

THE RELATIONSHIP BETWEEN THE HIGH SCHOOL'S PERFORMANCE AND STUDENTS' COLLEGE ATTENDANCE RATES*

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Abstract

Declining college admission test scores during the 1970s raised concerns that America's primary schools were inadequately preparing students for college or the workforce. Rock's (1985) analysis of SAT scores indicated that seniors in 1980 scoring at the 50th percentile for vocabulary would have placed at the 41st percentile in 1972. Mathematics scores at the 50th percentile in 1980 were equivalent to scores at the 45th percentile in 1972.

1 NCPEA Publications



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2 Responding to Declining Achievement

Rock's (1985) study came on the heels of findings by a national commission tasked with evaluating educational quality in the United States ("*A Nation At Risk*," 1983). "*A Nation at Risk*" helped to crystallize a general sense that educational quality in the United States had eroded. As a response, commission members called for standardized tests to measure students' learning. It was a recommendation soon adopted across the country. By 1990, 47 states mandated that students be tested in mathematics, language arts/reading and writing (Coley & Goetz, 1992). Federal involvement in what historically had been a state and local enterprise reached something of a culmination in the "No Child Left Behind" (NCLB, 2001) regulations, which set standards, based on educational goals.

2.1 Documenting Educational Improvement in California

In 1999 California policy-makers settled on a set of academic content standards and implemented an assessment tool known as the Academic Performance Index (API). The API is a weighted numeric score ranging from 200 through 1000 and is calculated yearly using student test scores from California's Standardized Test and Reporting (STAR) program. Year-to-year changes in API scores are used as an index of progress in the schools' educational efforts.

2.2 College Admissions as an Improvement Criterion

Educational improvement can be documented many ways. Since a major portion of the labor force requires some level of post-secondary education (Hecker, 2005), advancement from high school to college is one of the more common measures. College preparation is also accepted as one of the primary goals of the high school (Resnick, 2006). Since the API is a measure of educational quality, and since educational quality is related to college attendance, it seems consistent to expect that as API scores rise greater proportions of high school graduates will attend college.

3 Standards-Based Reform Theory

David and Humphrey (2001) outlined a theory of standards-based reform which holds that educational standards can be the catalyst for bringing about school improvement when three conditions are present: the standards must communicate high expectations, progress towards the standards is gauged by assessments aligned with curricula, and educators accept accountability for educational outcomes. The lynch-pin of the improvement is educators' willingness to be judged by students' performance. David and Humphreys maintain that this willingness is conditioned by the degree of latitude educators are allowed in order to boost students' performance. The latitude is particularly important where students with special needs are concerned.

Conditions in California schools provide a stage for testing standards-based reform theory. The API score metric is unique to each school with the score objective based on past performance in relation to state and national requirements. Standardized test performance data from each school must indicate adequate yearly progress toward the objective. The sanctions for failing to meet objectives can be substantial, extending even to the replacement of administrative personnel and with school governance exercised by outside officials. Because rising performance should be reflected in college attendance, the evidence for successful school reform, on the other hand, will be greater proportions of secondary school students attending colleges and universities.

4 Method

The number of high school students who graduated from California public high schools as well as the number of entering freshmen enrolled at California public higher education institutions in 1999 and 2008 was used to analyze the relationship between API scores and college attendance. Descriptive statistics were calculated

for API scores and college attendance rates in 1999 and 2008. The schools' API scores were then correlated with the percentage of high school graduates who entered college for the two years in question.

5 Results

Table 1 shows mean API scores for 1999 and 2008. The data indicate that the average API score throughout the state increased by 60 points during this period.

1999 and 2008 Mean API Scores

Year	Mean
1999	622.27
2008	682.27

Table 1

Table 2 indicates the percentage of new high school graduates attending college in fall of 1999 and 2008.

High School Graduates' 1999 and 2008 College Attendance Rates

Year	College Attendance%
1999	47.61%
2008	41.98%

Table 2

Despite rising API scores over this period, the percentage of high school graduates who attended college in fall actually decreased by nearly 6% during the period.

Correlation values for API scores and for college attendance provide a different dimension of the relationship between these two criteria. Although college attendance fell from 1999 to 2008 even as API scores rose, Table 3 indicates that for both 1999 and 2008 the correlation between API scores and college attendance rates is statistically significant.

API Scores and College Attendance Rates Correlations

Cohort	Pearson Correlation	Sig. (2-tailed)	r^2
Fall College Attendance and 1999 API Scores	.240*	.000	.058
Fall College Attendance and 2008 API Scores	.395*	.000	.156

Table 3

* Correlation is significant at the 0.01 level (2-tailed).

Effect size coefficients (r^2 values) were calculated as a measure of the practical importance of the correlation between API and college attendance. The values indicate that the variability in API scores accounted for about three times the variance in college attendance in 2008 (15.6%) as in 1999 (5.8%).

6 Discussion

Results are a reminder that college attendance rates do not lend themselves to single variable explanations. Coefficients of determination not beyond $r^2 = .156$ are a reminder that there are other variables involved in explaining student college attendance behavior, some of them economic. California college tuition and fees when measured in constant 2010 dollars increased 47.6% during 1999-2008 period (College Board, 2010). The increasing API scores are only one potential element in an analysis of college attendance rates.

However, there remains wide-spread confidence in the relationship between school performance and college attendance. A CPEC (2006) study found that increases in high school API scores were correlated with a higher percentage of students graduating from high school who met the University of California and California State University eligibility requirements. Meeting the requirements is not synonymous with attending however. The proportion of high school graduates who attended college actually *fell* from 1999 to 2008. The standards-based reform theory literature may provide at least a partial explanation of the decline.

The theory holds that education reform is successful when emphasis on high standards for all students is clearly communicated, the progress measure is standardized testing, and teachers have latitude in the way they respond to the standards. However, David and Humphrey (2001) offered that perhaps educators do not generally embrace a philosophy of high standards for all students. In particular, educators' doubts may prompt, "less ambitious teaching, especially for low-performing students" (David & Humphrey, 2001 p. ii). Although their efforts are associated with rising API scores, the general improvement may obscure a malaise present in the lower performance levels. If college attendance is the criterion by which the success of educational reform is gauged, school improvement efforts are falling short, particularly for the lowest performing students.

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