promise-White-Paper-The-Power-of-a-Promise.pdf>; Complete 2 Compete. (July 2023). "One Degree Better." Retrieved August 10, 2023, from <https://msc2c.org>; ReUp Education. (n.d.). "Leaders in the Future of Higher Ed." Retrieved August 10, 2023, from <https://reupeducation.com/institutions/partner-stories>

- Strategies to reduce the number of students who get close to transfer and do not transfer or apply to transfer; and
- Strategies to reengage students who already hold the ADT and did not transfer or apply to transfer.

Area of Focus 1: TRIAD—Strategies to reduce the number of students who get close to transfer and do not transfer or apply to transfer

- *Build a common transfer application platform designed to be inclusive of all segments:* AB928 calls for the California Community Colleges to “place students on the ADT pathway if students declare a goal of transfer on their mandatory education plans.” The AB928 Committee recommends that effort be combined with an effort to allow students to apply for entry into the community colleges and for transfer to eligible bachelor’s degree-granting institutions at the same time, through a single statewide admissions portal that simplifies the admissions process, audits students’ completion progress, and seamlessly shares student transcripts and financial aid information.
- *Identify, monitor and elevate the visibility of students vulnerable to experiencing difficulties in transfer processes including but not limited to Black, Latine, American Indian, Alaskan Native, Asian Pacific Islander and any other disproportionately impacted groups:* Develop a statewide, student-level data identification process that can be accessed by each UC/CSU/CCC/AICCU institution to better understand who the students are who are “near the gate,” meaning they have prepared for transfer, or are close to doing so, in particular by pursuing completion of an ADT. This would allow institutions to directly target and support their successful transfer and/or reengagement if they have left without transferring or applying to do so. Ideally, each student would be assigned a single, statewide student identification number, allowing for far improved data systems and coordination of outreach and supports for each student.
- *Streamline processes and remove unnecessary barriers:* Auto-award the ADT, ensure students do not have to apply to graduate or pay graduation fees, ensure institutions are not holding transcripts for student debt, reduce barriers to certification of Cal-GETC and ensure fees are not charged, and develop holistic admissions processes that provide for equitable admissions.
- *Study the impact of financial aid:* Develop a deeper understanding of financial needs for students who have earned the ADT, and for students who are re-entering postsecondary, disaggregated by a number of valuable characteristics including race and ethnicity, interest in STEM degrees, and past education and receipt of credentials.

- *Build a regional infrastructure for coordinating admissions across segments and online offerings* to ensure placebound students can stay in their preferred region.

Area of Focus 2: TRIAD—Strategies to reengage students who already hold the ADT and did not transfer or apply to transfer

- *Launch a reengagement campaign:* Establish a statewide reengagement campaign that is carefully designed for success. While a strong communications plan is central to this effort (and a communications plan is a legislative expectation of the AB928 Committee for 2024), this campaign is far more than a marketing effort. The AB928 Committee recommends it be inclusive of:
 - Reengagement *scholarships* that provide reduced or free tuition and fees for returning students;
 - *Bridge programs* that support students as they reenter postsecondary education;
 - Easily accessible *coaching* services so students can quickly and easily receive customized support; and
 - *Funding levers and metrics* that can incentivize institutions' focus on increased student enrollment, persistence, and completion.

Of note: While the AB928 Committee was specifically required to focus on students who earned the ADT but did not apply for transfer or transfer, the holistic nature of TRIAD should be leveraged to support students with a large variety of characteristics, including students who started at four-year institutions and students who left community colleges without completing an associate degree.

All of the above strategies should be continually monitored, with disaggregated student outcomes data, to proactively address emerging inequities in student outcomes.

The TRIAD seeks to address the systemic barriers that are creating obstacles for ADT earners who do not transfer or apply for transfer, with a keen eye to equitably serving populations not currently served well. The comprehensive approach of TRIAD is supported by a wide-ranging research foundation (e.g., research on why students do not transfer, examples of reengagement campaigns, and strategies to improve equitable student success). The research is summarized below.

The need for clarity, simplified processes, and the removal of unnecessary barriers

Despite the creation of guaranteed-transfer pathways such as the ADT and the UC Transfer Pathways, the transfer system remains unnecessarily complex and contains too many contingencies to be considered universally accessible.⁹¹ Tables 2 and 3 in this document (in the Goals section) demonstrate baseline inequity gaps by race and ethnicity in transfer attainment at CSU and UC.⁹² Such data reaffirm the need to simplify the process for ADT earners looking to transfer and provide clear navigation and ensure there is institutional capacity and program alignment and availability to enroll students.

A compelling and locally relevant data source is from the RP Group in California. Researchers at RP Group found that 156,999 students (roughly 8%) of the examined cohort of transfer students in California were near the transfer gate, meaning that the students had earned ≥ 60 transferable units with a 2.0 GPA, however had not yet transferred as they were missing transfer-level English and/or math.⁹³ Their comprehensive analysis revealed that students who do not successfully transfer most often cite four essential factors impacting their transfer capacity:

- “University Affordability: How Can I Pay for a Bachelor’s Degree?”
- “School-Life Balance: How Do I Practically Transfer Given My Numerous Responsibilities?”
- “Pathway Navigation: What Steps Do I Take to Transfer?”
- “Support Network: Who on Campus Cares about My Transfer Success?”⁹⁴

The RP Group also highlighted that the complexity of, and lack of clear information about, the transfer and articulation process is a significant barrier to success for transfer students. Of particular relevance to supporting ADT earners who do not transfer or apply for transfer, RP Group found that, “Research also shows that even students who

⁹¹ Student-Ready Strategies. (2023, January 26). “Understanding Transfer: Current Research in California.” Presentation for the Associate Degree for Transfer Intersegmental Implementation Committee. Retrieved April 18, 2023, from <https://www.ab928committee.org/meetings/january-26-2023>

⁹² Student-Ready Strategies. (2023). “Transfer Attainment.” Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor’s Office, University of California Office of the President and California State University Chancellor’s Office. Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

⁹³ Cooper, D., Fong, K., Karandjeff, K., Kretz, A., Nguyen, A., Nguyen, K., Purnell-Mack, R., Schiorring, E. (2017). *Through the Gate: Mapping the Transfer Landscape for California Community College Students*. Retrieved August 10, 2023, from

<https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Phase-I-Technical-Report.pdf>

⁹⁴ Cooper, D., Nguyen, A., Nguyen, K., Chaplot, P., Rodriguez-Kiino, D., Kretz, A., Purnell, R., Brohawn, K., & Karandjeff, K. (2020, May). *Students Speak Their Truth about Transfer: What They Need to Get Through the Gate*. Retrieved April 23, 2023, from

https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/RPGroup_TheTruthAboutTransfer_TTGPhase3_R3%5B79%5D.pdf?ver=2020-05-18-171449-773 . Aligned results were found by <https://www.wiche.edu/wp-content/uploads/2018/resources/accnPolEx-strategies-for-success.pdf>

are close to the transfer gate struggle to know what practical steps to take to transfer and when.”⁹⁵

Consistently, the onus of successfully navigating the transfer process is on students. To address this, the institutions and segments must be ready to serve the students that need access to baccalaureate degrees the most. This means that they must invest in designing and implementing streamlined application and on-boarding processes that minimize bureaucracy and unnecessary fees and create supportive structures that facilitate students applying for transfer and enrolling. These services and practices must be visible, accessible, and flexible to meet their needs.

The need to understand and address college affordability and financial aid

A 2023 analysis by PPIC indicated that the cost of tuition and room and board at four-year institutions is likely an impediment to transfer, which reinforces RP Group’s finding (noted above) that university affordability is a barrier for transfer students.⁹⁶ A key part of this strategy should include the UC, CSU, CCC and AICCU coordinating with other key entities such as the California Student Aid Commission (CSAC) to engage students to better understand the opportunities and barriers in the transfer process. This is critically important for students of color and other key populations who are often not served well by our current processes and structures. Such strategies should include but not be limited to surveys, focus groups and other feedback opportunities biannually, if not annually to create streamlined and consistent touch points to assess and improve processes.

The need to improve data to and be able to identify and make visible the students in need of TRIAD

Given the research demonstrating the need for clear information for students, there needs to be a centralized data identification process which elevates who these students are in real time to aid in colleges’ awareness and students’ success. Such a data system must allow disaggregation by key demographic characteristics, including but not restricted to race/ethnicity, gender, and income. Long-term, this finding should lead to creating a statewide strategy to manage, maintain and ensure accountability throughout the ADT reengagement process across all segments. By making students at

⁹⁵ Cooper, D., Nguyen, A., Karandjeff, K., Brohawn, K., Purnell, R., Kretz, A., Nguyen, K., Chaplot, P., Rodriguez-Kiino, D., Chaplot, P., & Nguyen, K. (2020, May). Students Speak Their Truth about Transfer: What They Need to Get Through the Gate. Retrieved April 23, 2023, from https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/RPGroup_TheTruthAboutTransfer_TTGPhase3_R3%5B79%5D.pdf?ver=2020-05-18-171449-773

⁹⁶ Cuellar Mejia, M., Johnson, H., Perez, C.A. & Jackson, J. (2023). Strengthening California’s Transfer Pathway. Public Policy Institute of California. Retrieved October 27, 2023, from <https://www.ppic.org/publication/strengthening-californias-transfer-pathway/>

or near the gate visible, the segments will be able to dedicate resources to (re)engage them in the transfer process.

The RP Group also identified that if students do not transfer within the first year of arriving near the gate, the likelihood they will make this transition reduces considerably: “Nearly 90% of students who made it through the gate, transferred within a short period of time.”⁹⁷ Given this, it's clear timing matters. Reengagement strategies must encompass reaching students during this critical time frame.

The need for culturally responsive strategies that meet students where they are
TRIAD should be shaped in culturally-responsive ways to ensure it resonates with students identified by the data as most likely to not apply for or transfer, including students of color, low-income, first-generation and non-traditional age students. A clearly articulated value proposition for low-income, first-generation, non-traditional age students and students of color needs to be at the center of this campaign, with answers to specific questions such as: How will this work for me? Who can help me when I get stuck? Where are the resources that can help me succeed? Furthermore, asset-oriented concepts, such as a sense of belonging, inclusion, and familism need to be integrated in the messaging campaign. The campaign should also be intentional about going to where opportunity-seekers are, such as workplaces, job centers, and various community-oriented organizations (faith-based organizations, libraries, etc.), and centering their lived experiences.

The need to help students stay in region

Several studies report that community college students are more likely to stay close to home than their peers. Therefore, having access to a college in the region is a matter of necessity, allowing students to meet their familial, financial and work responsibilities.⁹⁸ However, statewide, there are more incomplete regional ADT pathways between the community colleges and the California State University than

⁹⁷ Cooper, D., Fong, K., Karandjeff, K., Kretz, A., Nguyen, A., Nguyen, K., Purnell-Mack, R., Schiorring, E. (2017). *Through the Gate: Mapping the Transfer Landscape for California Community College Students*. Retrieved August 10, 2023, from

<https://rpggroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Phase-I-Technical-Report.pdf>

⁹⁸ Hillman, N. & Weichman, T. *Education Deserts: The Continued Significance of “Place” in the Twenty-First Century*. American Council on Education. Retrieved June 21, 2023 from

<https://www.acenet.edu/Documents/Education-Deserts-The-Continued-Significance-of-Place-in-the-Twenty-First-Century.pdf>; Carter, J. (Aug. 17, 2016). “College Students Prefer to Stay Close to Home, Data Finds.” *Higher Ed Dive*. Retrieved June 21, 2023 from

<https://www.highereddive.com/news/college-students-prefer-to-stay-close-to-home-data-finds/424594/>; Wozniak, A. (March 22, 2018). “Going Away to College? School Distance as a Barrier to Higher Education.” *Econofact*, University of Notre Dame. Retrieved June 21, 2023 from

<https://econofact.org/going-away-to-college-school-distance-as-a-barrier-to-higher-education>

there are complete pathways that offer both the community college and university curriculum in a given region and program of study.⁹⁹

It is thus critical to address the capacity of institutions to serve students in their region, which is a critical theme in the Goals section of this document as well.¹⁰⁰ Systems and institutions must prioritize:

- Facilitating placebound students' access to a nearby campus, and addressing major impaction issues, to prioritize reengagement applicants/students to ensure they have a seat at institutions within their home regions;
- Aligning admissions cycles to eliminate students facing different standards for when they enroll vs. when they are ready to transfer;
- Addressing physical barriers to transfer for place-bound students through cross enrollment opportunities and expanded online offerings;
- Partnering with AICCU and its member institutions to sign MOUs to accept and apply ADTs as sufficient transfer preparation (with their articulation guarantees), as a way to address capacity and regional constraints and reduce the need for admissions redirection;
- Establishing shared courses and programs in partnership across four-year colleges and universities and community colleges in underserved regions; and
- Ensuring returning students are able to develop meaningful and sustained relationships with staff and faculty to be able to persist and succeed in higher education. Failing to support returning students will result in perpetuating existing inequities.

Examples from which to learn

Indiana provides just one example of a statewide strategy to reengage students. In 2015 Indiana passed legislation that helped launch the Indiana Commission for Higher Education's initiative "You Can. Go Back." The legislation required public universities to reach out to former students who hadn't graduated, and institutions that didn't have the capacity to handle the outreach could lean on the commission for support. Working with the universities to find email and mailing addresses, the commission launched a marketing strategy to reach out to students who had dropped out within the last

⁹⁹ Student-Ready Strategies. (2023). "Regional Associate Degree for Transfer Analysis." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data from the California Community Colleges Chancellor's Office and the California State University Transfer Model Curriculum website. Retrieved April 18, 2023, from

<https://www.calstate.edu/attend/degrees-certificates-credentials/Pages/TMC-Search.aspx#page-2>

¹⁰⁰ California State University. (2022). *Student Admissions and Impaction Policies Report 2022*. Retrieved April 18, 2023, from

<https://www.calstate.edu/impact-of-the-csu/government/Advocacy-and-State-Relations/legislativereports1/Student-Admissions-and-Impaction-Policies-Report-2022.pdf>

decade and who had earned at least 25% of their credits.¹⁰¹ Similarly, researchers from the *Going the Distance in Adult College Completion: Lessons from the Non-traditional No More Project* analyzed strategies from six states that sought to reengage adult learners. Recommended promising strategies included broad public outreach campaigns, reentry concierges or coaches, and flexible course scheduling.¹⁰²

There are also numerous national initiatives from which California can learn, including Degrees When Due, Credit When It's Due, and Project Win-Win.¹⁰³ Lessons learned from these projects include that reenrollment processes require a holistic approach, including: implementing policies and practices such as academic advising; addressing institutional holds; and ensuring access to robust student supports that include and non-academic support needs.¹⁰⁴

Of note, AB928 similarly calls for a focus in 2024 on a “comprehensive communications plan and guidance on student-centered outreach to inform students about the ADT pathway,” recognizing the critical nature of clear information for transfer students. The work in 2024 on a communications plan, and further development of a reengagement campaign, should be pursued together.

SECTION III: CONCLUSION AND NEXT STEPS

These recommendations represent the culmination of the first 18 months of work for the AB928 Committee. The Committee offers these recommendations emboldened by the strong belief that the state of California must dramatically improve equity in transfer student outcomes to sustain a productive workforce in California, improve the well-being of the state’s residents and provide fair opportunity for social and economic mobility.

With facilitation from Sova, the Committee will continue its work through June 30, 2025. In 2024 the AB928 Committee “shall elect a chair from its members to serve a

¹⁰¹ Quinn, S. (2020, January 27). “More Indiana Adults Returning to College to Finish Degrees.” WFYI Public Media. Retrieved August 10, 2023, from

<https://www.wfyi.org/news/articles/more-indiana-adults-returning-to-college-to-finish-degrees>

¹⁰² Lane, P., Michelau, D. K., & Palmer, I. (2012a, June). *Going the Distance in Adult College Completion: Lessons from the Non-traditional No More Project*. Retrieved August 10, 2023, from

<https://www.wiche.edu/wp-content/uploads/2018/resources/ntnmStateCaseStudies.pdf>

¹⁰³ <https://occlrlarchive.web.illinois.edu/cwid.html>

<https://www.ihep.org/initiative/project-win-win/>

¹⁰⁴ Davis, L., Poca, J., and Santos, J. (2022). *The Degree Reclamation Playbook*. Institute for Higher Education Policy. Retrieved September 16, 2023, https://www.ihep.org/wp-content/uploads/2022/01/IHEP_DWD_Playbook.pdf

two-year term.”¹⁰⁵ In addition, on or before December 31, 2024, the Committee will respond to the following legislative requests:

- “Establish timelines and reporting deadlines for the existing regular review of declaring or matching transfer model curricula similar to the California State University majors for admissions purposes.”
- “Develop a plan for the periodic analysis and creation of additional transfer model curricula for the ADT to respond to evolving workforce demands, including STEM degree pathways, and degree pathways that will aid in the economic recovery from the COVID-19 pandemic, such as nursing and cybersecurity.”
- “Develop a comprehensive communications plan and guidance on student-centered outreach to inform students about the ADT pathway and to ensure prompt and accurate information is communicated across four-year postsecondary educational institutions, the California Community Colleges, and elementary and secondary education.”
- “Provide feedback for the regular review and identification of updates needed to the ADT internet website maintained by the California Community Colleges to ensure current information and updates are communicated to students, families, and student support staff engaged in educating students about their college options, participating four-year postsecondary educational institutions, and degree options.”

The task ahead is daunting, but equitable transfer outcomes are possible with the right resources and investments. The AB928 Committee looks forward to continued engagement with stakeholders, including lawmakers, on how to build toward a brighter and more equitable future for California.

¹⁰⁵ California State Legislature. (2021). *Assembly Bill No. 928, Student Transfer Achievement Reform Act of 2021: Associate Degree for Transfer Intersegmental Implementation Committee*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB928

RESOURCES AND TOOLS

Academic Senate for Community College. (n.d.). "ASCCC Transfer Alignment Project." Retrieved August 7, 2023, from <https://www.asccc.org/transfer-alignment-project>

Academic Senate for California Community Colleges. (Fall 2022 Revision). *C-ID Handbook*. Retrieved December 8, 2023, from <https://c-id.net/page/1>

Ashley, M., Cooper, K. M., Cala, J. M., & Brownell, S. E. (2017). "Building Better Bridges into STEM: A Synthesis of 25 Years of literature on STEM Summer Bridge Programs." *CBE-Life Sciences Education*, 16(4), 1–18.

Aspen Institute College Excellence Program. (2021). "Transfer Students at a Glance." Retrieved August 3, 2023, from https://highered.aspeninstitute.org/wp-content/uploads/2021/04/ASP001_Infographic_1.pdf

Association of Independent California Colleges and Universities. (2023). *Impact Report 2023*. Retrieved April 18, 2023, from https://cdn.ymaws.com/aiccu.edu/resource/resmgr/publications/2023/impactreport2023_final_2.16..pdf

Bahr, P., Jackson, G., McNaughtan, J., Oster, M. & Gross, J. (2016, December 20). *Unrealized Potential: Community College Pathways to STEM Baccalaureate Degrees*. Retrieved April 18, 2023, from <https://doi.org/10.1080/00221546.2016.1257313>

Baker, R., Kurlaender, M., & Friedmann, E. (2021, February). *Improving the Community College Transfer Pathway to the Baccalaureate: The Effect of California's Associate Degree for Transfer*. Retrieved April 23, 2023, from <https://www.edworkingpapers.com/sites/default/files/ai21-359.pdf>

Baker, R., Kurlaender, M., & Friedmann, E. (2020). *Improving the Pathway to the BA: An Examination of the Associate Degree for Transfer*. UC Davis Wheelhouse: The Center for Community College Leadership and Research. Retrieved April 18, 2023, from https://education.ucdavis.edu/sites/main/files/wheelhouse_report_pathway_to_the_ba_1220_final.pdf

Bishop, B., Heckert, K. (2022). *Membership Report, FY 2021*. State Higher Education Executive Officers. Retrieved August 8, 2023, https://sheeo.org/wp-content/uploads/2022/08/SHEEO_FY21_Membership_Report.pdf

Brady, A. & Gallant, D. (July/August 2021). "STEM Bridge Program: Underrepresented Minority Students' Perceptions of Louis Stokes Alliance for Minority Participation Program Impact." *Journal of College Science Teaching* (Volume 50, Issue 6).

California Community Colleges. (n.d.). "Associate Degree for Transfer." Retrieved November 2, 2023, from <https://icangotocollege.com/associate-degree-for-transfer#:~:text=What%20is%20an%20Associate%20Degree,California%20and%20outside%20the%20state>

California Community Colleges. (n.d.). "Enroll Now." Retrieved August 10, 2023, from <https://icangotocollege.com/>

California Community Colleges Chancellor's Office. (2021). *Update to the Vision for Success*. Retrieved April 18, 2023, from <https://www.cccco.edu/-/media/CCCCO-Website/Reports/vision-for-success-update-2021-a11y.pdf>

California Competes. (n.d.). *Pathways to Prosperity*. Retrieved April 18, 2023, from <https://californiacompetes.org/p2p>

California Legislative Analyst's Office. (2003, January). *CPEC: A Review of Its Mission and Responsibilities*. Retrieved August 1, 2023, from https://lao.ca.gov/2003/cpec/CPEC_0103.pdf

California State Legislature. (2021). *Assembly Bill No. 132, Postsecondary Education Trailer Bill*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB132

California State Legislature. (2021). *Assembly Bill No. 928, Student Transfer Achievement Reform Act of 2021: Associate Degree for Transfer Intersegmental Implementation Committee*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB928

California State Legislature. (2021). *Assembly Bill No. 1111, Postsecondary Education: Common Course Numbering System*. Retrieved August 2, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB1111

California State Legislature. (2023). *Assembly Bill No. 1291, University of California Associate Degree for Transfer Pilot Program*. Retrieved November 2, 2023, from <https://legiscan.com/CA/text/AB1291/2023>

California State Legislature. (2023). *Assembly Bill No. 1749, Student Transfer Achievement Reform Act: University of California*. Retrieved August 1, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240AB1749

California State Legislature. (2010). *California Senate Bill No. 1440, California Community Colleges: Student Transfer*. Retrieved August 1, 2023, from <https://legiscan.com/CA/text/SB1440/id/10519>

California State Legislature. (1960). *California Senate Bill No. 33, 1960 Donahoe Act, Amendment to the California State Education Code: Sections 22500-22705*. Retrieved August 1, 2023, from https://oac.cdlib.org/view?docId=hb5b69n9fm&brand=oac4&doc.view=entire_text

California State University. (n.d.). 2010-2022 CSU Undergraduate and Graduate Degrees Granted, The California State University, Data & Reports. Retrieved July 2023, from <https://www.calstate.edu/data-center/institutional-research-analyses/Pages/reports-and-analytics.aspx>

California State University. (n.d.). 2008-2009 to 2012-2013 CCC Transfers to the CSU (Concentration & Ethnicity), The California State University, Data & Reports. Retrieved July 2023, from <https://www.calstate.edu/data-center/institutional-research-analyses/Pages/reports-and-analytics.aspx>

California State University. (n.d.). 2013-2014 to 2021-2022 CCC Transfers to the CSU (Concentration & Ethnicity), The California State University, Data & Reports. Retrieved July 2023, from <https://www.calstate.edu/data-center/institutional-research-analyses/Pages/reports-and-analytics.aspx>

California State University. (n.d.). "CSU Graduation and Continuation Rates Dashboard." Retrieved August 8, 2023, from https://tableau.calstate.edu/views/GraduationRatesPopulationPyramidPrototype_liveversion/SummaryDetails?iframeSizedToWindow=true&%3Aembed=y&%3Adisplay_count=no&%3AshowAppBanner=false&%3AshowVizHome=no

California State University. (n.d.). "Graduation Initiative 2025." Retrieved April 18, 2023, from <https://www.calstate.edu/csu-system/why-the-csu-matters/graduation-initiative-2025/What-Is-Graduation-Initiative-2025>

California State University. (n.d.). "Transfer Model Curriculum." Retrieved April 18, 2023, from <https://www.calstate.edu/attend/degrees-certificates-credentials/Pages/TMC-Search.aspx#page-2>

California State University. (2022). *Student Admissions and Impaction Policies Report 2022*. Retrieved April 18, 2023, from <https://www.calstate.edu/impact-of-the-csu/government/Advocacy-and-State-Relations/legislativereports1/Student-Admissions-and-Impaction-Policies-Report-2022.pdf>

Campaign for College Opportunity. (2021). *Chutes or Ladders: Creating a System That Supports Community College Student Completion*. Retrieved April 18, 2023, from <https://collegecampaign.org/publication/chutes-or-ladders-strengthening-california-community-college-transfer-so-more-students-earn-the-degrees-they-seek>

Campaign for College Opportunity. (2019). *State of Higher Education for Black Californians*. Retrieved April 18, 2023, from <https://collegecampaign.org/wp-content/uploads/2023/02/2019-State-of-Black-Californians-Full-Report-Final.pdf>

Carter, J. (2016, August 17). "College Students Prefer to Stay Close to Home, Data Finds." *Higher Ed Dive*. Retrieved June 21, 2023, from <https://www.highereddive.com/news/college-students-prefer-to-stay-close-to-home-data-finds/424594/>

Causey, J., Gardner, A., Pevitz, A., Ryu, M., and Shapiro, D. (2023, April). *Some College, No Credential Student Outcomes, Annual Progress Report – Academic Year 2021/22*. Herndon, VA: National Student Clearinghouse Research Center.

Chen, Grace. (2023, June 30). "Why 60% of Community College Students Never Transfer." *Community College Review*. Retrieved August 1, 2023, from <https://www.communitycollegereview.com/blog/why-60-of-community-college-students-never-transfer>

Community College Research Center. (2022, July). "Community College STEM Pathways." Retrieved April 18, 2023, from <https://ccrc.tc.columbia.edu/publications/community-college-stem-pathways.html>

Complete 2 Compete. (July 2023). "One Degree Better." Retrieved August 10, 2023, from <https://msc2c.org/>

Cooper, D., Fong, K., Karandjeff, K., Kretz, A., Nguyen, A., Nguyen, K., Purnell-Mack, R., Schiorring, E. (2017). *Through the Gate: Mapping the Transfer Landscape for California Community College Students*. Retrieved August 10, 2023, from <https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Phase-I-Technical-Report.pdf>

Cooper, D., Nguyen, A., Nguyen, K., Chaplot, P., Rodriguez-Kiino, D., Kretz, A., Purnell, R., Brohawn, K., & Karandjeff, K. (2020, May). *Students Speak Their Truth about Transfer: What They Need to Get Through the Gate*. Retrieved April 23, 2023, from https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/RPGroup_TheTruthAboutTransfer_TTGPhase3_R3%5B79%5D.pdf?ver=2020-05-18-171449-773

Course Identification Numbering System. (n.d.). C-ID Transfer Model Curriculum Information. Retrieved August 7, 2023, from <https://c-id.net/tmc>

Course Identification Numbering System. (n.d.). C-ID Model Curriculum. Retrieved August 7, 2023, from <https://c-id.net/model-curriculum>

Cuellar Mejia, M., Perez, C.A., Hsieh, V. & Johnson, H. (2023). *Is College Worth It?* Public Policy Institute of California. Retrieved October 27, 2023, from <https://www.ppic.org/publication/is-college-worth-it/>

Cuellar Mejia, M., Johnson, H., Perez, C.A. & Jackson, J. (2023). *Strengthening California's Transfer Pathway*. Public Policy Institute of California. Retrieved October 27, 2023, from <https://www.ppic.org/publication/strengthening-californias-transfer-pathway/>

Davis, L., Poca, J., and Santos, J. (2022). *The Degree Reclamation Playbook*. Institute for Higher Education Policy. Retrieved September 16, 2023, https://www.ihep.org/wp-content/uploads/2022/01/IHEP_DWD_Playbook.pdf

Gallup and Lumina Foundation. (2023.) *Education for What?* Retrieved September 21, 2023, from <https://www.gallup.com/analytics/468986/state-of-higher-education.aspx>

Governor's Office of Planning and Research. (2018). *The Master Plan for Higher Education in California and State Workforce Needs: A Review*. Retrieved August 3, 2023, from https://opr.ca.gov/docs/20181226-Master_Plan_Report.pdf

Hillman, N. & Weichman, T. (2016). *Education Deserts: The Continued Significance of "Place" in the Twenty-First Century*. American Council on Education. Retrieved June 21, 2023 from

<https://www.acenet.edu/Documents/Education-Deserts-The-Continued-Significance-of-Place-in-the-Twenty-First-Century.pdf>

Institute for College Access and Success. (2021). Raising College Attainment: A National Proposal to Scale Student Success Strategies. Retrieved November 2, 2023, from <https://ticas.org/wp-content/uploads/2021/04/Raising-College-Attainment-A-National-Proposal-to-Scale-Student-Success-Strategies.pdf>

Jenkins, D., & Fink, J. (2016). *Tracking Transfer: New Measures of Institutional and State Effectiveness in Helping Community College Students Attain Bachelor's Degrees*. Community College Research Center, The Aspen Institute, & National Student Clearinghouse Research Center. Retrieved April 18, 2023, from <https://ccrc.tc.columbia.edu/media/k2/attachments/tracking-transfer-new-measures-institutional-state-effectiveness.pdf>

Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers*. Public Policy Institute of California. Retrieved April 18, 2023, from <https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf>

Johnson, H. Bohn, S. & Cuellar Mejia, M. (2015, October). "Will California Run Out of College Graduates?" Public Policy Institute of California. Retrieved April 18, 2023, from <https://www.ppic.org/publication/will-california-run-out-of-college-graduates/>

Johnson, H., & McGhee, E. (2023, March 21). "Who's Leaving California—and Who's Moving In?" Public Policy Institute of California. Retrieved July 25, 2023, from <https://www.ppic.org/blog/whos-leaving-california-and-whos-moving-in/>

Lane, P., Michelau, D. K., & Palmer, I. (2012a, June). *Going the Distance in Adult College Completion: Lessons from the Non-traditional No More Project*. Retrieved August 10, 2023, from <https://www.wiche.edu/wp-content/uploads/2018/resources/ntnmStateCaseStudies.pdf>

Legislative Analyst's Office. (2009, November 12). "The Master Plan at 50: Assessing California's Vision for Higher Education." Retrieved August 1, 2023, from https://lao.ca.gov/2009/edu/master_plan_intro/master_plan_intro_111209.aspx

Levesque, E.M. (2018). Improving Community College Completion Rates by Addressing Structural and Motivational Barriers. Brookings. Retrieved November 2, 2023, from <https://www.brookings.edu/articles/community-college-completion-rates-structural-and-motivational-barriers/>

Lumina Foundation. (2021). *A Stronger Nation: Learning Beyond High School Builds American Talent*. Retrieved April 19, 2023, from <https://www.luminafoundation.org/stronger-nation/report/#/progress>

Maltese, A. & Tai, R. (2011, May 3). *Pipeline Persistence: Examining the Association of Educational Experiences with Earned Degrees in STEM among U.S. Students*. Retrieved August 1, 2023, from <https://doi.org/10.1002/sce.20441>

Massachusetts Department of Higher Education. (2023). *Strategic Plan for Racial Equity*. Retrieved August 8, 2023, from https://www.mass.edu/strategic/documents/Massachusetts%20Department%20of%20Higher%20Education%20Strategic%20Plan%20for%20Racial%20Equity_Updated_01242023.pdf

May, G. (2023, January). *C-ID/TMC/ADT 101 on behalf of the Academic Senate for California Community Colleges*. Available at <https://www.ab928committee.org/resources>

McKinsey & Company. (2023). *Fulfilling the Potential of US Higher Education*. Retrieved August 11, 2023, from <https://www.mckinsey.com/~/media/mckinsey/industries/education/our%20insights/fulfilling%20the%20potential%20of%20us%20higher%20education/fulfilling-the-potential-of-us-higher-education.pdf>

Monaghan, B. & Attewell, P. (2015). "The Community College Route to a Bachelor's Degree." *Educational Evaluation and Policy Analysis*, 37(1), 70–91.

National Center for Science and Engineering Statistics. (2023.) *Diversity and STEM: Women, Minorities, and Persons with Disabilities 2023. Special Report NSF 23-315*. Alexandria, VA: National Science Foundation. Retrieved August 17, 2023, from <https://nces.nsf.gov/wmpd>

National Governors Association. (March 2021). *State Strategies to Re-engage Students with Some College and No Degree*. Retrieved August 10, 2023, from

<https://www.nga.org/publications/state-strategies-to-re-engage-students-with-some-college-and-no-degree/>

Office of Governor Newsom. (n.d.) "California Blueprint." Retrieved August 1, 2023, from <https://www.gov.ca.gov/wp-content/uploads/2022/01/Higher-Education-Fact-Sheet.pdf>

Office of Governor Newsom. (2022, May). "Multi-Year Compact Between the Newsom Administration and the California State University." Retrieved April 18, 2023, from <https://dof.ca.gov/wp-content/uploads/sites/352/Programs/Education/CSU-Compact-May-2022.pdf>

Office of Governor Newsom. (2022, May). "Multi-Year Compact Between the Newsom Administration and the University of California." Retrieved April 18, 2023, from <https://dof.ca.gov/wp-content/uploads/sites/352/Programs/Education/UC-Compact-May-2022.pdf>

Office of Governor Newsom. (2022, May). "Multi-Year Roadmap Between the Newsom Administration and the California Community Colleges." Retrieved April 18, 2023, from <https://dof.ca.gov/wp-content/uploads/sites/352/Programs/Education/CCC-Roadmap-May-2022.pdf>

Pechota, D., Fulton, M., Broom, S. (2020). "50-State Comparison: State Postsecondary Governance Structures." Education Commission of the States. Retrieved August 8, 2023, <https://www.ecs.org/50-state-comparison-postsecondary-governance-structures/>

Perez, C. A., Hsieh, V., Johnson, H. & Cuellar Mejia, M. (2022, November 29). "Improving Regional Representation among Community College Transfers." PPIC Blog. Public Policy Institute of California. Retrieved April 18, 2023, from https://www.ppic.org/blog/improving-regional-representation-among-community-college-transfers/?utm_source=rss&utm_medium=rss&utm_campaign=improving-regional-representation-among-community-college-transfers?utm_source=ppic&utm_medium=email&utm_campaign=blog_subscriber

Postsecondary Value Commission. (2021). *Equitable Value: Promoting Economic Mobility and Social Justice through Postsecondary Education*. Institute for Higher Education Policy and the Bill & Melinda Gates Foundation. Retrieved August 11, 2023, from <https://www.postsecondaryvalue.org/wp-content/uploads/2021/05/PVC-Final-Report-FINAL.pdf>

Quinn, S. (2020, January 27). "More Indiana Adults Returning to College to Finish Degrees." WFYI Public Media. Retrieved August 10, 2023, from <https://www.wfyi.org/news/articles/more-indiana-adults-returning-to-college-to-finish-degrees>

ReUp Education. (n.d.). "Leaders in the Future of Higher Ed." Retrieved August 10, 2023, from <https://reupeducation.com/institutions/partner-stories>

Scrivener, S., Weiss, M.J., Ratledge, A., Rudd, T., Sommo, C. and Fresques, H. (2015). Doubling Graduation Rates: Three-Year Effects of CUNY's Accelerated Study in Associate Programs (ASAP) for Developmental Education Students. MDRC. New York, NY.

Shapiro, D., Dundar, A., Huie, F., Wakhungu, P.K., Yuan, X., Nathan, A. & Hwang, Y. (2017, September). *Tracking Transfer: Measures of Effectiveness in Helping Community College Students to Complete Bachelor's Degrees* (Signature Report No. 13). Herndon, VA: National Student Clearinghouse Research Center.

State of California Employment Development Department. (2015). *California Labor Market Trends: Science, Technology, Engineering, and Math Jobs in California*. Retrieved April 19, 2023, from <https://labormarketinfo.edd.ca.gov/Publications/Trend-Reports/STEM-California-August-2015.pdf>

State Higher Education Executive Officers. (2018). *The Power of a Promise: Implications and Importance of Adult Promise Programs*. Retrieved September 15, 2023, from <https://sheeo.org/wp-content/uploads/2019/02/Adult-Promise-White-Paper-The-Power-of-a-Promise.pdf>

Student-Ready Strategies. (2023). "AB928 STEM Study Group Data Review." Data analysis created for the STEM Study Group of the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President, California State University Chancellor's Office, and the Association of Independent California Colleges and Universities.

Student-Ready Strategies. (2023). "Goal-Setting Model." Tool created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President, California State University Chancellor's Office,

Association of Independent California Colleges and Universities, and the U.S. Census Bureau.

Student-Ready Strategies. (2023). "Historical Credential Production." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President, California State University Chancellor's Office, and the Association of Independent California Colleges and Universities.

Student-Ready Strategies. (2023). "Regional Associate Degree for Transfer Analysis." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data from the California Community Colleges Chancellor's Office and the California State University Transfer Model Curriculum website. Retrieved April 18, 2023, from <https://www.calstate.edu/attend/degrees-certificates-credentials/Pages/TMC-Search.aspx#page-2>

Student-Ready Strategies. (2023, January 26). "Understanding Transfer: Current Research in California." Presentation for the AB928 Associate Degree for Transfer Intersegmental Implementation Committee. Retrieved April 18, 2023, from <https://www.ab928committee.org/meetings/january-26-2023>

Student-Ready Strategies. (2023). "Transfer Attainment." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President and California State University Chancellor's Office.

Texas Higher Education Coordinating Board. (2021). *2021 Texas Public Higher Education Almanac*. Retrieved August 8, 2023, <https://reportcenter.highered.texas.gov/agency-publication/almanac/2021-texas-public-higher-education-almanac/>

Tillery, R., Booth, K. & Johnstone, R. (2023). "Transfer, Credentials, and Employment in CA." WestEd and National Center for Inquiry and Improvement.

Tomasko, D. L., Ridgway, J. S., Waller, R. J., & Olesik, S. V. (2013). "Association of Summer Bridge Program Outcomes with STEM Retention of Targeted Demographic Groups." *Journal of College Science Teaching*, 45(4), 90–99.

Trostel, P., and Smith, M.C. (2017.) It's Not Just the Money: The Benefits of College Education to Individuals and Society. University of Maine and Lumina Foundation. Retrieved September 21, 2203, from <https://www.luminafoundation.org/wp-content/uploads/2017/08/its-not-just-the-money.pdf>

University of California. (n.d.). "UC 2030 Dashboard." Retrieved April 18, 2023, from <https://www.universityofcalifornia.edu/about-us/information-center/uc-2030-dashboard>

University of California. (2022, July 22). *University of California 2030 Capacity Plan*. Retrieved April 18, 2023, from <https://regents.universityofcalifornia.edu/regmeet/july22/b5attach2.pdf>

University of California. (2022, February 7). *Building 2030 Capacity: UC Traditional and Non-traditional Enrollment Growth Strategies*. Retrieved April 1, 2023, from https://www.ucop.edu/institutional-research-academic-planning/_files/building-2030-capacity-report.pdf

University of California (2021). "UC Opens Doors for Community Colleges." Retrieved August 8, 2023, from https://www.universityofcalifornia.edu/sites/default/files/2022-02/uc_transfer_onesheet_2021.pdf

U.S. Census Bureau. (n.d.) "Quick Facts." Retrieved April 19, 2023, from <https://www.census.gov/quickfacts/CA>

Varty, A.K. (2022, Summer). "Promoting Achievement for Community College STEM Students through Equity-Minded Practices." *CBE Life Sci Educ*, 21(2): ar25.

Wang, X. (2020). *On My Own: The Challenge and Promise of Building Equitable STEM Transfer Pathways*. Harvard Education Press, <https://www.hepg.org/hep-home/books/on-my-own>

Weissman, S. (2023, April). "New Report Finds Increase in Students with Some College, No Credential." *Inside Higher Ed*. Retrieved August 10, 2023, from <https://www.insidehighered.com/news/students/retention/2023/04/25/some-college-no-credential-cohort-grows>

Whinnery, E., & Peisach, L. (2022, July). *50-State Comparison: Transfer and Articulation Policies*. Education Commission of the States. Retrieved August 10, 2023, from <https://www.ecs.org/50-state-comparison-transfer-and-articulation/>

Wozniak, A. (2018, March 22). "Going Away to College? School Distance as a Barrier to Higher Education." *Econofact*, University of Notre Dame. Retrieved June 21, 2023 from <https://econofact.org/going-away-to-college-school-distance-as-a-barrier-to-higher-education>

Zhu, Z. (2022, July). "Improving Graduation Rates in the Two-to-Four Pathway to Bachelor's Degrees." *Education Finance and Policy*, 17 (3): 432–453.

APPENDIX A: PREVIOUS COMMITTEE MEMBERS

(ii) Designating/appointing entity: The Office of the Chancellor of the California State University

Sylvia Alva
Executive Vice Chancellor, Academic and Student Affairs
Office of the CSU Chancellor

(vi) Designating/appointing entity: The Student Senate for the California Community Colleges

Paul Medina
Student
Los Angeles Community College District

(vi) Designating/appointing entity: The Student Senate for the California Community Colleges

Trajan Robinson
Student
Folsom Lake College

(vii) Designating/appointing entity: California State University Student Association

Michael Schouten
Student
California State University, Northridge

(viii) Designating/appointing entity: The University of California Student Association

Tariq Azim
Transfer Student Affairs Officer
University of California Student Association

(viii) Designating/appointing entity: The University of California Student Association

Abeeha Hussain

Student

University of California, Los Angeles