California Postsecondary Education Commission

The Impact of the High School Academic Performance Index (API) on Student Eligibility

March 2006

Increases in school API play a major role in the probability that a student will become UC and CSU eligible. However the increase in eligibility for Latino students occurs at a much lower rate than it does for all other racial/ethnic groups.

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The Commission advises the Governor and 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 06-03

Impetus for the Study

The Commission's previous studies regarding student eligibility and college going rates determined that gaps exist in eligibility and enrollment rates among racial/ethnic groups. White and Asian students are eligible for the University of California (UC) and California State University (CSU) at much higher rates than Latino and African American students. The result of this eligibility gap, naturally, is lower *enrollment* rates to UC and CSU for Latino and African American students. Although in some cases these numbers are improving (see Figure 1 comparing 1996 rates to 2003 rates), the different eligibility rates between racial/ethnic groups are an issue of concern.

Display 1: Eligibility and Enrollment Rates for California Public High School Graduates for 1996 and 2003

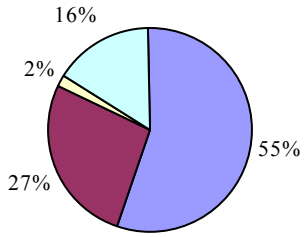
	University of California		California State University	
	Eligibility Rate	Enrollment Rate*	Eligibility Rate	Enrollment Rate*
African American				
1996	2.8%	3.6%	13.2%	10.5%
2003	6.2 ↑	3.4 ↓	18.6↑	9.0 ↓
Latino				
1996	3.8	3.2	13.4	7.6
2003	6.5 ↑	3.3 ↑	16.0 ↑	7.0 ↓
Asian				
1996	30	19	54.4	13.5
2003	31.4 ↑	19.8 ↑	47.5 ↓	13 ↓
White				
1996	12.7	5.8	36.3	7.1
2003	16.2 ↑	5.7 ↓	34.3 ↓	8.5 ↑

*Percentage of recent public high school graduates enrolling as entering freshmen.

Display 2: Attendance at Low, Average, and High Performing Schools by Race/Ethnicity

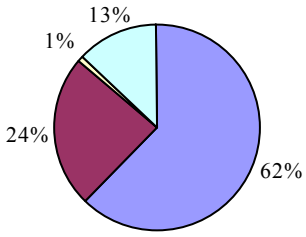
AFRICAN AMERICAN

SCHOOL PERFORMANCE (API)	PERCENT
Low Performing	55
Average Performing	27
High Performing	2
No API Available	16



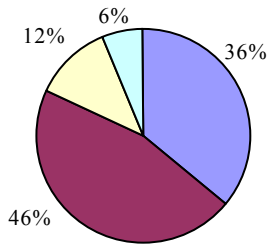
LATINO

SCHOOL PERFORMANCE (API)	PERCENT
Low Performing	62
Average Performing	24
High Performing	1
No API Available	13



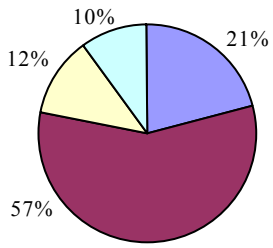
ASIAN

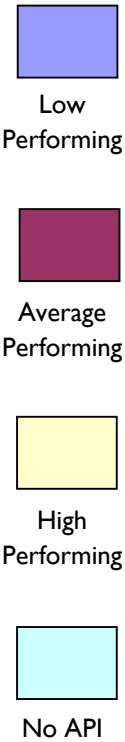
SCHOOL PERFORMANCE (API)	PERCENT
Low Performing	36
Average Performing	46
High Performing	12
No API Available	6



WHITE

SCHOOL PERFORMANCE (API)	PERCENT
Low Performing	21
Average Performing	57
High Performing	12
No API Available	10





Preliminary analysis of possible factors affecting eligibility suggest that African American and Latino students are far more likely to attend low-performing schools than other racial/ethnic populations (see Figure 2). The research question driving this study is the question of impact of API on student eligibility; more specifically, do eligibility rates for under-represented students increase as school API increases? When comparing racial/ethnic populations at "low performing" schools with the same populations at "medium" and "high" performing schools, do the eligibility rates for racial/ethnic groups increase at the same rate? In other words, does a rising tide raise all boats?

Using a quantitative approach, this paper examined data from 12,757 student transcripts, randomly collected from 711 public high schools, in order to address the following research questions:

1. What is the relationship between UC and CSU eligibility rates and high school API?
2. When comparing racial/ethnic populations across various API and income levels, do eligibility rates increase at the same rate for all populations as API and income increases?

A number of factors are presumed to affect student academic achievement and university eligibility, including student cognition, socioeconomic status, parental educational attainment, quality of instruction, and various school performance and demographic measures. Knowledge of the most influential factors of student eligibility can assist researchers and policymakers in devising solutions to the problem of inequality of opportunity in higher education. Some factors are difficult to measure, and we will likely never pinpoint all causal factors of eligibility. However, by looking at the more quantifiable variables, such as school API and income, we can begin to understand which variables, among those available, are the most influential.

Findings

The key finding is that an increase in a school's API plays a significant and substantial role in the probability that a student will become UC and CSU eligible. However, the increase in eligibility for Latino students occurs at a much lower rate than it does for all other racial/ethnic groups.

- For African American, Asian, and White students, every 50-point increase in high school API elevates the chances of becoming eligible for UC by 28%, and CSU by 19%.
- For Latino students, every 50-point increase in school API elevates the chances of becoming eligible by only 11% for UC and 5% for CSU.

Additional findings indicate that:

- For every $10,000 increase in household income, student eligibility for UC increases by 5%. Income is not a significant factor in CSU eligibility.
- Males are eligible at a much lower rate than females: they are 31% less likely to become eligible for UC and 44% less likely to become eligible for CSU.

Policy Implications and Questions for Further Study

Many of the questions this study raises require the collaboration of secondary and postsecondary data sets and analytical expertise. As is the case with other policy issues in postsecondary education, answering student eligibility queries is best approached as a joint effort between K-12 and higher education institutions. Questions that arise and topics for further study include the following:

1. It is evident that factors other than school API are having an effect on eligibility for Latino students. Language barriers and the dissemination of information regarding college preparation are likely contributing factors to inequity in Latino eligibility even as API increases.
2. Conducting in-depth case studies of certain high schools may reveal why Latino students who come from higher API schools are not obtaining eligibility at the same rate as other populations. Why might some "high performing" high schools not be successful in producing university eligible Latino students?

3. African American students are demonstrating increasing rates in eligibility with increases in school API; however, their overall eligibility rates remain low. Perhaps despite strong performance of African American students in the highest API schools, those students in average and low performing schools are struggling to achieve eligibility, therefore depressing the overall rate.
4. The issue of male eligibility requires further examination. Are males from all racial/ethnic groups failing to become eligible at the same rate as female students, or are some groups specifically affected by this trend?

NOTE: It is possible that that the eligibility gap is not as severe as it appears and that students may be in close proximity to eligibility, perhaps only lacking completion of one of the requirements, such as taking the SAT. In the case of the Latino population, it could be that many bilingual students are not fulfilling the language requirement due to their proficiency in both English and Spanish. More study is needed to determine which requirements students are missing and for what reasons.

Research Methodology

This examination ran two separate logistic regression models: one with eligibility for UC as the dependent variable and the other dependent variable being eligibility for CSU. The independent variables for both models are the same: school API, median household income, school size, gender, and student race/ethnicity. In order to understand the way different racial/ethnic groups respond to fluctuations in API levels, an "interaction variable" is incorporated into the regression model. The interaction variable explains whether or not all racial/ethnic groups are achieving increased eligibility at the same rate with each 50-point increase in school API.

DEFINITION OF TERMS	
Academic Performance Index	For public high schools, API is calculated by weighing a school's performance on two different standardized tests. The majority of the API weighing comes from the results of the California Standards Test (CST), which consists of four subjects: English Language Arts, Mathematics, Science, and Social Science. The combined total of each of these subjects account for 80% of the API score. The other exam used to determine the API score is the California High School Exit Examination (CAHSEE). English Language Arts and Math sections of the CAHSEE are each valued at 10% (CDE, 2005).
Eligibility Rates	Student eligibility rates are based on the portion of students who qualify for first-time freshman admission to the California public universities. Many factors contribute to a student's eligibility status, including completion of specific high school courses and standardized test scores. Eligibility rates are higher than the percent of students who actually enter the university systems from public high schools because some students will choose to attend private or out-of-state institutions, attend community college, or choose a career path that does not require a college degree.
Logistic Regression	Logistic regression is a statistical model used to determine the likelihood that a casual relationship exists between one outcome measure, referred to as a dependent variable, and a set of explanatory factors, called independent variables. In logistic regression, the criterion or dependent variable (student eligibility, in this case) falls into one of two categories, "eligible" or "not eligible".