

Cal-PASS

Transitions

Success at Every Level

From the Executive Director: Growth amid Challenges

Cal-PASS is in a difficult position. While we have enjoyed increased growth in membership and data, the economic picture presents challenges. As of December, all community college districts are members, all but one University of California campus (of those that grant bachelor degrees) are members, all but five California State Universities are members, and about two-thirds of California school districts containing high schools are members. Our database now tops 250 million records. This rapid growth is due in part to being named the statewide career technical education data provider under Perkins IV.

While growth is exciting it brings challenges, especially during a bad budget year. Because of the uncertainty of the California budget and the likelihood that budget woes

will continue, Cal-PASS is particularly grateful to have a number of foundations supporting specific projects. Cal-PASS staff is mindful, however, that its core functions and infrastructure are funded by the legislature and that funding may be at risk.

The confluence of funding uncertainty and expanded growth presents challenges to any organization. Cal-PASS is acutely aware of these challenges and wants to assure member institutions that work is underway to maintain and improve services even during these times. One example is the development of tools that give member institutions even greater access to data analysis (funded by the Hewlett Foundation). In addition, the Gilbert and Johnson foundations are providing funding to expand the Professional Learning Councils (PLCs) within their service regions. These PLCs bring faculty and regional leaders together to examine student data and make recommendations to change practice and improve outcomes. Cal-PASS monitors these changes to ensure that student performance is improving.

While California faces unprecedented budget deficits, Cal-PASS is positioned to provide a service that no other entity can provide: tracking students across segments and bringing regional institutions together to collaborate on improving *Success at Every Level*. We are hopeful that 2009 will be a productive year!

A Vote of Confidence

Given the harsh reality of the time, it is gratifying to Cal-PASS that the Walter S. Johnson Foundation and the Rosalinde and Arthur P. Gilbert Foundation have chosen to continue funding Cal-PASS' efforts in their respective regions, demonstrating confidence in Cal-PASS. The Johnson Foundation is funding the work in California's Central Valley, and the Gilbert Foundation is funding expansion in the Los Angeles region. Both of these foundations chose to continue their support of Cal-PASS' efforts after the initial funding cycles ended.

In the Central Valley, work will continue in Merced and San Joaquin counties. In addition to continuing the six existing PLCs for another year, the grant from the Johnson Foundation will be used to create and test sustainability plans for the current consortia in these locales, with the hope that these strategies can be applied elsewhere. Two new consortia will be started in Fresno and Tulare/Kings counties to improve student transitions across the educational segments. Each of

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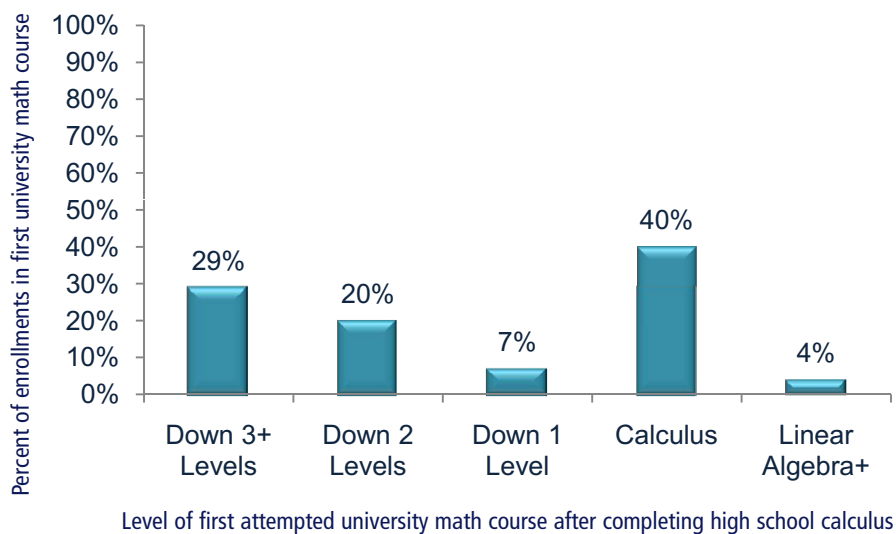
Spotlight on Data:

Examining Calculus Pathways

The concepts and tools of calculus are fundamental to a variety of fields including physics, computer science, economics and engineering. A Professional Learning Council (PLC) concerned about student transition and success in calculus looked at students' progress through the calculus series and beyond. Cal-PASS researchers examined students taking calculus in high school, community college, and the university and tracked their math enrollments before and after their calculus course, both within and between educational segments. One component of the report looked at students who completed calculus in high school and then transitioned to a local university. It appeared that the majority of these students attempted a course lower than calculus at the university, and 40 percent of students who transitioned to the university repeated calculus (see chart).

While this may seem less than ideal, differences in how calculus is offered between K-12 and higher education complicate the interpretation. In K-12, calculus is often an honors course pursued by only a few students and may not be intended to segue into a

Math transition to first university math course after completing high school calculus (N=579)



specific higher education calculus sequence. In higher education, many institutions offer two types of calculus: one is typically a two-course sequence intended as a terminal set of courses for social and life science students who will not be continuing in math. These students need to understand specific concepts such as how rates of change affect population growth or economic cycles. Less important for these students are the mechanics of performing complex derivations and demonstrating proofs of basic theorems. The other calculus sequence is for physical science and engineering students and is usually

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Using Technology to Improve Education

Barack Obama made history when he was elected the first African-American president, and he will make history again if and when he names the first cabinet-level chief technology officer for the United States. While the CTO would be primarily responsible for improving the exchange of information between the federal government and citizens and ensuring the security of our networks, it would also be about using data to improve federal programs. This appointment would demonstrate the awareness of Obama's administration about using data and technology, an awareness not shared by former occupants of the Oval Office. The concept, known as "data-driven decision making" (education's favorite) or "evidence-based practices" (popular in health and welfare) is what Cal-PASS is all about.

Cal-PASS connects millions of student records in order to provide data for decisions. These data elements include: course outcomes; STAR test scores; California High School Exit Exam scores; success in subsequent classes; degree, diploma and certificate information; and demographic data (gender, ethnicity, primary language spoken in the home, and age). These are all pieces of a puzzle that Cal-PASS is able to put together to answer questions about student transitions through the educational pipeline. Some common questions this year have been:

- How closely aligned are course grades and performance scores on the California Standards Test (CST)?
- How did the relationship between the last successfully completed high school math course and the first attempted community college math course change over time?
- How do high school math pathways

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Mini-Grants Fund Innovations

Cal-PASS is funding nine innovations through our Professional Learning Council (PLC) mini-grant process. These innovations spring from the work of the discipline-specific PLCs where faculty members examine regional student data to identify both barriers to successful transitions and strategies that are working for students. These data are then used to create pilot innovations that aim to better align curricula.

Sonoma Science *Science A-Go-Go*: High school biology students will be given the opportunity to become geologists, engineers, and marine biologists for a day by attending three Saturday field experiences at local university science labs. The goal is to increase student interest in the sciences early in their high school careers and attract more students to attend universities and choose science majors.

Sonoma Math *Jump Start...to College-Level Math (summer bridge)*: EAP results and community college placement data will be used to identify high school students at risk of repeating Elementary or Intermediate Algebra during their first year of college. Students' math skills will be formatively assessed prior to starting the Bridge Program so that Bridge time can be spent building skills in the area of needed improvement.

South San Diego Science *BAM — Biology Action Models*: High school and community college biology teachers will create Biology Action Models (BAMs), physically demonstrating biological concepts for use in teaching California K–12 content standards for biology. BAMs will replace standard, static, one-dimensional pedagogical tools.

East San Bernardino Counseling *I'm Taking My Parent to College: An Academic Treasure Hunt*: Middle school students and their parents will attend a six-hour Saturday event at the local community college designed to be a fun and informative way of familiarizing students and their parents with college-going opportunities. The themes for the day will be educational and career opportunities as well as overcoming barriers for attending college. An "Academic Treasure Hunt" will bring participants in contact with community college departments, offices, and personnel.

San Bernardino High Desert Counseling *STREET (Students Transitioning Empowered with Effective Tools)*: Four local community college students will be trained by college counselors to be peer mentors to 11th and 12th grade students in feeder high schools for the community college region. Peer mentors will engage in activities that promote a college-going culture in the high schools as well as host specific events and activities that will help high school students overcome barriers to college enrollment.

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What's New

The East San Diego English PLC has won a Practice with Promise award from the Campaign for College Opportunity for their work to align transfer-level English at the community colleges with San Diego State University's transfer-level English. Kudos to all faculty members who worked on this, and to Micah Jendian for submitting it!

Both the William and Flora Hewlett Foundation and the James Irvine Foundation are co-funding a grant to align curriculum in English and math from 11th grade through transfer-level at the community colleges. Twenty four PLCs will be doing this work over the course of the next two years. Cal-PASS gratefully acknowledges the support from these two foundations to make this work possible.

Cal-PASS is pleased to announce that Mary Kay Patton has accepted the position of Senior Director of Technology and Research. Cal-PASS staff has been developing new technologies to improve the delivery of information and research to its members, such as the OLAP cubes that were reviewed in the last issue of "CalPASS Transitions." Patton will now be responsible for the coordination of those efforts, enabling Cal-PASS to better serve its members.

Spotlight *cont.*

three courses. This sequence requires students to perform involved calculations and learn applied techniques. For these students, calculus is an entrance into higher math. The PLC is currently exploring the implications of this report in the context of these different paths, and is examining how faculty can help students succeed in this critical course as they transition between segments.



Innovations cont.

San Diego East English Aligning English Curricula from High School to Post-Secondary: This grant process focused on expanding work in one district in San Diego County where high school English faculty, working with their post-secondary colleagues, developed teaching skill sets that high school faculty identified as missing from their repertoire. This included learning to select and use expository text in their classrooms as well as creating writing prompts and rubrics to accompany the readings. The process was so effective in terms of both professional development for faculty and student outcomes that it is now being expanded to include all district high schools using the CSU and community college colleagues and mentor teachers from the original high school.

Merced Math Summer Geometry Bridge: A six-week, summer geometry bridge course at a community college was designed to facilitate students' pathways through math. This course provided dual credit, thus allowing students to take Intermediate Algebra in the academic year following Algebra I and more advanced math classes prior to post-secondary.

Merced EL College Day: *College Day* encourages high school students to go to college. A college awareness curriculum was developed to be taught in high school classrooms the week before *College Day*. The day is being planned by the Cal-PASS EL PLC, Merced College personnel, and local ESL faculty.

Merced English Aligning HS Writing Exit Skills with CC Writing Entrance Skills: Faculty analyzed differences in writing levels across community college and high school English classes using a common reading assignment and essay prompt. Faculty used a common rubric to score the essays. Outcomes were analyzed for trends and learning gaps across segments.

Confidence cont.

these new consortia will have English and math PLCs.

In Los Angeles, the Gilbert Foundation continues to fund the San Gabriel Valley Consortium. This consortium includes California State University Los Angeles, Los Angeles Community College District, Montebello Unified School District, and Los Angeles Unified School District. Cal-PASS also received funding to expand its work in Los Angeles and is working with a consultant to assist with opening the doors to numerous foundations. Michelle Whiting and Associates was selected for this work. Cal-PASS will be approaching these new foundations in the coming months to partner with them in the support of four new consortia to be developed in Los Angeles over the next three years.

Many thanks go to the Johnson and Gilbert foundations for their generous support and their confidence in Cal-PASS' strategies, the work of the PLCs, and the positive effects this work has on *Success at Every Level*.



A Partnership of the California Community Colleges Chancellor's Office and the Grossmont-Cuyamaca Community College District

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Technology cont.

between eighth and ninth grade differ for students who complete different levels of eighth grade math?

- How do students who take science at the community college do in university science courses, and how many earn science, technology, engineering or math (STEM) degrees?
- What are the concurrent course enrollment patterns between high school and community college?

Generalized findings can be found in the 2007–2008 research summary on the Cal-PASS Web site. In this era of demand for evidence-based practices, Cal-PASS delivers.