WHAT’S AID GOT TO DO WITH IT?

THE IMPORTANCE OF INCORPORATING FINANCIAL AID DATA IN CALIFORNIA’S CRADLE-TO-CAREER DATA SYSTEM

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INTRODUCTION

Education is one of the primary public services that states provide and manage for residents. States invest heavily in education, providing funding either directly or in the form of financial aid from preschool through college, and positive outcomes from those investments ripple outward to impact nearly every other area of public policy, particularly the workforce. In order to understand and assess these outcomes, states typically collect and analyze information about the investments at various levels. Many states maintain longitudinal data systems that link together statewide education data and workforce outcomes for this purpose.1

These systems vary widely; while some states have only linked K–12 and postsecondary data for limited purposes, others have linked a wide variety of data, including information from health and social service agencies, to provide a deeper understanding of the factors that can shape student outcomes in order to create public policy to address state priorities.2 While California currently collects a wide variety of data and is actively taking steps to further improve and expand the sharing of data across agencies, it is one of few states that does not have a longitudinal data system already established.3 However, the work to create one is underway.

In 2019, there were several proposals to create a longitudinal data system,4 and the legislature ultimately passed the California Cradle-to-Career Data System Act (Data System Act),5 a proposal put forth by Governor Gavin Newsom which sets out requirements for the development of a statewide data infrastructure. The system is to be built in a series of phases with the ultimate goal of leveraging educational, workforce, financial aid, and social service information to address disparities in educational opportunities and improve outcomes for all students.

The COVID-19 pandemic, and the resulting recession, has made the data system even more essential for the purposes of targeting resources where they are needed most. However, at the same time the state is suffering a massive budget shortfall,6 and the availability of resources for the data system are likely to be limited. Yet it is because resources are so limited that it is essential that information about students’ socioeconomic status, college costs, and financial aid information be included in the data system from the very beginning. Financial aid policy is a key factor in the affordability of, access to, and success of students attending higher education in California.

State, federal, and institutional financial aid policies intersect in complex but important ways, and having data about student outcomes can inform policymakers as they seek to understand the reach of financial aid programs, along with the incidence and impact of student debt. A centralized longitudinal data system will also make it possible to explore how access and success across higher education systems vary for students of different backgrounds, including by race, ethnicity, income, first generation status, and identified factors of disadvantage, allowing California to measure the reach of programs designed to aid underserved populations and address persisting statewide equity gaps.

Because most states have already created data systems of their own, California has the opportunity to learn from the work undertaken by states and researchers across the country. This report will examine the value and opportunities that including financial aid data in the Cradle-to-Career Data System will bring to California, provide examples of tools and research utilizing financial aid data available in other states, and make recommendations for California’s own system.
THE CALIFORNIA CRADLE-TO-CAREER DATA SYSTEM

The California Cradle-to-Career Data System Act lays out a long-term vision for utilizing data to improve outcomes for all Californians, with a particular focus on identifying disparities and equity gaps. By linking data that are already being collected by various entities within California, the goal is that the data system will:

- Enable users to identify the types of supports that help more students learn, stay in school, prepare for college, graduate, and secure a job;
- Provide information that teachers, parents, advisors, and students can use to identify opportunities and make decisions;
- Help agencies plan for, target investments in, and improve education, workforce, and health and human services programs; and
- Support research to ensure policy effectively supports individuals from birth through their career.

The data system is intended to improve the quality and reliability of education information, both within and between the entities providing data. This improvement effort will include creating a single anonymized identification number for students which can be used across all public entities, establishing consistent data definitions, and developing processes for correcting data, as well as ensuring student privacy. Connecting data across systems will allow for more complex and detailed analysis and understanding of the state’s strengths and challenges, which in turn can inform better public policy design, decisions, and investments.

Even before the COVID-19 pandemic disrupted economies and complicated policy priorities across the globe, it was recognized that this would be a momentous undertaking, requiring several phases of work. The Data System Act has designated that the existing K–12 and college data sets are the first to be linked, followed by employment and earnings data, early childhood education information, and social services information. The Data System Act also identifies the need for information disaggregated by several student characteristics in order to identify equity gaps, but does not specify when financial aid data is to be included, or to what degree.

A Workgroup made up of state agency representatives, informed by several Advisory Groups, is statutorily responsible for making recommendations about the data system’s structural components, processes, and the options for expanding and enhancing functionality. The Workgroup is allowed to recommend an alternative implementation order for the above data sets, provided there is sufficient justification included in the report.

Especially in these uncertain times, statewide data is more important than ever, and incorporating financial aid data will make it possible to target limited resources in ways that maximize impact and support vulnerable Californians’ ability to attain their higher education goals. Including these data in the system from the beginning will ensure that sufficient data are incorporated to answer critical state policy questions, in order to fulfill the state’s goal of closing equity gaps in educational attainment.
FINANCIAL AID DATA

College affordability and state financial aid reform have been topics of prominent policy debate in California in recent years,\(^\text{12}\) including widespread concerns about unaffordable costs for low-income students and disproportionate student debt burdens for students of color.\(^\text{13}\) While many of those conversations have been paused as the state tries to determine a path forward during, and after, the COVID-19 pandemic, the state can enhance its understanding of students’ cost challenges by improving the data used to measure them. Financial aid programs are one way states can increase the affordability of postsecondary education, and data is necessary to target aid to the most under-resourced students and anticipate the possible consequences of new policies and programs.\(^\text{14}\)

While the question of college affordability has been widely discussed, the reality is that college costs, along with students’ ability to pay them, vary enormously by family income and resources, students’ living situation, and the college attended.\(^\text{15}\) For many students, decisions about whether to attend college, which college to choose, and how to foot the bill have impacts that reverberate for decades, impacting their financial stability and quality of life, as well as the state’s greater economic landscape. In 2018, 49 percent of graduates from California’s public and nonprofit colleges had student loan debt, owing an average of $22,585.\(^\text{16}\) While this amount is among the lowest in the nation, data provided by California’s public universities show that students of color and low-income students are disproportionately more likely than their better resourced peers to graduate with debt burdens.\(^\text{17}\)

These debt burdens have a disproportionately harmful impact on certain groups of students. Black bachelor’s degree recipients, those who received Pell Grants, those who were the first in their family to attend college, and those who attended for-profit colleges have been shown to be more likely to default on their loans.\(^\text{18}\) While about half of all UC and CSU bachelor’s degree recipients graduate with student loan debt, 2/3 of Black UC graduates and 3/4 of Black CSU graduates do.\(^\text{19}\) National data show that the majority of Black, Latino, and Native American students come from families that earn less than $30,000 annually.\(^\text{20}\) Detailed, publicly accessible data on Californians would allow researchers to investigate exactly why underrepresented students are more likely to incur student debt, which has a rippling effect on their own wealth and the greater economy, and would help lawmakers craft policies that better target financial aid that best serves the most under-resourced Californians.

Many agree that California’s financial aid programs should be made available to more low-income students and that financial aid policies must better reflect students’ needs, particularly by better accounting for students’ full cost of attendance.\(^\text{21}\) Research has shown that, while targeted need-based financial aid is imperative for low-income and working-class students, it still may not be enough to cover the full cost of their education.\(^\text{22}\) The cost of college includes expenses beyond tuition and housing, such as food, books, transportation, medical care, child care, school fees not covered by financial aid, and more. In California, non-tuition college costs exceed $20,000 annually at all types of colleges,\(^\text{23}\) and many report struggling with basic needs, including housing and food insecurity.\(^\text{24}\) When students cannot cover these costs, they are forced to make choices that impact their ability to be successful in college, such as working or borrowing excessively, cutting back on the number of courses they enroll in, or dropping out altogether.

While college affordability has been one of Governor Newsom’s priorities, and financial aid reform the subject of several pieces of high-profile legislation in the state Senate and Assembly,\(^\text{25}\) a number of key questions remain about how to redesign state financial aid policy, including whether student self-help expectations (like work or borrowing) should vary based on student
income. Unfortunately, the state does not currently have the type of data system necessary to answer key questions like these.

For example, because only limited demographic data is collected with FAFSA applications, the California Student Aid Commission (CSAC) - the state agency responsible for administering financial aid programs for students attending public and private universities, colleges, and vocational schools — is not currently able to analyze their data by race or ethnicity. At present, there is no centralized data system for higher education data, and what data does exist on the impact that financial aid has on students of color must be requested from the institutions themselves who have access to additional student records and are able to answer more complex questions with a richer data set. Without access to this institutional data, California would have no information about these topics.

Further, detailed longitudinal data would allow the state to answer questions not only about students who received aid, but also individuals who might be eligible but do not benefit. This includes those who applied but did not receive aid, either because not enough awards are available or they did not meet specified eligibility criteria, and those who never applied at all. To help close college success equity gaps, it is not only valuable to know about the students who have received aid, but it is equally important for the system to have information on individuals who did not and why.

California’s three systems of public higher education — the University of California (UC), California State University (CSU), and California Community Colleges (CCC) — already collect a great deal of financial aid data in their own independent data systems, including dependency status; federal, state and institutional financial aid; and FAFSA fields. The UC and CSU systems also collect some data on cumulative debt and the cost of postsecondary education. CSAC also houses a great deal of additional information, and improved data will be available on student debt and workforce outcomes at for-profit institutions soon. However, while each of these systems make a limited amount of their aggregated data available to the public online, all of these data systems are currently independent, and they do not share data with one another. This results in a variety of siloed systems housing data that are not easily combined or analyzed as a whole, leaving California unable, or insufficiently able, to answer questions about the statewide impact of financial aid policies on college affordability and without a clear picture of students’ needs.

The Workgroup charged with providing recommendations about data system development has discussed including financial aid data in the first phase of data matching, and the Research Agenda Subcommittee recently highlighted the importance of defining what constitutes financial aid data broadly, including the total cost of college and the sources of income that students are using to cover the cost of higher education. Early incorporation of broad financial aid data will support the state’s efforts to close racial, socioeconomic, and other equity gaps, and its inclusion should be prioritized in the first phase.

**BENEFITS OF CENTRALIZED DATA SYSTEMS**

There are several ways to structure data systems, including federated and centralized systems. Federated data systems are generally used to temporarily link information from participating agencies to address a specified purpose, while centralized data systems gather information from the agencies and store it in one place for analysis.

Federated systems retrieve information from siloed data sets, but do not keep the data or results within the system after the analysis has been conducted. The systems can implement rules that allow certain requests for information, or to deny requests that do not meet pre-set criteria. Federated systems may also provide a higher degree of privacy protections, because information is not stored in a centralized location. However, given that federated systems generally do not allow data storage over time, they do
Centralized data systems, on the other hand, house a set of regularly refreshed student records within a single data system. Centralized systems can include multiple types of data, as long as the underlying data elements have been aligned. This alignment provides greater access because information is already compiled in one place, and facilitates longitudinal research by making it easier to pull data sets together without additional processes. Further, centralized systems allow information from a specific year to be analyzed with policy context in mind, such as the impact of financial aid investments on higher education outcomes over time, making them especially helpful for creating and evaluating public policy. The majority of state data systems are centralized, and in almost all cases data are stored in a deidentified format to protect student privacy and to comply with federal requirements. By centralizing the available data, and matching data across systems, the quality and richness of the data are improved, allowing policymakers and students alike to make better informed decisions about the future.

The Workgroup plans to recommend a hybrid approach to structuring information, to maximize utility while adhering to relevant federal and state regulation. In order to better respond to the pandemic and recession, and to be able to answer more complex questions about the impact of public policy with regard to equity, it is important that the California data system use a centralized model wherever possible, allowing for more flexible and rich data matching and for new queries to be added when needed or when more information becomes available.

LIMITATIONS ON USE OF FINANCIAL AID DATA

Different federal laws may impact the use of financial aid information, depending on the source of the data and whether any personally identifiable information has been deidentified. While the data use framework established under the Family Educational Rights and Privacy Act (FERPA) applies to financial aid data, other laws further restrict the use of data collected as part of students’ receipt of federal financial aid. Most notably, the Higher Education Act (HEA) provides that data collected on the FAFSA can only be used “for the application, award, and administration of aid.” Although 2016 guidance from the Department’s Privacy Technical Assistance Center (PTAC) affirmed that sharing and use of financial aid data to support data-driven decision-making for states was allowed when it relates to the administration of student aid, subsequent PTAC guidance from 2017 has been interpreted to potentially limit the use of financial aid data for these purposes. The lack of clarity around the federal restrictions have had a chilling effect on state efforts. However, many states, including the three state systems discussed in this report, have found ways to incorporate these data within their data systems and in compliance with applicable federal law.
WHAT OTHER STATES HAVE DONE

California has created programs and strategies to address financial barriers in order to promote better and more equitable student outcomes, and evaluating information about students’ ability to pay for college and the role of aid programs in addressing these challenges is an important part of that solution. While not all states with longitudinal or higher education data systems have incorporated financial aid information, many have, and there are worthwhile examples for California to learn from.

TEXAS

Texas has committed to collecting and utilizing higher education data to facilitate the state’s public policy goals. The state collects a wide variety of student-level data, including financial aid data such as the amount of state, federal, and institutional aid the student received, the student’s Adjusted Gross Income (AGI), the Expected Family Contribution (EFC), tuition exemption or waivers awarded, the student’s living arrangement, dependency status, race, and more.\(^{45}\) The institutional data collected in Texas can be leveraged to better understand how financial aid policies improve college attainment for low-income students.\(^{46}\) Although Texas has a variety of interesting tools to choose from, below are two which specifically utilize financial aid related data to inform public policy.

**Texas Higher Education Data Website**

The Texas Higher Education Data (THED) website is Texas’ primary source for statistics on higher education.\(^{47}\) The THED website offers policymakers, students, parents, K-12 educators, media, researchers, and faculty a collection of education data designed to help shape policy and inform initiatives in order to meet the goals established in the Texas 60x30TX, a strategic plan designed to improve postsecondary attainment throughout Texas.\(^{48}\) Maintained by the Texas Higher Education Coordinating Board (THECB), the website allows users to locate or generate data regarding higher education, and provides access to various reports, statistics, queries, and interactive tools.\(^{49}\)

Each year, THECB collects statewide financial aid data to produce an annual statewide Financial Aid Report,\(^{50}\) determine state aid program allocations, conduct compliance monitoring, and generate additional statewide and institutional reports. These reports provide the state with a means of measuring and analyzing the funding resources available to students attending public and private nonprofit institutions of higher education in Texas, and thereby to craft more effective public policy.

FIGURE 1: ANALYSIS IN THE MOST RECENT STATEWIDE FINANCIAL AID REPORT EXAMINES TEXAS STUDENTS’ UNMET FINANCIAL NEED

\(^1\) Average costs of attendance include tuition and required fees, books and supplies, room and board, and transportation and personal expenses.
Texas Higher Education Accountability System

The Texas Higher Education Accountability System provides data on higher education performance in Texas organized around the goals and targets of 60x30TX. The accountability system includes data from public universities, two-year colleges, health-related institutions, two-year private career colleges, and some out-of-state public universities with a presence in Texas. Data reports are prepared for each of the accountability system’s measures, including student debt. Information is available on the cost of tuition and fees, the percent of graduates with debt, and student debt as a percentage of wages, organized by statewide sector or by individual institution.

Because this information is available publicly, the audience includes not only policymakers but also students and families making decisions about their future. The availability of information relating to student debt, and the ability to compare the average cost, student debt, and future earnings in a central location make it possible for prospective students and their families to make better informed choices when considering colleges.

![Texas Higher Education Accountability System](image)

**FIGURE 2: THE TEXAS HIGHER EDUCATION ACCOUNTABILITY SYSTEM TRACKS METRICS RELATED TO THE 60X30TX GOALS, SUCH AS REDUCING STUDENT DEBT BURDENS**

VIRGINIA

The State Council of Higher Education for Virginia (SCHEV) is Virginia’s coordinating body for higher education. SCHEV’s mission is “to advocate and promote the development and operation of an educationally and economically sound, vigorous, progressive, and coordinated system of higher education in the Commonwealth of Virginia and to lead state-level strategic planning and policy development and implementation based on research and analysis.”

SCHEV collects student-level data from Virginia public and not-for-profit private institutions about the various forms of financial assistance provided and the use of that assistance, and use the data to show what forms financial aid has taken, who has received it, what institutions
they have attended and over what time frames. The data include information relating to the student’s need level, family income, residency, race, grants, work programs, tuition waivers, federal, state, and institutional aid, and more. Most reports allow selection of academic year, by individual institution or type, and student level.

SCHEV makes higher education public policy recommendations to the Governor and General Assembly on a variety of topics, including capital and operating budget planning, enrollment projections, institutional technology needs, and student financial aid. SCHEV seeks to promote greater access, quality, affordability, and accountability throughout the system, and maintains a comprehensive data system designed to inform the state’s policy decisions and budget recommendations. SCHEV’s data system also provides postsecondary data for the Virginia Longitudinal Data System (VLDS), supplying 20 years of data on Virginia college students to a data collaborative system, spanning education, workforce, social services, and juvenile justice services, via restricted use data agreements.

SCHEV is an active presence in Virginia’s capitol, drafting and advocating for legislation to support the agency’s mission, as well as responding to requests from the Governor and Secretary of Education for analysis of individual bills. For example, SCHEV data is used to determine the appropriations for all public colleges within Virginia,57 and state funds are targeted through legislation to accomplish state goals and priorities. SCHEV also tracks the efficacy of these investments, and reports that data publicly as well.

MARYLAND

The Maryland Longitudinal Data System (MLDS) was designed with the mission to develop and maintain a data system that contains student-level data from all levels of education and into the workforce in order to provide information and analyses which can be utilized to improve student and workforce outcomes. The MLDS provides information for all education decision makers – including both policymakers who are determining the best use of limited resources and also students trying to make decisions about their future – with data that will help inform them, highlighting different information specifically for different audiences.

The primary purpose of the MLDS is to provide policymakers with data which can be used to evaluate state public policy initiatives and their effects on education and employment, and the MLDS Center has a research agenda that includes topics related to K-12 readiness, college readiness and access, college completion, and workforce outcomes. The questions specifically include a query into “Which financial aid programs are most effective in improving access and success (i.e., retention and graduation) for Maryland students?” Several tools are available to
Financial Aid Dashboards

The MLDS Center makes a number of dashboards available, which are designed to provide policymakers with data to assess student outcomes on key performance metrics. Several of these dashboards focus specifically on financial aid, providing information on college retention and graduation for Maryland public high school graduates who enroll in college and have financial aid in their first year. The dashboards allow the data to be compared between institutions and over time, and include students that took out loans, those that were awarded grants, and those expected to have no Expected Family Contribution (EFC).

Research Reports

The Center also publishes research reports that utilize MLDS data and cover a wide variety of topics, including financial aid. For example, “The Effects of Need-based Grant Aid on Long-Term College and Workforce Outcomes,” which examines the impact of need-based aid on student success. The report found that receiving aid increases the likelihood that a student will graduate within five years, and that there were positive effects on workforce wages after graduation. The report also showed that institutions reduce the amount of institutional grant aid awarded to students and that students take out smaller loan amounts when they received need-based aid, and that there was evidence that the effects are larger for lower-income students. Other reports include the annual “Career Preparation Expansion Act Report,” which in 2019 included a section examining the relationship between wages, student loan payments, and the cost of living in Maryland, both for those with a college degree and those with some college courses but no degree.
CONCLUSION AND RECOMMENDATIONS

As California begins to create a statewide longitudinal database, especially at a time when resources are stretched thin and there is likely to be an increase in higher education enrollment, it is important to consider what can be learned from the examples set by other states. It has been predicted that the recession ahead may be as bad or worse than the Great Recession that began in 2007, which resulted in massive and harmful cuts to public education; although it is important to note that experts credit California policymakers’ decisions to protect the state’s largest financial aid programs from the worst cuts a decade ago with helping to protect access for lower income students, shielding them from a surge in student debt. As the COVID-19 pandemic continues to wreak havoc across the state, California may have an even more critical need in the years ahead for better information to inform decisions about how to best target state dollars to meet vulnerable students’ financial need.

Below are several recommendations for how California’s Cradle-to-Career Data System could address these goals.

**RECOMMENDATION 1: INCORPORATE FINANCIAL AID DATA IN THE FIRST PHASE OF DATA SET MATCHING**

Financial aid data is specifically identified in the Data System Act, but the Act does not specify when the data is to be incorporated, or to what extent that data will be made public. There is additional uncertainty surrounding the system as a whole in the wake of COVID-19 and the current economic recession. However, it is because of these crises that it is more important than ever that the state provides access to sufficient data to answer key questions about financial aid policy and equity gaps within the state.

The Data System Act specifically identified college access, completion, and the long-term effects of access to state financial aid as priorities for the data system to address, and it will be impossible to accomplish that priority without incorporating financial aid data. The data needed to answer questions about the impact of financial aid and support the state’s efforts to close racial, socioeconomic, and other equity gaps must be incorporated into the first round of data matching for the Cradle-to-Career data system. Given that much of this data is already collected by institutions and CSAC and that its early incorporation aligns with the priorities established for the data system, the inclusion of financial aid data should be prioritized.

**RECOMMENDATION 2: CENTRALIZE THE DATA SYSTEM WHEREVER POSSIBLE**

Centrally linking California’s data is an essential component to creating a useful data system. Ensuring that data is connected across multiple agencies will allow for the richest data set possible, combining a variety of information from various data systems to give a fuller picture of statewide student outcomes. Centralizing the data system wherever possible will allow California to answer new and complex questions and queries as needed, including questions about income, race, and ethnicity essential to closing persisting equity gaps, and will facilitate innovative research.

Key Cradle-to-Career stakeholders have discussed a hybrid approach, but the ultimate direction of the system will be decided in the coming years. California should centralize the data system wherever possible, maximizing the potential for the state to address equity gaps by retaining flexibility to design new queries as needed, as data from different systems are matched over time, and when new data sets are introduced from additional partner entities.
RECOMMENDATION 3: ENSURE THE DATA IS USEFUL TO THE POLICYMAKERS, RESEARCHERS, AND THE PUBLIC

All of the state data systems discussed above were specifically designed with the intent to inform and improve public policy, and it is essential that the California data system follow their lead. California has long been without a state data system that links information between agencies, making it difficult to answer foundational questions about the impact of state policies and investments.

It is imperative that the California data system be useful to policymakers, including by facilitating access to independent researchers and analysts focused on answering policy-relevant questions, and provide useful information to answer questions about the impact of programs and best use of limited resources. The system should incorporate the best of the examples above, both making raw data available for policymakers and researchers to analyze, but also providing analysis of trends and the impact of policy within the state to support efforts to close equity gaps. Finally, it is important that the data be presented publicly, and in a format that facilitates use by the public, so that students and families can make better informed decisions about their futures.