Pathways to Postsecondary Success

Maximizing Opportunities for Youth in Poverty

Daniel Solórzano, Amanda Datnow,
Vicki Park, and Tara Watford

PATHWAYS

TO

POSTSECONDARY SUCCESS

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for Youth in Poverty

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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

Within the context of the country's economic downturn and its need for greater postsecondary participation, *Pathways to Postsecondary Success: Maximizing Opportunities for Youth in Poverty* was designed to provide scholarship and policy recommendations to help improve educational outcomes for youth in low-income communities. This final report of the five-year *Pathways* project provides findings from a mixed-methods set of studies that included national and state analyses of opportunities and obstacles in postsecondary education (PSE) for low-income youth, detailed case studies of approximately 300 low-income young adults preparing for or pursuing PSE in three California counties, and the development of a set of indicators to monitor the conditions in community colleges. This project was supported by the Bill & Melinda Gates Foundation.

Research Questions and Focus

The overall project examined questions that are relevant to policymakers, higher education leaders and faculty, K–12 personnel, and others who help students prepare for and succeed in postsecondary programs. These questions include:

- What barriers and supports do low-income students experience in their attempts to earn postsecondary credentials?
- How do students access and interpret information that is integral to college navigation, such as how to enroll, apply for financial aid, decide which courses to take, and choose a major of study?
- What are the differences between low-income students and their middle- and high-income counterparts with respect to their pathways to college and their college entrance and completion rates?
- What conditions are necessary in colleges to ensure student success?

While we report on national data, our study has a particular focus on California, which is the state with the largest number of community colleges. The majority of low-income students in California who pursue PSE begin in community colleges, and thus our work takes a special interest in this sector. And while we did not set out to understand the effects of the Great Recession on the postsecondary pathways of low-income youth, the start of our study coincided with this significant economic downturn. This crisis impacted education and the labor market in some very complex ways. Thus, we have interpreted our study's findings in this context and we encourage readers to do the same.

Drawing on quantitative and qualitative data, we argue for a more comprehensive notion of postsecondary success for low-income youth. This requires a better understanding of their lived realities, as well as knowledge of the critical transitions they face preparing for and completing college. We highlight some promising supports in this report, as well as the obstacles students face in accessing them. With this knowledge, we believe that institutions can build interventions and supports that better address students' needs and goals. Ultimately, the improvement of student success in higher education will require a stronger commitment to the institutions that predominantly serve low-income students from K–12 through college.

Key Findings: What Matters Most?

Our study revealed *five key things that matter most* for understanding and improving low-income students' success in postsecondary education.

1. STUDENT VOICES MATTER.
   Having numbers that show how many students enroll and persist in post-secondary education is important, but unless we understand from students why these outcomes occur, we run the risk of misunderstanding patterns and implementing ineffective interventions. Hearing student voices is essential to understanding their pathways to and through postsecondary education. Listening to students we learned that:

- Education is a powerful force in the lives of low-income youth. It not only expands their economic opportunities but also changes how they perceive themselves, their futures, and what they are able to contribute to society and their families.
- Financial difficulties, family instability, transportation problems, and a lack of childcare frustrate many low-income students' attempts to fulfill their goals. This is especially the case for students who are not connected with support programs in community college.
- When low-income students experience caring educators and high quality instruction in high school or college, these factors make a difference to their engagement and persistence in education.
- Low-income students' pathways through community college do not follow a linear model from entry to transfer. Rather, their pathways are often non-linear and may involve experiences with developmental education classes, various academic or certificate programs, and stopping out due to financial and other constraints.

2. DIVERSITY MATTERS.

Low-income youth are a diverse group with a wide range of experiences. Paying attention to the similarities and differences in this population of students can help us better plan college success initiatives. Focusing on diversity we learned that:

- Almost half of community college students are older, work full time, and are parents. This so called "non-traditional" population is quickly becoming the majority in community colleges, and programs need to orient around their needs rather than see them as a diversion from the norm. In California, there are also significant numbers of students from immigrant families in community colleges and the particular constraints they face as they navigate their educational pathways must be considered.
- Over half of California's youth in the 18- to 26-year-old range are enrolled or have been enrolled in some kind of postsecondary education. However, there are substantial differences by racial group, with Asian Americans being most likely to pursue PSE and Latinos and African Americans being least likely. In all racial groups, women pursue PSE at higher rates than men. However, women, especially single mothers, are more likely to be living in poverty, and low-income women earn less than low-income men.
- A bachelor's degree has a significant return in the labor market for low-income young adults. There are, however, disparities between men and women and between individuals from different racial groups with respect to participation in full-time employment with benefits and with respect to earnings.

3. ASSETS MATTER.

Deficit approaches blame low-income students for their lack of success, or they blame educational institutions for failing students, often without recognizing the challenging fiscal, policy, and practical constraints they operate within. In work designed to improve student success, it is essential to focus on both student and institutional assets. Our research uncovers the remarkable strengths students bring and the many positive programs that exist in educational institutions. This asset-based approach helps us understand how to design programs that better tap into and foster students' strengths in order to support college success. Focusing on assets we learned that:

- Low-income students are highly motivated. Despite many hurdles, low-income students enroll and often persist in college, albeit not always in traditionally defined ways. The motivation they exhibit will likely serve them well in their educational pursuits, as well as in the labor market.
- Many low-income students in two-year institutions are pursuing higher education with a goal of transfer.
- In spite of a challenging budget environment, community colleges are providing a tremendous service to students with a wide array of educational interests and needs.

- Community colleges have launched important innovations, such as support programs and learning communities, that can provide models for assisting a larger number of students to reach their educational goals.

4. CONNECTIONS BETWEEN K–12 AND HIGHER EDUCATION MATTER.
   Postsecondary success is not a story that begins once a student sets foot on a college campus. High quality K–12 schooling and a host of college preparatory resources and activities must be provided in order to ensure college-going success for all students. Exploring low-income students' experiences as they transition out of K–12 schools we learned that:

- Nationally, more than three quarters of low-income youth do not complete a college preparatory curriculum in high school. Our qualitative data reveal that this should not be surprising considering how little they describe learning at school about preparation for college. Instead, they tend to rely mostly on personal networks, and what they learn is often inaccurate.
- Nationally, the majority of low-income youth do not go directly into PSE after high school. Those who do not enter right away have lower completion rates.
- Most low-income students who enter PSE require developmental coursework where they repeat concepts they should have learned in high school or earlier. In particular, a dramatic number of community college students require remediation— and when they are placed there they often feel stuck and yearn for more engaging instructional methods and curricula—pointing to a need for greater articulation across K–12 and PSE segments.
- Given that most low-income students in California begin their postsecondary education in community colleges, high school educators need more and better information about this sector to aid student success. This information should include enrollment procedures, academic assessment and placement processes, financial aid, and other student support services within community colleges.

5. INSTITUTIONAL SUPPORTS AND CONDITIONS MATTER.
   To ensure that low-income students' college aspirations are affirmed and their academic needs are met, institutional supports are essential. As students persist to and through college, they face critical transitions along the way, and certain conditions function as a "guard rail" for keeping them on the path towards college completion. Focusing on key institutional conditions and supports we learned that:

- The K–12 sector in California has experienced significant budget cuts that have resulted in very high student-to-counselor ratios and reductions in mentoring programs and supports for students. Meanwhile, national data show that mentorship is critical for low-income students' entry into college.

- Because most community college students need remediation, the supports and conditions that help them move quickly through developmental education curricula are integral to their success. Students need information and support around placement testing because it carries such critical consequences for their trajectories in community college.
- A key support for students' persistence in college is financial aid. Low-income students often struggle with the complicated financial aid process, and this can cause them to stop out of school or enroll part time. Financial aid information needs to be streamlined so that students have an easier time accessing financial support.
- Information is critical to students' successful pathways to and through college. Currently, there are points along these pathways where students are not receiving the information they need. High quality advising is essential and yet, due to staffing cuts, community colleges cannot always provide students with sufficient time and attention to help them plan for their futures.
- Students not connected with programs like learning communities or counseling often encounter a lack of coordination at key transition points in their paths towards PSE success. Support programs that integrate information, financial assistance, and academic and emotional support—so that students do not have to seek out these services separately—seem to be more effective. Many programs are oriented around full-time students; more programs are needed to meet the needs of students who attend part time.

In sum, low-income students are a diverse group who bring many assets to the educational enterprise. Their talents need to be fostered in order for them to realize the gains that education can bring to them, to their families, and to society as a whole. Supporting low-income students in postsecondary education requires an institutional commitment to their success, high quality curricula and instruction, ongoing advising and mentoring, integration of support services and resources, and streamlined pathways to completion (West, Shulock, & Moore, 2012). To support student success, four provisions—maps, compass, fuel, and tools—are necessary to help students understand their pathways and stay on track as they navigate their college experience. We observed many positive examples of these elements in our research. The challenge is to make these conditions a reality for more students.

1.

Introduction

Student Success and the Value of Postsecondary Education

Student success is a goal often espoused in higher education, yet understanding exactly what this goal is—and how to reach it—is not easy. Prior research has shown that student success is a longitudinal process through four transition phases: college readiness, college enrollment, college achievement, and post-college attainment (Perna & Thomas, 2006). Across these transitions there are indicators that help measure or benchmark success. For example, college readiness can be measured by educational aspirations and expectations as well as academic preparation for college. But to fully understand student outcomes within higher education pathways, researchers and policymakers must consider the multiple contexts of students' lives (Perna & Thomas, 2006).

The importance of students' multiple personal contexts is bolstered by current demographic trends: close to 45% of the nation's college students are considered non-traditional because they are older, attend school part time and work full time, or are parents (Rose, 2012). But the term "non-traditional" is quickly becoming outdated as these students become the norm rather than the exception (Cox, 2009; Deil-Amen, 2012). Because groups of students have such different situated contexts, their routes to success in college will undoubtedly vary (Perna & Thomas, 2006).

The broader political and economic contexts of individuals and institutions also significantly shape students' access to and experiences with post-secondary pathways. For example, in California, recent budgetary trends have limited the ability of community colleges to fulfill their mission of open access. Steep declines in state resources over the past four years have resulted in a 12% decline in funding for the colleges (California Community Colleges Chancellor's Office [CCCCO], 2013), while the per unit cost to attend has quadrupled. Although

the majority of low-income students are able to access tuition waivers (e.g., Board of Governors Fee Waivers), budget cuts have forced California's community colleges to respond to fiscal challenges in ways that limit access to postsecondary education. Reliance on increased class sizes, reduced program and class offerings, and limited enrollment periods (e.g., no course offerings in summer semesters) all ration enrollment (CCCCO, 2013).

These trends are troubling because of the implications they have for low-income students. The value of postsecondary education (PSE) for the purposes of economic gain has been well documented in prior research (e.g., Altonji, 1993; Becker, 1994; Bills, 2004; Goldin & Katz, 2008; Hout, 2012), but the voices of low-income students pursuing PSE show that the value of college extends beyond financial payoffs. Student perspectives and their experiences with educational institutions show us that school is more than simply a way to get a degree or a job. Consider the following comments from community college students who described their reasons for pursuing and persisting in higher education:

> I like going to school.…It just changes the way you think about things, the way you analyze things. Problem solving, like in regular life.

> Because no one's going to take care of me.…I want to be independent and I want to be able to say, "Hey, I did this." I want to have a job that I can be comfort-able with and enjoy. I don't want to work someplace that I hate. So I want to go to school, and I want my kids to understand it's important. I like actually learning. I really do.

> I feel like I've really grown because as I've gotten toward the end of the track I've learned so much more information.…I really love it. I do love learning.

To be sure, students believe that education will give them the necessary training and credentialing to help them out of poverty. But it is clear that their motivations for attendance are also personal and meaningful in other ways. They are looking for ways to give back to their families and communities, hoping to provide a good example for their children, and, after struggling in high school, discovering a love and passion for learning (Rose, 2012). The students' own words point to the power of education as a shaping force in young people's lives. It reshapes how they think and feel about themselves and their futures, and what they can contribute to the world and to their families. It gives them confidence to participate in dialogue and decision-making, and it helps them gain the problem solving skills they need in their lives. It allows them to be role models for their own children. These are the non-economic benefits—personal and societal—that participants told us they derived from college attendance.

We know, however, that the playing field is not level and thus not everyone who pursues an education has the chance to accrue the same benefits. It is true that there are many examples of educational and economic success among low-income youth, but these stories often cloud the reality that, on the whole, young people from low-income families face myriad challenges in their educational pursuits. Many of these young people cannot easily escape poverty in spite of their intent to reach educational goals and their persistent attempts to do so. They cannot easily overcome the substantial barriers that stand in the way of their success, or they may discover that the jobs they trained for do not exist or do not pay a living wage.

How do we move toward an educational system in which there is genuine opportunity for all and, most significantly, opportunities for those who have accrued fewer benefits up to now? What implications might there be for other social institutions and conditions, many of which constitute barriers to success themselves (e.g., lack of affordable child care, health care, living wage, etc.)? We believe these questions are important if we are to envision an America in which equal opportunity actually exists beyond the theoretical realm.

The *Pathways* Research

Within the context of the country's economic downturn and its need for greater postsecondary participation, the *Pathways to Postsecondary Success: Maximizing Opportunities for Youth in Poverty* project was designed to provide scholarship and policy recommendations to help improve post-secondary success for youth in low-income communities. Typically, scholarship on low-income students has focused on issues of access and enrollment in higher education. And while disparities still exist in college access, populations that have traditionally had low enrollments on college campuses, such as low-income students and students of color, are now enrolling in much greater numbers. Although these students overcome many obstacles in order to enter college, many leave before reaching their postsecondary goals (Bailey & Dynarski, 2011; Rosenbaum, Deil-Amen, & Person, 2006). Therefore, we set out to document not only the resources that help low-income students enroll in college, but also to understand more about the factors that help them persist and earn postsecondary credentials after they arrive.

To learn about these resources and factors, our project examined many questions that are relevant to policymakers, college leaders and faculty, K–12 personnel, and others who help students prepare for and succeed in postsecondary programs. These questions include:

- What barriers and supports do low-income students experience in their attempts to earn postsecondary credentials?
- How do students access and interpret information that is integral to college navigation, such as how to enroll, apply for financial aid, decide which courses to take, and choose a major of study?

- What are the differences between low-income students and their middle- and high-income counterparts with respect to their pathways to college and their college entrance and college completion rates?
- What conditions are necessary in colleges to ensure student success?

To fully grapple with these questions, the various components of the *Pathways* project were designed to investigate low-income students' preparation for and participation in PSE through several key methodological approaches. First, we placed a particular emphasis on students' perspectives and experiences. While it was important for us to broadly uncover the status of postsecondary participation by analyzing demographic patterns and institutional outcomes, such analysis would not be complete unless we also understood from the ground level how and why these phenomena occur. Thus, our student-centered approach revealed the day-to-day realities students confront as they navigate college and how they interpret and maneuver through these experiences (Park, Jones, Yonezawa, Mehan, & Datnow, 2009; Watford, Park, & Rose, 2011). Without knowledge of these realities, we run the risk of misdiagnosing problems and developing interventions that miss the mark or never reach the students they are trying to serve.

Second, the *Pathways* research used an asset-based approach to document students' experiences. Traditionally, scholarship on low-income students has focused on the traits and characteristics that supposedly lead to low-income students' poor college participation. The problem with this deficit perspective is that it blames students for their situation without recognizing the institutional and structural barriers they may face in their attempts to complete college, including a lack of access to postsecondary information, poor childcare resources, and inadequate academic support services (Valencia, 2010; Valencia & Solórzano, 1997). Since such research places the problem at the individual level, it provides little insight into how services and institutional conditions can be improved to better sup-

port students (Valencia, 2010). Likewise, a deficit approach may place blame on institutions without taking into account the fiscal, policy, and practical constraints within which they operate. An asset-based approach allowed us to see the strengths students bring with them in their daily interactions with college actors and programs and pushed us to consider the institutional conditions that support or hinder student success. It helped us understand how to design programs that better tap into and foster students' strengths in order to support their overall college success (Harper, 2012; Villalpando & Solórzano, 2005; Yosso, 2005).

Third, in our focus on low-income students, we recognize that this population is diverse and comprised of various groups that may have unique needs and characteristics. In the *Pathways* work, some of these groups included single mothers, students of color, and immigrant students. Paying attention to similarities and differences in the needs of these college-going sub-populations helped us keep in mind the additional policies and factors inside and outside school walls that must be taken into account when implementing college success initiatives.

Finally, from our viewpoint, postsecondary success is not a story that begins once a student sets foot on a college campus. We recognize the importance of high quality K–12 schooling and the various preparatory activities and resources that must occur throughout students' early educational experiences to ensure college-going success. Therefore, in our work we emphasized educational resources and supports that are key for students both before and after they enroll in college. In this report we highlight important college programs and curricula, such as developmental education, student orientations, and counseling, that are integral to the college success of students who missed out on key resources during their earlier years of schooling.

In sum, by focusing on low-income students and college completion, and by considering a wide range of contextual factors that may impact outcomes, the *Pathways* project aimed to advance research and inform policy and practice on issues of educational equity.

How We Did the Study

The *Pathways* project was launched in the fall of 2008 to support efforts to expand educational opportunities for low-income youth. The project was conceived to inform research and policy on breaking the intergenerational cycle of poverty for young adults who are at risk of not obtaining a postsecondary credential. UC/ACCORD leaders Jeannie Oakes and Daniel Solórzano, along with others affiliated with UC/ACCORD, worked closely with staff from the Bill & Melinda Gates Foundation to develop a proposal that would help the foundation meet its goals of improving postsecondary education and advancing knowledge in the field. The culmination of this collaborative effort was a set of multi-method studies designed to explore low-income students' postsecondary success from multiple perspectives.

The *Pathways* project consisted of five major components that provided interlinking research products that can guide and inform reform initiatives at the local, state, and national policy levels. The project was designed to allow the components to inform each other, and together they shed light on the multiple layers of low-income students' lived experiences, from the broad research context, to national trends, to the very personal lived experiences of students who are traveling their own postsecondary pathways.

COMPONENT 1
REVIEW OF THE RELEVANT LITERATURE

In May 2009, experts were invited from the fields of education, sociology, urban planning, public policy, and ethnic studies to participate in a convening of scholars to discuss the problem of postsecondary access and completion for low-income students. From this meeting, 12 scholars were commissioned to write articles that examined the outcomes and experiences of various low-income sub-populations. The collection included a range of literature reviews, empirical studies, and policy analyses that were published in a special double issue of the *Journal for Students Placed At-Risk* (*JESPAR*) called *Pathways to Postsecondary Education and Beyond: Maximizing Opportunities for Youth in Poverty* (Datnow, Solórzano, Watford, & Park, 2010). The articles in the *JESPAR* special issue offered important guidance for the development of the remaining four project components. This guidance included the consideration of systemic disparities outside of educational institutions—such as a lack of access to healthcare or immigration policy—that impact successful navigation of college for low-income youth. The articles and additional analyses also demonstrated that the voices of low-income students are rarely included in higher education research and are necessary to make sure that reform efforts are on target and not inadvertently neglecting students' needs and strengths (Park & Watford, 2012). Several of the original 12 scholars remained on as consultants to the end the *Pathways* project.

COMPONENT 2
NATIONAL ANALYSIS
(Principal Investigators Cynthia Feliciano and Leticia Oseguera)

The second component of the project included analyses of two national longitudinal survey data sets, the Education Longitudinal Study (ELS) and the National Longitudinal Study of Adolescent Health (Add Health). These data sets provide a range of broad level information that traces young people's trajectories out of K–12 schooling and into various types of postsecondary education, employment, family formation, and other post-college related pathways. The goal of the national analyses was to highlight the postsecondary trajectories, outcomes, and labor market experiences of low-income youth in comparison to their middle/high-income peers. The analyses also shed light on some of the circumstances, transition points, and institutional conditions that present postsecondary opportunities and obstacles nationally for low-income youth.

ELS data were analyzed to understand students' high school characteristics and experiences, and their relationship to postsecondary pathways. Analyses of Add Health data focused particularly on the postsecondary and labor market experiences of low-income youth. Researchers used the data to compare, over a 14-year period, the educational and employment trajectories of young people from low-income and middle/high-income backgrounds and to analyze predictors of educational and employment outcomes. Appendix A contains additional detail concerning the methodology of the ELS and Add Health research.

COMPONENT 3
CALIFORNIA YOUNG ADULT STUDY

(Principal Investigator Veronica Terriquez)

The third component of the project focused on California and patterns of participation in postsecondary education, employment, and civic engagement for the state's population of 18- to 26-year-olds. California represents the future of demographic change for the United States and often predicts the policy and institutional issues that will soon be at the forefront for the rest of the country. With this in mind, the California Young Adult Study (CYAS), which includes survey and interview data, provides a pivotal and valuable look at state-level issues that impact the postsecondary participation of low-income young adults.

Analyses of CYAS data documented unique patterns in race, gender, and immigration status subgroups of California's low-income population. CYAS data also shed light on how school, community, or government resources may mediate young adults' postsecondary educational, employment, and civic engagement outcomes. For more detail regarding the CYAS methodology and analysis, please see Appendix A.

COMPONENT 4
CASE STUDIES

To add more breadth and depth to the overall study, three sets of case studies examined the ways that low-income youth make meaning of their educational experiences to and through postsecondary education. The case studies were set in three different regions in Southern California and collectively they highlight the experiences of specific sub-populations and trajectory points in postsecondary pathways. A total of 308 students, most of them students of color, participated in interviews over a two- to three-year period. Case study teams also interviewed faculty and staff at the colleges and high schools the students were attending, conducted observations of classes, orientations, and other relevant events and meetings, and reviewed documents describing programs at the institutions. Appendix A includes demographic profiles of the case study students as well as additional detail concerning the methodological approaches at each site.

Figure 1
Pathways Components
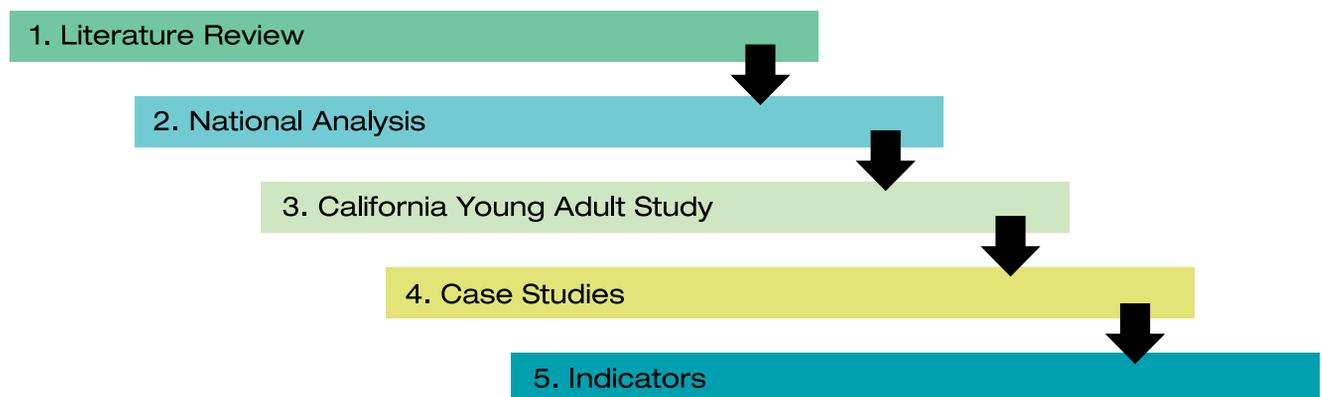
1. Literature Review

2. National Analysis

3. California Young Adult Study

4. Case Studies

5. Indicators

San Diego Case Study:
Transition to Postsecondary Education
(Principal Investigators Makeba Jones and Susan Yonezawa)

The San Diego case study examined transitions out of secondary institutions for low-income students attending six different high schools in the San Diego area. It focused on students' decision-making and experiences as they prepared for and transitioned to a range of college pathways, including community colleges, proprietary schools, and four-year universities, as well as to other pathways including work and the military.

Riverside Case Study:
Postsecondary Participation of Low-Income
Women *(Principal Investigator Vicki Park)*

The Riverside case study focused on the meaning-making processes and experiences of low-income women and single mothers in postsecondary education. The team investigated how these women made decisions about and interpreted their educational pathways, and the types of supports and barriers they encountered as students.

Los Angeles Case Study:
Community College Pathways
(Principal Investigator Tara Watford)

The Los Angeles case study investigated how students understood and navigated their educational pathways within community colleges. Students who participated in the research were engaged in one of three different degree/certificate pathways at three different campuses in the Los Angeles area:
1) basic skills/developmental education;
2) career and technical education; or
3) "transfer tracks" to four-year universities.

Individually, each of the case studies aimed to provide rich details concerning low-income students within a specific trajectory and sector of postsecondary participation. Taken together, they provide a holistic portrait of how young adults negotiate their daily lives to and through college participation.

COMPONENT 5
INDICATORS
(Principal Investigators John Rogers and Nancy Shulock)

The final *Pathways* component was the development of web-based tools and monitoring reports that describe the status of California young adults and the conditions needed to improve postsecondary success for low-income youth. The Indicators team used descriptive statistics from publicly available data sets to provide information on the educational, employment, and poverty status of young adults across California's diverse communities. They drew on the following data sources:

- The California Department of Education (CDE);
- The California Postsecondary Education Commission (CPEC);
- The College Board;
- The National Center for Educational Statistics (NCES);
- The United States Census Bureau's American Community Survey;
- The United States Department of Education's Office of Civil Rights (OCR); and
- The University of California Office of the President (UCOP).

The resulting reports (available online at http://pathways.gseis.ucla.edu) are intended to encourage dialogue among the members of government agencies, community-based organizations, educational institutions, and businesses about how best to support the transitions of youth into productive adults who contribute to the civic and economic well being of their local communities. As such, the team disaggregated data about young adults at the local level. The Indicators work highlights the experiences of different groups in California (by race and gender) to enable decision makers to consider how they might target public policy to meet the needs of all of California's young adults.

The Indicators component also includes a report that highlights the institutional conditions in community colleges that are necessary to ensure success for low-income students (West et al., 2012). The purpose of this piece of the work was to organize the research from other components of the *Pathways* project to develop a usable set of indicators and identify available data sources that could potentially yield information about the conditions at community colleges that do or do not support student success. Together these tools provide information about how institutional interventions and policy strategies can stimulate needed support for the postsecondary success of youth from low-income families.

THE DEVELOPMENT OF EMERGING SCHOLARS

Another major goal of the *Pathways* project was to support the professional development of scholars who conduct research focused on low-income youths' postsecondary educational access, persistence/retention, and completion. *Pathways* was designed to contribute to research and policy and, by supporting emerging scholars, the project can help sustain this work over time. Thus, from the outset, deliberate efforts were made to engage early-career scholars who not only conduct research in this area but who themselves are from underrepresented groups. Specifically, many *Pathways* team members were (or are) first-generation college students and/or were in various stages of their training and careers (i.e., pre-tenure faculty, postdoctoral fellows, graduate students, and undergraduate students). See Appendix B for a list of current and former project members.

A Note on Context

It is significant that our data collection took place during a period of remarkable economic change. In the fall of 2008, when we began our study, the United States in general faced an economic downturn that has come to be known as the Great Recession. California experienced far and away its most severe and prolonged economic crisis since the 1930s. This crisis impacted education in some very complex ways, including the loss of $809 million in funding for California Community Colleges. These cuts eroded outreach, guidance, and support programs for first- generation college-going students at two- and four-year colleges, and created havoc in scheduling and course offerings. In fact, since the 2008–2009 academic year, the community colleges have cut 15% of their course offerings (CCCCO, 2013). At the same time, a lack of access to jobs may have prompted more young adults to pursue or stick with college than otherwise might have been the case. Although we did not set out to understand the effects of these types of economic conditions on the postsecondary pathways of low-income youth, we have interpreted our study's findings in this context, and we encourage readers to do the same.

2.

## Profiles of Low-Income Youth and Postsecondary Education

We believe leaders, policymakers, and scholars need to fully understand broad contextual issues as well as individual lived experiences in order to develop the types of interventions and conditions needed to foster the success of low-income young adults. Low-income youth are a diverse group with a wide range of stories. Issues of race/ethnicity, gender, immigration, parental status, geography, and more may mediate how students experience socioeconomic status and educational opportunity. Thus, to commit to student success we must first fully understand the diversity of their needs and assets.

In this section we provide a demographic portrait of young adults at the national level and then focus specifically on the demographics of California and several of its local regions. We discuss low-income students' aspirations and lived realities and how they intersect with their plans for college. Understanding the background of low-income young adults and paying attention to the similarities and differences within this population of students can help us better plan college success initiatives.

A National Portrait of PSE and Low-Income Young Adults

The national portrait of college access and attainment shows continuing inequalities based on class, race/ethnicity, and gender. Socioeconomic status plays an especially critical role in college access and persistence, and one component of our work in the *Pathways* project was to examine this in greater detail. Ashtiani and Feliciano (2012a), in an analysis of data from the 1994–2008 National Longitudinal Study of Adolescent Health (Add Health), found striking disparities in college entry and completion by students' income background. Their work revealed that 70% of 18- to 22-year-olds who grew up in low-income families had not yet enrolled in postsecondary education (PSE). In contrast, only 41% of higher-income youth in the same age range had not yet enrolled. See Figure 2.

Percentage of 18- to 22-Year-Olds Not Enrolled in PSE by Family Income Background
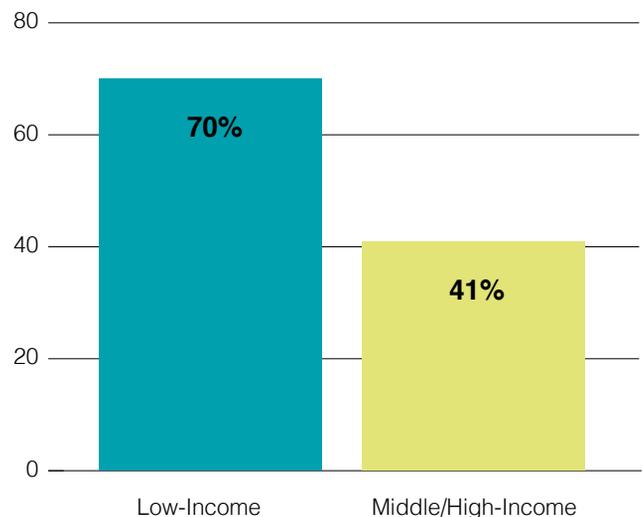
Original source of graphic: Ashtiani & Feliciano (2012a).

Data source: National Longitudinal Study of Adolescent Health (1994–2008).

Ashtiani and Feliciano's analysis of young adults' college completion six years later (when they were 24–32 years old) showed that 40% of adults from middle- or high-income families had obtained bachelor's degrees, whereas only 15% of adults from low-income families had done so. Nearly one third of adults from low-income backgrounds had not attended any PSE or job training by this point.

The types of institutions students enrolled in also affected degree completion: although there were disparities by income group, both low- and middle/high-income students had higher degree completion rates when they went directly into four-year universities. Not surprisingly, and consistent with prior research, Ashtiani, Burciaga, and Feliciano's (2013) analysis of the Add Health data set also revealed that a bachelor's degree had the most value in the labor market for both male and female young adults from low-income backgrounds. See Figure 3.

Personal Earnings of Low-Income Young Adults with Full-Time Jobs and Benefits
## by Gender and Educational Attainment (in thousands)*
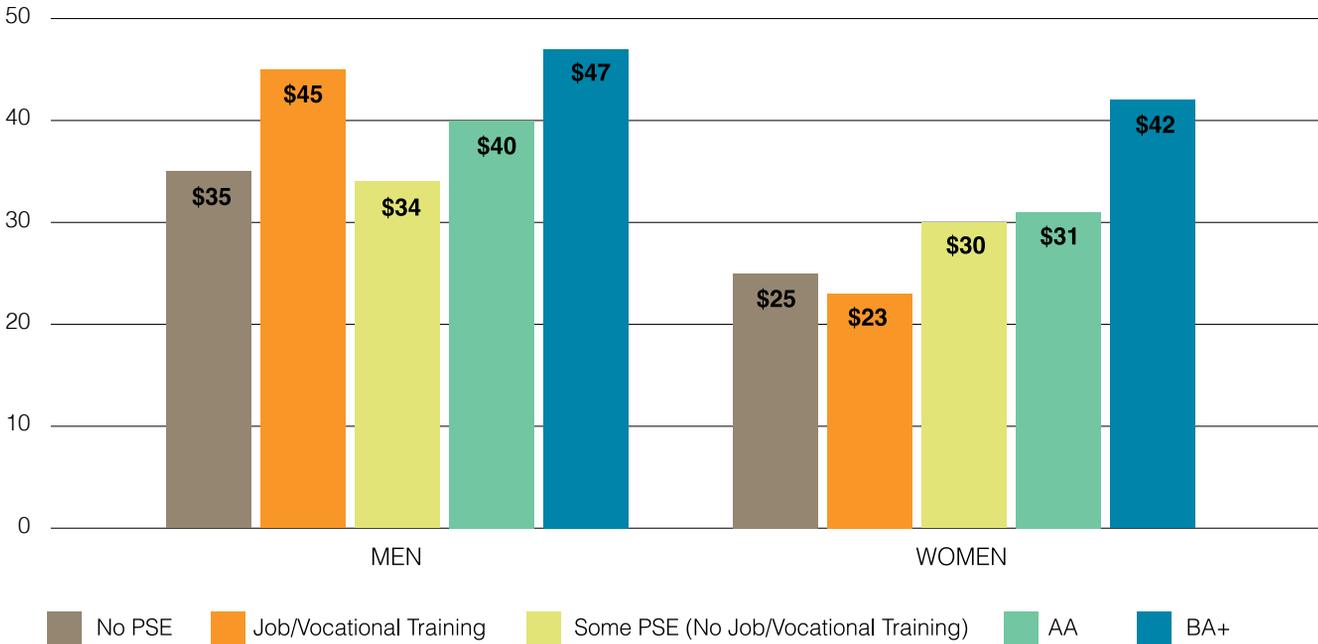
Original source of graphic: Ashtiani, Burciaga, & Feliciano (2013).

Data source: National Longitudinal Study of Adolescent Health (1994–2008).

*"Low-Income" refers to family income background.

The disparities we see with college enrollment, attainment, and labor market returns are especially troubling given the nation's demographic trends. There is substantial overlap between race and socio-economic status in the United States, with a dispro-portionate number of Latina/os, African Americans, and American Indians being classified as low-income (Rogers & Freelon, 2013). In particular, Latina/os are the largest and fastest growing minority group in the K–12 and community college sectors of education in

the United States (Solórzano, 2012). Table 1 gives a 2008–2009 snapshot of K–12, two-year, and four-year college enrollment by race/ethnicity. It reveals that while Latina/o, African American, and American Indian students decline in proportion as they move into post-secondary education, whites and Asian Americans/Pacific Islanders increase in their respective proportions (see Fry & Lopez, 2012).[2]

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[2] Because our data sources combine Asian American and Pacific Islander young adults, we are not able to examine these two distinct groups separately. It is important to note, however, that there are educational and economic disparities within this broad racial category. Specifically, disaggregating Pacific Islanders from Asian Americans reveals that their poverty rates are among the highest of all racial/ethnic groups, and their educational attainment rates are among the lowest. For more detail, see Chang et al. (2010).

Table 1

K–12 and College Enrollment in 2008–2009 by Race/Ethnicity

	K–12		2-Year Colleges		4-Year Colleges	
	Number (thousands)	*%*	*Number (thousands)*	*%*	*Number (thousands)*	*%*
African American	8,255	17%	1,153	15%	1,767	14%
American Indian	586	1%	90	1%	118	1%
Asian American/PI	2,423	5%	496	7%	842	7%
Latina/o	10,457	22%	1,309	17%	1,238	10%
White	26,725	55%	4,373	58%	8,357	65%
Other	244	< 1%	100	1%	585	5%
Total	48,690	100%	7,521	100%	12,907	100%

Original source of table: Solórzano (2012).

Data sources: Adapted from U.S. Department of Education, National Center for Education Statistics, Common Core of Data (2008–2009).

Table 2

Young Adults Living in Poverty in 2010 by Race/Ethnicity and Gender

	California	*Texas*	*New York*	*Florida*	*Illinois*	*United States*
Male						
African American	23%	23%	21%	26%	27%	24%
American Indian	26%	13%	10%	22%	*	29%
Asian American/PI	17%	18%	15%	20%	14%	17%
Latino	18%	20%	22%	20%	15%	19%
White	16%	16%	13%	17%	15%	16%
Female						
African American	30%	32%	25%	36%	38%	33%
American Indian	31%	27%	25%	32%	*	33%
Asian American/PI	20%	24%	17%	23%	17%	20%
Latina	24%	28%	27%	23%	22%	26%
White	19%	22%	16%	20%	19%	21%

* No data

Original source of table: Rogers & Freelon (2013).

Data source: United States Census Bureau, American Community Survey (2010).

PSE Participation and Low-Income Young Adults at the State Level: California as a Bellwether State

As one of the largest states in the nation, California is home to approximately 5 million young adults between the ages of 18 and 26 (Rogers & Freelon, 2013). California's young adults are demographically distinctive: 45% are Latina/o, a larger proportion than any other large state and more than twice the national average. The state's Asian American and Pacific Islander population also represents a substantially higher proportion than in any other large state (13%) and is more than twice the national figure (5%). African Americans represent 6% of California's young adults, and 33% of the young adult population is white (Rogers & Freelon, 2013).

California has a sizable low-income youth population. Rogers and Freelon (2013) noted that in 2010 almost one out of every five young adults (19%) was poor. Young adults of color were more likely to be living in poverty than whites. Young women, regardless of race/ethnicity, were more likely than their male peers to be living in poverty. Table 2 shows the percentages of young adults living in poverty by race and gender. The table compares California to four other large states and to the United States as a whole.

With regards to PSE, a higher proportion (39%) of young adults in California were enrolled in undergraduate programs than in other large states or the nation as a whole (Rogers & Freelon, 2013). This broad access to PSE points to the state's historical investment in higher education and commitment to multiple avenues for college entry. See Figure 4.

In their analysis of the California Young Adult Study (CYAS) data, Terriquez and Florian (2013) found that, across income levels, young adults in California with

Figure 4

Young Adults Enrolled in Undergraduate or Graduate Programs by State

State	Undergraduate	Graduate
California	39%	3%
Texas	32%	2%
New York	38%	5%
Florida	36%	3%
Illinois	36%	4%
USA	36%	3%
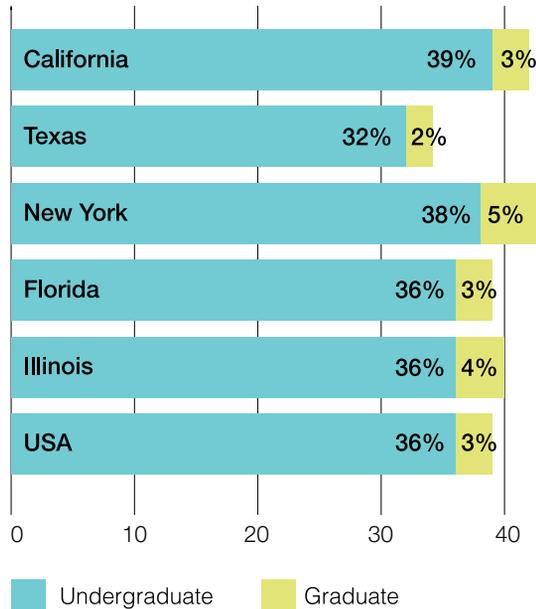
Original source of graphic: Rogers & Freelon (2013).
Data source: United States Census Bureau, American Community Survey (2010).

college-educated parents were more likely than those without to enroll in four-year colleges. Young adults from middle- and higher-income backgrounds with at least one parent who attended college had a 34% probability of enrolling in a California State University or similarly ranked four-year institution. This likelihood was only 13% for low-income young adults who did not have a parent with a bachelor's degree. Parental education was also especially important to young adults' enrollment in more selective institutions. Compared to those with less educated parents, young adults with college educated parents were three to five times more likely to attend selective and top tier institutions such as those in the University of California system, Ivy League universities, and similarly ranked schools.[3]

[3] Selectivity information was drawn from Barron's (2011) rankings.

Disparities in PSE access and completion also existed between racial/ethnic groups. Terriquez (2012) found substantial differences in PSE enrollment, with Asian Americans/Pacific Islanders being most likely to pursue PSE and Latina/os and African Americans being least likely. In all racial groups, women pursued PSE at higher rates than men. These patterns were consistent for college completion as well—Asian Americans/Pacific Islanders were far more likely than any other group to complete bachelor's degrees. Latina/os showed the lowest levels of attainment among all ethnic groups, with only 6% completing a college degree by age 26. Overall, women completed college at higher rates than men (29% versus 21%).

The Importance of Community Colleges

Across the nation, community colleges have long been known to serve a large number of students from diverse backgrounds pursuing diverse educational goals. Community colleges now enroll almost half of the nation's college and university students. As Bragg and Durham (2012) stated, "If not for community colleges, the overall higher education system would enroll fewer racial and ethnic minorities and fewer low-income, immigrant, and first-generation students" (p. 108).

California in particular is important because, with 112 institutions, it has more community colleges than any other state in the nation. In fact, California Community Colleges serve 25% of community college students nationwide (U.S. Department of Education, 2011). Figure 5 compares community college enrollment in California to enrollment in other states across the nation.

Figure 5
2010 Community College Enrollments by State (in thousands)
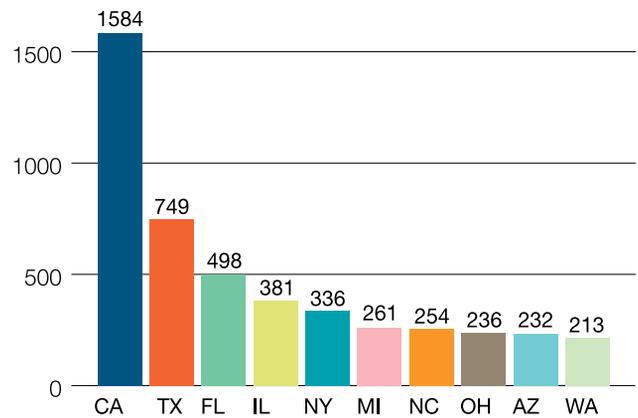
Original source of graphic: Bradley (2011).
Data source: U.S. Department of Education (2011).

Fortunately, community colleges—which provide a possible gateway to four-year universities—are relatively accessible to many students, especially first-generation college students and those from low-income backgrounds. More than any other PSE institution in the state, California community colleges reflect the state's demographic diversity. Paralleling national racial/ethnic trends, Latina/o students are the fastest growing segment of California's community college student population. In 2011, 34% of California community college students were Latina/o, 32% were white, 15% were Asian American or Pacific Islander, 8% were African American, and 1% were American Indian (CCCCO, 2012). See Figure 6.

1992–2011 Enrollment in California Community Colleges by Race

Legend:
- White
- Latina/o
- Asian American/PI
- African American
- American Indian
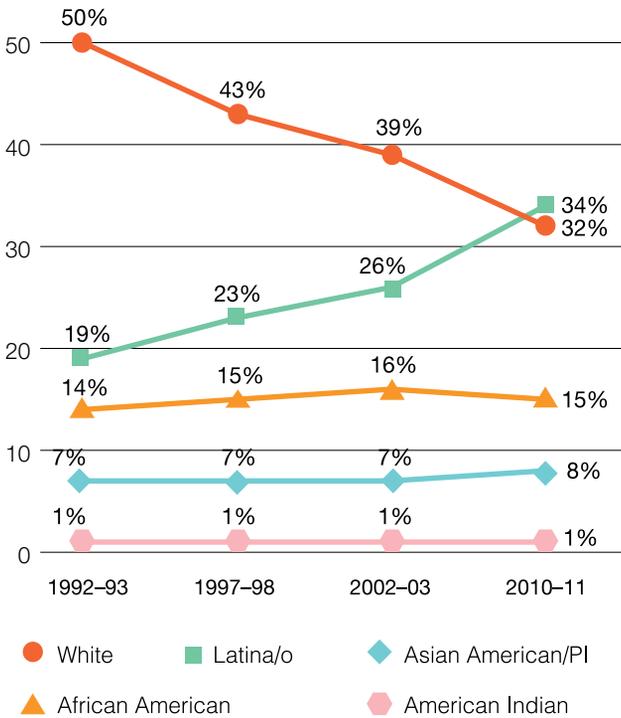
Data source: California Community Colleges Chancellor's Office (2012).

Significant Sub-Populations of Low-Income Young Adults in California Community Colleges

Given the diversity of community college students, we sought to gain a better understanding of particular subgroups of low-income young adults whose experiences have been understudied. Our case studies were particularly well-suited to this goal. Three quarters (75%) of the students in the case studies were Latina/o or African American (see Appendix A), and so most of the students who shared their experiences with us were racial and ethnic minorities. The special populations we sought to highlight included student parents, children from immigrant families, and undocumented students. All faced challenges in their pursuit of higher education, but they also brought with them important assets—including resilience and the ability to juggle many competing demands and make the best out of limited resources—that fueled their desire to succeed. These life experiences shaped their interest in pursuing PSE and continued to shape their experiences in college, as we will explain.

STUDENT PARENTS

More often than in other PSE institutional types, students in community colleges juggle parenting and coursework. Single parents, as a specific subset of the increasing "non-traditional" student population served by community colleges, comprise 16% of the student body, with the majority being single mothers (Goldrick-Rab & Sorensen, 2010). The access to education that community colleges provide is important because households headed by single women continue to have the highest poverty rates among all household types in the United States. In 2010, approximately 32% of single female-headed households were poor, compared to 16% of single male-headed households and 6% of married couple households (National Poverty Center, 2012). Single mothers, particularly African American women and Latinas, experience high levels of poverty in the United States and are less

likely to follow traditional pathways to college (Romo & Segura, 2010). In college, young parents struggle to pay for child care, have difficulty finding quality advocacy and counseling, and often find it hard to manage the time constraints of working, parenting, and attending school (Polakow, Butler, Deprez, & Kahn, 2004).

Young adult parents in community colleges (both men and women) frequently link their purposes in the pursuit of education to being parents. They want to serve as role models for their children, and they believe that education will lead to better job opportunities. Romo and Segura (2010) noted that it is common for young mothers to counter traditional stereotypes of being exclusively child rearers and overcome many levels of adversity in working towards their educational goals. In our case studies, many students talked about how having children changed the way they engaged in school and made them see for the first time the utility of school as a means to gaining skills, broadening their worldviews, or connecting to better work opportunities. In the case of Deb, a 25-year-old single mother, the birth of her son was a central event that led to her increased focus on school and her persistence through it:

> **DEB:** *I don't want my son to be raised like I was.*
>
> **INTERVIEWER:** *In what way?*
>
> **DEB:** *Poverty....[N]ow I feel like I need to go back to school, even though I do have a job....Even if you have a job it's not guaranteed. If you have a degree or something you always have a better chance of getting a higher position...[rather] than just starting off way at the bottom…for nothing.*
>
> **INTERVIEWER:** *Before you had your son did you still have that same attitude?*
>
> **DEB:** *No, I didn't. I actually didn't. So when I had him I was more...determin[ed], like, "Oh, I've got to do this, I can't think of myself [any]more."*

Jonathan, a married male student with two children expressed similar sentiments: "[W]ell, you have two children and it changes your standard of thinking.… Once you have other people depending on you, you don't have that choice; it's not about you anymore, it's about them." Participants also frequently spoke of a desire to act as role models and set an example for their children by attending college. As Tanya, a 24-year-old mother, noted, "It's very important to me to get an education. That way I could set a good example for my son."

The determination to become positive role models for their children and a strong motivation to provide a better life for their families were both powerful assets that these student parents brought with them to persist in school.

IMMIGRANT YOUTH AND YOUTH OF IMMIGRANT PARENTS

Within California, significant portions of community college students are immigrants and children of immigrants, and thus we paid special attention to this life experience as we gathered data in our case studies. Twenty-five percent of the Los Angeles case study participants and 16% of San Diego participants were immigrants. Only one participant in the Riverside case had immigrated to the United States, but 40% of the Riverside case study participants, 85% of the Los Angeles participants, and 83% of San Diego participants reported having at least one parent who was born outside the United States. The vast majority of foreign-born parents were of Latin American descent.

Many immigrant students expressed a lack of confidence in their English language skills and looked to their community college courses to help them improve. Christina, who had struggled with this for many years, described an early childhood experience with language:

> Since I didn't speak English it was hard for me to make friends and communicate with my teacher. She didn't speak Spanish. She tried communicating with me, but I was little. I didn't understand what she was trying to do. I was scared of her. My classmates tried to help me, but some of them were just mean. Like, "Oh, she doesn't speak English. Let's not be her friend."

Immigrant students also expressed that they were not familiar with how to navigate postsecondary education and they often relied on community outreach programs, teachers, counselors, and community members to share information and resources that would allow them to access and persist in college. Some students had older siblings who had been in college and could help them navigate schooling; in other cases, students would rely on their peers if they felt they were getting misinformation from counselors. Many immigrant students were strongly motivated to succeed so they could help provide and take care of their families that had often sacrificed a lot to help them get to and through college. Through institutional interventions, colleges could tap into these key assets of motivation and determination to foster and promote success.

UNDOCUMENTED YOUTH

We also had a number of undocumented youth in our sample. At the start of the Riverside and Los Angeles case studies, undocumented students represented 3% and 9% of participants, respectively, and the vast majority were of Latin American descent.

For the undocumented youth in the Pathways studies, one of the primary challenges was financial stress, in particular because they were not able to qualify for student financial aid. On top of the financial stressors, most undocumented students also faced worry and fear in their daily lives associated with their undocumented status. They worried about being deported and about their family members being deported. And other studies have shown us that as undocumented youth age, they begin to face problems finding safe and adequate means of transportation and can struggle to find jobs where their status is not heavily exploited (Abrego & Gonzales, 2010). Because of the limited resources made available to the undocumented students in our case studies, they relied heavily on student networks and campus clubs as sources of information and support.

Unfortunately, financial barriers and students' undocumented status can mean that even those who get into four-year institutions may not actually go to college. Of those who do pursue higher education, "the vast majority of undocumented college students attend two-year community colleges, where tuition is more affordable" (Abrego & Gonzales, 2010, p. 149). Many of the young adults in our case study community colleges spoke of the California Dream Act and the Deferred Action for Childhood Arrivals (DACA) program, citing their actual or potential impact on their ability to pursue higher education. After the passage of this legislation, students spoke of being more at ease and of having more promising educational futures. As Marta explained:

> Well I don't have any [concerns] right now because they passed the [California] Dream Act. My only concern would be that they veto it, and then I'd go back to being scared: "How I'm going to pay for school? What will happen if I get stopped by the cops when I'm driving?"

Three Major Policies Affecting the Postsecondary Opportunities of Undocumented Youth in California

AB 540 provides in-state resident tuition for students registered for or enrolled in public, accredited colleges and universities in California who meet the following eligibility criteria:
- Attended a California high school (9th–12th grade) for at least three years.
- Graduated from a California high school or attained a GED or passed the California High School Proficiency Exam (CHSPE).
- Filed or intend to file an affidavit with the public institution of higher education to attain legal residency.
- Do not hold a valid non-immigrant visa (F, J, H, L, A, E, etc.).
- Submitted an application at the public postsecondary institution disclosing status and eligibility. (Institutions are not allowed to release AB 540 student information to immigration authorities.)

California Dream Act (AB 130 and 131) provides financial aid for AB 540 students and alleviates the financial burden of education in public colleges and universities:
- **AB 130** provides access to private scholarships for public postsecondary institutions.
- **AB 131** provides access to state financial aid (Cal Grants and Board of Governors Fee Waivers).

Deferred Action for Childhood Arrivals (DACA) is a federal policy that provides two-year renewable work permits for undocumented youth. The program provides improved options for undocumented students as they look for work to help pay for their education. Participants must meet the following criteria:
- Arrived in the United States before the age of 16 and are now 30 years of age or below.
- Resided in the United States for at least five years.
- Enrolled in or have graduated from high school, served in the military, or have a GED.
- Have no convictions or have not committed any felonies.

While some undocumented students in our study were able to qualify for DACA status, they reported receiving very few resources to deal with their new identity and legal status and they continued to have trouble finding well paying jobs and financial stability. Also, the strict qualification limitations for DACA, combined with the ongoing reality that family members can still be deported, has made many wary of the DACA process. And, DACA does not qualify youth for federal financial aid or federal programs for low-income individuals. As Richard (2012) explained, "it is essential to remember that DACA is not a widespread form of relief" (p. 25). Thus, while the program may be a helpful bandage for some issues that AB 540 students confront, financial difficulties and other stressors are still difficult realities that undocumented students must face as they strive to achieve their educational dreams. See the text box above for more detail on students with AB 540 status.

Even with these challenges, undocumented youth had high educational and career expectations, as well as a high commitment to serving their communities. Even though they typically came from low-income families and often had difficulty paying for their education, undocumented students found ways to become activists in college and in their communities. In their analysis, Terriquez and Patler (2012) found that undocumented youth activists were overwhelmingly enrolled in higher education, had higher than average grades in high school, and reported more significant civic engagement than the general population.

As this section begins to make clear, low-income community college students, most of whom are students of color, bring a wide array of life experiences and circumstances to school, many of which shape their educational trajectories.

Student Aspirations for College and Career

Understanding low-income students' aspirations for college and career is a critical step in building a profile of this population. The occupational goals of high school students are subject to dramatic change as they enter the workforce and higher education (Rindfuss, Cooksey, & Sutterlin, 1999). Among low-income individuals this often means constrained ambitions as they learn more information about specific occupations or as they engage with higher education institutions (Rosenbaum, 2001), though some experience the opposite (Rosenbaum, Deil-Amen, & Person, 2006). While some research has documented these changes longitudinally (Rindfuss, Cooksey, & Sutterlin, 1999; Hanson 1994), there is insufficient qualitative information on how aspirations change over time or why, especially for low-income students who enter community colleges or vocational training programs. Drawing on our case study data, in this subsection we account for the institutional and personal barriers that make goal persistence challenging, but we also describe how these same factors can lead some low-income youth to expand their aspirations.

Our youngest cohort of students—high school students in San Diego—expressed a range of occupational goals, and they changed frequently over the course of the two-year case study. Between interviews in the second and third waves, which typically measured a span of nine to 12 months, only 23 of 65 respondents maintained the same career goals, even when their overall educational goals remained consistent. Importantly, the data showed no leveling off phenomenon for most participants, where

students dreamed high and then moved their aspirations downward when academic or economic realities shook them. Rather, most had leveled aspirations from the beginning of the study (when they were juniors or seniors in high school), well before encountering college or the job market. Students in the San Diego case study infrequently aspired to four-year degrees; most focused on vocational training programs, community college, or no PSE. This could be due—at least in part—to the grim picture of opportunities students perceived as a result of the Great Recession.

In the San Diego research, 20% of the students never enrolled in PSE during the study. In contrast, because of the sampling criteria in the Los Angeles and Riverside case studies, all participants had at some point enrolled in postsecondary institutions. This likely explains a difference in findings: while a number of students we interviewed in Los Angeles and Riverside did begin with leveled ambitions (e.g., a certificate in office management), more described high initial aspirations that required the completion of a college degree. When the participants enrolled in community colleges and declared their respective majors, the majority aspired to transfer to four-year universities, but they found it to be more complicated and difficult than they had anticipated. By the end of the study, most of these individuals described lower occupational and/or educational goals, demonstrating what others have documented as the "cooling out" function (Clark, 1960). The institution "cooled out" their educational and occupational aspirations and made them feel that it was their decision to lower their aspirations.

As we will discuss in greater detail in a later section, the Riverside and Los Angeles case studies both showed that institutional barriers (e.g., lack of academic advising, trouble with financial aid, lack of college credit for basic skills courses, difficulty accessing information on transfer or coursework, or a shortage of classes) interfered with students' ability to realize their educational goals. For example, budget cuts to the California Community Colleges made it very difficult for students to register for necessary courses. Susan, a

student in our Los Angeles case study, had aspirations to become a registered nurse and had been frustrated by the unavailability of classes: "Every semester it's hard to get a class. So far, since I've been here, I'm not able to get any sciences.…They are always full, every semester."

Jennifer, a single mother pursuing an associate's degree in Automotive Collision Repair, explained that because she did not get sufficient financial aid every semester she could not afford to forego paid employment and enroll full time. As a result, she made the difficult decision to abandon her transfer plans and pick up a second certificate in welding—aspirational changes that contradicted her early goal of avoiding "back breaking work." She explained, "if financial aid wasn't a factor…then I probably would go for both [an associate's and bachelor's]."

A smaller but nevertheless substantial number of students increased their aspirations during the course of the study. Some aspired to transfer to four-year institutions or to obtain graduate degrees as a result of positive interactions in school. Sometimes they attributed their higher aspirations to institutional agents (e.g., counselors, staff, faculty, transfer programs) that mediated encouragement and mentorship, priority registration, and continuous financial aid. Janet, a Los Angeles participant, had felt discouraged and like she was wasting her time. She was re-energized by an interaction with a counselor who explained which courses she did and did not need in order to transfer and encouraged her by saying, "You're doing great. You're on the right path to doing something." Moreover, the counselor "was very understanding. She was like, 'What do you want to do now, and what do you want to do later?' Then I told her, and she cleared everything [up]." This information was crucial for Janet to feel like she could continue.

In the Riverside case study, Anna explained that attending college and learning more about degrees and the occupations they can lead to helped expand her goals. The positive interactions she had with counselors assisted her in this process:

> *I guess you could say I'll settle for a bachelor's, but I now want something higher….It is like the more I study, the more I want. Before I just wanted an associate's, just [to be] a probation officer. And now I am looking at the job description, at the salary, at what it is, and it's like, "Why would I settle for this when I can do [more]?"*

By the end of the study Anna had successfully transferred to a four-year state college and was making plans to complete a master's program in social work. She credited her success to the Extended Opportunity Program and Services (EOPS)—a program we will describe in more detail later in this report—as well as to support from family members. Likewise, in the Los Angeles case study, Sara was encouraged by her instructor to run for student body office, where she eventually won a seat. From her experiences there she realized that after receiving her welding certificate she wanted to transfer to earn a bachelor's degree, perhaps in politics. And Charlie, another welding student, began working in the tutoring center and enjoyed the experience so much that he decided to also pursue a bachelor's degree in psychology.

Anna, Sara, and Charlie all offer examples of what is known as the "warming up" phenomenon. In contrast to cooling out (Clark, 1960), students develop higher aspirations and goals as a result of their engagement with school (Alexander, Bozick, & Entwisle, 2008). They present an important contrast to the more common story of "cooling out," and point to the importance of individual determination and institutional resources in allowing students to develop and achieve their dreams.

The perspectives of students and the ways in which their aspirations became constrained or broadened highlight the power of educational institutions as mediating forces. The formation of student aspirations cannot be divorced from the institutional context and the accompanying social interactions that can guide, inform, and/or direct young adults' decision-making processes by virtue of their absence or presence.

Low-Income Students' Realities and Needs

In order for institutional interventions and policy reforms to work, it is clear that we first need to understand the reality of students' lived experiences. The *Pathways* case studies point to the ways that financial difficulty, family instability, or a lack of childcare can frustrate students' ability to fulfill their goals. Family support and financial help enabled some students to persist, but often the time demands, rigors of college, and foregone wages became too much. Committing to educational pathways that required full-time attendance—sometimes over many years—was too difficult. Given financial needs and other life circumstances, participants needed to work, frequently resulting in part-time college attendance that increased their time to degree completion.

FINANCIAL INSTABILITY

Despite aspiring to four-year and advanced degrees early on in their college experiences, many participants in the case studies struggled after realizing that their goals would require more time than they originally understood. Various students felt that going to school could not be a priority because they had to support their families or they simply could not afford the costs of school. As Matthew explained:

Well, I'm just not accomplishing my goals. I'm not finishing education as fast as I would want to. I feel like I'm too much of a burden to my dad, [living at] home and getting paid minimum wage.

Shortages of money during college also meant that students stopped out or anticipated stopping out because they could not pay for books. One student in the Riverside case study explained that because of the high cost of books and the fact that the book vouchers she was eligible for had not arrived on time, she "might have to take a semester off. Or maybe not the semester off, but not take such a [heavy course] load." Another student in San Diego explained that she worked four part-time jobs as a house cleaner, caterer, taco shop cashier, and babysitter, but she was still worried she might not be able to pay for books the next semester. Some students attempted to struggle through without the materials but this created new problems; when asked to comment on how he was doing academically, one San Diego student said, "Actually, everything was hard when I didn't have a book."

THE NEED FOR CHILD CARE

For the student parents in all three case studies, balancing childcare with school (and, in most cases, work as well) was an ongoing challenge. Having regular quality childcare frees up a parent's time, making class attendance and homework completion more feasible and education more of a realistic option in day-to-day life. Thus, it is understandable that it was the most prominent theme discussed by parents (most of whom were mothers) who held primary responsibility for their children.

The teen parents in the San Diego case were busy transitioning to the idea of parenthood and struggling with typical new parent issues, including childcare. Across all three case studies, student parents scheduled their coursework and work schedules around childcare availability, but this proved difficult, as many did not have regular work schedules. Because of the high cost of childcare services, many students relied on family members such as parents, aunts, and siblings to care for their children while they attended class or went to work. This was not always reliable, but it proved to be the most cost effective way to secure quality childcare. Mary explained her challenges:

> *The community daycare was asking when I was going to school. They wanted a specific schedule. And for [my retail job] I don't have a specific schedule. It varies. It switches days. So they wanted to know what hours I'm going to need for daycare....So right now my sister is taking care of my daughter...but now she wants to look for a job, so I have to look for another daycare.*

Approximately 25%–30% of mothers in the Riverside case study cited their inability to find regular quality childcare as a major factor affecting their ability to persist in college. They often had to balance varied daily commitments, shifting class schedules, restricted daycare hours, and overlapping school and work commitments in order to make sure their children's needs were met. As one student explained, "Sometimes I have to miss class in the daytime because I don't have [child]care. So I'm really thinking about maybe just trying to find a full-time job."

Mothers spoke of the emotional toll it took on them to negotiate childcare with their schooling and work lives. For example, Laura described this tension:

> *I was kind of stressed out most of the time....My daughter demanded a lot of my attention. She would always be like, "Mommy, Mommy." I felt bad because I was always studying and I felt like I wasn't paying attention to her. And I felt bad because she always wanted to play with me, but I couldn't play with her. And I just felt like I need to do this even though I'm busting my butt for [a college degree], but I know that this is going to pay off at the end.*

Given the large number of student parents in community colleges, childcare is a pressing issue that institutions will continually need to address.

TRANSPORTATION

Low-income students also face challenges with transportation to college. Issues concerning travel to and from school bounded many of the decisions students in our case studies faced, including when and where to attend college. Distance sometimes forced them to choose colleges they were less happy with or to leave school altogether.

Students without cars or reliable access to cars were particularly vulnerable. It was not uncommon for them to remark that they were grateful for and dependent on public transportation subsidies such as free bus passes. Without these, they argued, they would be unable to attend college. Across all three case study sites, many of the students had to rely on public transportation and, for a number of them, commutes to and from school could consume three hours or more in a day. Janine, a student in Los Angeles, described getting up early to make it to class on time: "This semester, there's two days I have to get up at 4:30 in the morning, get out of the house by 5:30 to get here by 7:00 because my first class starts at 7:00 in the morning." Long commutes and early mornings derailed some students' college plans. Patricia, who participated in the Riverside case study, explained her experience:

We rode the bus at 5:00 in the morning to go to college. …Second semester I bought a car. The car I got from an auction, it broke down, so I had to drop out that semester because I couldn't make it to school because…I had a job. If I rode the bus I wouldn't make it to work on time and if I went to work I wouldn't make it to school, so I just dropped out of school because I needed the money.

As the examples above illustrate, early morning classes can mean getting up well before dawn. Night classes pose their own dilemmas. In Los Angeles, for example, women reported not wanting to take evening classes for fear of traveling by bus at night. As course offerings dwindle, lengthy bus travel late at night may discourage many students, particularly women, from taking advantage of limited enrollment opportunities.

In some cases, students began at preferred colleges or universities, only to decide after weeks of long commutes that the distance was too much, so they stopped out or transferred to closer, but less-preferred (by them) institutions. In San Diego, this often meant that students opted into the only community college located conveniently on a public transportation line. Similarly, a student in the Riverside case study said she might not be able to transfer to her dream four-year university because the commute was just too long; she expected she might have to attend a local, less selective university instead—a choice that would likely have long term consequences for her.

The possession of a car often meant reduced time traveling to school but sometimes it also meant added responsibilities and increased time spent taking significant others to and from work, school, doctor appointments, and so on. In general, transportation presented an ongoing challenge for the low-income students we studied, particularly as they had limited resources to support transportation and were also juggling work and, in many cases, childcare along with school. All of these factors prompt consideration of the myriad costs, beyond tuition and books, that low-income students struggle with when they attend college.

In sum, our aim in this section has been to provide a demographic portrait of low-income students and their educational trajectories at the national and state levels. We highlighted the significance of California as a bellwether state in our examination of low-income students' educational experiences, particularly in community colleges. We illuminated the diversity of low-income students in these institutions and several of the special populations that exist among this group. And perhaps most importantly, we drew upon student voices to highlight the aspirations and lived realities of low-income young adults' lives and how they intersect with their educational goals.

3.

Pathways to Postsecondary Educational Success
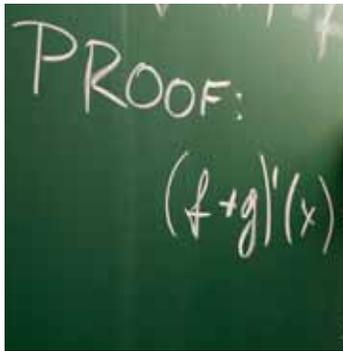
In order to foster students' postsecondary success, we need an understanding of the multiple ways low-income young adults successfully move through PSE. But we also need to understand how they prepare for and arrive there and how college degrees do or do not benefit them once they have graduated. In other words, having a full portrait of low-income students' pathways goes far beyond a focus on postsecondary outcomes and requires an understanding of the importance of K–12 experiences for college readiness, the complicated picture of persistence and retention for low-income students, and the consequences of these issues for labor market outcomes.

The Importance of K–12 Schooling Experiences

COLLEGE PREPARATORY COURSEWORK

If a student were to ask, "What is the most important thing I can do in high school to prepare for college?", completing college preparatory coursework would be high on the list, if not at the top. This is an important aspect of any application to a four-year university in the United States, in part because it helps students better prepare for college coursework. However, youth from low-income families are far less likely to complete college preparatory coursework than their higher-income peers. An analysis of both quantitative and qualitative data from our study supports this unfortunate conclusion.

Oseguera's (2012) analysis of the 2002–2006 panel of the Education Longitudinal Study (ELS), which included over 14,000 youth surveyed in tenth grade, twelfth grade, and two years post-high school graduation, revealed significant disparities between low-income and middle/high-income youth. Only 22% of youth who grew up in poverty completed a college preparatory curriculum (see Figure 7), as compared to 38% of youth not in poverty (see Figure 8). However, of those low-income youth who completed college preparatory coursework, 75% ended up in four-year colleges. In other words, when low-income youth complete a college preparatory curriculum— defined here as the academic concentrator curriculum—they enroll in four-year institutions at high rates.

Another significant disparity arises when we examine the rates of four-year university entrance among youth who have *not* completed college preparatory coursework. Oseguera (2012) found that 78% of youth in poverty did not complete a college preparatory curriculum; of this group, only one third enrolled in four-year colleges or universities. On the other hand, 62% of middle/high-income youth did not complete college preparatory coursework, and yet half of these

The Academic Concentrator Curriculum: One Indicator of College Readiness

The academic concentrator curriculum is defined based on NCES's 1998 Revision of the Secondary School Taxonomy, which offers a framework for understanding and analyzing high school transcripts. While not required by every four-year college or university, it does signal preparedness and general eligibility for college. It is characterized by the completion of specific coursework: four credits of English, three credits of mathematics (with at least one credit higher than Algebra II); three credits of science (with at least one credit higher than Biology); three credits of social studies (with at least one credit in U.S. or World History); and two credits in a single foreign language (NCES, 2005).

Original source: Oseguera (2012).

students still enrolled in four-year institutions. Thus, as Oseguera (2012) pointed out, we know that not completing college preparatory coursework can be an obstacle to four-year university admission, and yet it is an obstacle that higher-income youth seem to more easily overcome, "perhaps drawing on resources not as readily available to their lower-income peers" (p. 3).

These findings underscore the importance of the completion of college preparatory coursework for low-income youth to gain access to four-year universities upon graduation from high school. While community colleges do provide another important potential pathway into four-year institutions, at present less than one fourth of community college students successfully transfer (Moore & Shulock, 2011).

COLLEGE ADVISING IN HIGH SCHOOL

Not only is completion of required coursework important for postsecondary access, students also need accurate information about preparing for and applying to college. For many middle- and high-income youth, this information is obtained from their parents. More and more, middle- and upper-income families are also paying private college counselors to advise their children on planning for and applying to college (McDonough, 1997). Low-income youth, on the other hand, often do not have access to these types of resources (including informed parents) that can guide them through the increasingly complex process of college preparation and admission. Private counselors are out of reach, so they must rely on information obtained at school.

Figure 7

Postsecondary Outcomes for Students in Poverty by High School Preparation

In Poverty
High School Graduates in PSE
N=655,784

DID NOT COMPLETE ACADEMIC CONCENTRATOR CURRICULUM
78%

COMPLETED ACADEMIC CONCENTRATOR CURRICULUM
22%

4-year not-for-profit 33%

Proprietary 10%

2-year not-for-profit 57%

4-year not-for-profit 75%

Proprietary 3%

2-year not-for-profit 22%

Figure 8

Postsecondary Outcomes for Students Not in Poverty by High School Preparation

Not In Poverty
High School Graduates in PSE
N=1,564,438

DID NOT COMPLETE ACADEMIC CONCENTRATOR CURRICULUM
62%

COMPLETED ACADEMIC CONCENTRATOR CURRICULUM
38%

4-year not-for-profit 50%

Proprietary 6%

2-year not-for-profit 44%

4-year not-for-profit 84%

Proprietary 2%

2-year not-for-profit 14%

*Original source of graphics:* Oseguera (2012).

Data source: Education Longitudinal Study (2002–2006).

Note: These figures only represent those students who secured a traditional high school diploma or certificate within a four-year time frame.

In years past, school counselors played an important role in preparing students for post-high school options. However, in recent years student-to-counselor ratios have climbed to unmanageable levels due to budget cuts. In California the average ratio is 945:1—the highest in the United States, and well above the national average of 477:1. Nearly one third of school districts in California have no formalized counseling program (California Department of Education, 2011). Needless to say, it is virtually impossible for counselors—nationally, and especially in California—to do an effective job advising this many students about college preparation.

The San Diego case study brings the impact of these dismal numbers into full view. Through the voices of 78 low-income teenage youth, we captured the reality of college advising "on the ground." A staggering 80% said that their college counselor was not their main source of information about college (Jones, 2013). Rather, over 40% of students relied on their own personal networks to learn about postsecondary education. See Figure 9.
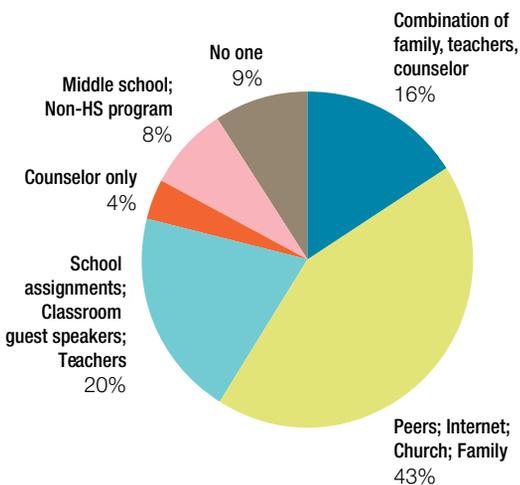
As Jones (2013) pointed out, "Most disturbing...was the pervasive inaccurate information students possessed about PSE" (p. 4). For example, one student did not realize that her years in community college could count towards a four-year degree when she transferred. In other words, she believed—and was daunted by the idea—that she would still need to complete four years of college after completing two years of community college.

Almost half (46%) of the San Diego youth described having minimal or no contact at all with their school counselors. Twenty-eight percent had perfunctory contact with their counselors to obtain information about college preparation or high school graduation. This led to a great deal of frustration among students. One senior student said, "I can't even get in to [see] the counselor." Only 26% of youth shared that they had meaningful relationships where they received detailed, helpful information about college and positive encouragement. As Jones concluded, "Perfunctory interactions and relationships with counselors were pervasive and in-depth college guidance was rare" (p. 7).

Not surprisingly, given the students' lack of guidance about college preparation, only 16% of the youth in the San Diego case study enrolled in four-year universities upon graduation from high school, 43% were in community colleges, and 9% were in for-profit institutions. Thirty percent of the students were not in any PSE (and, as noted earlier, 20% never enrolled during the study period). Most of those who did enroll in two- and four-year colleges had little help from counselors. Again, this is not surprising given the high student-to-counselor ratios in California, but it does underscore the need for better access to counselors and accurate information about college preparation and enrollment.

Figure 9

Students' Primary Source of Information about Postsecondary Education

Original source of graphic: Jones (2013).

Data source: Pathways San Diego case study.

HIGH SCHOOL MENTORING

The experiences of the San Diego case study participants reveal the lack of college guidance many low-income high school students experience. This is particularly unfortunate, as Ashtiani and Feliciano's (2012b) analysis of data from the National Longitudinal Study of Adolescent Health showed that mentorship plays a crucial role in college persistence for students who have grown up in poverty. Over 70% of low-income youth who were mentored by coaches or athletic directors, high school teachers or guidance counselors, employers, or religious leaders were *enrolled* in PSE, and an average of 42% of low-income youth who were mentored by these adults had *completed* bachelor's degrees (Ashtiani & Feliciano, 2012b). See Figure 10.

While certain types of mentorship were beneficial to students from any income background, mentorship was especially beneficial to those from low-income families. In particular Ashtiani and Feliciano (2012b) found that having a coach/athletic director or employer as a mentor affects the likelihood of earning a bachelor's degree for adolescents from low-income backgrounds much more than it does for middle/higher-income youth. See Figure 11.

Of course, the type and timing of mentorship matter: Counselors and teachers appeared to help students enter college but not to persist in college, while coaches/athletic directors and employers did both. Ashtiani and Feliciano (2012b) hypothesized that coaches/athletic directors and employers facilitated persistence more than high school teachers and

Figure 10

Postsecondary Educational Attainment of Low-Income Youth by Mentor Type
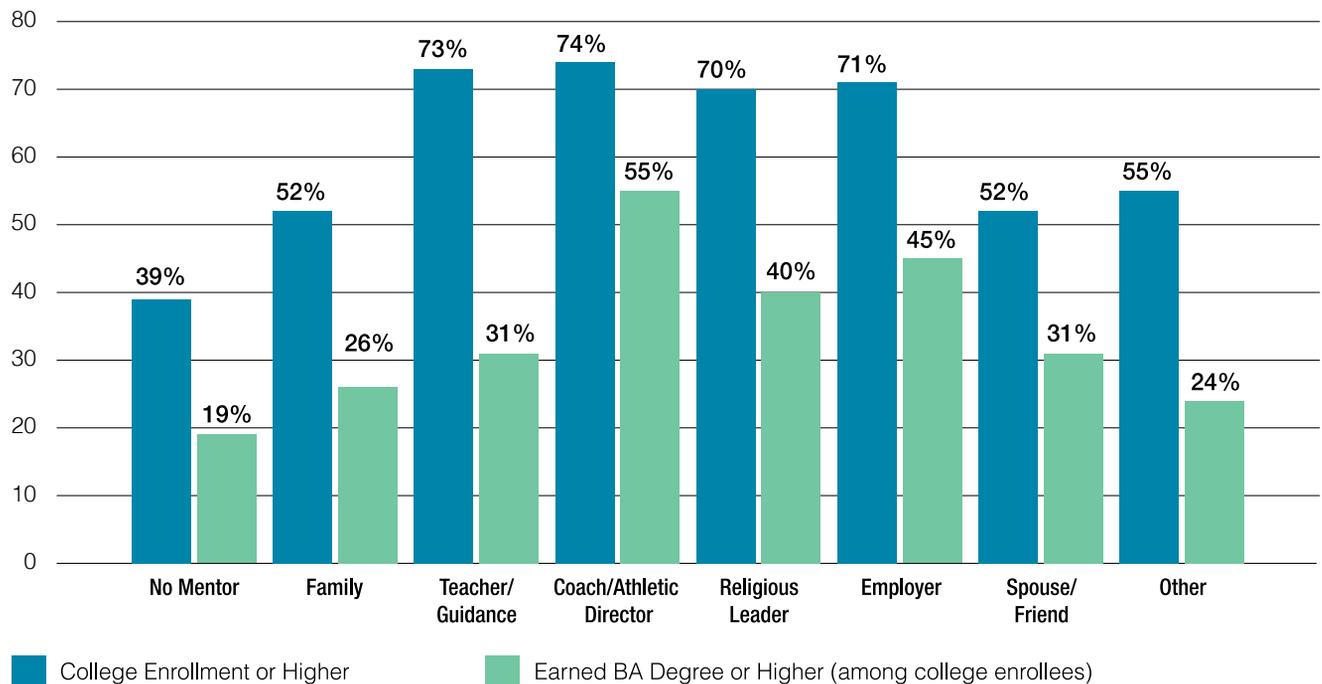
Legend: ■ College Enrollment or Higher   ■ Earned BA Degree or Higher (among college enrollees)

Original source of graphic: Ashtiani & Feliciano (2012b).

Data source: National Longitudinal Study of Adolescent Health (1994–2008).

Figure 11

Predicted Percentages of BA Degree+ by Mentor Type
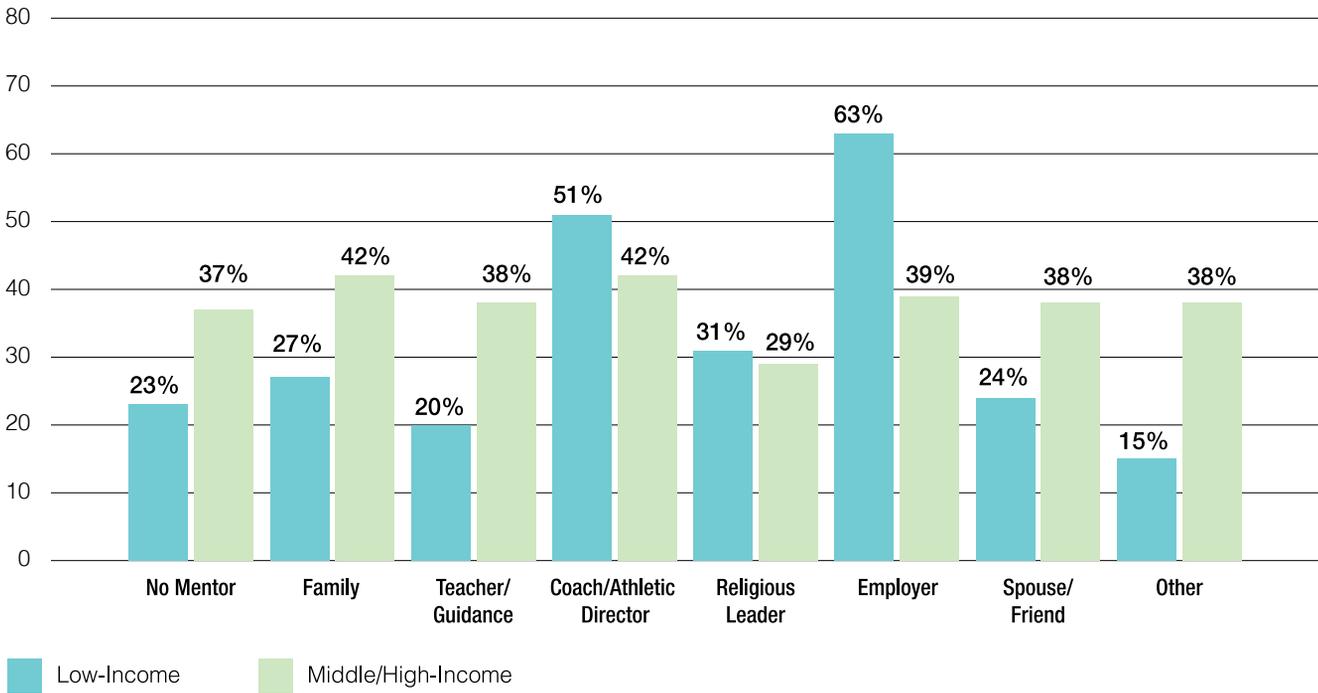
Original source of graphic: Ashtiani & Feliciano (2012b).

Data source: National Longitudinal Study of Adolescent Health (1994–2008).

counselors because youth established mentoring relationships with new coaches and employers after they entered college, whereas the influence of teachers and counselors seemed to wear off after high school departure. Mentorship programs, especially those that continue into PSE years, are one powerful way to increase persistence numbers among youth who grew up in poverty.

HOW K–12 SCHOOLING EXPERIENCES AFFECT STUDENTS ONCE IN COLLEGE

At all three case study sites, students talked about a range of academic experiences in their K–12 schooling. Most often they reflected on their academic experiences in high school classes, which varied as much as their course-taking patterns. Students across our case study sites attended a range of different types of schools including comprehensive, private, and continuation/alternative schools, as well as themed schools and magnet programs. There were no broad claims that a particular subject area or department was weak or strong overall, but students often pointed to individual teaching quality as a primary measure of their satisfaction with schooling. Unfortunately, however, more often than not, students reported inadequate K–12 preparation and support.

Many of our community college participants felt unprepared for college. Students conveyed that some teachers in their K–12 schools did not hold them to high academic standards and that their schools in general did not provide rigorous curricula. Jamie reflected on his high school experiences:

> *That's the one point where I think the educational system failed on me.…The teachers should have focused more on the writing.…Some of the English teachers that I had…were lenient.…[For example, one teacher] wouldn't really enforce…structure. He was more like, "Just do the work. If I understand what you're saying, you can go on."*

Jamie went on to explain how these K–12 experiences had an adverse effect on him once he was enrolled at a community college:

> *And because [writing skills weren't] really enforced… I started seeing [that it wasn't] working out for me [in community college]. My writing is still the same.… You know, it hit my self-esteem a lot. How is it that other people are able to write better than I am?*

Jamie exemplifies what many students expressed; they connected their current struggles in college to the instruction they received during their K–12 years. Another student, Charity, struggled with passing her basic skills math courses because she did not adequately learn multiplication in elementary school:

> *I think my number one problem—and I still won't admit it—is that I…still haven't learned my times tables.…But I can't tell the professor. And he said it: "You don't know your time tables? You're not going to pass my class."*

Charity's teacher in elementary school did not ensure that she learned how to multiply, and that now threatens her degree progress. Charity rightfully felt that her dreams of earning her bachelor's and master's degrees were in jeopardy. Several other students also shared that some teachers in their K–12 schools did not follow prescribed curricula. In other words, they did not impart knowledge and skills required by state and local standards, making it less likely that students would enter postsecondary institutions prepared to engage in college-level coursework. While these examples occurred across various types of high schools, alternative and continuation high school students in particular often complained that their schools helped them complete requirements, but skills such as how to study or how to write college papers were never learned or taught. This is an important reminder that, regardless of institutional type or students' trajectories, college preparation must be an important component of all K–12 curricula in order to build students' foundations for PSE opportunities and success.

Students who shared positive academic experiences pointed to specific high school teachers who took the time to help them and their peers and expressed concern for their academic success. They appreciated teachers who reached out to students who were struggling and did not give up on them. Shauna, a high school student, explained:

> *[My biology teacher] always helps each person individually. She goes to the tables until you get it. She always helps. And if you don't understand it, you can go after school and just spend a lot of time explaining until you get the material.*

These examples of high quality and caring teachers were found across all of our sites, but more often than not, students who "choiced" into high schools in more middle/upper-income areas believed their schools were of better quality than their neighborhood schools. (This finding was nearly exclusive to our San Diego case study site.) For example, Laura, who attended a math and science themed academy shared how her K–12 experiences shaped her confidence to effectively navigate college:

> *I actually feel very strongly about my high school. I go back to visit all the time. I feel like my high school made me into the person I am. Before I was really shy and stuff, but when I went to my high school, they made us do a lot of presentations, so when I was in the twelfth grade, I was chosen for the Statewide Championship Capital Markets and we had to go to the Federal Reserve Bank in LA and give a presentation in front of ten economists.…I feel like I'm a lot more confident now.*

Students enrolled in theme-specific courses or schools often had more satisfactory comments about their high school experiences. The fire-fighting class in one career academy in San Diego, for example, was highly regarded by students because of the hands-on, real world focus and the passion of the teacher. Likewise, students in the multimedia and visual arts courses at a school of choice were happy with their hands-on, technology-based experiences. Students who were connected to specific programs often expressed contentment with the academic support they received in tutoring programs, preparation for the California High School Exit Exam (CAHSEE), and the available credit-recovery programs through afterschool, summer school, and online courses.

In general, students who were connected to programs and/or who were positively engaged in their courses in high school entered college better prepared to navigate postsecondary schooling. Other students pointed to specific teachers or programs that helped to nurture early educational experiences. In contrast, students who overwhelmingly expressed unsatisfactory experiences in their K–12 schooling trajectories had a more difficult time in college and rarely sought out support.

Non-Linear Pathways: The Complicated Reality of Persistence and Retention in Community Colleges

As described early in this report, postsecondary success is often discussed as a process in which students make their way through key college transitions and outcomes (Perna & Thomas, 2006). Such models represent students moving through college in a linear fashion, from one transition and outcome to the next (e.g., from college readiness to enrollment to achievement, etc.). While these models represent the traditional trajectories of many students in four-year universities, they do not take into account the fluidity between transitions and various educational opportunities and barriers that occur within community colleges. We found, for example, that instead of experiencing a linear progression, students in community colleges often had trajectories that contained remedial loops, stop-outs, and participation in multiple curricular pathways. Figure 12 models some of the transitions and detours that influence students' progress through community colleges. These are described in more detail in this subsection.

Figure 12
Pathways through Community College Are Often Non-Linear

TRANSFER

STOP OUT

BASIC SKILLS/ DEVELOPMENTAL EDUCATION

CERTIFICATE

A.A. DEGREE

STOP OUT

STOP OUT

BASIC SKILLS/DEVELOPMENTAL EDUCATION

Upon entering community college, most students aspire to transfer to a 4-year university and receive a bachelor's degree.

= PATHWAY OUTCOMES

STOP OUT = STOP OUT
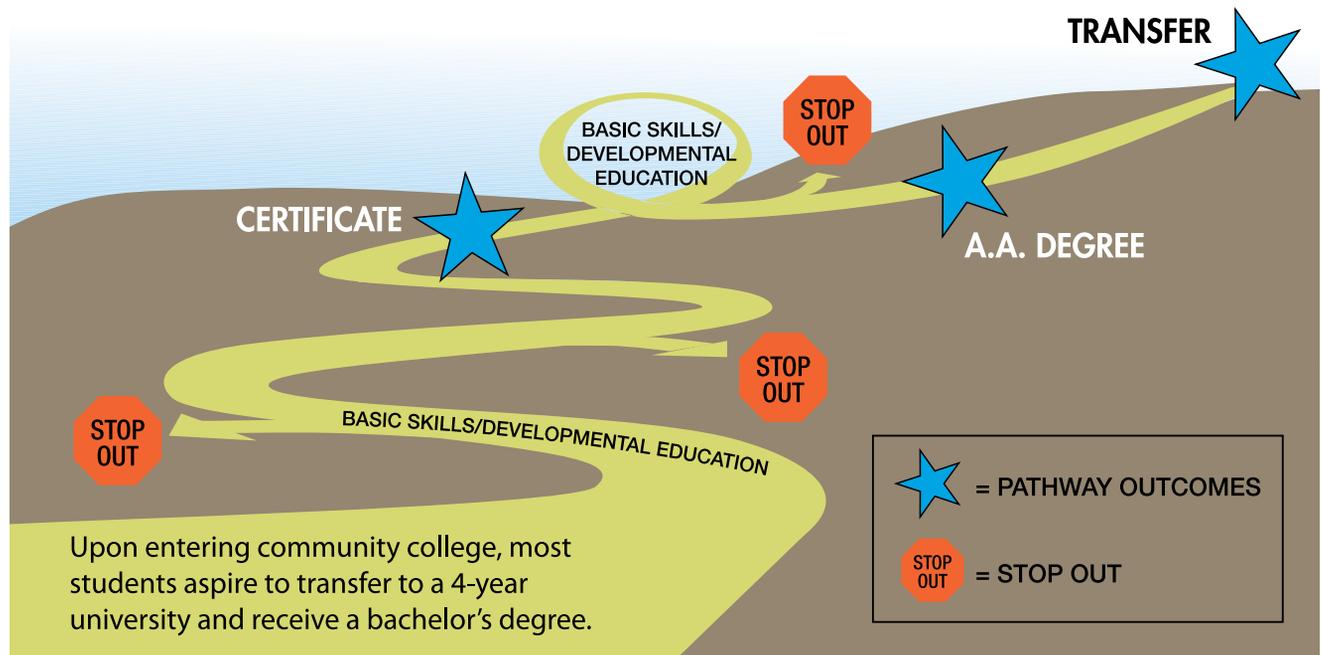
HIGH ASPIRATIONS AND MULTIPLE CURRICULAR PATHWAYS

The majority of students who attend community colleges have high postsecondary aspirations and goals to transfer to four-year universities (Conway, 2010). However, because community colleges offer many more choices of educational outcomes than typical four-year universities, paths toward transfer can take many twists and turns. Even when we separate out non-degree educational opportunities, community colleges offer numerous certificates in occupational fields as well as a wide range of academic programs. Therefore, a student may have overlapping degree goals and want to earn a certificate or an associate's degree, transfer to a four-year university, or accomplish a combination of these.

In our Los Angeles case study, regardless of the various programs in which they were enrolled—academic tracks as well as career and technical education (CTE)—61% of participants described aspirations to transfer and earn bachelor's degrees. Sometimes students became interested and engaged in multiple pathways as they progressed, looping from CTE programs to academic programs or vice versa. All of these different directions had implications for students' access to financial aid to fund their aspirations, and their access to the knowledge they needed to negotiate courses and requirements to earn multiple degrees.

UNSTRUCTURED AND UNCOORDINATED PATHWAYS

Because of the many educational programs offered and the variance in the pathways of these programs, some researchers have argued that community colleges are unstructured (Rosenbaum, Deil-Amen, & Person, 2006; Scott-Clayton, 2011). These researchers note that the multiple educational opportunities as well as numerous support services offered at community colleges are often loosely coordinated and designed in ways that do not ensure students' academic progression. As a result, researchers argue that students too often deviate from paths that can lead them to timely completion of their goals (Rosenbaum, Deil-Amen, & Person, 2006; Scott-Clayton, 2011).

For example, students in the Los Angeles case study who entered career and technical education programs with an idea about transferring often understood little about what those pathways would look like or the kinds of questions they needed to ask to learn more. Many of them had poor experiences in K–12 and were academically underprepared. They entered and became engaged in their CTE programs; they did well, and this built their confidence and they got, as one student described it, the "courage" to then jump onto the transfer or associate's degree track. Generally, this meant that they had to start with a series of basic skills courses in math and English, and many struggled, especially as they were removed from some of the strong supports that helped them flourish in their CTE programs. Often they felt like they could not see the link between these remedial courses and their work aspirations and future careers.

We also learned from faculty and staff in the Los Angeles case study that CTE and developmental educational pathways overlapped, but were not coordinated very well. For example, an instructor in a welding program realized that his students needed a decent understanding of math to make welding calculations, but they often could not link the math they learned in basic skills courses directly to their practice. In response, the instructor started teaching his own math class within his program to assist his students.

REMEDIAL LOOPS—DEVELOPMENTAL EDUCATION AND BASIC SKILLS COURSEWORK

A substantial number of community college students must do remedial work in math and English (often labeled developmental education or basic skills classes) to better prepare for college-level coursework (Bailey, Jenkins, & Leinbach, 2005a). Depending on their placement into these courses, students may be required to take up to an additional 2-1/2 years of courses before entering college-credit coursework and progressing toward their credentialing goals. Although remediation can bolster academic preparedness, students may be in the midst—or even at the end—of their academic or certificate programs when they take developmental courses. Whenever enrollment occurs, it can create a type of loop in progress, where a student spends a large segment of his or her community college pathway building college readiness skills instead of taking college-level curricula. We discuss more about students' experiences in developmental education in the next section of this report.

STOP-OUTS

It is common for college students, especially those in community colleges, to have multiple stops and starts within their educational trajectories. In their analysis of CYAS data, Terriquez, Gurantz, and Gomez (2013) found that many young adults in California stopped out of college because they could not afford to stay in school; when they were asked why they had taken a break from school, 41% said they could not afford to continue. (See Figure 13.) Other top reasons for leaving included not knowing what to study (33%) and wanting to pursue travel and other interests (32%). Just over a quarter of students (27%) reported taking time off because they did not feel prepared, and another 18% claimed that they did not like school.

Figure 13
Most Common Reasons for Stopping Out of College
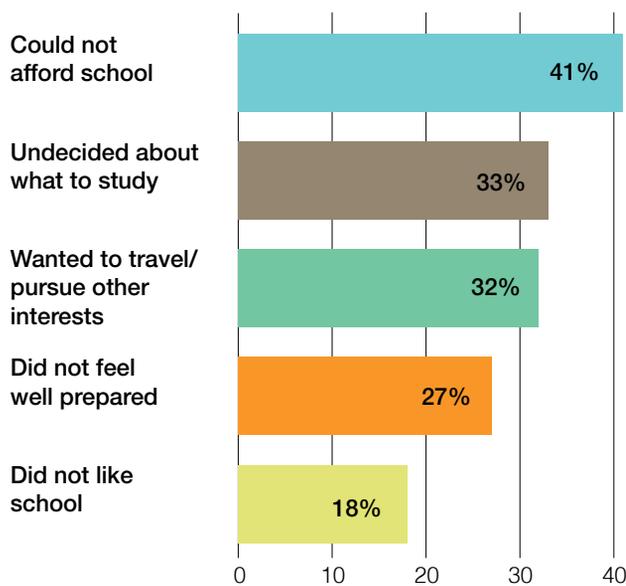
Original source of graphic: Terriquez, Gurantz, & Gomez (2013).
Data source: California Young Adult Study (2011).

Community college students were more than twice as likely as four-year college students to stop out. More than half (52%) of CYAS respondents who were community college students had stopped out at some point. In comparison, less than one fourth (22%) of those enrolled in four-year institutions had done so. Students stopped out because of contextual factors such as working while in school, taking care of an ill family member, unavailability of quality childcare, or a lack of financial resources. Stops and starts in enrollment also occurred as students dropped classes for academic performance problems or because key classes were not offered or were full. In our case studies, many students experienced one or more stop-outs, sometimes because of academic issues, but often because of financial constraints or the inability to access required courses.

PERSISTENCE AND RETENTION

Issues of persistence and stop-out for students in postsecondary education are complex. The primary theme across our three case studies was that students' lives were complicated and issues compounded to affect their ability to persist. Support networks through family, friends, significant others, and institutional agents countered these challenges and served to help students persist in their education. There were, however, material issues that also needed to be addressed.

As we described earlier, regardless of the level of postsecondary education, finances were a big concern for students. For example, Ignacio entered his community college looking to get a welding certificate. He accomplished this goal but then he wanted to get an associate's degree as well. Since he was an undocumented student and struggled financially, Ignacio was unable to pay in-full the tuition when he returned and he eventually stopped out to work full time. He described his rationale:

I haven't taken the risk of quitting my job and focusing on school because I feel like I'm not going to have enough money to pay the rent and pay bills and pay for school, because it's kind of expensive. And then I also owe some money from the last semester that I took that I didn't pay, and that's mainly why, what's holding me back.

Ignacio was initially unaware that the newly passed California Dream Act would make scholarships and fee waivers available to him. Once he learned that he would be eligible for the California Dream Act during the interview, he seemed hopeful that he could return to school to complete his degree: "I actually want to go back to school and I feel like it's more possible now than it was before."

In some cases, students did not seek the help they needed that may have enabled them stay in school. Elvin, for example, had participated in the freshman honors program, but he did not seek out academic help when he needed it. He dropped classes without speaking with the instructor or a counselor, and he did not access any of the resources available to him on a consistent basis because he did not want to feel judged. He alternately attributed his performance to his procrastination, feeling bored, and getting over-whelmed by school. Elvin was on academic probation multiple times and had to successfully complete a course to clear his status so he could re-enroll. After he returned, he had a new attitude about seeking help:

I think what helped me make that change is that I was messing up so much, and I guess it's because I would never ask for help, or I would really be scared. And so I thought, "You know? Let's do things [differently]. Let's just ask for help and then get the help. And then pass the classes with good [grades]—like A's."

Although there are certainly negative aspects of stopping out, the time away from school can also be a chance for students to re-focus and develop a greater commitment to their schooling. This occurred for some of our case study participants who described the importance of achieving a career goal, providing support for family members, or trying to set an example for others. At times, this motivation would come up against low-income students' present financial realities—for example, if they needed to work and support their families. Depending on various factors, including their employment situations, they would either receive the flexibility and support to continue with their schooling, suffer academically due to work demands, drop out, or stop out. Thus, in the face of compounding life issues and academic barriers, narrowly targeted supports may not address the range of obstacles to persistence faced by low-income students.

While the reality of many low-income students' daily lives and the non-linear nature of community college pathways may create challenges for student success, we argue that colleges should veer away from plans that try to foster success by making their students and/or their programs more "traditionally" aligned. Instead, colleges would do better to instill supports that recognize, affirm, and address the realities of the various turns, bumps, collisions, and accelerations that students' academic and social statuses may prompt or deliver in their educational trajectories. We discuss these supports in greater detail in the next section.

4.

Critical Transitions and Institutional Conditions
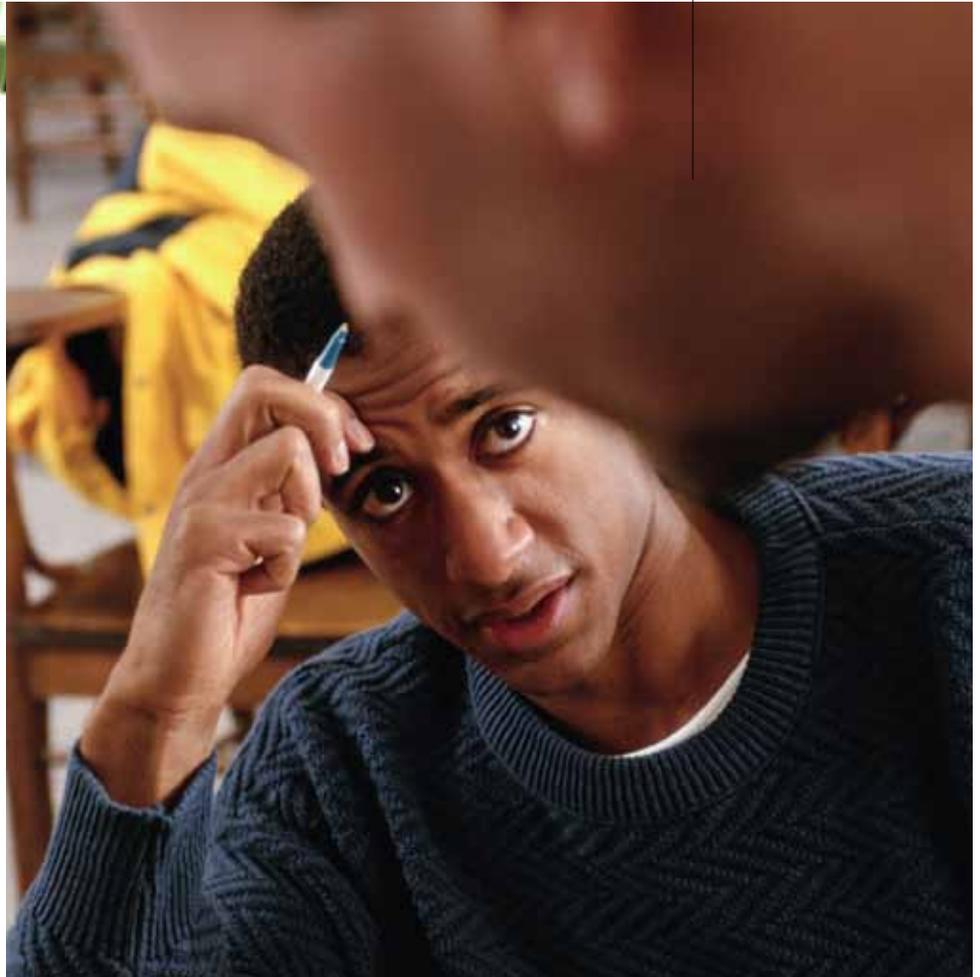
In this section we explore the critical transitions that students face in community colleges as well as the institutional conditions needed to support successful navigation through these transitions. These conditions are elaborated on in a report by West, Shulock, and Moore (2012) that was prepared as part of the Indicators component of the *Pathways* project. There, West et al. provide guidance on how we might measure the degree to which individual institutions are equipped to support student success.

Building on Oakes' (2003) formulation of critical conditions, West and her colleagues observed that the *Pathways* data point to five conditions for success:

> *College commitment to student success.* Community colleges need to prioritize student success and accountability. This first condition sets the tone for the remaining four.

> *Ongoing advising and mentoring.* High quality advising and guidance is essential, from students' postsecondary entry to completion.

> *Integration of support services and resources.* Students need information as well as financial, academic, and emotional support in an integrated way so that they do not have to seek out these services separately.

> *High quality instruction and curriculum.* When low-income students experience caring educators and quality instruction, they can more easily engage with and persist in education.

> *Streamlined pathways to completion.* Students need to be given every opportunity to successfully navigate sometimes complicated pathways to postsecondary completion.

Although West et al. described a wide range of indicators, metrics, and data sources that can be used to assess the degree to which these five conditions exist in a given educational setting, we focus here on the data from our case studies. This allows us to provide the student perspective on key institutional conditions and how they may or may not facilitate navigation through important transitions.

As we explained earlier, students who participated in our case studies typically had high aspirations but sometimes lacked solid preparation for college from their K–12 experiences. Thus, we first elaborate on the centrality of developmental education to college success for low-income youth. We describe how students did not always have access to information on PSE and how to navigate it, and we therefore need a system that better links advising and mentoring to students' daily college routines and interactions. We point to the particular importance of support programs that work with students to help them get back onto a "persistent" path if they stop out due to common barriers that result from dealing with poverty. And finally, with all of these issues in mind, we present students' voices about the need for high quality teaching and supportive relationships with college faculty and offer ideas for more streamlined pathways to college completion.

College Placement and Developmental Education

PLACEMENT TESTING

A key critical transition for students in community colleges occurs at the entry point, when they are required to take placement tests. Placement tests assess students' abilities in core subject areas, which include math, reading, and writing. Test scores determine whether students can enroll in college-level courses or if they must first complete developmental coursework intended to increase their skill sets.

Students who test below transfer-level math or English must often enroll in and complete the appropriate course(s) to become eligible to enroll in and complete coursework that will count toward transfer requirements. In the California Community College system, 85% of all students assess below transfer-level math and 72% test below transfer-level English (CCCCO, 2012). These placement exams vary across campus and are usually proctored in a designated area at each respective community college campus, although this is not always the case—some San Diego and Los Angeles case study participants took their tests during afterschool hours while they were still enrolled in high school.

Unfortunately, low placement exam results reflect inadequate K–12 preparation (Grubb et al., 2011), but they are weak predictors of student performance in transfer-level courses (Burdman, 2012). In fact, high school courses have been shown to more accurately predict success (Geiser, 2003; Geiser & Santelices, 2007). And regrettably, the majority of students take placement assessment exams without first receiving information regarding the implications the results will have for their educational trajectories (Venezia, Bracco, & Nodine, 2010).

Solórzano, Acevedo-Gil, and Santos (2013) found that the odds of completing a transfer-level English course depended heavily on where assessment results placed the student. Specifically, they revealed that when a Latina/o student began a community college trajectory with developmental education courses, the lower the student was placed below transfer-level English and math courses, the lower the likelihood of success in the related transfer-level coursework.[4]

Figure 14 illustrates that in California, out of 100 Latina/o students who began in developmental English, only 34 passed a transfer-level course in a three-year period. Solórzano et al. (2013) also noted that while the vast majority of Latina/o students assessed into developmental English at one and two levels below transfer level, students at all assessment levels were having trouble completing college-level English within three years of enrollment. It is evident, however, that starting at a lower assessment level was an especially serious impediment to timely progress.

Figure 14

California Latina/o Developmental English Writing Education Pipeline
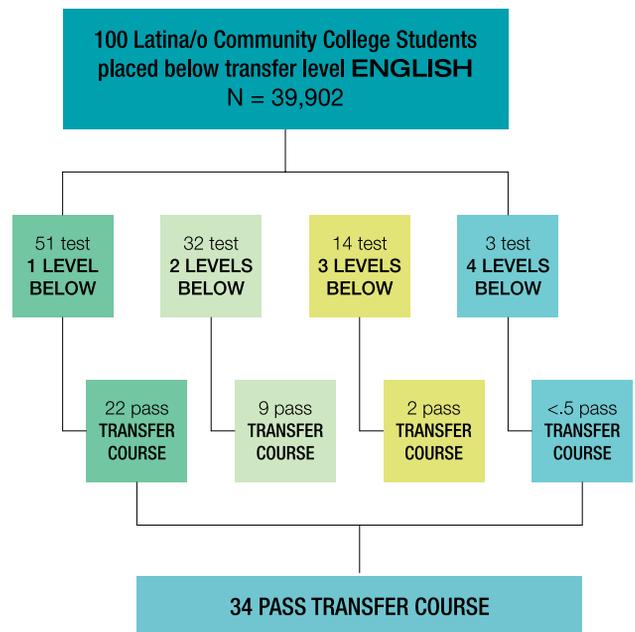
Original source of graphic: Solórzano, Acevedo-Gil, & Santos (2013).
Data source: California Community Colleges Chancellor's Office, Basic Skills Progress Tracker Data (Fall 2009–Spring 2012).

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[4] The assessment levels for English are: Level 1—One level below Freshman Composition; Level 2—Two levels below Freshman Composition; Level 3—Three levels below Freshman Composition; Level 4—Four levels below Freshman Composition. The assessment levels for Mathematics are: Level 1—Intermediate Algebra/Geometry; Level 2—Beginning Algebra; Level 3—Pre-Algebra; Level 4—Arithmetic.

Additionally, Solórzano et al. (2013) noted that Latina/o students had even greater difficulty advancing through developmental math course sequences, and their success was again related to initial placement. Figure 15 reveals that out of 100 Latina/o students who began in developmental math, only 14 successfully completed a transfer-level course in three years. Students who assessed into one level below transfer math were 10 times more likely to pass a transfer-level course than were students who assessed four levels below. This staggering difference deeply underscores the importance of developmental math assessment outcomes for Latina/o students' post-secondary success.

Figure 15
## California Latina/o Developmental Math Education Pipeline
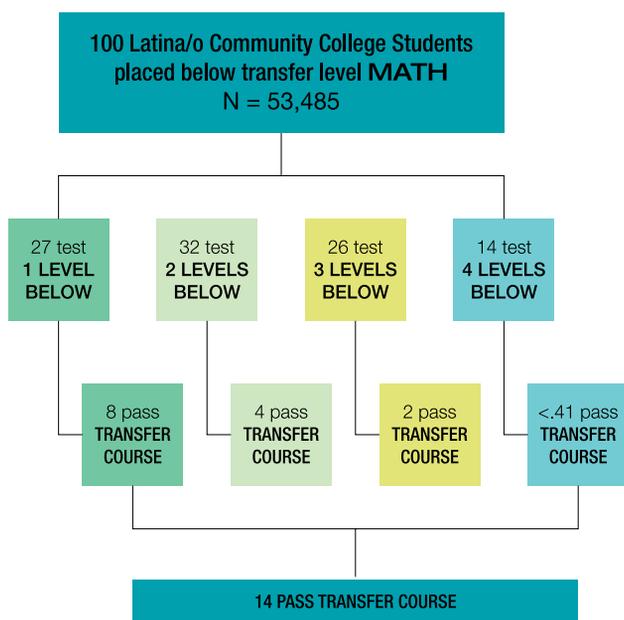
Original source of graphic: Solórzano, Acevedo-Gil, & Santos (2013).

Data source: California Community Colleges Chancellor's Office, Basic Skills Progress Tracker Data (Fall 2009–Spring 2012).

Across the *Pathways* case studies, three common themes emerged regarding placement tests: students lacked an understanding of their importance; they were largely unprepared for the tests; and they often did poorly. The first of these themes—their lack of understanding—undoubtedly affected the other two. Participants in all three case studies expressed a lack of knowledge about the placement testing process and its impact on their future trajectories in community college, including delays in degree attainment and/or transferring. Students made remarks like "I didn't think it was a big deal" and "I don't think I really knew how important it was." One student said, "If I would have known, I would have done better, I think." This same student recognized that this would have meant "I would have been done faster, sooner, and I'd probably be out of here by now."

Not surprisingly, since the students didn't fully grasp how the tests would affect them, they did not prepare for them. Across the case studies, students did not realize they could study for the tests or take practice exams. For example, Adam, a San Diego participant, explained:

> **INTERVIEWER:** *Did you study at all beforehand?*
>
> **ADAM:** *No, not at all. (Laughter.)…Because I didn't know what to study from. It was kind of [a] "what do you know" kind of test.*
>
> **INTERVIEWER:** *Oh, so there weren't any materials online?*
>
> **ADAM:** *It's just [a] "What do you know, what do you remember?" kind of thing.*

Alberta, from the Riverside case study, had a similar lack of understanding at the time of the test, but now regretted that she had not done more to prepare:

[I understood] that it was just going to be a test where they test you at what level you are going to start college courses at, and that was what I knew. I didn't study. I didn't do anything because I didn't think it would affect me that much. If I had known, then maybe I would have tried a little bit harder….But I didn't know. I thought it was just for statistics or something. I didn't think it was for something for where you get placed at the level.

The lack of placement test information, understanding, and preparation often led students to perform poorly on the test. As a result they were aware of being slowed down or not moving at all along their pathways in the timeframes they had anticipated. Fanny, a student in Los Angeles, illustrated this issue in relation not only to her progression but also to the feelings associated with placing in basic skill courses:

I thought it was going to be just to see what kind of level in math I was, but I didn't know it was going to place me in a certain math class. I was kind of disappointed because in high school I got up to statistics and then here, I went back to basic algebra. And I'm thinking, "What? I already took that in high school!" So I think that kind of angered me because I'm thinking, "Why am I going to repeat that class if I passed it in high school?" And it's kind of slowing me down. Once I'm taking the math class it's kind of easy, so it's easy for me for the quiz–zes and stuff like that, but it kind of disappointed me because I already took that class in high school so I don't want to take it again and pay for it.

In sum, students' lack of preparation for placement tests meant that many of them placed into remedial or developmental education classes. This set them on a slower path to college completion. But how did students actually experience these courses? Next we explore community college students' experiences in developmental education courses.

DEVELOPMENTAL EDUCATION COURSES

Remediation courses, now more commonly referred to as developmental education, were central to the original design of community colleges (Cohen & Brawer, 2003). Grubb (1999) defined remediation as "a class or activity intended to meet the needs of students who initially do not have the skills, experience or orientation necessary to perform at a level that the institutions or instructors recognize as 'regular' for those students" (p. 174). For students from low-income backgrounds and under-resourced K–12 schools, community colleges have increasingly held the responsibility for providing developmental education (Dowd, 2007; Rose, 2012).

Among Los Angeles case study students who participated in all three waves of the research, 92% placed in basic skills in at least one subject; 77% placed in both math and English basic skills. A full 90% of participants in the Wave 3 sample were placed in basic skills math and 78% were placed in basic skills English. Most students in the Riverside case study also placed into basic skills courses.

The fact that so many community college students enroll in developmental education courses speaks to the crisis in public education, particularly for students of color and low-income students (Dowd, 2007; Rose, 2010). Although developmental courses can be helpful for improving students' academic qualifications, students who have enrolled in them tend to have low completion and graduation rates (Melguizo, Bos & Prather, 2011); this can create an additional strain on community colleges as they seek to improve student outcomes in light of the accountability movement in education.

The issue has become so important that in 2006 the California Community College system established the Basic Skills Initiative (Academic Senate for California Community Colleges, 2009). The Basic Skills Initiative (BSI) provided supplemental funding to the California Community Colleges for improving basic skills courses on their campuses and provided professional development for faculty and staff to improve basic skills and ESL instruction. In addition to regional workshops and trainings for faculty and staff, the initiative included an extensive review of the research literature on basic skills practices (CCCCO, 2007). Partly due to the BSI, a number of important experiments are currently taking place in California to improve the quality of remedial courses and to accelerate students' time through them (Boroch et al., 2010; Grubb & Gabriner, 2013; Rose, 2011, 2012; RP Group, 2007).

As might be expected, a majority of students expressed frustration with their experiences in developmental education courses, often because they felt stuck or delayed. Many who placed in these courses took up to two or three years to get through the math and English sequences before they were able to enroll in college-level courses. This can lead to delayed time to transfer. Moreover, the non-transferable course load weighed heavy on some students to a point of frustration that made the transfer process seem unattainable. Natalie expressed her feelings around developmental education in relation to her academic goals:

> *It could be three to four years to transfer from a community [college]. And that's kind of scary because, to me, it's like I have been here, I am already going to be a junior…and I feel I haven't progressed. I am still at the same [level], and what I am trying to do is get into nursing programs. That's like two years. I have been [here] for I don't know how many years and another two years to complete it. I feel stuck. I feel stuck here and I don't want to feel like that. I feel anxious. I want to complete it already. Start completing it or transfer.*

Students across campuses felt they were repeating classes they had taken in high school because the subject matter was so basic. Many believed they had been misplaced into these classes due to their low performance on a placement exam that did not accurately measure their skills. In addition, developmental education courses seemed to define and shape how students viewed themselves and their place in college:

> *English 28 was like middle school English because the teacher, all he would talk about was the grammar and sentence fragments and all of that. And I thought, "I already did all of that." These were one–page essays and I thought, "I already did all of this. You should push me harder." I guess I wanted a challenge.*

> *In my math class I felt really dumb, 'cause we were just learning the decimal places in my first class.…And there was a time where [I was in] Math 40, my brother's in seventh, sixth grade. And we were taking the same class. So I kind of felt like, really? He's eight years younger than me. And we're taking the same class.*

Although many students expressed frustration with the overall English and math course sequences, some did find the courses useful. For example, some saw basic skills English classes as a good way to refresh their understanding of foundational grammar concepts, while others appreciated learning how to develop an argument, write and organize papers, and read critically. Some students even self-selected and placed themselves in lower basic skills levels in order to review and better equip themselves for their required courses. As one student explained, "I just started myself at 101 because I wanted to review math, so that's the only reason why I took 101." The courses also gave students an opportunity to develop study and time management skills. One student pointed to the foundational benefits of these more basic courses: "Whatever is going to help me, either way I'm going to get better at it…even though it's a no-credit, but pass-or-no-pass class."

The Importance of Advising and Monitoring to Support Youths' College Transitions

ADVISING

Advising is critical for student success, both at the college entry point and thereafter. Yet many students in our case studies, particularly those who were not connected with focused student support programs (discussed later in this report), found advising services to be greatly lacking. Often they expressed dissatisfaction with campus program offices and staff that did not provide enough time or attention to help them. Some of these findings indicate pragmatic problems that reflect the tremendous burden placed on community colleges with few resources to address them.

Students in the Riverside and Los Angeles case studies voiced their disappointment with counselors and support staff who did not provide sufficient time or attention to help them figure out their goals and plans. Fewer than one fourth (22%) of the students in the Riverside case study mentioned counselors who helped them set goals and clarify the pathways to attain them. Others felt like they had wandered for semesters or even years before fully understanding how to achieve their goals, or they changed majors more than once before finding their direction.

Many students were deterred from seeing counselors because the lines were always long and there were not enough counselors to adequately meet the needs of all students. At one college in the Los Angeles case study, students had to make appointments three days in advance to see a counselor for something that a student stated, "takes maybe five minutes." Sophie, a student in Los Angeles, explained, "It's booked and they tell me to go the next week and I go, but it's booked. So then I stopped going." Indeed, many students in the Los Angeles case study complained about the length of time they had to spend waiting for counselors and the rushed nature and inadequate information they faced once they did meet with them.

One fourth (25%) of the women in the Riverside case study mentioned counseling sessions that were rushed, left them feeling unsure about how to proceed, or simply frustrated them. Giselle hoped for a counselor who would not only show her what courses were required but would also give her insight into the multiple pathways she could potentially take toward her goal. Unfortunately, her encounters with the general campus counselors left her frustrated:

> *It wasn't really helpful. I went in there with questions and still came out with the same questions. I mean, it was okay. They showed you your regular and standard things that you needed to do, but they don't show you a better route or suggest other things.*

A significant number of students identified a desire to transfer to four-year institutions, and yet many had little to no knowledge about the transfer process and had not spoken to counselors about it. They were not clear on where to access all of the information they needed to reach their goals. Some students admitted that they just did not have the time to seek out help or support services. Others were not sure where to go, or they preferred asking faculty members for guidance. Lauren, a student in the Los Angeles case study, shared:

> *Well to be honest with you, I really don't go [for help].… If I don't know something I could always go back to my professor. And every so often I call her [and say], "I have an issue with something like this, who should I go to?" And I've had some teachers say…"Yes, go to a counselor."*

As Deil-Amen and Rosenbaum (2003) also found, navigating community colleges requires a certain kind of "social know-how" that low-income students often lack. Yet this knowledge is essential in order for students to be able to overcome the obstacles they may face in critical transitions. Advising plays a vital role, but because of budget cuts, access has become more and more limited.

COURSE REGISTRATION

Unless they were involved in a support or special program, students at our case study sites struggled with the process of enrolling in courses at community colleges. Because advising was often absent, the process was doubly difficult for them. The San Diego case study team identified the relative ease that students at four-year institutions had in understanding enrollment policies and practices. Students there were required to attend freshman orientation sessions in order to register for classes and many were able to register without any difficulty. Students' experiences at two-year colleges were very different, however; they often needed to show up on the first day and hope to be added (an approach called "crashing"), or strategize about how to acquire better registration slots. With severe budget cuts, community college course offerings in California continue to dwindle while enrollment increases; students across the case studies cited particular difficulties in enrolling in required courses such as math or English.

In one instance described by Javier, a student in the San Diego case study, even going to an orientation was not particularly helpful since the timing was so close to the start of the school year:

[Orientation] was kind of rushed because it was the week before the start of school. So [the speaker told us] that, "Trying to get into class right now is going to be really hard and you're going to have to crash."…[If] you want to try to be on a waitlist for English, they give you a number, like 29 or something.…And most likely [if] you try to crash, you're not going to get that class at all because it goes from people on the [class] list, to the waitlist, then the crashers.

Students in the Los Angeles case study also described challenges in enrolling in their required courses, particularly when they needed to work their way through basic skills math and English. The courses were often so full that students' academic progress was delayed as they waited for openings.

As we will explain in more detail later in this section, students who participated in support programs that offered priority registration often had a much easier time enrolling in classes compared to their peers. In addition, a college in the Los Angeles case study had begun to develop innovative practices that addressed many of the enrollment issues described in this section. They had created an orientation program that introduced students to their programs, and this had become very popular and useful in bringing more students to their college. They also offered alternative approaches to math and English coursework by developing a more applied curriculum focused on different trades.

Overall, the similarities across case studies illustrate the challenges that community college students face in understanding enrollment policies and practices, as well as how institutions have sought to address those challenges. Issues with registering for required coursework, understanding the role of placement exams, and the benefits of specialized programs that scaffold knowledge for incoming students appeared across cases, further underscoring the importance of advising and monitoring.

The Role of Financial Aid in Persistence and Retention

The findings we have shared up to now reveal that low-income youth are likely to need a variety of supports in order to persist on their pathways to completing postsecondary education. Across the case studies, we also captured important information on how particular programs and support services assisted students, as well as the challenges some students faced in accessing them. We describe these factors in this subsection. We begin with financial aid, which was a critical support for low-income students attending college (Terriquez, Gurantz, & Gomez, 2013).

For the participants in the three *Pathways* case studies, the importance of federal financial aid in the form of Pell Grants and California Board of Governors (BOG) Fee Waivers cannot be overstated. Pell Grant funds allowed students to purchase textbooks, laptops, and other school supplies, and helped them buy gas or make car payments so they could get to campus. BOG Fee Waivers allowed students to enroll continuously without worrying about covering tuition payments. Conversely, the disruption of or inability to access financial aid was a primary cause of educational pathway disturbance. Sometimes students had to drop out of school completely, but more often the disruption in financial aid led them to enroll part time or take a semester off.

Despite its importance, applying for and receiving financial aid can be a formidable obstacle for low-income community college students. The first step in the process is often completing the Free Application for Federal Student Aid (commonly known as the FAFSA). Across the case studies, students found this process onerous and they needed support to do it successfully. Often they were hindered by a lack of accurate information about FAFSA eligibility, fears of compromising the safety of undocumented parents, or an inability to understand the requirements of the application.

Students who successfully completed the FAFSA spoke of crucial support they received from individuals in institutional settings. They connected to college or high school counselors or enrolled in summer programs, and they frequently described direct intervention by knowledgeable adults who facilitated completion of the form. Students who lacked such connections—whether because they had not yet enrolled in college, had not been connected with college counselors, no longer spoke to their high school counselors because the school year was over, or were not in summer programs—were less likely to complete the FAFSA.

Support in completing the FAFSA was more the exception than the norm. Even when students received assistance from high school counselors, this support ended when school let out for the summer. Between graduation and postsecondary enrollment, San Diego case study students were often left alone to make sense of confusing application requirements. Unless they were in some kind of college support program, they were on their own to navigate the opaque process.

Just over half (52%) of the young adults in the San Diego case study submitted the FAFSA (Yonezawa, 2013). It is not clear how many forms were completed incorrectly, but only 62% of those who submitted them received Pell Grant funds. In addition, 12 of the 42 students (29%) who entered college after high school did not submit the FAFSA, even though all had incomes that qualified them for support. Ultimately, just under half of the students who went on to PSE from San Diego high schools did not receive aid, despite their eligibility (Yonezawa, 2013).

Similarly, Los Angeles community college students found it difficult to get help from their financial aid offices or to garner a clear understanding about the paperwork they needed to complete. Often, those who successfully completed the FAFSA and received funds had support in navigating the process; they were connected to individuals with the necessary knowledge to guide them, whether through personal connections or support service programs.

For example, one of our case study students, Claudia, encountered several challenges submitting her FAFSA. Every time she turned in her paperwork, the financial aid office would return it, telling her the form had incorrect information. She was not given clear guidance, however, regarding what additional information they needed. And, when she logged in to her financial aid account online, she would see that there was an error with her paperwork, but no further explanation was given. Claudia eventually found out, with the guidance of a counselor from a support service program, that she was incorrectly reporting her parents' identification information. Without the support of this particular counselor she would not have known. She described her frustration:

> *I hated it, because they didn't even tell you what's wrong. They just say, "It's wrong." It's online, and then…[financial aid doesn't] tell you because—I don't know why they don't tell you…specifically what problem it is.… But it would just be like a section that was wrong. It wouldn't tell you which page exactly.*

A counselor from a student support program used his knowledge of financial aid to help Claudia identify and fix the errors, and he also coached her on how to call the financial aid office and ask them exactly what additional paperwork she needed to submit. This gave her the clarity she needed and spared her from having to wait hours in line at the financial aid office.

As in the San Diego case study, some Los Angeles students decided not to apply for financial aid because they perceived the process to be too daunting, even when they had assistance from support services. One of the students we interviewed did receive the BOG Fee Waiver but not the Pell or Cal Grant because he had not completed the FAFSA. Although he knew additional funds would be useful, he believed they were not worth the hours of hassle that came with the process, including long lines at the financial aid office.

In Riverside, students were frequently uninformed about important details of financial aid policy. Often they did not know about important aspects of the policy until their financial aid amounts were being

Navigating the FAFSA: What Support Is Available Online?

The federal government's office of Federal Student Aid maintains a website for FAFSA information and the online application. A recent review of this website revealed 70 different video, audio, pdf, and pamphlet resources for students and their families trying to figure out the federal student aid application process. The materials are provided in English and, in some cases, in Spanish (and, to a lesser extent, in braille). Users can access these resources by scrolling down a long table with a clickable title for each document. The same office uploaded a video to YouTube in November 2012 entitled, "How to Fill Out Your FAFSA." The video had just over 36,000 views as of late February 2013.

No research has been conducted to gauge the utility of these online tools for low-income students. While the information provided is sufficiently abundant, we suspect that the format and sheer magnitude of information on the website may make it difficult for students and their families to navigate through it, necessitating tremendous in-person help.

Original source: Yonezawa (2013).

reduced, for example because of a lack of compliance with satisfactory academic progress (SAP) or unit maximum policies—terms that held little (if any) meaning without at least some external guidance. Over 70% of the Riverside participants who participated in all three waves of the study were still unfamiliar with at least one financial aid policy by the end of the study.

These findings point to the need to further streamline the financial aid process to make it easier for students to apply for financial support. They also reveal that institutions must attempt (with the limited resources they have) to better educate students about financial aid, specifically the ways that financial aid can be reduced or terminated, including based on GPA requirements, course success ratios, and unit limits. Additionally, increasing support services at the financial aid office could decrease the time students have to wait in line to receive such support, which could in turn reduce some of the discouragement students feel.

Support Services and Resources That Foster College Retention

Community colleges offer a wide range of student success programs and services that include academic, personal, and financial supports. In addition to disabled student services, transfer and career centers, workforce preparation/job placement centers, health and wellness centers, and academic tutoring, colleges also provide integrated programs that meld academic and social supports. Initiatives such as those under the Federal TRIO Program (e.g., Upward Bound), Extended Opportunity Program and Services (EOPS), First Year Experience (FYE) programs, and learning communities may provide counseling, academic planning and tutoring, and social networking opportunities aimed specially at first-generation students, low-income students, veterans, students with disabilities, or student parents.

For many students, schools remain the primary source of the resources, knowledge, and skill development needed to successfully navigate college. Indeed, across the case study sites, students were far better off when they were part of some type of support program. Successful programs tended to be modeled on what Park, Cerven, Nations, and Nielsen (2013) referred to as "webs of structured and ongoing support" (p. 13). These integrated programs were effective because they provided information, financial support, and academic and social emotional support all together, without students having to seek these things out separately.

Our study participants were involved in two main types of integrated support programs: learning communities and state-funded programs for low-income students. At our case study schools, learning communities took two primary forms—Academic Learning Community (ALC) and First Year Experience (FYE) programs—and provided students with strong navigational skills and support. Likewise, state-funded programs such as California Work Opportunities and Responsibilities to Kids (CalWORKs), EOPS, and Cooperative Agencies Resources for Education (CARE) provided important resources that enabled students to enter and stay enrolled in postsecondary institutions. Although some students also participated in other services and programs (Park et al. 2013), we initially made contact with potential study participants through the particular support programs listed above and they are therefore the focus of this section.

What Does an Academic Learning Community Look Like?

The Academic Learning Community (ALC) program at our Riverside case study site was established in 2006 to help students become part of a community of self-reliant, active, and engaged learners; connect learning to the classroom and beyond; and develop relationships with other students and the institution to increase success.

The program enrolls students in grouped courses with common themes, activities, and assignments. The program provides an orientation, priority registration for ALC courses, assigned counselors, access to technology, supplemental instructors, and university visits.

The ALC program at Riverside employs a part-time educational advisor who helps students make sense of the program and their educational planning. A student will be referred to a counselor on campus if she does not yet have a formal educational plan. From fall 2010 to spring 2011, the program served about 450 students.

Original source: Park, Cerven, Nations, & Nielsen (2013).

SUPPORT PROGRAMS AND THE DEVELOPMENT OF NAVIGATIONAL SKILLS

Learning communities are promising approaches to student support because they blend the provision of academic training with the facilitation of a social network. For example, the Academic Learning Community (ALC) in the Riverside case study linked courses so that students moved through as a cohort, providing a built-in peer group. They were explicitly expected to depend on one another and to collaborate on schoolwork. Students in the ALC program described how they had developed study groups, contacted one another to get help on their homework, and socialized beyond school (Park et al., 2013). Patty, a 21-year-old student, noted, "Before the ALC, I didn't really socialize with any of my classmates. It would be like 'hi, bye,' and that's it after the semester ended." Now, because she is always with the same students, Patty has established and maintained relationships.

Because ALC courses were linked, instructors were also part of the learning community, and they collaborated to monitor students' progress and facilitate interdisciplinary lessons and skill development. Mary described how her instructors kept an eye on students:

> *All the professors, they work together so it makes it easier. They know what's going on in your reading class and your English class, and those professors, they communicate with each other. It gives the students that confidence…kind of like a little guardian angel thing so you will succeed and you won't drop out, because you have that confidence. If you're doing not so well in one class, the other two teachers know so they'll come and get on you to push you.*

For the most part, students in learning communities were satisfied with the quality of teaching in the courses. This may have been due in large part to the fact that learning community programs typically hand-pick their instructors or faculty volunteer to participate, creating the groundwork for a strong commitment to the goals of the program.

First Year Experience (FYE) programs, which are designed to ease the transition into postsecondary education, offer another important form of support for college students. Although they vary by institution, they are typically optional for students and provide extra counseling services and enrollment in hard-to-get courses. As with students in the ALC program, students in FYE programs received intense support services, as well as guidance courses such as "Introduction to College" and "College Success Strategies," which helped them develop time management and goal setting skills. Stacy, an FYE student, shared:

> One of the first things [the professor] made us do was a scavenger hunt. And it was going to all these resources and asking, "What do you guys do? How do you guys help students?"…I had heard about these programs the first week…[but] I don't know how to go about approaching them and saying, "How would you help me?" But since it was a class assignment, I thought, "Oh, okay, I'm going to be with other people." You are more comfortable when you are with a group.…And I was a lot more comfortable [with saying], "Oh, I need help with this. How could you help me, and can I speak to someone about this?" And so I think her class really helped me break out…because I'm shy.

These courses also provided students with strategies for taking notes, being organized, and socializing with other students and instructors on campus. Thus, they helped students develop skills sets that were transferrable across contexts.

Students in the FYE and ALC programs often met with their counselors, had a clear understanding of the courses they needed to take, made use of campus resources (such as English and math tutoring centers), and knew and understood academic requirements for transfer and/or degree completion. The support and information they received was streamlined, readily available, and did not require them to sift through campus networks and structures looking for what they needed. The programs offered a comprehensive one-stop shop and made it easier for students to access opportunities. Susanna, a student in the San Diego case study, described how her experience would have been different without the FYE program:

> I probably still would have been at home trying to figure out what I want to do, and probably taking the wrong classes and just like pretty much wasting my time.…So I got lucky that the [program] helped us.…Like I probably would have just been like, "Oh, I don't know what I'm doing." Probably just hanging out. I pretty much would have been just wasting my time.

Confirming existing research on the importance of integration and connectedness (Deil-Amen, 2010; Karp, 2011; Tinto, 1993), "support programs…highlight how persistence is not only an individual endeavor, but also a social and collective process" (Park et al., 2013, p. 9). Unfortunately for our case study participants, experience with these programs was more the exception than the rule. Some students could not take advantage of such programs because of entrance criteria—FYE program eligibility is typically related to placement test scores, for example, and many have "cut lines" at one or two courses below transfer level. Other programs such as EOPS require full-time enrollment. Often, however, the problem was systemic or related to students' reluctance or inability to connect with the programs. We discuss these issues in greater detail later in this section.

THE EOPS, CALWORKS, AND CARE PROGRAMS

The Riverside case study included students who were participants in state-funded support programs in their community college, including Extended Opportunity Program and Services (EOPS), the Cooperative Agencies Resources for Education (CARE), and California Work Opportunities and Responsibilities to Kids (CalWORKS). All of these programs are specifically aimed toward low-income students, and CalWORKS and CARE serve low-income single parents in particular.

EOPS was established in 1969 with the passage of California educational policy (Senate Bill 164) that was designed to provide financial and academic support to California's community college students who face educational and socioeconomic barriers to academic success. In particular, EOPS targets first-generation college students and, with the inclusion of the Co-operative Agencies Resources for Education (CARE) program in 1982, welfare recipient single parents for support. EOPS-CARE provides specialized counseling; tutoring; childcare support; work/study, book and transportation grants; emergency student loans; priority registration; social service referrals and advocacy; parenting workshops; and personal development and college survival classes. Between 1969 and 2000, EOPS-CARE has assisted over 1 million students; between 2011 and 2012 the program served 76,232 students across all of California's 112 community colleges (Cerven, Park, Nations, & Nielsen, 2013).

The CalWORKs community college program grew out of social welfare policy that identified education as one viable route to the employability and financial independence of low-income single parents. The Chancellor of the California Community Colleges allocates funds to all districts and colleges based on the relative numbers of CalWORKs recipients in attendance (CA Assembly Bill 1464, 2012). On-campus services support academic success and self-sufficiency, and many cross over into basic needs (e.g., child care, transportation, work uniforms, etc.). It is important to note that in spite of the benefits of the CalWORKs program, welfare reform policies and their embedded emphasis on finding employment quickly do limit the kinds of degrees and length of time welfare recipients may stay in college, and they likewise limit who is eligible to receive support for the pursuit of educational credentials. Currently, CalWORKs college student support programs exist at all of California's 112 community colleges (Cerven, Park, Nations, & Nielsen, 2013).

Students who participated in EOPS-CARE and CalWORKs found the related support services helpful. Cerven et al. (2013) reported that for the single mothers in the Riverside case study who participated in these programs, the most beneficial services were counseling experiences, the provision of vouchers to help pay for course books and supplies, and priority registration that enabled them to enroll in high demand and increasingly unavailable required courses. See Figure 16.

Figure 16

Percentage of EOPS-CARE and CalWORKs Participants Calling Specific Services "Especially Helpful"
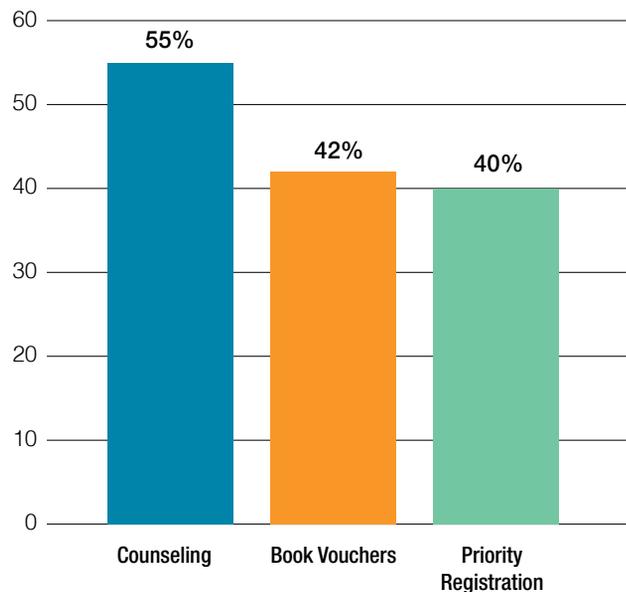
Original source of graphic: Cerven, Park, Nations, & Nielsen (2013).
Data source: Pathways Riverside case study.

Students noted the benefits of these services in their interviews with the research team. About priority registration, one student explained: "I'm on [CalWORKs]. They give me priority registration so now I can get into all the classes [I couldn't before]….[I]t was frustrating because I couldn't get into any of the hard classes…. Then, when I got priority registration, I got into the hard classes." Citing the book vouchers as especially helpful, another student said, "I wouldn't be able to take on as many classes as I have been because of the help that I got from the CalWORKs department to help me with my books."

More than half the participants mentioned the support and counseling they received from program staff as being particularly helpful. Consider the following quotation from Lupe, a single mother of two children:

> *One of the counselors has [been helpful], just because he has kids himself, so he knows how difficult it is, and I can go to him. I've seen other counselors, but it seems like they don't give me all the information that I need to know. But if I go to him and ask the same thing, I'm getting completely different answers. He says, "This is what you have, this is what you need to do, here's what I think you should do, these classes now, then kind of do this class with a couple [of] fun classes that don't… have homework, so that way you can really study on these ones." He just explains it more.*

Students explained that the counselors in these programs made information meaningful and relevant. Unfortunately, even though these programs demonstrated numerous positive benefits to students, they have experienced multiple funding reductions that have resulted in cuts to their vital supports. In particular, they have higher student-to-counselor ratios than in the past and/or they cannot serve as many students as they have in previous years.

INSTITUTIONAL CHALLENGES WITH CONNECTING STUDENTS TO SUPPORT PROGRAMS

While support programs were indeed extremely helpful, many students were not connected with them. Knowing about the programs and participating in them consistently was a challenge for those who juggled competing school, work, and family responsibilities. Budget cuts and the inability of overburdened school staff to spend time with students further exacerbated the problem. As noted earlier, some students did not qualify for certain programs depending on their placement test results. Thus, both access and the ability to participate in programs remained ongoing challenges.

Students' exposure to the range of support programs available in community colleges often seemed to be dependent on happenstance or on social connections outside of formal school structures. For instance, Park et al. (2013) reported that in the Riverside case study a large number of the participants knew little— if anything—about the availability of supports when they first began college. Fewer than half (43%) of the participants recalled receiving information or guidance before or during their first year of school. The remaining women reported that they either learned about support programs after their first year of college (42%) or did not recall when they did so (15%). Close to half (43%) learned about support services from individuals or agencies not officially connected to their schools, including by word-of-mouth from family members who had received help from these programs, or from classmates.

Park et al. (2013) further noted that while services were advertised in mail-outs, on campus websites, in course catalogs, or at orientation sessions, students' responses suggested that these static modes of outreach were not effective at helping them learn about and properly access services. Apart from those students enrolled in learning communities, students in programs such as CalWORKS and EOPS-CARE reported that they learned about support services primarily though their classes or other staff members. A workforce preparation counselor described the limitations of such outreach efforts:

> *To be honest with you, I think we serve maybe a third of the population. Some people are walking around looking for a job and they don't even know we exist. Some people are walking around with no resume and don't even know we exist. I want to envision, when the student comes in and applies for school, they know all the programs because somebody's telling them, not a computer. The bad thing about a computer is they still have to look it up.*

Even with support programs in place, students needed to develop navigational skills in order to take advantage of opportunities.

HELP-SEEKING BEHAVIORS OF COMMUNITY COLLEGE STUDENTS

"Help-seeking" refers to a learning strategy in which individuals request assistance from appropriate sources in order to comprehend or solve problems related to academics (Karabenick, 1998). Earlier studies have shown that this behavior is significantly correlated to class performance (Alexitch, 2002; Karabenick, 2004; Karabenick & Napp, 1991), making it an especially important aspect of students' college pathways. Unfortunately, many students in the *Pathways* study struggled with help-seeking, and often avoided asking for assistance altogether.

The women in the Riverside case study, for example, shed valuable light on the factors that affected their ability to utilize opportunities; notably, even when they were aware of available opportunities, they did not always seek them out. A lack of time and motivation may have played a part, though the data tell a different story. The students consistently mentioned choosing not to seek help after negative experiences, including an inability to schedule appointments, incorrect advice or information, negative encounters with faculty and staff, or fear of negative judgment (Park et al., 2013). Roughly one fourth of the participants (24%) said they had not sought help because they were afraid of being judged negatively. Stella, who chose not to seek help, shed light on how the fear of being labeled affected students' choices:

> *They offer the math tutoring here but, like I said, I'm not social, so I don't really like to come [to school] and ask for help. And people I don't know may think I'm an idiot because I don't know math. But that's how I feel, so I avoid it and I just go along and hope that my effort gets me by.*

Some students said they wanted to be self-reliant and did not feel like they deserved help or that they were entitled to ask for it. Jasmine explained:

> *I kind of keep things to myself, like if I'm going to miss class or whatever, I won't tell the instructor. I don't like to bug them or disturb them. You know, I'm an adult and I know what I have to do and I think a lot of instructors don't like you bugging them or asking them [for help].*

In addition to students' feelings of insecurity and individual responsibility, Park et al. (2013) found that institutional obstacles could discourage and even prevent students' future help-seeking. Nearly one third of the participants (32%) cited some aspect of the community college as a hindrance; often, whether knowingly or not, they pointed to the effects of budget cuts on programs and services. Helen, a 21-year-old student, explained:

> *What's hard is [that] tutoring is so booked up. I tried… to get tutoring. They said they couldn't help me until like the middle of next month. I said, "I need the help now."*

Given these perceived obstacles, students may choose to seek help outside of formal channels. Close to half of the Riverside participants (42%) acknowledged that they sought help from peers, while more than one fourth (28%) said they turned to family members and significant others (Park et al., 2013). These supports can and should be part of any web of support, but classmates, friends, and family may lack sufficient information to effectively guide students on their own.

The students in the Los Angeles case study described similar concerns. When questioned about their reasons for not seeking help, they often said they were unaware of sources of support on campus, that they were too embarrassed to ask for help, or that faculty members seemed unapproachable. To complicate matters, some students who did seek guidance from academic counselors received inadequate or inaccurate information, which discouraged them from booking future counseling appointments.

In sum, few students eschewed help entirely, but not all who needed formalized, institutional support were willing to seek it. Whether through formal programs or otherwise, community college staff may need to initiate support and more effectively structure opportunities for students so that they receive the help they need.

For low-income students, many of whom are first-generation college students, having someone explain programs and their purposes may also make the difference in their willingness to participate.

It is important that community colleges recognize the factors that cause students to embrace or shy away from learning opportunities and assistance. It is especially important to maintain awareness about the barriers to ensure they are addressed. Some of the deterrents include campus conditions such as long lines, and others are psychosocial factors such as feelings of intimidation. All in all, with an awareness of these conditions, institutions can address them to ensure that students feel free to take advantage of all the help at their disposal.

High Quality Instruction and Relationships with Faculty

As we explained, community college students have often had poor K–12 experiences and may have encountered low expectations from teachers. The students we interviewed in our case studies noted that having community college professors who supported their learning through high quality instruction, high expectations, and a positive learning environment contributed positively to their persistence. Conversely, when professors created or allowed for a negative climate in the classroom, were unapproachable, or used ineffective teaching strategies, students struggled and felt disengaged.

Students in the three case studies discussed how their interactions with college faculty were somewhat different than what they were accustomed to in their K–12 years because of the lack of interpersonal relationships they had with their instructors. A consistent problem that students described was the feeling that their college instructors "do not know me." For example, Octavio, a student in the Los Angeles case study, described:

Because they never talk to you. In math, you just kind of sit there and listen. They don't even know who I am. They don't know who I am at all. I'm in the back. They just—their assistant takes roll. They never interact with us. They don't ever walk around. They don't do anything.

Maria, who was involved with the FYE learning community program, described the difference between the relationships she had with her teachers while she was in the program and after she completed it and began to take courses not affiliated with FYE:

I think another thing that kind of messed me up was transferring from FYE classes to just going on your own. Because your first whole year you're—the teachers are pretty much like high school. You get to know them really well. Everybody in your class, you know them very well. If you're not doing well, the teacher starts talking to you, and telling you, "You need to do this." [Then] you're all on your own. Teachers, if you don't go talk to them, then they don't want to talk to you.

When students lacked personal interactions with their instructors they described feeling uncomfortable asking for help, going to office hours, and engaging in discussion and coursework. For example, Jessica explained:

Usually the first day of school, professors say, "Come meet me at office hours if you need help." And every time he was trying to teach, a lot of students would ask questions. And he would really get irritated. So if you went to his office you could only imagine how much more irritated he was going to get….And you don't want to be that student that he really goes after or anything like that. So I didn't think he was—I really was not going to go to his office hours because he really looked like the irritated type. He wasn't inviting at all.

Conversely, when students described their favorite courses and instructors, they often said they became engaged because the instructors related instructional activities to the students' lives or interests. Cynthia explained:

I hated reading. Now I like reading because of my English teachers…. Well, this class, especially…she has a broad theme: social justice. That's her class theme, and all the stories that we've read—she composed this book of different readings on justice and racism, and that's interesting to me, so now I like reading. I look forward to my reading assignments 'cause they're not boring to me now.

Another student, Teresa, noted that she "get[s] a personal kind of connection with [professors] when they talk personally to us." For her, this connection formed when instructors linked lessons to stories from their own lives or connected the lessons to real-world experiences:

I actually really like psychology and the way they taught it; I actually like the way they do it.…I mean, it's usually in PowerPoint, but they'll find personal examples. Or they'll use references we can relate to, or they just don't make it boring where it's just like talking about it and not giving the personal reference or making some kind of joke, or something like that.

Numerous students stated that they appreciated when instructors tried to connect with them using humor. As Jose explained, when teachers were funny or made jokes in the classroom, they were more approachable and less intimidating:

I got in the class and then she started making jokes, just making jokes, making everybody comfortable. So then I just got used to it, and I'll make jokes too. But when I needed help, she'll be serious and she'll sit there and help us….[I]f the class is fun, then I'll participate. Because there's another sociology class I took in the spring, and I participated a lot….But I actually participated a lot because the teacher made it so fun….A fun class is like everyone laughing, there's laughter and there's other people trying to participate as well. And it's just—it's not like, "Oh, I'm falling asleep." I'm actually paying attention.

Many students also discussed that they became more engaged or pushed themselves to do well when their instructors made it clear that they held high expectations for students. Students often described the expectation of high quality work and engagement as a form of care, in the sense that faculty wanted them to be their best and reach their goals and aspirations. A student in the Los Angeles case study explained that her instructor was "very strict. I like that. She's not lenient about things or she will not pass you because you're really nice in the class. She passes you if you do well in the class."

Some students had classroom experiences that revealed to them that they could achieve what they initially thought to be impossible. With this growth in confidence, they began to set higher degree and career goals. Estela, a 20-year-old student, serves as a prime example. She originally doubted her intellectual abilities until she encountered a physics instructor to whose pedagogy she could relate. She started the course with self-doubt and struggled to keep up with the material. Her professor was aware that she was disengaged and having a difficult time grasping

the concepts. He made an adjustment to his instruction by using more visuals, which changed everything for Estela. She passed the course with a "B," which she had initially believed she could never do. With this achievement under her belt, she began to believe that she could really achieve her dream of being a fashion journalist. In fact, since her last interview, she has been hired as a journalist at a local newspaper and has been accepted into a transfer program at a prestigious university.

Although our access to classrooms during the *Pathways* study was minimal and we therefore were limited in our ability to observe high quality instruction in action, we know that stories like Estela's are numerous and they reveal how life changing the community college experience can be. We are hopeful that future studies can further explore the important connections between low-income students and postsecondary faculty members.

In this section, we have explained the critical transitions that students face in community colleges as well as the institutional conditions needed to support these transitions. We examined important issues with respect to placement testing and remediation, advising for course registration and financial aid, support programs, and instruction and relationships with faculty.

5.

Conclusion

The *Pathways to Postsecondary Success: Maximizing Opportunities for Youth in Poverty* project was designed to provide scholarship and policy recommendations to help improve postsecondary success for youth in low-income communities. Drawing on qualitative and quantitative data, this project examined the opportunities and barriers that low-income students face in their pathways to and through PSE.

Through the years we talked to over 300 low-income students, analyzed their academic trajectories, and observed their college and high school programs and classrooms. We explored survey data from thousands more. We came to realize that there is a critical need for a richer, more comprehensive and humane understanding of the lives of low-income youth. Such a perspective would allow us to see more clearly not only the challenges these students face as they prepare for and make their way through college, but also their resiliency and determination. It would demand a stronger ethical foundation in our arguments for increasing their college opportunities and completion rates. This perspective would remind us that a college education does more than just prepare students for the workforce; it increases knowledge, broadens self-perceptions, and bolsters civic engagement—all key characteristics of an engaged and healthy democratic citizenry. And finally it would lead us to question why institutions that predominantly serve large populations of low-income students are consistently the ones with the least resources and the first on the chopping block of educational budgets and cut-backs.

With this perspective in mind, we believe there are five factors that really matter when thinking about and promoting success for low-income college students. These factors, described below, are key for student success initiatives, whether small, such as the development of a student support center at a local community college, or large, such as financial aid policy reform:

Student voices matter. Really listening to students and valuing their knowledge is essential to understanding their pathways to and through postsecondary education. Having numbers that show how many students enroll and persist in postsecondary education is important, but unless we understand from students why these outcomes occur, we run the risk of misunderstanding patterns and implementing ineffective interventions. Financial difficulty, family instability, transportation problems, and a lack of childcare—not to mention self-doubt and a lack of institutional knowledge borne of inadequate academic and social resources—frustrate many low-income students' attempts to fulfill their college goals. Knowing about these barriers and about the successes that students encounter when they receive supports that help them deal with these realities is critical if we are to plan for their success in PSE.

Diversity matters. Low-income youth are a highly diverse group with a wide range of experiences and demographic backgrounds. Paying attention to the similarities and differences in this population of students can help us better plan college success initiatives. Part of acknowledging this diversity is acknowledging that common understandings of traditional college students may no longer be relevant. Almost half of community college students are older, work full time, or are parents. This so called "non-traditional" population is quickly becoming the majority in community colleges, and programs need to orient themselves to their needs rather than see them as a diversion from the norm. They are the norm.

Assets matter. In order to help low-income students succeed in PSE, we must focus on both student assets and institutional assets. The motivation of low-income students is a significant strength. Despite many hurdles, the students in our study enrolled and often persisted in college, albeit not always in traditionally defined ways. Their motivation will likely serve

them well in their educational pursuits, as well as in the labor market. Community colleges also have important strengths, in spite of the challenging budget climate. They have launched important innovations, including support programs and learning communities, that may provide models for assisting a larger number of students to reach their educational goals. Additionally, they employ many dedicated and talented instructors and administrators who value their students and are committed to their success. These faculty and staff set the standard that should be met through wise hiring practices and comprehensive faculty and staff development. We would also argue that the significant diverse student populations served by community colleges and the open access and multiple entry points for earning postsecondary educational degrees are assets that directly bolster the American values of opportunity and equality.

Connections between K–12 and higher education matter. Postsecondary success is not a story that begins once a student sets foot on a college campus. On the contrary, high quality K–12 schooling and a host of college preparatory resources and activities must be provided in order to ensure college-going success for all students. But low-income students often report their K–12 schooling is inadequate, and they lack the information they need to apply for and be successful in college. Just as community colleges have suffered in the current budget climate in California, so too have high schools. Many lack the resources they need to effectively teach, support, and advise students. How, for example, can a high school counselor with a student load of 800 to 1,000 young people provide adequate college counseling?

Institutional supports and conditions matter.
Because low-income community college students often have high aspirations but sometimes lack preparation, institutional supports and conditions play an especially important role in their persistence in PSE. Students face critical transitions along the way, and support programs within community colleges, such as learning communities and state-funded programs for low-income students, can function as a "guard rail" for keeping students on the path towards college completion. However, many students, particularly those who attend school part time or who lack information networks, are not aware of these programs and services.

During our many hours on campuses, we heard accounts of college personnel who were not at all helpful to the students we interviewed. But equally striking to us were the many stories we heard of caring, committed, and talented instructors, staff, and administrators who played an incredibly important role in the lives of our interviewees. Developing engaging curricula, providing mentorship and counseling, and following up with students to make sure they stay on track are the kinds of things that institutional agents do daily to support students. These key interactions and relationships are often at the heart of student persistence and retention and yet are routinely undervalued or ignored in the way initiatives are developed and evaluated.

College programs and student success initiatives do not exist in a vacuum. Thus, political contexts and policies matter for institutional support and conditions. Political agendas and legislative policies greatly affect students' PSE opportunities and the ability of colleges to develop and implement quality instruction and services. Whether it is immigration policy that enables students to gain access to financial aid or legislative decisions to make tremendous cuts to institutional budgets, politics and policy influence how low-income students experience and navigate their college pathways.

Education is a powerful force in the lives of low-income youth. It not only expands their economic opportunities, but also changes how they perceive themselves, their futures, and what they are able to contribute to their families and to society. These students are a diverse group who bring many assets to the educational enterprise. To help them realize their goals, we must support their success to and through postsecondary education. Ultimately, the improvement of student success in higher education will require a stronger commitment to community colleges and other postsecondary institutions that predominantly serve low-income students from K–12 through college.

Next Steps in Supporting Student Success

Through our research, we've found that reforms based on traditional models of student achievement will not work, so instead we argue for a *pathways approach* to college success. This approach emphasizes the supports and structures that are necessary if we are truly serious about improving postsecondary completion rates for low-income students. It also acknowledges that students' experiences are complex and non-linear. Therefore, academic and support services at colleges should be implemented in ways that acknowledge these complex realities and be flexible enough that students can work within them. To underscore how the college process can be seen in terms of complex pathways, we have summarized four provisions that are necessary to help students understand their pathways and stay on track as they navigate their college experiences. In other words, these provisions—which we will call maps, compasses, fuel, and tools—ensure that institutions are accountable to students and committed to helping them meet their postsecondary completion goals.
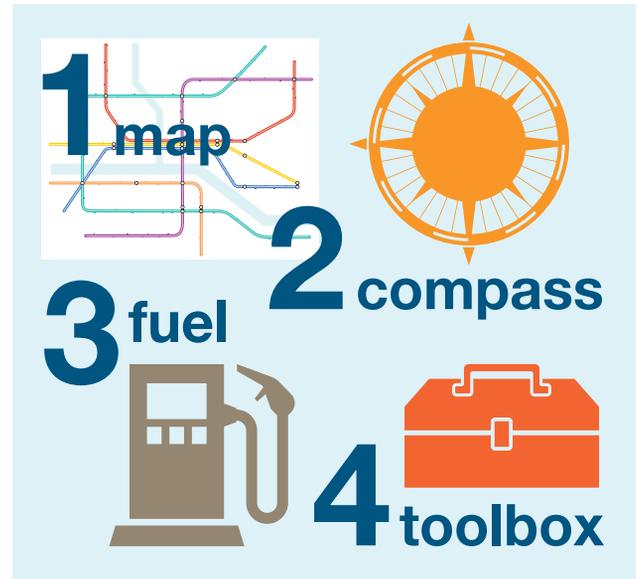
Maps are the resources that provide a clear vision of the routes toward completion. These may include educational plans that outline for students the curricula they need to complete in order to achieve their desired goals in the most streamlined fashion. Maps may also include orientations that walk students through the various academic support services available to them on campus, or booklets that highlight where students can turn if they encounter problems or get sidetracked in their college trajectories. For example, who should they talk to if they experience sudden financial distress and can't purchase books or pay for transportation to school? What are the varied counseling services that provide information on how to choose a major? What are the various degrees associated with each major and the job possibilities connected to each degree? Without various types of maps, low-income students, many of whom are the first in their families to enroll in college, can easily get lost or feel confused about how to plan and plot their trajectories. Maps also help bring awareness of where resources can be found and at what point in a student's trajectory they should be utilized.

A consistent **compass** would help students assess their academic direction and consistently point them toward their goals. An example of these resources would be required regular meetings with counselors who can provide advice to students about their academic progress. A compass might also take the form of an interactive online program to help students regain movement if they stop out or face academic problems on their pathways. These resources should be carefully aligned with how pathways to completion are mapped out for students, providing direction at any point where students may start to struggle with continuation or where they need to make decisions, small or large, about their next steps—for example, providing tips for students on when they should consider tutoring, or the questions they should consider before choosing a program of study.

The third provision, **fuel**, allows students to stay on track and in school. Just like the gas in your car, these resources enable students to sustain momentum and progress toward their goals. For example, students need adequate financial aid and access to required coursework. And those who are also parents need childcare facilities. The need for such resources may seem obvious, but in a time when education budgets are being slashed, in many colleges that serve low-income students these supports are shrinking or disappearing altogether.

And finally **tools** are the supports that ensure students' academic preparation and achievement so they can persist through their pathways. Tools include quality instruction and curricula as well as tutoring so that students gain the skills and preparation they need to meet their goals and be academically successful. As mentioned earlier, these tools are underemphasized in current accountability models and institutional effectiveness trends at many colleges. But without relationships with excellent instructors and caring and committed administrators and staff, many students would lack the skill-building—not to mention the emotional support—that makes college-going feel engaging and inspired.

In many ways, the American belief that higher education is a necessity for economic growth and opportunity has never been stronger. The current White House educational agenda, joined by large philanthropic forces, calls for doubling the numbers of postsecondary degrees across the country—including 5 million more community college graduates—by 2020. In order to reach these goals, there is an urgency to target postsecondary access and completion for low-income young adults. However, while we are listening to this call for more postsecondary graduates, we are simultaneously witnessing an unprecedented disinvestment in higher education and in the social services that support the poor. For example, since 2008–2009, the California Community College system alone has experienced a loss of $802 million dollars from state budget cuts.

As a nation, if we truly believe that higher education is key to our country's prosperity and growth, then we must be prepared to invest in our postsecondary institutions so that they can deliver and meet our expectations. And these investments must be developed and implemented in ways that meet the needs of our most vulnerable students, giving them the provisions—maps, compasses, fuel, and tools—that ensure their success as they navigate their college pathways. The future growth and prosperity of our country depends on it.

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APPENDIX A

STUDY METHODOLOGY
AND SAMPLE INFORMATION

This appendix contains additional information about the methodologies employed in the empirical components of the *Pathways* study and the participants in each of these particular aspects of the research.

COMPONENT 2:
NATIONAL ANALYSIS
(Principal Investigators Cynthia Feliciano and Leticia Oseguera)

The National Longitudinal Survey of Adolescent Health (Add Health) consisted of four waves of data collection, beginning with a representative sample of youth in grades 7–12 in 1994–1995. More than 12,000 adolescents completed at-home interviews in this first phase, and follow-up in-home interviews were conducted with the same sample in 1996, 2001–2002, and 2007–2008. We drew on data from three of these waves in order to understand respondents when they were in seventh through twelfth grade; seven years later, when they were between 18 and 26 years old; and six years after that, when they were ages 24–32. More detail on the Add Health study can be found here: http://www.cpc.unc.edu/projects/addhealth.

The Educational Longitudinal Study (ELS) 2002–2006 panel was collected for the National Center for Education Statistics (NCES). In spring 2002, NCES surveyed 14,000 United States tenth graders, and these same respondents were re-surveyed in spring 2004 (when students were asked to report their intended high school graduation status) and in spring 2006 (two years post-high school, assuming a traditional high school path). The final sample of respondents who completed all three surveys included 12,554 youth attending public, religious, and private high schools throughout the United States. Data were weighted using panel weights provided by ELS to reflect the responses of all U.S. students who were tenth grad-

ers in 2002, and as such can only be generalized to students who were tenth graders in 2002. NCES also collected information from the students' parents, teachers, and school administrators. Additional detail concerning sampling procedures can be found at the NCES website (http://nces.ed.gov/surveys/els2002/).

In the analyses of both data sets, a respondent was classified as low-income if, based on his or her family income and household size at the first wave of the study, he or she was at or below 185% of the federal poverty line. These households qualified for a number of means-tested benefits such as Medicaid, food stamps, and reduced-price school lunch programs. Respondents whose household incomes in adolescence were above 185% of the poverty line were classified as middle/high-income background youth.

COMPONENT 3:
CALIFORNIA YOUNG ADULT STUDY
(Principal Investigator Veronica Terriquez)

The California Young Adult Study (CYAS) relied on survey data collected through landline telephone and cell phone interviews with 2,200 randomly selected youth, ages 18–26, who attended school in California at any point before the age of 17. Administered in April–August 2011, the surveys lasted an average of 25 minutes. Over two fifths of respondents came from low-income backgrounds, meaning they were eligible for free or reduced lunch during high school or their families received public assistance while they were in high school. To obtain a sufficient number of low-income respondents, the CYAS oversampled landline numbers from homes in census tracts at or below the 20th percentile for median household income.

The CYAS also included in-depth follow-up interviews with a subsample of over 160 survey participants residing in the greater Los Angeles and San Francisco Bay areas. Quota sampling based on race, gender, LGBTQ identification, immigrant background, income background, and college enrollment was used to

select participants. Interviews lasted from 40 minutes to 3-1/2 hours. Additional survey and in-depth interview data were collected from community-based organizations, DREAMer organizations, the UC Office of the President's Early Academic Outreach Program (EAOP), and Linked Learning schools. These auxiliary data sets were used to assess the impact of civil and educational interventions on the trajectories of youth in California.

COMPONENT 4:
CASE STUDIES

A total of 308 students, most of whom are students of color, participated in the case studies. (See Figure A1.) The Wave 1 interview sample (*N*=308) included all participants at the beginning of the study; the Wave 2 sample included students who participated in a second interview; and the Wave 3 sample included those who participated in a third interview. Since the interviews occurred over a period of over two years, there was some attrition in the sample.

The "stopped out" variable is intended to ascertain whether students experienced any interruption in their academic studies overall and it is therefore not time-sensitive. In other words, these data represent whether students withdrew from school for a semester or more at any time during their postsecondary education. Students who participated in each wave of interviews were asked whether they had stopped out at any time, and any new information regarding this issue was documented at each wave of data collection.

Case study teams also interviewed faculty and staff at the colleges and/or high schools the students were attending, conducted observations of classes, orientations, and other relevant events and meetings, and reviewed documents describing programs at the institutions.

Figure A1
Race/Ethnicity of Wave 1 Case Study Participants
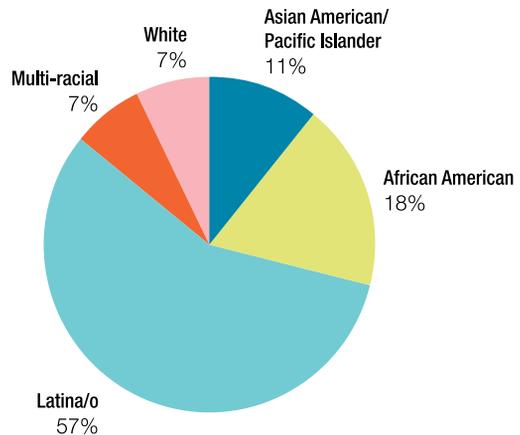
SAN DIEGO CASE STUDY: **Transition to Postsecondary Education**
(Principal Investigators Makeba Jones and Susan Yonezawa)

Data collection for the San Diego case study took place between April 2010 and September 2012 at six high schools in San Diego County. It included:

1. Three waves of in-depth interviews with low-income youth, beginning in high school (or after they had stopped out without attaining high school diplomas) and continuing as they transitioned into college, work, or elsewhere;
2. Three participant demographic and background surveys;
3. Collection of student demographic and academic history data from school- and district-level data sources; and
4. Interviews with 43 administrators, teachers, and counselors at the six high schools.

Table A1 presents demographic information for the San Diego case study participants in each wave of data collection.

Table A1
San Diego Case Study Participant Demographics by Wave

	Wave 1 (N=102)		Wave 2 (N=76)		Wave 3 (N=64)		Attrition[1] (N=12)	
	N	%	N	%	N	%	N	%
Gender								
Male	56	55%	36	47%	27	42%	-29	52%
Female	46	45%	40	53%	37	58%	-9	20%
Age								
16–19	102	100%						
17–20			76	100%				
18–22					64	100%		
Educational Status								
11th Grade	22	22%	1	1%	0	0%		
12th Grade	71	70%	14	18%	0	0%		
Post-High School	0	0%	61	80%	64	100%		
Adult Education	9	9%	N/A	N/A	N/A	N/A		
Race/Ethnicity								
Asian American/Pacific Islander	18	18%	14	18%	14	22%	-4	22%
African American/Black	19	19%	15	20%	12	19%	-7	37%
Latina/o	62	61%	44	58%	37	58%	-25	40%
Multi-racial	1	1%	1	1%	0	0%	-1	100%
White (Non-Hispanic)	2	2%	2	3%	1	2%	-1	50%
Enrollment								
High School	93	91%	15	20%	0	0%		
Full-Time PSE	9	9%	36	47%	33	52%		
Part-Time PSE	0	0%	3	4%	5	8%		
No PSE	0	0%	17	22%	13	20%		
PSE Stopped Out	0	0%	5	7%	13	20%		

[1] Attrition in age, educational status, and enrollment cannot be accurately calculated because they were not constant for individuals over time.

RIVERSIDE CASE STUDY: **Postsecondary Participation of Low-Income Women**
(Principal Investigator Vicki Park)

The Riverside case study took place in a single community college district in Riverside County between May 2010 and September 2012. In this time frame, the case study team undertook the following tasks:

1. Three waves of in-depth interviews with low-income women who were enrolled in community college at some point over the course of 2-1/2 years, with each interview lasting approximately 1-1/2 to 2 hours;
2. Background surveys of study participants;
3. Interviews with 18 institutional representatives, including student support program staff, faculty, and administrators, to understand their role in supporting student success; and
4. Document review and observations of classrooms and program orientations.

Table A2 contains demographic information about the Riverside case study participants.

Table A2
Riverside Case Study Participant Demographics by Wave

	Wave 1 (N=96)		Wave 2 (N=73)		Wave 3 (N=66)		Attrition[1] (N=30)	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Gender and Family Status								
Single Mothers	60	63%	39	53%	35	53%	-25	26%
Single Women	36	38%	34	47%	31	47%	-5	5%
Age								
18–24	70	73%						
25–31	26	27%						
Race/Ethnicity								
Asian American/Pacific Islander	3	3%	3	4%	3	5%	0	0%
African American/Black	25	26%	16	22%	15	23%	-10	10%
Latina/o	41	43%	32	44%	26	39%	-15	16%
Multi-racial	10	10%	8	11%	9	14%	-1	1%
White (Non-Hispanic)	17	18%	14	19%	13	20%	-4	4%
Enrollment								
Full-Time	35	36%	24	33%	19	29%		
Part-Time	48	50%	33	45%	22	33%		
PSE Stopped Out	13	15%	16	22%	25	38%		

[1]Attrition in age and enrollment cannot be accurately calculated because they were not constant for individuals over time.

LOS ANGELES CASE STUDY: **Community College Pathways**

(Principal Investigator Tara Watford)

Data collection for the Los Angeles case study took place between December 2010 and September 2012 at three community college campuses. Students who participated were engaged in three different degree/certificate pathways: basic skills/developmental education; career and technical education; and "transfer tracks" to four-year universities. Data were obtained through:

1. Three waves of interviews with low-income students;
2. Observations of classroom and programmatic interactions; and
3. Interviews with 17 key administrators, faculty, and staff across the three campuses.

As shown in Table A3, the case study participants represent the rich diversity of low-income community college students in the Los Angeles area.

Table A3

Los Angeles Case Study Participant Demographics by Wave

	Wave 1 (N=110)		Wave 2 (N=81)		Attrition[1] (N=29)	
	N	*%*	*N*	*%*	*N*	*%*
Gender[2]						
Male	48	44%	32	40%	-16	15%
Female	61	56%	48	59%	-13	12%
Age[3]						
18–24	96	87%	70	86%		
25–32	12	11%	9	11%		
33 and older	2	2	2	3%		
Race/Ethnicity						
Asian American/Pacific Islander	14	12%	9	11%	-5	5%
African American/Black	10	9%	8	10%	-2	2%
Latina/o	73	66%	54	67%	-19	17%
Multi-racial	9	8%	8	10%	-1	1%
White (Non-Hispanic)	4	4%	2	3%	-2	2%
AB 540 (undocumented)	10	9%	8	10%	-2	2%
Mother and/or father is an immigrant	93	85%	71	88%	-22	20%
Enrollment[4]						
Full-time	98	89%	56	70%		
Part-time	12	11%	10	12%		
Stopped Out[5]	36	35%	28	35%		

[1] Attrition in age and enrollment cannot be accurately calculated because they were not constant for individuals over time.

[2] One respondent did not report gender.

[3] Data on age were not gathered for Wave 2. The age ranges reported in Wave 2 were gathered in Wave 1.

[4] Enrollment figures in Wave 2 do not add up to the total number due to missing data.

[5] Stop out data refer to students who took time off from school at any time, for any reason, during their post-secondary education careers.

A subset of the Wave 2 sample was selected for participation in Wave 3 to further investigate key findings that emerged from the interviews. Their demographics are therefore presented separately, and this sample is not used to calculate an attrition rate for the case study. See Table A4.

Table A4
Los Angeles Case Study Wave 3 Participant Demographics

	Wave 3 (N=51)	
	N	%
Gender[1]		
Male	20	43%
Female	30	51%
Age[2]		
18–24	46	90%
25–32	5	10%
33 and older	0	0%
Race/Ethnicity		
Asian American/Pacific Islander	5	10%
African American/Black	5	10%
Latina/o	36	71%
Multi-racial	4	8%
White (Non-Hispanic)	1	2%
AB 540 (undocumented)	8	16%
Mother and/or father is an immigrant	47	92%
Enrollment[3]		
Full-time	44	86%
Part-time	1	2%
Stopped Out[4]	7	14%

[1] One respondent did not report gender.

[2] Data on age were not gathered for Wave 3. The age ranges reported in Wave 3 were gathered in Wave 1.

[3] Enrollment figures do not add up to the total number due to missing data.

[4] Stop out data refer to students who took time off from school at any time, for any reason, during their postsecondary education careers.

APPENDIX B

PROJECT TEAM MEMBERS
(current and former)

The *Pathways to Postsecondary Success* project was divided into six teams from six universities (California State University, Sacramento; Pennsylvania State University; University of California, Irvine; University of California, Los Angeles; University of California, San Diego; and University of Southern California). The 79 current and former project members included nine tenured/tenure-track faculty. Three of these faculty members were pre-tenured when they began the project (two subsequently received tenure) and were principal investigators of teams. Additionally, six research scientists, six postdoctoral fellows, 39 graduate students, 18 undergraduates, and one high school student participated in the project. In total, 49 were first-generation college students, and 41 were from underrepresented groups.

NATIONAL DATA ANALYSIS TEAM
(UC Irvine, Penn State)

Name	*Position*
Leticia Oseguera	Faculty—Associate Professor
Cynthia Feliciano	Faculty—Associate Professor
Alexander Yin	Postdoctoral Fellow
Wilfredo Del Pilar	Graduate student
Frank Fernandez	Graduate student
Charles Gibson	Graduate student
Ya-Chi Hung	Graduate student
Jihee Hwang	Graduate student
Ezekiel Kimball	Graduate student
Diliana Peregrina	Graduate student
Karla Loya-Suarez	Graduate student
Irene Vega	Graduate student
Mariam Ashtiani	Graduate student
Edelina Burciaga	Graduate student
Kelly Troutman	Graduate student
Roseilyn Guzman	Undergraduate

CALIFORNIA YOUNG ADULT STUDY TEAM
(USC, UCLA)

Name	*Position*
Veronica Terriquez	Faculty—Assistant Professor
Karina Chavarria	Graduate student
Nancy Guarneros	Graduate student
Oded Gurantz	Graduate student
Hyeyoung Kwon	Graduate student
May Lin	Graduate student
Caitlin Patler	Graduate student
William Rosales	Graduate student
Jeff Sacha	Graduate student
Juli Simon Thomas	Graduate student
Claudia Solari	Graduate student
Rafael Solórzano	Graduate student
Victor Vasquez	Graduate student
Robert Chlala	Graduate student
Miguel Carvente	Graduate student
Sandra Florian	Graduate student
Kevin Platt	Graduate student
Ignacia Rodriguez	Graduate student
Ana Gomez	Graduate student
Adrienne Carter	Undergraduate
Megan Chin	Undergraduate
Jorge Guerreiro	Undergraduate
Courtney Howard	Undergraduate
Connor Regan	Undergraduate
Uriel Rivera	Undergraduate
Angela Ross	Undergraduate
Gaby Dominguez	Undergraduate
Isabel Duenas	Undergraduate
Evelyn Larios	Undergraduate
Alejandra Vargas-Johnson	Undergraduate
Abdiel Lopez	High school student

LOS ANGELES CASE STUDY TEAM
(UCLA)

Name	*Position*
Daniel Solórzano	Faculty—Professor (Principal Investigator)
Mike Rose	Faculty—Professor
Tara Watford	Research Scientist (Director of Research)
Lindsay Perez-Huber	Postdoctoral Fellow
Veronica Velez	Postdoctoral Fellow
Maria Malagon	Postdoctoral Fellow
Nickie Johnson-Ahorlu	Postdoctoral Fellow
Nancy Acevedo	Graduate student
Yen Ling Shek	Graduate student
Lluliana Alonso	Graduate student
Nichole Garcia	Graduate student
Grace Kim	Undergraduate
Josephine Lee	Undergraduate

RIVERSIDE CASE STUDY TEAM
(UCSD)

Name	*Position*
Amanda Datnow	Faculty—Professor (Principal Investigator)
Vicki Park	Research Scientist (Director of Research)
Christine Cerven	Postdoctoral Fellow
Jennifer Nations	Graduate student
Kelly Nielsen	Graduate student
Virginia Bartz	Graduate student
Sana Meghani	Undergraduate
Jessica Sun	Undergraduate

SAN DIEGO CASE STUDY TEAM
(UCSD)

Name	*Position*
Bud Mehan	Faculty—Professor Emeritus
Susan Yonezawa	Research Scientist
Makeba Jones	Research Scientist
Carmen Jay	Graduate student
Lauren Cantrell	Undergraduate
Paul Zubatov	Undergraduate
Kimbridge Balancier	Undergraduate

INDICATORS TEAM
(UCLA, Sacramento State)

Name	*Position*
John Rogers	Faculty—Associate Professor
Nancy Shulock	Faculty—Professor
Caroline West	Researcher
Colleen Moore	Researcher
Rhoda Freelon	Graduate student

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All Campus Consortium On Research for Diversity (UC/ACCORD) is an interdisciplinary, multi-campus research center devoted to a more equitable distribution of educational resources and opportunities in California's diverse public schools and universities.

UC/ACCORD harnesses the research expertise of the University of California to identify strategies that will increase college preparation, access and retention. Policymakers, researchers, teachers, outreach staff and students all benefit from this source of reliable information for equitable education policy and practice.

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