California Postsecondary Education Commission

Public Higher Education Performance Accountability Framework Report:
Goal - College Readiness
Measure: Levels in English and Mathematics

December 2007

As part of its work in developing a performance accountability framework for higher education, the Commission conducted an analysis of student performance on standardized tests at the high school and middle school levels.

National test results show that California is behind most other states in giving its students a high school education of the quality that prepares them for success at college.

State figures show that, within California, Latino and African American students and students from schools in poor neighborhoods tend to have low test scores, indicating that the state is not delivering opportunities to qualify for higher education equally to all of its residents.

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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.

Commission Report 07-24

Introduction

One of the goals of California's public higher education system is to give all high school students, regardless of their background, the opportunity to enter and succeed at a college or university. Providing students with a high school education that prepares them for college-level work is important for meeting this goal. Although students can refresh their skills at community colleges or take remedial classes while enrolled at a university, those who are well prepared by the education they get at high school are more likely to qualify to enter colleges and universities and complete their studies successfully and in a timely manner.

Performance on standardized tests is one indicator of how well California high schools are preparing students for college. Proficiency in English and mathematics is an essential grounding for college work in any discipline, so performance in these subjects has the widest applicability for assessing preparation for college.

The California Standards Test

The most comprehensive testing program in California is the California Standards Test (CST). This program consists of tests in a variety of subjects taken by public school students in grades 2 through 11. All students take the CST in English/Language Arts in grades 2 through 11 and the Mathematics test in grades 2 through 7.

Most of the other tests are taken only after a student completes a particular course, so the results are not a good measure of the overall level of student proficiency in any given grade level. For example, the Algebra II test was taken only by 24% of 11th graders and 21% of 10th graders, so the results do not

give an indication of the proportion of the overall high school class who are proficient in Algebra (Display 1).

The goal of the State Board of Education in the CST program is that all students should score at the proficient level or better.

English/Language Arts. This test assesses vocabulary, ability to understand written English, and grasp of the principles of clear writing.

Scores in this test have advanced in recent years. Overall, 37% of 11th graders scored at the advanced or proficient level, compared with 32% in 2003 (see Display 2 on the next page).

There are striking differences in test results between ethnic groups. Only 22% of African American students scored at the proficient or advanced level in 2007. This is up from 2003, but the race/ethnicity gap has widened because scores for other ethnic groups, particularly Asians, have increased more strongly. In 2007, 57% of Asian 11th graders 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 African Americans.

Test scores are also 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-income and high-income areas.

Schools in low-income areas have a different pattern of ethnic variation, with Asian students scoring lower than Whites. However, Asians have done relatively well recently, with the percent scoring advanced or proficient increasing by 7 percentage points to 34% between 2003 and 2007.

Progress for African Americans lagged that of other students. Only 16% of African American 11th graders at schools in low-income areas scored at the proficient or advanced level in 2007.

Display 3 on page 4 shows more details of the 2007 test scores. As in most other measures of educational performance, the results show a gender gap, with female students doing better than male students. Overall, 41% of female students scored at the proficient or advanced level, compared with 33% of males.

DISPLAY 1 - Percent of Students Tested in English and Mathematics

Test	Percent of …		
	7th graders	10th graders	11th graders
English/Language Arts	99%	96%	96%
Mathematics	94	*n*	n
Algebra 1	4	28%	16%
Algebra II	<1%	21	24
Geometry	<1%	31	1
Summative math	*n*	3	20
Integrated math 1	*n*	<1%	1%
Integrated math 2	*n*	<1%	<1%
Integrated math 3	*n*	<1%	<1%

Percent of public school students taking the selected CST tests in 2007. Data from the California Department of Education.

n — Test not applicable for this grade.

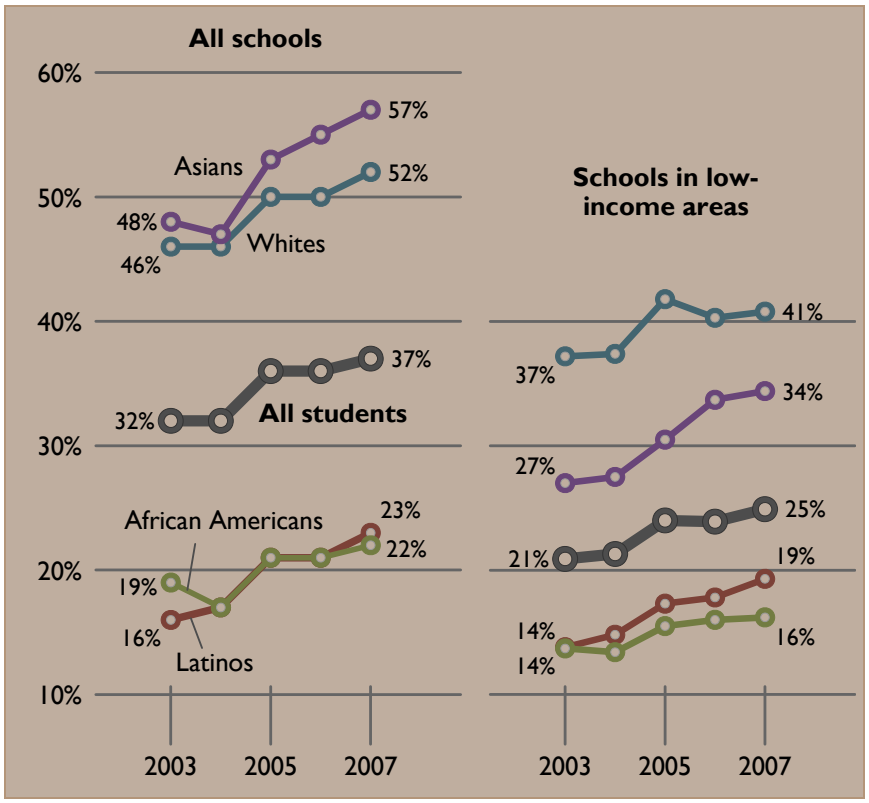
Public Higher Education Accountability Framework

The public's investment in higher education should be measured by outcomes. As the California's independent higher education planning and coordinating body, the Commission is in a unique position to assess performance without bias or conflict of interest. Under State law, the Commission is the only public agency with the data needed to assess student success across the University of California, California State University and California Community College systems. The Commission uses these data, coupled with other relevant State and national higher education data, to compile the performance assessment presented here. The Commission has put a priority on improving public confidence in the administration and delivery of public postsecondary education by increasing public knowledge of student outcomes, transparency of higher education decision making, and efficient achievement of a well educated and prepared workforce and population.

The percentage of students scoring at the basic level does not vary much between the categories of students. The differences show up more at the below basic and far below basic levels. Nearly half of 11th graders at schools in low-income areas scored below basic or far below basic. One-third of African Americans scored at the far below basic level. This is a sign of problems that go beyond preparation for college. These results show that many students in California are not getting an education at high school that prepares them for any form of skilled work.

Mathematics. California has no standardized test in mathematics taken by all high school students beyond the 7th grade. The Algebra and Geometry CSTs are taken only by students who have taken an Algebra or Geometry course. Consequently, the percentage scoring proficient is not an indicator of the overall level of proficiency of all students in the 10th or 11th grade.

DISPLAY 2 – Percent of 11th Graders Scoring Proficient or Better on the CST English/Language Arts



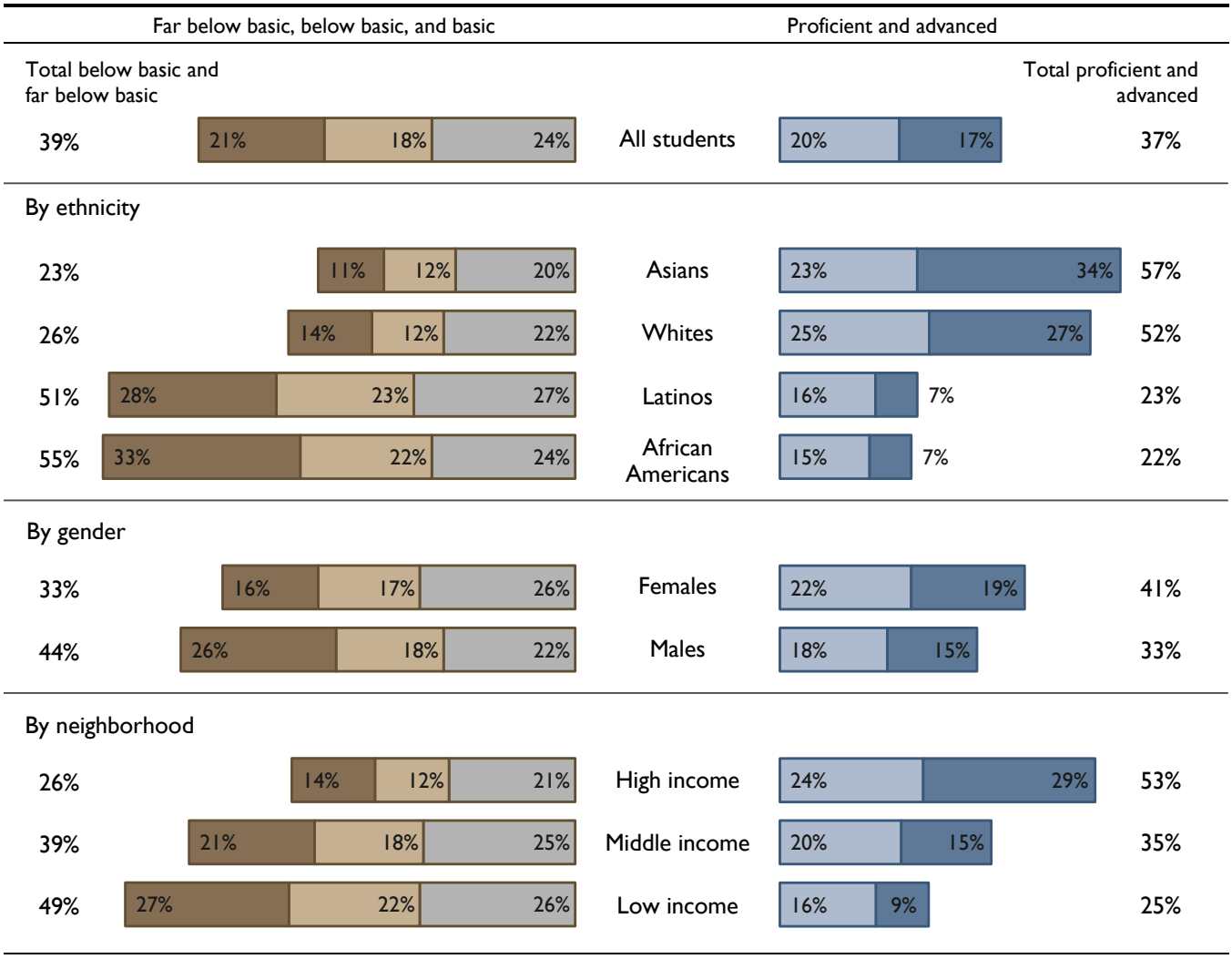
Commission calculations based on test data from the California Department of Education and income data from the 2000 U.S. Census.

The 7th grade Mathematics CST results can be used to show how the opportunity to prepare for college varies between racial/ethnic groups and between neighborhoods. This test is taken by all students and the results measure the overall proficiency level of 7th graders. Students who are behind at the middle school level will have difficulty in catching up at high school and reaching the level of proficiency needed at a college or university.

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 (see Display 4 on page 5). Although the overall proficiency level in this test is higher than the 11th grade English test, there is much more of a racial/ethnic gap. Only 22% of African Americans scored at proficient or advanced, compared to 69% of Asians.

DISPLAY 3 - Proficiency in English/Language Arts

11th graders in California public high schools, 2007



The neighborhood figures break down scores by local income levels. The low-income figures give results for students attending schools in areas where the median family income was below $44,000. About 30% of California public high school students attend schools in these areas.

The high income figures show results for the 30% of students attending schools in areas where median family income exceeded $65,000 and the middle income figures show results for the remaining 40% of students.

Income data from the 2000 U.S. Census.

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

Scores for all racial/ethnic groups have increased from 2003, but as in the 11th grade English test, progress for African Americans lagged that of other students. Only 15% of African Americans at schools in low-income areas scored at the proficient or advanced level in the 2007 7th grade mathematics test.

Comparisons with Other States

California can be compared with other states using test results compiled by U.S. Department of Education in the National Assessment of Educational Progress program. This program includes tests for 8th graders in reading and mathematics. The results are based on a sample of schools, so it is not possible to break down results by income level or by neighborhood. In California, the results are from about 300 schools.

Reading. In 2007, 22% of California 8th graders scored at the proficient and advanced level compared with 29% for the U.S. as a whole. Only five states had lower scores than California. California was the lowest of the 15 largest-population states (see Display 5 on page 6).

California has more English language learners than most states, but excluding these students from the comparison does little to change the picture. Only 26% of California 8th graders who are not English language learners scored at the proficient and advanced level. This puts California level with Georgia, but still in the bottom two of the 15 largest states.

Mathematics. California's scores are the lowest of the 15 largest states, with only 24% of 8th graders scoring proficient or higher.

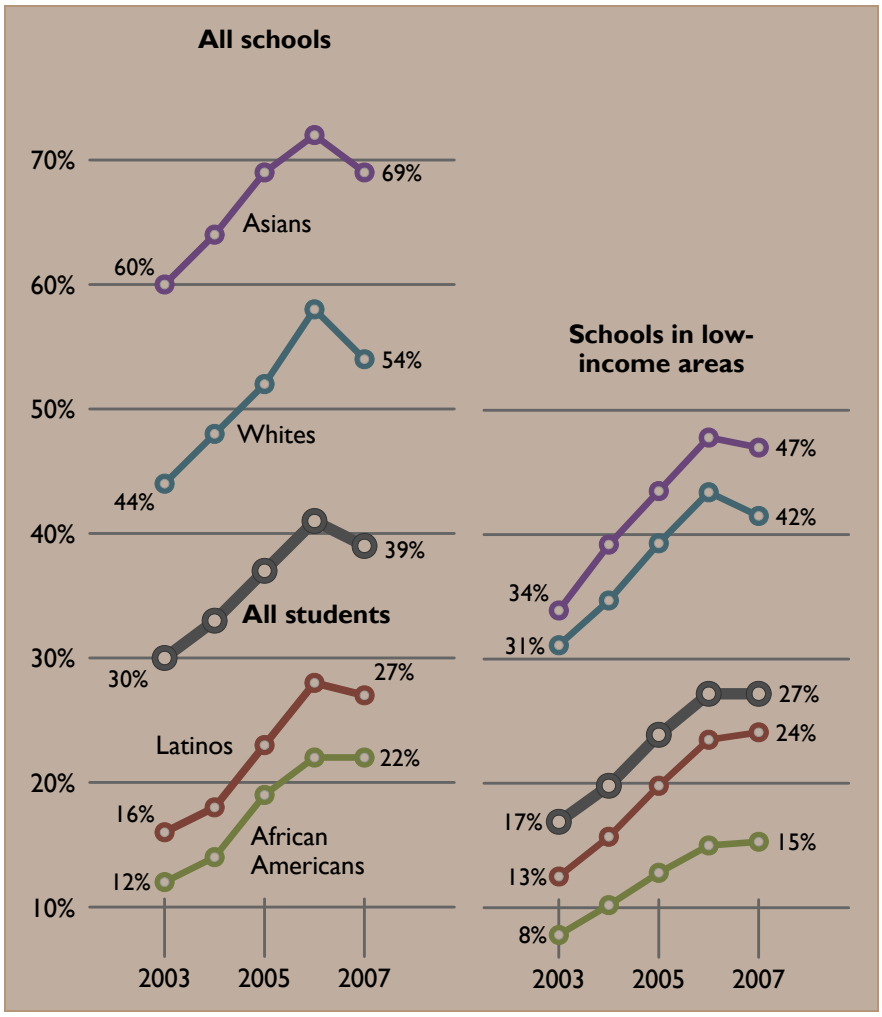
Restricting the comparison to 8th graders who are not English language learners raises the scores slightly. On this basis, California is level with Michigan and Florida, ahead of Georgia, but still behind most large industrialized states.

Next steps

This review shows that California has serious problems in preparing students for college. Middle school and high school students are doing poorly compared with students in other states. Within California, Latino and African American students and students from schools in low-income areas do not have the same opportunity to prepare for college as students from schools in more affluent areas.

The opportunity for all students to get a high school education that prepares them for success in postsecondary education is an impor-

DISPLAY 4 - Seventh Graders Scoring Proficient or Better on the CST Mathematics



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

tant goal for California. As the Commission moves forward with its Performance Accountability Framework, it will use the insights gained in this overview of test results in two ways.

First, the Commission will conduct a more detailed examination of how test performance varies between schools, between neighborhoods, and between racial/ethnic groups. This analysis will allow the Commission to identify schools where students are doing better than would be expected given the type of neighborhood in which the school is located and the racial/ethnic composition of the school. The Commission will survey these schools to see what staff there can tell us about preparing a broader cross section of high school students for college.

The Commission will also review the way that test results fit in the Performance Accountability Framework. Student preparation for college can be assessed using a variety of measures, such as high school graduation rates, performance in the California High School Exit Exam, enrollments in college preparatory courses, and scores in college admission tests. Some of these measures are discussed in other reports in the Commission's performance accountability series. The Commission is now in a position to compare these measures and see how they can be used together to monitor progress toward the goal of giving more students the opportunity to enter and succeed in college.

DISPLAY 5 Proficiency of 8th Graders: Largest 15 States, 2007

