ITEM 9 ■ DRAFT

California Postsecondary Education Commission

Beyond the Looking Glass: Performance Measures and Accountability in California Postsecondary Education

March 2008

This item summarizes the Commission's examination of performance measures over the past 18 months. It provides a policy context for the Commission's work on assessing higher education performance. Major findings and lessons learned from this examination are highlighted in the report, and critical issues and questions for the Commission to consider are identified. The report also underscores the importance of California adopting a set of statewide goals for all of postsecondary education to assess performance.

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The Commission advises the Governor and the Legislature on higher education policy and fiscal issues. Its primary focus is to ensure that the State's educational resources are used effectively to provide Californians with postsecondary education opportunities. More information about the Commission is available at www.cpec.ca.gov.

Draft Commission Report

Summary

Over the past year, the Commission has had a sustained focus on four areas of performance for public postsecondary education. Based on its review of a variety of measures, the Commission has concluded the following.

Preparation for college entry and success

- California public schools have been uneven in their ability to prepare students for and encourage them to take the SAT and ACT college entrance tests, which are indicators of student intent to pursue a college education after high school. Completion of *a–g* courses, another indicator of college preparation, also varies between schools. Participation and performance in these high school experiences vary significantly among students from various racial/ethnic groups and enrolled in schools located in different income areas.
- California has not been as successful as it hopes to be in elevating the educational attainment of adults. However, there is no specific state goal in place that defines the percentage of adults who should be prepared for or enrolled in postsecondary education. Nor is there a stated average level of educational attainment desired for the state's residents.

Affordability and accessibility

- California has serious inequities in access to postsecondary education. College-going rates vary considerably depending on students' ethnicity, gender, and type of neighborhood where the student's high school is located.

- California's public college and university systems have come close to parity enrolling an undergraduate population that mirrors the racial/ethnic composition of the state's 18- to 24-year-old population between 2002 and 2006, with the notable exception of Latino students. In addition, there are significant differences within each system.
- In the past two decades, the cost of attending college in California has grown faster than inflation. Non-fee costs are a major contributor to reduced affordability. Many students took on additional debt to pay for college. This is particularly true for students from middle- and high-income families.

Student success

- California students who enter CSU or UC directly out of high school and enroll in a full-time course load persist into their second year at rates higher than that for students enrolled in comparable institutions in other states. Students who continue to enroll full time in their second year and beyond are more likely to graduate in a timely manner.
- Students who transfer from community colleges to CSU and UC campuses do as well as first-time freshmen in completing baccalaureate degree requirements, given sufficient time.
- Too few community college students are earning two-year degrees, certificates or transferring to one of California's public universities.

Contributions to California's economic, civic, and social development

- There are several critical occupations of high priority to California that require skills that only a few college disciplines can satisfy. The state is not producing enough graduates to meet the state's economic needs for information technology professionals, engineers, nurses, pharmacists, and teachers.
- California's workforce is better educated than the nation as a whole. However, the educational attainment of California's population is growing more slowly than the national average and there is a disparity based on race/ethnicity.
- College attendance contributes to per capita income growth among Californians. Earning a degree amplifies the income benefit of college but the benefits of educational attainment vary by gender and race/ethnicity.

Overview

The Commission's Higher Education Performance Assessment Framework is intended to evolve into a trusted information source for policymakers, researchers, students and their families as they seek to make decisions about education after high school. Few would dispute the value of a good education as a means to establishing a desired quality of life. However, there is little agreement about what policies and practices are most effective in developing the intellectual talents and dispositions that make for a strong, stable economy and engaged citizenry. The Commission can make a substantial contribution to generating consensus about how well public schools, colleges, and universities do in promoting and supporting educational attainment of the students they serve by providing annual, reliable data and analyses on selected outcomes desired by the state.

Over the past year the Commission has reviewed and refined a number of measures that can serve as indicators of various outcomes of California's public schools, colleges, and universities. Viewed separately, they provide a series of snapshots about:

- The number of students who complete high school and how that varies by race/ethnicity and gender.
- The number of students who complete a pattern of coursework that should prepare them for entry into and success at a college or university and how that varies by race/ethnicity, gender, and school type.
- The proportion of high school students who demonstrate proficiency in language arts and mathematics, subjects that should provide a basic readiness for workforce entry and/or further education.
- The number of first-time freshmen who earn associate degrees or attain transfer readiness within three years of initial enrollment and how that varies by certain student characteristics.
- The number of students who actually transfer from community colleges to a baccalaureate degree-granting institution and how that varies by certain student characteristics.
- The number of students that persist to earn bachelor's degrees within six years of initial enrollment or three years of initial transfer and how that varies by certain student characteristics.
- The number of degrees awarded annually, by type and subject areas, and the degree to which awards in selected areas match demand for employees with those degrees.

The Commission has critically examined these indicators to assess their feasibility as reliable data to provide understandable and empirically-based responses to key state policy questions in a number of areas, but particularly with respect to education priorities.

In addition, Commission staff has looked at how these performance indicators can be combined to provide a more comprehensive understanding of how each portion of California's public education system is meeting its share of responsibility for attaining the education goals that have been articulated by state policymakers. To further advance the Commission's efforts, it has relied on two documents to derive a consensus on of the state's vision for public education: the 1960 *Master Plan for Higher Education* and the 2002 *Master Plan for Education: Preschool through University*.

California's Vision for Public Education

The 1960 *Master Plan for Higher Education* established a strong state commitment to providing broad access to postsecondary education to any high school graduate or adult who could benefit from a college or university education. The Master Plan established the missions of the three systems. Each system has a different set of missions, breadth of authority, and target population to serve. The Master Plan, in part, contained recommendations on funding postsecondary education, including distribution of students among the three sectors and affirming the importance of financial assistance to students who require it.

Many of the Master Plan recommendations were codified in statute and have since guided state policy and fiscal priorities for postsecondary education. Subsequent reviews of the plan have reaffirmed the state's commitment to broad and affordable access and further detailed a commitment to preserving high-quality education in all sectors, increased participation of students from all racial, ethnic, gender, and income backgrounds with low college-going histories, increased contribution to the economic health of the state, and encouraging transfer of students between community colleges and the four-year systems.

Concurrently, the state has focused on various aspects of public schools and how well they do in preparing students for eligibility for college admission and successful transition into the workforce. This has been a growing concern as the state's residents have become increasingly divided by race and ethnicity

and by language proficiency and income. It is also of great concern because of compulsory attendance laws that require children older than 5 to enroll in a public school, or an approved non-public alternative. As early as 1984, the State Board of Education adopted model high school graduation requirements to encourage public schools to increase expectations of what public school students would be taught and required to complete, boosting confidence in what a high school diploma represented. The legislature enacted the Public School Accountability Act in 1999, which led to adoption of a series of academic content standards of what every public school student should be taught, by grade level, in five subject areas. This was followed by the development of the State Testing and Reporting System (STAR), a series of criterion-referenced examinations to measure student achievement in these areas; and, more recently, the California High School Exit Examination (CAHSEE), which all high school students must pass to earn a diploma. Despite differences of opinion about the testing components of the Public School Accountability Act, it established two priorities: The state expects consistency in what is taught at public schools; and teachers must possess strong content and pedagogical knowledge. The former has supported efforts to break through the tacit acceptance of conditions where less was expected and provided to some students based on their income, racial/ethnic, or geographic situations. The latter has encouraged increased attention and resource investment in the preparation of public school teachers, an explicit responsibility of postsecondary education.

As California's population grows, it is accompanied by increased enrollment in K-12 schools and demand for access to public colleges and universities. This population-driven demand for educational opportunity generates increasing demand for fiscal resources to assure that every student, whether compelled to enroll by statute or choosing to enroll voluntarily, are provided with a high-quality education. Meeting this fiscal challenge is complicated by the combined impact of increased diversity among Californians, competition for General Fund dollars by other state operations, rising costs, and the inevitable boom and bust cycles of state revenue. Taxpayers and policymakers alike are concerned about the extent to which state investments are actually producing the desired results. This concern is apparent with respect to the public schools, where expectations have been explicitly stated but the data indicate unevenness in the quality of education and levels of achievement of various student groups. Policymakers are examining data on the performance outcomes of public colleges and universities as well.

In 1999, the legislature initiated another decennial review of the *Master Plan for Higher Education* but given the codependency of K-12 and postsecondary education, elected to expand the focus to encompass all public schools, colleges and universities. This three-year effort culminated in a final report with recommendations submitted to the legislature in July 2002. The 2002 *Master Plan for Education: Preschool through University* reaffirmed the core elements of the 1960 higher education plan but expanded its vision by asserting the need for joining a strong set of colleges and universities with an equally strong set of public schools and preschools. It stated this vision as follows:

> *"California will develop and maintain a coherent system of first-rate schools, colleges, and universities that prepares all students for learning and for transition to and success in a successive level of education, the workplace, and society at large, and that is fully responsive to the changing needs of our state and our people."*

In order to achieve this vision, all interested parties — schools, school districts, regional and county education entities, community-based organizations, postsecondary education institutions, business and industry, and the state — must work collaboratively to build an aligned system of education that ensures that priority outcomes are met consistently over time. It also requires a capacity to monitor and assess institutional performance for evidence of progress and need for revision.

Basic premise

The Commission views its role not only as a champion of high quality postsecondary education but also as a source for reliable performance data on various aspects of public education performance and educational outcomes. This view is in large part based on acceptance of the following basic premise:

> *Higher levels of educational attainment have both public and private benefits. Increased success in both areas contributes to sustained support for public education and is, therefore, an important policy priority for the state.*

What Have we Learned?

Over the past year, the Commission has sustained its focus on four areas of performance for public education. Seventeen measures have been examined, to better understand how well our public schools, colleges, and universities are performing, and to assess the value of these measures to help the Commission meet its responsibility to advise the Governor and Legislature on postsecondary education issues and priorities. A vast amount of data is available on different aspects of public education but it is often not readily accessible or presented in an easily-understood format. Viewed independently, the 17 measures reviewed by the Commission offer snapshots that have limited utility. However, viewed in combination they can add to public understanding of educational performance. The Commission has sought to make these data available through its online database and Commission reports. Public understanding of performance indicators for postsecondary education is not grounded by explicit, measurable state goals but do provide useful information about several desirable educational outcomes.

In preparation for the Commission's examination of performance indicators, staff reviewed the report of the Public Law Research Institute at Hastings College of Law presented to the Commission at its December 2004 meeting. The PLRI research examined states with accountability statutes, which entity in each state was responsible for measuring performance, and the flexibility of that entity to make adjustments to its accountability framework. The PLRI study identified five primary questions.

- *Authority to Establish Goals.* Is the statute itself comprehensive or does it simply delegate the task of defining goals and measuring progress to an agency or to the institutions?
- *Defining Goals.* If the statute itself defines goals, what are they and how specifically are they defined?
- *Establishing Performance Measures.* Does the statute define performance measures by which progress toward a goal can be assessed?
- *Establishing Reporting Requirements.* What reporting mechanisms are used to track or monitor progress
- *Enforcement.* What, if any, enforcement mechanisms are used to hold institutions accountable for their performance in meeting defined goals?

After this study, Commission staff examined accountability models of 30 states. Twenty have accountability frameworks in statute, although nine of these have no identified goals or performance measures in statute. In those nine states, authority to develop the framework was delegated to the higher education coordinating agency or the university system boards.

- States that mention goals in statute — Colorado, Connecticut, Florida, Kansas, Louisiana, Massachusetts, Minnesota, New Mexico, Ohio, Oregon, and South Carolina.
- States that mention indicators in statute — Colorado, Connecticut, and South Carolina.

- States that statutorily designate the higher education coordinating agency or the university system board to develop all or part of the framework — Arkansas, Kentucky, Maryland, Minnesota, Missouri, New Jersey, North Dakota, South Carolina, Utah, Washington, and West Virginia.

Another key finding of Commission staff is the importance of clarifying the audience for an accountability report. The target audience is critical to defining the level of detail that should be contained in an accountability report in order to accommodate the needs of different audiences. In examining performance measures, the Commission has identified state policymakers and legislative staff as its primary audience and is therefore concerned that its measures are both concise and aggregated to provide as comprehensive a statewide view as possible.

Goals in the Accountability Framework

Following the advice of an Accountability Technical Advisory Committee assembled by Commission staff, the Commission adopted four areas for which performance indicators were to be developed. Each of these areas are delineated below, along with a brief summary of why the Commission believes this area to be important, what has been learned from an examination of performance indicators for the area, and options for refinement where appropriate. The goal area has been packaged in the form of a question, answers to which can be derived from one or more performance indicators.

1. Does California foster reasonable and equitable opportunities for individuals to enter college prepared to succeed in higher education?
2. Is California higher education affordable and accessible to all Californians?
3. Are students succeeding in getting through college?
4. Is California higher education making significant and lasting contributions to the state's economic, civic, and social development?

Question 1
Does California foster reasonable and equitable opportunities for individuals to enter college prepared to succeed in higher education?

California's 1960 *Master Plan for Higher Education* envisioned a system of postsecondary education open to all Californians who can benefit from instruction offered by the state's colleges and universities. At the statewide level, this is a commitment to provide choice and opportunity for all qualified prospective students. Performance indicators should, therefore, focus on the role of postsecondary education in fostering adequate levels of preparation needed for success by students pursuing education and training beyond high school. Measures should also recognize the division of labor embodied in the structure of California's public postsecondary education system, as well as the critical role of transfer, and the use of technology to enhance efficiency.

Performance Indicators

The Commission examined six measures of observable outcomes to assess how well the state is doing in meeting the public commitment to broad access to college and adequate preparation for success. Commission reports presenting data on these performance indicators are listed in Appendix B. These measures included college readiness, direct college-going rates, proficiency in English and math among high school juniors, proportions of 18- to 24-year-olds with a high school diploma or equivalent, proportions of 25- to 49-year-olds with a high school diploma or equivalent, and adult basic skills proficiency. These measures embrace the possibility that preparation for college success may be obtained by a high school

education as well as through adult education programs. Some of the key findings from review of these measures include the following:

- California public schools have been uneven in their ability to prepare students for and encourage them to take the SAT and ACT college entrance tests, which are indicators of student intent to pursue a college education after high school. In 2004–05, 36% of public 12th grade students took the SAT and 10% took the ACT. The variation in test takers and scores earned reveal different levels of readiness for college success.[1]

Display 1 — Percent of SAT Takers and Average Scores, by Ethnicity, 2004–05

	Asian	Black	Latino	White
Total 12th Graders	31,276	9,568	32,727	50,672
Percent	57%	28%	20%	33%
Average Score	1,063	869	899	1,085

- A similar proportion of the 125,087 students who graduated in academic year 2005–06, 35.8% completed *a–g* courses, another indicator preparation for college success. As in test performance, there are clear differences between racial/ethnic groups. While 60% of Asian high school graduates and 40% of White graduates completed *a–g* courses, only 25% of Latino high school graduates, 25% of Black graduates, and 23% of Native American graduates did so.[1]

Display 2 — Number and Percent of 2005–06 Public High School Graduates Completing *a–g* Courses, by Ethnicity

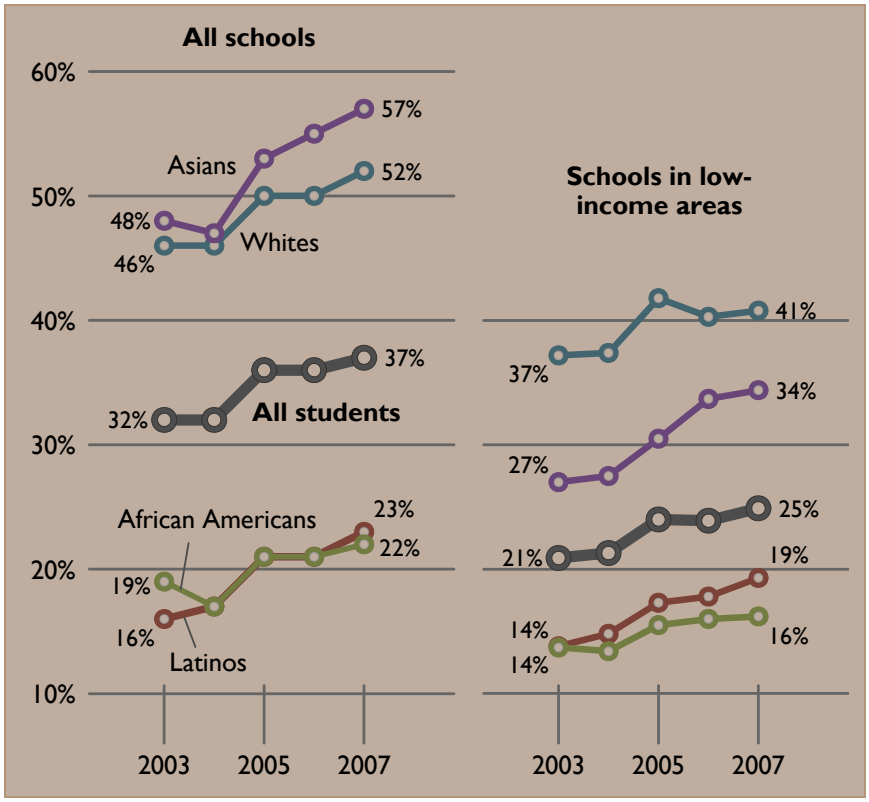
	Asian	Black	Latino	American Indian	White
High school graduates	22,930	6,460	31,764	666	55,571
Percent *a–g* course completion	59.7%	25.5%	25.5%	23.5%	40.1%

- In 2006, 46.7% of 343,511 public high school graduates enrolled in a public college or university: 7.4% enrolled at UC, 10.8% at CSU, and 28.4% at a community college. Ethnic variation in college-going is again evident: Two of every three Asian graduates (69%) enrolled in a public college or university, and less than half of all other ethnic groups enrolled (Blacks – 48%, Latinos – 44%, American Indians – 45% , Whites – 41%).[2]
- Not all high school students have clearly-established goals for college enrollment. Nonetheless, these students should still develop proficiency in language arts and math that prepares them for success should they later decide to pursue postsecondary education. Measures obtained from California Standards Test (CST) scores reveal the great challenge still faced in adequately fostering math and language proficiency.[3]
  - Overall, 37% of 11th graders scored at the advanced or proficient level in English/Language Arts in 2007, compared with 32% in 2003.
  - English/Language Arts test scores are much lower at schools in low-income areas. Overall, only 25% of students at these schools scored at the proficient or advanced level. Scores

have increased since 2003, but at a slower rate than at schools in middle- and high-income areas.

— Only 22% of Black students scored at the proficient or advanced level in English/Language Arts in 2007. This is up from 2003, but the race gap has widened because scores for other ethnic groups, particularly Asians, have increased more strongly. In 2007, 57% of Asian 11th graders, 52% of Whites, and 23% of Latinos scored at the proficient or advanced level. Scores for Latinos are well below average, but have increased steadily since 2003 and are now pulling ahead of scores for Blacks.

Display 3 — Percent of 11th Graders Proficient or Advanced in CST Language Arts by Ethnicity



Commission calculations based on test data from the California Department of Education and income data from the 2000 U.S. Census.

- There is no common CST math assessment taken by all high school students after the 9th grade. Using the 9th grade math assessment as a measure, a similar achievement gap is evident.[3]

  — Overall, the 7th grade math CST results showed that less than 40% scored at the proficient or advanced level in 2007. This is down slightly from 2006, but comes after three years of strong gains. Although the overall proficiency level in this test is higher than the 11th grade English/Language Arts test, there is much more of a racial gap. Only 22% of Blacks scored at proficient or advanced levels, compared to 69% of Asians, 54% of Whites, and 27% of Latinos.

- — As in other tests, there are vast differences between schools. Overall, only 27% of students at schools in low-income areas scored at the proficient or advanced level compared to 39% of students at all public schools.

- California has not been as successful as it hopes to be in raising the educational attainment of its younger adult population.[4]
  - — Overall, 82% of 18- to 25-year-olds have a high school diploma or equivalent. However, this average masks important differences that depend on ethnicity and time of residency in the United States.
  - — In 2005, nearly 90% of people who were born here or entered the U.S. before school age had a high school diploma. Across ethnic groups, the percentage varied between 96% for Asian males and females to 79% for Latino males.
  - — High school completion rates for people who entered the U.S. at school age or later are lower on average, but show much more variation between ethnic groups. Nearly all Blacks who entered the U.S. at school age or as adults had a high school diploma (males – 98%, females – 95%). In contrast, less than half of male Latinos in this category had a high school diploma (males – 45%, females – 54%).
  - — When averaged over all residents, California is in the bottom ten states for the percentage of 19- to 25-year-olds with a high school diploma. Of the 15 largest states, only Georgia and Texas have a lower percentage of young adults with a high school diploma.

- California supports nearly 300 adult schools enrolling more than 1.1 million students in 2005–06. Among its offerings: Adult Basic Education, English as a Second Language, and High School Diploma or Adult Secondary Education, including General Education Development certification programs.[5]
  - — Latinos comprise 54% of participants in adult school programs; Whites – 24%, Asians – 12%, Blacks – 6%.
  - — ESL courses have the largest enrollments. This would seem to reflect the need to complete education interrupted by immigration to the U.S. and/or to acquire sufficient English proficiency to successfully transition into the local workforce and/or take advantage of educational opportunities at the postsecondary level.

Limitations and options for further refinement

While these measures are interesting, they lack a context in which to make a judgment about whether they meet state goals. California provides an abundance of opportunities for its residents to become prepared for college but it is difficult to conclude the adequacy of these opportunities, particularly for the adult population. There is no specific state goal that defines the percentage of the adult population that should be prepared for or enrolled in postsecondary education. Nor is there a stated average level of educational attainment desired for the state's residents.

Notwithstanding the absence of a standard for the adequacy of opportunity, it is clear that few, if any policymakers, would express satisfaction with the evident inequity of outcomes for students from various racial/ethnic groups or attending schools located in low-income areas. The Superintendent of Public Instruction has launched an initiative to reduce the achievement gap in public schools. Dissatisfaction generates a series of questions that deserve consideration as the Commission decides upon desirable refinements in its performance measures and how they can be adapted and best applied to any postsecondary education accountability system adopted by state policymakers. A sampling of these supplemental questions is provided below.

- Should state policymakers adopt an "adequacy" goal that is confined only to desirable standards for California, or comparative, where it compares itself to a selected number of other states? Should adequacy for college success be considered in terms of test scores, completed courses, demonstrated competencies in designated areas, some combination of measures, or actual college-going behavior? Should measures of adequacy of opportunity be expanded to monitor the degree to which technology is expanding teaching and learning opportunities and/or enhancing the quality and effectiveness of educational preparation?
- If preparation for college success can best be determined by monitoring student achievement subsequent to college enrollment, students' persistence should be monitored over time. Given the prevalence of college students requiring remedial instruction upon initial enrollment, should a collaborative effort be undertaken to review and align, as necessary, what is assessed by college and university skills proficiency exams with the state's academic content standards and/or what is measured by the CST?
- While completion of the recommended sequence of college preparatory courses is commonly accepted as a gauge of how well prepared students are for college success, it is also acknowledged that content quality in these courses is uneven. Student success at the postsecondary level might be enhanced by monitoring how well students persist based on income levels in the areas in which their high schools were located. This could improve understanding of differences in student achievement on the basis of socioeconomic characteristics as well as gender and race/ethnicity. Should the Commission refine its cohort analysis to incorporate such a level of analysis?
- Should the state specify a proportion of the adult population it would like to see and be willing to support in postsecondary education, particularly for the community colleges, which is the primary public system providing college access to adults? Should equitable opportunity to enter college be considered a vital portion of this goal? Preparation to succeed in college can be improved as the state better aligns curricular content and assessment and distribution of highly-effective teachers throughout the state, among other things. However, such improvement in preparation would not be sufficient to meet this goal as currently stated unless the state also provides adequate space in public colleges and universities to accommodate all prepared Californians who should decide to enroll. This question highlights the importance of considering the choices that students and adults make regarding college enrollment.

The above questions underscore the complexity of defining goals for which appropriate performance measures can be developed. It also begins to clarify the importance of maintaining a systemic perspective so as to not miss connections between goals and measures. For instance, the last supplemental question outlined in the above section provides a perfect segue to the second area for which the Commission has developed performance measures.

Question 2
Is California higher education affordable and accessible to all Californians?

Affordability has always been a priority for higher education in California. Tuition and fees are still affordable compared to other states, but the cost of living is driving up the overall cost of college attendance. This is pricing many low- and middle-income families out of higher education or forcing them to take on increasing levels of debt during their education. Recognition of these non-fee-related costs has shifted the conversation in California from costs to affordability.

Higher education researchers and advocates for equitable educational opportunity are legitimately concerned that budget constraints, and the resulting increases in fees over time, created an "affordability gap," and that this gap prevents some students from low- and middle-income families from enrolling in

a college or university for which they are qualified for admission. In addition to the concern that all high school students receive adequate preparation for college success, state policymakers should be concerned about the extent to which policy and fiscal decisions impede college access due to cost concerns of students and their families.

Performance Indicators

The Commission examined three measures to assess how well the state is doing in meeting its commitment to preserve access to public postsecondary education by keeping costs within reach of most families. These measures included measures of: the percent of racial/ethnic representation in colleges and universities compared to the racial/ethnic distribution of the population; indebtedness at graduation; and the percent of income, by quintile, needed to pay for college both before and after financial aid. Some of the key findings include the following:

- California has serious inequities in access to postsecondary education. College-going rates vary considerably depending on ethnicity, gender, and type of neighborhood where the student's high school is located.[2]
  - About one in four high school graduates enter a four-year college or university directly after high school. Overall, roughly 4.4% enroll in a four-year college in other states, 4.6% enroll in an independent four-year university in California, and 16.9% enroll in either CSU or UC. An additional 30.1% enroll in a community college.
  - Only 1.3% of Black male graduates of high schools located in low-income areas entered UC in 2005 and 3.3% of Black male graduates of high schools located in high-income areas did so. In contrast, 14% of Asian female graduates from schools in low-income areas and 28% of Asian female graduates from schools in high-income areas entered UC in 2005.
  - At CSU, there is less variation in college-going between neighborhoods and ethnic groups but more of a gap between males and females. For instance, Asian female graduates from low-income schools had a college-going rate of about 18% in 2005 while the corresponding rate for males was 12%.
  - Over the past decade, 28–30% of high school graduates have enrolled in a community college directly after high school. The community college college-going rate in the 1980s was about 35%. There is little difference in college-going rates of graduates from different ethnic groups or different neighborhoods. Slightly more males than females have enrolled in community college directly after high school.
  - National data shows that four-year college-going rates in California is lower than most of the 20 largest states in 2004. The national college-going rate to four-year universities is 38.3%, compared to 25.9% in California when enrollment in out-of-state college is included.
- Overall, California's public college and university systems have come close to parity enrolling an undergraduate population that mirrors the racial/ethnic composition of the state's 18- to 24-year-old population, with the notable exception of Latinos. In addition, there are significant differences within each system. Parity is calculated by dividing the percentage of an ethnic group in the system undergraduate population by the percentage that same ethnic group represents in the state's 18- to 24-year-old population. Perfect parity would yield a ratio of 1.0.[6]
  - At UC, Asian undergraduates exceed parity and White undergraduates are just about at parity. Black, Latino, and American Indian enrollment is below parity.

— At CSU, Asian and White undergraduate enrollment is just above parity. Black males are at 0.7 while Black female students are at 1.2. Both Latino students and American Indian students are below parity, significantly so in the case of American Indian females.

— Community college enrollment is at parity for all ethnic groups except Latinos.

Display 4 — Population Parity of College Enrollment, 18- to 24-year-old undergraduates, 2002–2006

Ethnicity and gender		University of California	California State University	Community Colleges	All systems
Asian	Male	2.8	1.3	1.0	1.2
	Female	3.3	1.5	1.2	1.4
Black	Male	0.3	0.7	0.9	0.8
	Female	0.6	1.2	1.4	1.3
Latino	Male	0.3	0.4	0.6	0.5
	Female	0.4	0.8	0.9	0.8
American Indian	Male	0.6	0.8	1.0	0.9
	Female	0.9	0.1	1.4	1.3
White	Male	1.0	1.0	1.0	1.0
	Female	1.2	1.4	1.4	1.4

Data on year-to-year parity rates from 1997 to 2006 are in Appendix A.

- Between 1996 and 2004, the cost of attending college has grown faster than inflation. Non-fee costs have done more than any state fee policy to increase costs and reduce affordability. Non-fee costs include housing, books and supplies, transportation and food.[7]

  — Between 1996 and 2004, inflation-adjusted costs rose by 15.3% at UC, by 11.4% at CSU, and by 31% at the community colleges. Nearly all of the cost increase for community colleges results from increases in non-fee costs, which account for most of the cost of attending community college.

  — The period studied captures a boom and bust cycle of fee increases, decreases and freezes. Fees were raised dramatically in the early 1990s. In 1996–97, the Legislature froze tuition, meaning it went down when adjusted for inflation. Fees were reduced in 1998–99 and 1999–2000 and held constant in the following years. When adjusted for inflation, fees increased only slightly at the community colleges and UC, and actually fell at CSU.

- Many students took on additional debt in order to pay for college between 1996 and 2004; this is particularly true for students from middle- and high-income families. The ability of students to pay for college has declined slightly for a variety of reasons, not all of which are amenable to state policy or fiscal intervention. CSU was the most affordable system for students from low-income families in 2004. In contrast, UC was the most affordable system for low-income students in 1996. Despite low fees, community colleges were less affordable for low-income students in 2004 than either CSU or UC, as measured by unmet need. Unmet need is the amount that had to be met from other means, such as current income or savings.[7]

— Students from low-income families attending the University of California saw an 11% increase in costs, and a 9% increase in total financial aid. Use of loans to finance college declined by 43%. Largely due to the reduction in borrowing, unmet need went from zero in 1996 to $2,335 in 2004.

— UC students from low-income families experienced an 11% increase in costs, and a 9% increase in total financial aid. The use of loans to finance college declined by 43%. Largely due to the reduction in borrowing, unmet need went from zero in 1996 to $2,335 in 2004.

— The cost of education for UC students from middle-income families rose by 21% and unmet need rose 15%. Middle-income families are those with incomes greater than $75,000 in 2004. The major source of this difference lies in a slight reduction in use of loans by students from middle-income families.

— Costs for UC students from high-income families rose by 16% and unmet need dropped by 2.8%. High-income families are those with incomes greater than $75,000 in 2004. The major source of this difference lies in an increase of 52% in the use of loans by students from high-income families.

— Costs for CSU students from low-income families increased by 10.5%. Financial aid increased by 41% and borrowing increased by 16%. The expected family contribution fell by 20%. This increase in aid and reduction in expected family contribution reflects the fact that more students from the lowest end of the income scale attended CSU in 2004. Consequently, aid for needy students attending CSU increased faster than the cost of education, and unmet need was reduced.

— At CSU, the cost of education rose by 14% for students from middle-income families and unmet need increased by about 2%. The cost of education for students from high-income families rose by 10% while unmet need dropped by 22%.

— Costs for community college students from low-income families increased by 33% between 1996 and 2004, while aid increased by 75%. These students nearly doubled their use of loans, while the expected family contribution fell by 58%. The combination of these changes resulted in an unmet need that increased from about $130 to more than $2,300. For middle-income students, the cost of education rose by 46% and for students from high-income families it rose by 6.4%.

Limitations and options for further refinement

These measures provide an incomplete set of indicators to inform judgment about the extent to which the state is keeping college accessible and affordable to all Californians who would choose to attend a college or university in the state. In most cases the measures do not account for the contributions of California's independent colleges and universities. Moreover, data on student income are incomplete and it is not possible to calculate the share of personal or family income that is used to pay for college.

Postsecondary education is considered to be a shared enterprise in which investments are expected to yield public and private benefits. Consequently, the costs of college attendance are expected to be borne by both public resources and by students and their families. It is possible to compare fees in California with fees in other states, but California has not adopted a standard that defines a threshold of affordability that could be used to guide state fiscal policy for postsecondary education and that is not dependent on the actions of other states.

Another problem is that it is difficult to collect data on debt from all sources. Data on state or federally subsidized loans are available but information on debt from credit cards, equity lines of credit, or home refinancing for colleges is not compiled by any one agency. Moreover, the measures do not account for

students who do not enroll because they decide that they cannot afford college or have an aversion to borrowing. Adequate financial aid may have reduced the price sufficiently for these students to consider college attendance affordable, but it is not possible to know if it would be enough to offset the need to generate immediate income for other needs.

The actual and perceived affordability of college attendance is intimately connected to the state's economic strengths. Availability of high-paying jobs and the stability of those jobs contribute to confidence that college is affordable, either individually or with state and federal financial aid. As the Commission considers these and other issues that could lead to improvement of performance measures of affordability, the following supplemental questions should be addressed.

- Until California can adopt a long-term resolution of its structural budget problem, should the state place a greater priority on need-based assistance to students from low- and middle-income families, rather than merit-based assistance to high-achieving students without regard to need? This would reassure policymakers that qualified students are not denied access to postsecondary education because of costs. Rewards for outstanding academic achievement would be reflected by admission to selective universities.
- Are incentives to promote increased productivity among postsecondary education institutions (as measured in part by reduced time-to-degree or reduced units-to-degree) viable options to preserve affordability? Reluctance to take on debt may prompt more students to reduce course loads and increase working hours to pay for college — this works against the state priority of encouraging students to complete their education in a timely manner.
- Is it possible to determine the debt burden at which students begin to alter choices away from areas compatible with their talents and interests to those that offer the promise of high salaries? Should state policy forestall this burden through increased use of such instruments as forgivable loans tied to high-priority occupations, such as teaching, engineering or health care?

Question 3
Are students succeeding in getting through college?

Student success should be measured through outcomes. Performance indicators that focus on measures of completion, educational quality, and satisfaction with the educational experience will provide a picture of student success. Measures should vary slightly for different types of institutions so that they are consistent with institutional missions and reflect the student population attending each sector.

The time taken by students to complete their degrees is a persistent concern. A bachelor's degree is commonly thought of as a four-year course of study, but many students take well beyond four years to graduate. Slow progress toward graduation can be costly to students, many of whom have taken out loans to pay for tuition, fees, books, living costs, and other costs of college attendance. Prolonged enrollment can also be costly to the state, as it may limit the number of new students that can be admitted to public colleges and universities.

Performance Indicators

The Commission examined five measures to assess how efficient California public colleges and universities have been in promoting degree and certificate completion. The Commission has been mindful in its examination of these measures of the fact that student choices play a large role in the time taken to complete programs. The measures examined by the Commission as possible indicators of how well students are getting through college included: time-to-degree; full-time/part-time enrollment ratios; persistence and graduation rates; four-year degrees awarded to transfer students; and the numbers of associate degrees and certificates awarded, and students transferring to four-year universities. More details are in the reports listed in Appendix B.

- Most freshmen entering UC and CSU immediately after high school enrolled full-time during their first year (82% and 71%, respectively). More than 70% of UC freshmen continued to carry a full-time load into their second and third years, while only 47% of CSU freshmen did so. Students who maintain full-time enrollment into their second and third years graduate in a timelier manner and in greater numbers.[8]
  - At UC, 56% of the freshmen who enrolled in a full-time load in 2000–01 graduated in their fourth year. Another 24% graduated in their fifth year, yielding a five-year graduation rate of 80%. Of those freshmen who continued to take full-time loads during their sophomore and junior years, 65% graduated in their fourth year and 89% of them graduated by their fifth year.
  - At CSU, 17% of the freshmen who enrolled in a full-time load in 2000–01 graduated in their fourth year and 40% graduated by their fifth year. Of those who continued to take full-time loads during their sophomore and junior years, 30% graduated in their fourth year and 62% graduated by their fifth year. A substantial number of CSU freshmen chose to reduce their course loads or interrupt their enrollment after their first year.
- Fewer students are enrolling part-time at UC and CSU campuses.[8]
  - As part of its mission, UC encourages students to enroll full time in the belief that it provides a richer academic experience. From 2000 to 2005, part-time enrollment fell from 7% to just over 5%. More freshmen and seniors were enrolled part-time than sophomores and juniors. The decline was evident among all ethnic groups, for males and females, all student levels, and at all campuses.
  - The CSU mission encourages part-time enrollment to the extent that it promotes the enrollment by students who might not otherwise enroll. Overall, part-time enrollment in CSU fell from about 23% in Fall 2000 to 21% in Fall 2005. Part-time enrollment was greater for juniors and seniors than for freshmen and sophomores. Though part-time enrollment varied by ethnicity and gender, a decline in part-time enrollment was evident for all groups and student levels.
- Persistence rate data provide useful insights about students who are successfully progressing toward their degrees and those who are struggling. It can also help to identify programs that are helping students overcome barriers to success. Low persistence rates may be an indication of a number of issues, both academic and social, that cause students to choose to interrupt or discontinue their education. Overall, both UC and CSU have higher persistence rates than comparable institutions in other states.[9]
  - The persistence rate for first-time students at UC who began their first term in Fall 2000 with a full-time course load was higher (92%) than at comparative institutions (88%) nationwide. The persistence rate for first-time students at CSU who began their first term in Fall 2000 with a full-time course load was also higher (80%) than at comparative institutions (68%) nationwide.
  - UC students with high- and middle-incomes were more likely than those with lower family incomes to enroll their second year and were less likely to have intermittent enrollment patterns. Combined intermittent or non-enrolled percentages were 6% for high-income, 8% for middle-income, and 9% for low-income students. The comparable figures for CSU students were 16% for high-income, 18% for middle-income, and 21% for low-income students.
  - Overall UC persistence rates (including students who return full-time and part-time) do not vary greatly among ethnic groups: Asian American students had the highest persistence rates (94%) and Black students had the lowest (90%).

— CSU persistence rates (including students who return full-time and part-time) varied among ethnic groups: Asian – 83%, Whites – 83%, Latinos – 80%, Blacks – 73%. Latino, Black, and Asian students had a higher part-time enrollment status in their second year (22%, 20%, and 19%, respectively) than White students (13%).

- The transfer function is an important component of access in California higher education. The low cost of community college enrollment allows students to realize substantial savings in the cost of earning a degree by completing the first two years at a community college. Nearly two-thirds of CSU students who receive a bachelor's degree transferred from a community college. For UC, transfer students account for approximately one-third of bachelor's degree recipients.[9]

  — For students transferring to UC in 2000, about 44% graduated within two years of transferring, 73% graduated in fewer than three years, 78% graduated in three years, and 86.5% graduated in fewer than five years.

  — For students transferring to CSU in 2000, nearly 22% graduated within two years of transferring, 49% graduated in less than three years, 52% graduated in three years, and almost 71% graduated in less than five years.

  — CSU transfer students who attained their degrees within three years took an average of more than 13 units per semester. Students who took longer than three years to graduate took an average of 11 units per semester.

- Too few community college students are earning associate degrees, certificates or transferring to public universities, based on the cohort of students who entered community colleges in Fall 2000.[10]

  — Between 2000 and 2005, only 17% of the freshmen tracked by the Commission earned an associate's degree or certificate, 22% transferred to a public university (10% of whom also earned a degree or certificate), and 52% left the community colleges without a degree, certificate, or transferring. Nineteen percent were still enrolled at a community college in 2005.

  — Women accounted for 57% of students earning degrees and certificates. Women also accounted for 55% of the students who transferred to a four-year university.

  — Latino students accounted for one-third of degree earners but less than a quarter of transfers, despite representing one-third of this group of community college students. Black students attained degrees and certificates at only two-thirds the rate of their proportion of the students who transferred at only half this rate. Asians/Pacific Islanders acquired degrees/certificates at just over three-quarters of its share of the students studied, but accounted for nearly twice as many transfers as their proportion of the student population.

Limitations and options for further refinement

These measures provide a complex picture of good and bad news. California students who enter CSU or UC directly out of high school and enroll full time persist into their second year at rates higher than students at comparable institutions in other states. Persistence is essential to completing a program. Students who continue to enroll full time in their second year and beyond are more likely to graduate in a timely manner. Reducing the number of years that students must meet the cost of college attendance will contain the costs of earning a degree. It suggests efficient curricular offerings to meet the needs of students and also opens the possibility of freeing capacity within CSU and UC to accommodate new students.

Some researchers are concerned that reduced part-time enrollment translates into fewer opportunities for non-traditional students. California has designated its community college system as the primary point of

access for non-traditional students who enroll part time. Community colleges are also an economical alternative for students who believe they cannot afford the cost of CSU or UC education for four years, but want to earn a bachelor's degree or higher. Community college fees have been kept low to assure that this point of access to postsecondary education is attainable for even the poorest of students. Students who transfer from community colleges to CSU and UC do well in completing their degrees, given sufficient time. But few community college students in the Fall 2000 cohort actually earned an associate degree, a certificate, or transferred within five years of initial enrollment. These are outcomes conventionally believed to require only two years or less of full-time study and their attainment promises increasing benefits to both the student, in terms of earnings potential, and the state in the form of increased tax receipts and a stable, well-educated workforce.

A variety of factors can affect students' choices about the level and continuity of enrollment, including their educational goals; quality of academic preparation; the availability of support services; the availability of financial assistance; the form of this assistance — whether as grants, work study, or loans; the availability of needed courses; and changes in personal circumstances.

As the Commission assesses the usefulness of these performance measures in advising the Governor and Legislature regarding higher education priorities, a number of supplemental issues and questions come to mind:

- Is it desirable to have more students enroll full-time and make timely progress towards degree completion? It offers the possibility of accommodating more students without making investments in infrastructure that may not be needed as enrollment demand changes with shifts in the age structure of the population. What balance should the state seek between encouraging high levels of full-time enrollment at CSU and UC and providing other paths for non-traditional students who want or need to enroll part-time, but that also promotes timely progression toward degree attainment?
- Should California consider following the lead of other states such as Texas by imposing a financial disincentive for students taking more units than needed for their degree? If so, what provisions should be made to help students who change their majors?
- Should California reconsider its priorities for community colleges and put a greater emphasis on facilitating student success in obtaining a degree or certificate, or transferring to a four-year college or university? Are these the only positive outcomes the state should track? Matriculation services seek to help new community college students make informed decisions about their goals and develop an appropriate course of study. Should these more discrete goals be incorporated into state-level performance indicators or be designated a responsibility of a system office?
- Would refining the Commission's performance indicators to reflect student participation in support programs justify any additional workload incurred by the public systems in adding this information to the data reported under the provisions of Assembly Bill 1570? AB 1570 requires UC, CSU and the community colleges to report identified enrollment data to the Commission to support longitudinal studies of educational outcomes. This additional data would help the Commission understand why certain outcomes occur and how state policy and fiscal decisions could contribute to improved outcomes.

Question 4
Is California higher education making significant and lasting contributions to the state's economic, civic, and social development?

Postsecondary education is often touted as a key economic driver and source of innovation, as well as a contributor to the quality of life in California. Each system of postsecondary education makes unique

contributions to the state's economic and civic culture and should be measured accordingly. Performance measures should assess the aggregate impact and importance of postsecondary education and its contributions toward meeting the critical economic and social challenges facing California.

Education and economics in California have never relied more closely on each other than they do today. This connection will only increase. Educational attainment matters for California because the state's human capital is a key advantage that must be maintained and improved for the state to remain competitive. If California is to keep its economic vitality, it will depend on the knowledge, skills and innovations of its people. Accomplishing this involves investments in, and partnerships among, education, economic development and workforce preparation. Being competitive in the "knowledge-based" global economy demands a responsive, efficient education system. By responding to changes in the economy and to the needs of students, that system will add value to the economy.

Performance Indicators

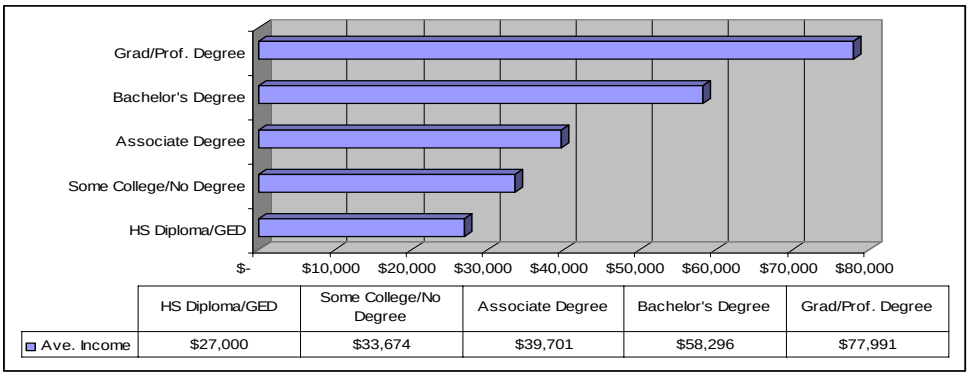
The Commission examined three measures to assess the extent to which California's public colleges and universities have contributed to the state's economic, civic, and social development. These measures included numbers of degrees awarded in selected areas of workforce need; educational attainment of the population; and per capita income by educational attainment.

- Between 1995 and 2000 California imported 224,000 people with bachelor's degrees and 141,000 with advanced degrees to fill jobs. Presumably, California's economy generated many more jobs requiring degrees than the number of qualified degree holders in the state; employers had to recruit out-of-state workers or move the work to other states or countries. However, it is difficult to know with any certainty if the inflow of educated workers was a result of an insufficient supply of degree holders in California. In that time period, CSU and UC awarded more than 100,000 bachelor's and advanced degrees annually, a total of well over 500,000. California's independent colleges and universities also awarded a significant number of degrees in this time period. It is conceivable that the imported workers had degrees in areas sought by employers whereas California-produced degree holders received their degrees in areas with less employer demand.[14]
- There are several occupations of high priority to California that require technical skills that only a few college disciplines can satisfy. The Commission has been able to assess the adequacy of degree production in these areas and has concluded that the state is not producing enough graduates in these areas to meet the state's needs.[11]
  - The demand for computer professionals is strong and cannot be satisfied by new California college graduates alone. In 2005, job openings approached 15,200, while baccalaureate graduates or higher from public and independent colleges and universities totaled just less than 8,600, leaving a shortfall of 6,600. If the number of advanced degree recipients is subtracted from this number, because many of them already had bachelor's degrees in the field, the net deficit is more than 9,200.
  - Engineering professions in California may also be facing a similar shortfall of qualified candidates. In 2005, openings for engineers created by growth and departure of current employees totaled more than 9,400. At that time California colleges conferred 11,150 new bachelor's and advanced engineering degrees. However, to the extent that 4,902 advanced degree recipients already had bachelor's degrees and were working in California, only 6,250 new engineers were produced, leaving a shortfall of roughly 3,000 qualified engineers for the 9,400 openings.

- — In 2005, California had more than 11,000 job openings for nurses. That same year California colleges and universities graduated just over 10,400 nurses, leaving a shortage of about 600. California has had a long-term shortage of nurses. The reduction in the supply–demand gap is largely attributable to legislative and administrative attention. A lesser imbalance exists for pharmacists, with a shortfall of 400 in 2005.
- — Projections are that California needs 20,000 to 22,000 teachers annually through 2014 to fill new openings and replace departing teachers. In the 2004–05 academic year, 4,486 teachers were awarded credentials. Without substantial increases in the credentialing of new teachers, the gap between newly-credentialed teacher and job openings will exceed 16,000 annually.

- California's workforce is better-educated than the nation as a whole. However, the educational attainment of California's population is growing more slowly than the national average and when compared internationally, posing a potential threat to the state's long-term economic competitiveness.[12]
  - — About 41% of California's 45- to 64-year-olds have at least an associate level degree, compared with 38% of the 35–44 age group and only 36% of the 25–34 age group. Continuation of this trend will result in a less well-educated workforce. Some employers will have to import qualified workers or move jobs to an area with a better supply of qualified workers.
  - — Overall, the educational attainment of Californians increased between 1990 and 2005. The proportion of the population aged 25–64 with an associate degree or higher increased from 34% to 39%, while the proportion with less than a high school education declined from 21% to 19%.
- While educational achievement is improving for all ethnic groups, there is a disparity in attainment based on ethnicity.[12]
  - — In 2005, about half of Whites and 59% of Asians between 25 and 64 years of age had an associate degree or higher, compared to 34% for Blacks, and 15% for Latinos, the fastest growing group in California.
  - — With the exception of Latinos, more men than women aged 25–64 had a bachelor's degree or higher in 2005. Among Whites, nearly 42% of men aged 25–64 had a bachelor's degree or higher, compared to 40% of women. For Asians 51 % of men had a bachelor's degree or higher compared to 48% of women. More Black men (22.4%) than women (22.1%) held a bachelor's degree or higher. Latinos were the only group where women between the ages of 25 and 64 were more likely than men to have a bachelor's or higher degree: women 10.2%, and men 9.6%. For American Indians and Alaskan Natives, 21% of men had a bachelor's or higher degree, compared to 15.5% of women. These trends are being reversed, given that more women than men have been enrolling in college.
  - — Educational attainment by gender for younger populations presents a different picture. In all racial/ethnic groups, among people aged 18 to 25, substantially more women than men have completed a bachelor's or higher degree in 2005: Whites – men 10%, women 13%; Asian and Pacific Islander – men 14%, women 20; Blacks – men 4%, women 5%; Latinos – men 2%, women 4%; and American Indian and Alaskan Native – men 7%, women 13%.
- College attendance contributes to income growth and completing a degree increases the income benefit of college. The benefits of educational attainment vary by gender and ethnic categories.[13]

Display 5 — Per Capita Income by Educational Attainment, 2005



	HS Diploma/GED	Some College/No Degree	Associate Degree	Bachelor's Degree	Grad/Prof. Degree
Ave. Income	$27,000	$33,674	$39,701	$58,296	$77,991

— The benefits of educational attainment for men are higher for men than for women in California. But income data show the ratio is declining over time. Males with a bachelor's degree earned 61% more than females on average in 1990, but by 2005 this dropped to 45%.

— In 2005, Whites with a bachelor's degree in California earned 17% more than Blacks and 40% more than Latinos. This is better than the national equity gap for Blacks. But for Latinos, pay inequities appear to be growing. In 1990, Whites with a bachelor's degree earned only 30% more than Latinos with a bachelor's degree. Yet, college still provides a greater financial reward for Latinos, Blacks, and Asians. The financial return for a bachelor's degree for Latinos (2.46), Blacks (2.10), and Asians (2.10) are all greater than the financial return of education for Whites (1.93).

Limitations and options for further refinement

These measures emphasize the importance of educational attainment, both to the individual and to the state, at least as measured by per capita income differences by educational attainment. Higher incomes provide people with the financial capacity to establish lifestyles of choice and actively participate in the maintenance of California's economy. Higher income also increases state revenues through sales and income tax. These benefits strongly suggest that state policy should continue to encourage high levels of educational attainment by California's residents.

The measures also highlight the importance to California's economic competitiveness of monitoring the extent to which the need for workers with degrees and credentials in specified fields is being matched by degrees awarded in these areas by California's colleges and universities. Shortages in some fields, such as computer technology, nursing, engineering, and teaching, are well known. Closing the gap in production of teachers is particularly critical because teachers are essential to the process that leads to degree attainment and job readiness. The absence of data on the transition of graduates of California's educational system into the workforce, however, limits the utility of these performance measures as a foundation for anticipating areas of shortage between workforce needs and qualified workers. Refining performance measures to track transition from education to the workforce would provide valuable information to policymakers who seek to ensure that proper incentives and support is provided to encourage Californians to pursue an education consistent with state needs for a qualified workforce. It would also strengthen the justification for colleges and universities seeking to expand or alter programs in response to documented workforce needs.

The Commission's assessment reveals an absence of measures on how well postsecondary education contributes to civic and social development. Likely candidates for measures in these areas — voting behavior, volunteerism, charitable contributions — are not outcomes that are produced predominately or

exclusively by postsecondary education. They are just as likely to be fostered in K-12 education, family or neighborhood values, or religious institutions. Consequently, it may not be possible to develop useful measures that can be used to evaluate postsecondary education institutions and for which reliable data are readily available. Some additional issues and questions that emanate from assessment of these measures include the following:

- Given the obvious importance of educational attainment to the state's economic competitiveness and fiscal health, should policymakers consider a goal that addresses not only the extent to which the state provides adequate opportunities for people to enter college prepared to succeed, but also opportunities to successfully enter the workforce? This would require attention to be focused on the skills besides those required for college success, if any, that are needed for success in the California workforce. Once identifying those skill sets, colleges and universities would be required to revise teacher preparation programs as needed to ensure that their graduates know how to develop these skills in their students. Should this be deemed desirable, it would also require development of measures that track performance of graduates on licensure or other exams required for entry into some jobs and/or survey data on employer satisfaction with and assessment of new employee performance.
- Statewide efforts to align production of college graduates with degrees in selected fields of high state priority are an explicit acknowledgement of public colleges and universities as an instrument of public policy. What is the appropriate balance between using policy and fiscal actions to influence curricular offerings and student choices with the freedom accorded to public college and university systems to organize programs consistent with their missions?
- Most benefits from education come from actually completing a diploma, certificate, or degree, suggesting that the state should develop policies and practices that promote completion of educational programs by public school and college students. Available data indicate that California is less successful at facilitating this outcome with its Latino population than with any other group. Identifying more effective ways of promoting and supporting educational attainment of Latino residents is imperative to raise overall educational attainment levels. It would also contribute to stabilization of jobs in the state through the provision of an ample supply of qualified workers for current and emerging jobs.
- Postsecondary education provides additional contributions to economic development through the research done at universities. Technology-assisted enhancement to workforce productivity, inventions and discoveries that lead to emergence of new jobs and employment of highly educated individuals represent additional contributions. The performance measures examined by the Commission do not include measures of such contributions. Is there sufficient value added to expanding the measures to include these contributions or this a responsibility better left to each system office?

Concluding Observations

For decades, California has enjoyed its reputation as a state with one of the most accessible and affordable systems of public postsecondary education in the nation, if not the world. The University of California is viewed as a premier public research university that has advanced the frontiers of knowledge and has been a major contributor to the emergence of the technology and knowledge sectors of California's economy. The California State University has also established a place of eminence for its focus on providing high quality education for talented Californians who might otherwise not enroll in a four-year college or university. It has done so by paying particular attention to building partnerships with local schools and community colleges and emphasizing the application of knowledge in the workplace.

The California Community Colleges have been hailed as the linchpin to California's public commitment to broad college access by providing an opportunity for enrollment to anyone who desires and can benefit from instruction beyond high school. California's public postsecondary education system is complemented by high quality independent colleges and universities and a large number of private, for-profit colleges providing options for job preparation and degrees.

For the past two decades, state policymakers have been increasingly concerned about the state's capacity to continue a level of support that preserves both broad access and high quality in public colleges and universities. Several conditions have led to these concerns

- Voter initiatives constraining how and how much state revenue is generated annually and dictates how those revenues must be spent.
- National studies showing that while California remains a leader in college access and affordability, it trails most other states in the proportion of its students who successfully graduate.
- Decreasing General Fund support for covering portions of the costs of public colleges and universities results in increasing costs to students.
- Steady growth and greater diversity in California's population, which produces new challenges for the entire public education system.
- Bifurcation in California's workplace: The greatest growth is occurring in retail and food service, where wages are low; and knowledge-intensive sectors, which provide higher incomes but also require higher levels of educational attainment.

In this environment, the Commission believes policymakers are justified in broadening the state's commitment from broad college access to equally emphasizing the success of those students who enroll. The Commission's development of performance measures is intended to provide useful information to policymakers about how well public colleges and universities are meeting the needs of the public (see Appendix C). Their utility will increase when the state adopts a clear set of goals to which these performance measures can be applied. Although the community colleges, CSU and UC have each developed their own accountability efforts, these efforts do not tell policymakers whether the state as a whole is on track to produce enough college-educated individuals to meet workforce needs and to compete in today's global information economy. They also fall short of reflecting statewide goals that cut across all postsecondary education systems. This is understandable in that each system's governing board is charged with the stewardship and nurturance of their own system and the missions that have been statutorily or constitutionally designated to them.

The Commission is well-positioned to gather, analyze and report data on outcomes of California's postsecondary education system. Much of these data are provided to policymakers and the general public by the Commission's website and through its reports. Commission staff have documented increasing use of its website from a variety of in-state and out-of-state users.

However, the Commission's ability is limited in explaining why observed outcomes have occurred. Detail on specific aspects of students' progress through public education is spotty at best. The absence of a comprehensive student information system for public schools, for instance, precludes the Commission from determining the extent to which specific experiences — exposure to highly qualified teachers, use of technology, early introduction to research activities, or participation in student support programs — help students.

More understanding of why certain desired outcomes do or do not occur for all students could impact the advice the Commission provides to the Governor and Legislature. It also opens up the possibility of designing ways to alter these outcomes, and could inform refinement of policy priorities for education.

Once the legislature and administration adopt statewide goals for postsecondary education, it may be possible for the Commission to refine its AB 1570 data, collected as part of its longitudinal database, to better document how public colleges and universities are facilitating student success and timely progression to graduation. Completion and implementation of the K–12 student information system would also be a great enhancement to the Commission's work.

While colleges and universities have a significant responsibility to provide high-quality teaching, students play a significant role in how much they learn by their choices. A variety of factors influence student choices, ranging from institutional and curricular requirements to personal circumstances and perceived cost-benefit relationships. Performance measures in an accountability framework should be sensitive to the effect of student choices on educational outcomes and include discrete enough measures to capture positive outcomes short of degree or certificate completion. Similarly, as policymakers consider the appropriate level of state investment in postsecondary education and how costs should be divided between public sources and students, they should factor in the possible impact of their decisions on students' perception of affordability and choices of college attendance.

The Commission has used the above performance areas as a framework to guide its development of performance measures for postsecondary education. Recommended refinements to these performance areas are contained in a separate Commission report, *Moving Forward: The Evolving Performance Assessment Framework*. They may or may not be appropriate for adoption as statewide goals. However they provide a solid foundation for policymakers to begin with in crafting appropriate statewide goals for a postsecondary education accountability system. The Commission stands ready to assist the policymakers in this effort.

Endnotes

Full titles of these reports are listed in Appendix B

1 www.cpec.ca.gov/completereports/2007reports/07-26.pdf

2 www.cpec.ca.gov/completereports/2007reports/07-04.pdf

3 www.cpec.ca.gov/completereports/2007reports/07-24.pdf

4 www.cpec.ca.gov/completereports/2007reports/07-28.pdf

5 Draft report, Adult Basic Skills Proficiency Levels — *link not yet available*

6 www.cpec.ca.gov/completereports/2007reports/07-20.pdf

7 www.cpec.ca.gov/completereports/2007reports/07-29.pdf

8 www.cpec.ca.gov/completereports/2007reports/07-05.pdf

9 www.cpec.ca.gov/completereports/2007reports/07-07.pdf

10 www.cpec.ca.gov/completereports/2007reports/07-06.pdf

11 www.cpec.ca.gov/completereports/2007reports/07-17.pdf

12 www.cpec.ca.gov/completereports/2007reports/07-11.pdf

13 www.cpec.ca.gov/completereports/2007reports/07-12.pdf

14 www.cpec.ca.gov/completereports/2007reports/07-18.pdf

Appendix A

Ethnic Parity Ratio, Undergraduate Population 18–24, 1997 to 2005

		Asian Pacific	Black	Latino	American Indian	White
1997	UC	2.5	0.5	0.3	0.9	1.0
	CSU	1.2	0.9	0.5	0.9	1.0
	CCC	0.9	1.0	0.7	1.1	1.0
	TOTAL	1.2	0.9	0.6	1.1	1.0
1998	UC	2.4	0.5	0.3	0.8	1.0
	CSU	1.2	0.8	0.5	0.9	1.0
	CCC	0.9	1.0	0.7	1.0	1.0
	TOTAL	1.2	0.9	0.6	1.0	1.0
1999	UC	2.4	0.5	0.3	0.7	1.0
	CSU	1.1	0.8	0.5	0.8	1.0
	CCC	0.8	1.0	0.7	0.9	1.0
	TOTAL	1.1	0.9	0.6	0.8	1.0
2000	UC	2.6	0.5	0.3	1.0	1.0
	CSU	1.2	0.8	0.5	1.2	1.0
	CCC	1.0	1.0	0.7	1.6	1.0
	TOTAL	1.2	0.9	0.6	1.4	1.0
2001	UC	2.6	0.4	0.3	0.9	1.0
	CSU	1.2	0.8	0.5	1.0	1.1
	CCC	1.0	1.0	0.7	1.3	1.1
	TOTAL	1.2	0.9	0.6	1.2	1.1
2002	UC	2.7	0.4	0.3	0.8	1.0
	CSU	1.2	0.7	0.5	0.9	1.1
	CCC	1.0	1.0	0.7	1.1	1.1
	TOTAL	1.3	0.8	0.6	1.0	1.1
2003	UC	2.8	0.4	0.3	0.7	1.0
	CSU	1.4	0.7	0.5	0.9	1.1
	CCC	1.1	0.9	0.7	1.0	1.0
	TOTAL	1.3	0.8	0.6	0.9	1.0
	UC	2.8	0.4	0.3	0.6	1.0
	CSU	1.4	0.7	0.5	0.8	1.1
	CCC	1.0	0.9	0.7	0.9	1.0
	TOTAL	1.4	0.8	0.6	0.9	1.0
2005	UC	2.9	0.4	0.3	0.6	1.0
	CSU	1.2	0.8	0.5	0.7	1.1
	CCC	1.0	1.0	0.7	0.9	1.0
	TOTAL	1.3	0.8	0.6	0.8	1.0
2006	UC	2.9	0.4	0.3	0.5	1.0
	CSU	1.2	0.8	0.5	0.7	1.1
	CCC	1.0	0.9	0.7	0.8	1.0
	TOTAL	1.3	0.8	0.6	0.7	1.0

Parity Ratio compares race/ethnicity of undergraduates aged 18–24, with ethnic composition of the state population, 18–24, ethnic composition.

Appendix B — Commission Reports on the Accountability Framework

General

Next Steps in the Development of the Commission's Higher Education Accountability Framework
www.cpec.ca.gov/completereports/2007reports/07-08.pdf

Moving Forward: The Evolving Performance Assessment Framework

Preparation for college entry and success

College-Going Rates: A Performance Measure in California's Higher Education Accountability Framework
www.cpec.ca.gov/completereports/2007reports/07-04.pdf

Public Higher Education Performance Accountability Framework Report: Goal — College Readiness. Measure: Levels in English and Mathematics
www.cpec.ca.gov/completereports/2007reports/07-24.pdf

Public Higher Education Performance Accountability Framework Report: Goal — College Readiness. Measure: High School Proficiency Levels
www.cpec.ca.gov/completereports/2007reports/07-26.pdf

Public Higher Education Performance Accountability Framework Report: Goal — College Readiness. Measure: Percentage of the Population with High School Diplomas
www.cpec.ca.gov/completereports/2007reports/07-28.pdf

Public Higher Education Performance Accountability Framework Report: Goal — Student Preparation. Measure: Adult Basic Skills Proficiency Levels

Affordability and accessibility

Developing a Statewide Higher Education Affordability Policy
www.cpec.ca.gov/completereports/2006reports/06-10.pdf

Public Higher Education Performance Accountability Framework Report: Goal — Access and Affordability Measure: Average Indebtedness of Graduates at Two- and Four-Year Colleges and Universities
www.cpec.ca.gov/completereports/2007reports/07-19.pdf

Accountability Framework: Goal — Access and Affordability Measure: Percentage of Racial Representation in Systems of Higher Education Compared to Racial Representation in the State
www.cpec.ca.gov/completereports/2007reports/07-20.pdf

Public Higher Education Performance Accountability Framework Report: Goal — Access and Affordability. Measure: Percent of Unmet Need in Paying the Cost of College
www.cpec.ca.gov/completereports/2007reports/07-29.pdf

Student success

California Higher Education Accountability: Goal — Student Success -- Measure: Full-Time/Part-Time Enrollment Ratio
www.cpec.ca.gov/completereports/2007reports/07-05.pdf

California Higher Education Accountability: Goal — Student Success -- Measure: California Community College Students' Degrees and Certificates Awarded and Successful Transfers
www.cpec.ca.gov/completereports/2007reports/07-06.pdf

Accountability Framework: Goal — Student Success How Are California's Public College Students Doing?
www.cpec.ca.gov/completereports/2007reports/07-07.pdf

Contributions to California's economic, civic, and social development

Public Higher Education Performance Accountability Framework Report: Goal — Contributions to Economic, Civic, and Social Development. Measure: Educational Attainment of Population
www.cpec.ca.gov/completereports/2007reports/07-11.pdf

Public Higher Education Accountability Framework Report: Goal — Contributions to Economic, Civic, and Social Development. Measure: Per Capita Income by Educational Attainment
www.cpec.ca.gov/completereports/2007reports/07-12.pdf

Accountability Framework: Goal — Contributions to Economic, Civic, and Social Development. Measure: Workforce Preparation - Degrees Awarded in Selected Areas of Projected Workforce Demand
www.cpec.ca.gov/completereports/2007reports/07-17.pdf

Accountability Framework Goal — Contributions to Economic, Civic, and Social Development. Measure: How is California Doing?
www.cpec.ca.gov/completereports/2007reports/07-18.pdf

Public Higher Education Performance Accountability Framework Report: Goal — Contributions to Economic, Civic, and Social Development. Measure: Policy Options
www.cpec.ca.gov/completereports/2007reports/07-27.pdf

Appendix C — Commission Policy Options

Some of the Commission reports on performance measures used as references for this report contained policy recommendations adopted by the Commission. These are summarized below.

Student success

- The Commission encourages institutions to explore the feasibility of establishing specific colleges on university campuses which enroll exclusively part-time students. Such colleges could provide students with the following benefits:
  - The expansion of PACE (Program for Adult and Continuing Education) programs to offer a greater variety of degree options.
  - Administrative and counseling offices that are open during weekend and evening hours so working adults are able to utilize services according to their schedules.
  - Customized counseling that helps students understand the timeline and costs of their education based on the number of units they are able to complete each term.
  - Being in a cohort of students progressing through the same degree program provides a peer support system, similar to the experience of students enrolled in small graduate programs.
- The Commission recommends that policymakers explore equity issues associated with part-time enrollment; specifically, why students, who may have limited resources to pay for school and do not have the luxury of attending full-time, end up paying more for their education? Although some may argue that higher relative costs for part-time students should be an incentive for them to progress more quickly, many part-time students do not have the option to attend full-time and should not be penalized. It is important that university systems and policymakers view the goal of part-time enrollment as one that expands the opportunities of students and ensures that it is not a hindrance or an obstacle to degree completion.

Contributions to California's economic, civic, and social development

- **Increase the Productivity of Existing Systems and Campuses -** To ensure that California has a workforce that is competitive nationally and internationally, it must upgrade the education of workers already in the workforce as well as prepare future workers. This will take innovative strategies and, in the Commission's view, new incentives.
- **Invest in upgrading the education of existing workers particularly those in the age groups with lower attainment -** Most of California's workers will still be in the state's workforce in ten years. As the data indicate, there are a large number of Californians who have some college education or an associate degree. The data also suggest that younger age groups, Latinos and Blacks, have earned fewer degrees than Whites and Asians. Given these trends, it would be reasonable for the State to make a special effort to encourage existing workers to upgrade their educational levels and to complete degrees. This will increase the quality of the existing workforce and mitigate inequality among groups. Further, increasing the educational attainment of California's workers eliminates the need to import workers from other states and countries.
- **Report outcomes of graduates entering the labor market -** Managing California's higher education systems includes knowing what becomes of its graduates. Without a systematic approach to track the experience of graduates, policymakers must rely on sporadic studies of small groups and anecdotes to assess the success of its students … Accurate monitoring of student outcomes produces valuable data for policy development and for assessing performance at the system, campus or program level.

- **Track graduates from California postsecondary public education -** Properly measured, the financial reward for education can be a valuable tool for measuring the effectiveness of education. Lawmakers should consider legislation providing the Commission with the authority and the resources to collect and compile data on the experiences and outcomes of students from kindergarten to retirement.
- **Focus resources on persuading students to get a degree -** Because the financial reward for obtaining a certificate or degree is far greater than the reward for merely attending some college, it seems natural to expend effort increasing the percentage of students who graduate. Lawmakers should use their powers to enact laws and to fund public programs to leverage higher education institutions to put greater emphasis on increasing capacity and efficiency. This effort would ensure that graduates of the state's K-12 system are prepared for success in college and are able to fill the high-paying jobs that employers now fill with those coming to California from other states or countries.
- **Target attention on eliminating gender and race income equity gaps -** Data show that higher education can be a powerful tool to eliminate income inequities linked to race and gender. Yet the data also show that success has not been uniform across all segments of California's diverse population. The State's lawmakers should focus continued attention on income inequities and work with the Commission to research and identify higher-education strategies that will enhance college as a tool to remedy income disparities based on gender or race.
- **Increase the Number of Californians Completing Degrees -** To achieve this goal, policymakers have three strategic options they can employ singularly or in combination:
  - Expand the number of campuses in the three public higher education systems;
  - Invest to increase the capacity of existing campuses to serve more students; and
  - Increase the productivity of the existing campuses, which means producing more graduates from the same number of enrollments.
- Invest in upgrading the education of existing workers particularly those in the ethnic and age groups with lower attainment - The Commission sees several policy approaches to accomplish this goal that deserve exploration:
  - The state and postsecondary education systems should develop a campaign to work with various industry and union groups to encourage employers to support their employees to complete degrees. Policies that provide tuition and fee subsidies or time off to attend class could be encouraged. Larger employers could "host" degree completion programs on their worksites by providing classroom space.
  - The Commission recommends that the Legislature fund a program to identify model self support degree completion programs in UC and CSU extension programs that cater to the large population of incumbent workers with associate degrees or "some college," and to disseminate these best practices. In addition, the Legislature should fund a similar program in community colleges to identify model programs to allow employed people with some college to complete an associate degree.
  - The large number of California workers who have attained some postsecondary education but have limited English proficiency could be a target for other postsecondary programs. These workers may have good technical skills but their success is limited by a lack of fluency in English … The Commission recommends the Legislature fund an initiative in this area to identify and disseminate best practices throughout the system and promote employer and union support for such programs.

Track graduates and leavers of public education into the labor market - Managing California's higher education without knowing what becomes of its graduates and leavers handicaps effective policy development and evaluation. Without a systematic way of tracking the experience of graduates, policy-makers must rely on sporadic studies of small groups and anecdotal stories to assess the success of policy … . The Commission recommends that the Legislature amend the law to designate the California Postsecondary Education Commission as the operating entity for an automated follow-up system for public higher education and training, in which all public higher education institutions are required to participate.