Public Policy Institute of California

California Counts
POPULATION TRENDS AND PROFILES

Hans P. Johnson, editor

Volume 6 Number 3 • February 2005

Educational Resources and Outcomes in California, by Race and Ethnicity

By Deborah Reed

Summary

California has a long tradition of policies aimed at providing equitable, quality education for all students. Yet, not all racial and ethnic groups fare equally well in California's education system. Less than 20 percent of Hispanic, black, American Indian, and Pacific Islander students earn bachelor's degrees by ages 25 to 29, compared to 31 percent of white students, 40 percent of Filipino students, and over 60 percent of other Asian students. Despite substantial investments in public higher education, college completion in California is not notably higher than in the rest of the country for any of these racial and ethnic groups.

This issue of *California Counts* explores educational resources and outcomes across racial and ethnic groups in the state. We examine family and school resources, student outcomes, and public policy initiatives affecting California's students from early childhood through university. We describe several factors that potentially contribute to racial and ethnic gaps in college completion. Hispanic, black, American Indian, and Pacific Islander children ages 0 to 5 are less likely than white and Asian children to be in families with income above poverty, to be in two-parent families, and to have a mother who has finished high school. Hispanic children are also less likely to have a mother who speaks English and less likely to attend preschool. In the public K–12 system, Hispanic and black students, and to a lesser extent American Indian and Pacific Islander students, are more likely than white and Asian students to be in low-performing schools. Hispanic and black students are more likely to be in overcrowded schools and in schools with lower shares of fully credentialed teachers.

Despite substantial investments in public higher education, college completion in California is not notably higher than in the rest of the country for any of these racial and ethnic groups.

At every step—eligibility, admission, enrollment, and graduation—Hispanic and black students fare worse than white and Asian students in the University of California system. Hispanic students are also underrepresented in the California State University system. First-time freshmen in the community college system are representative of the racial and ethnic mix of the state's high school seniors. However, Hispanic and black students are underrepresented among students transferring to four-year programs from California community colleges.

A number of new policy initiatives seek to improve educational equity in California. The First 5 commissions are working to promote school readiness through parental support, health, and preschool programs. The Public School Accountability Act of 1999 has focused attention and resources on low-performing schools and student test scores have substantially improved. Following settlement of a lawsuit in 2004, new state funds will be allocated to provide qualified teachers, textbooks, and facilities in low-performing K–12 schools. Overcrowded schools have priority access to some of the new state bond money for school facilities. Federal No Child Left Behind legislation puts an emphasis on qualified teachers and provides options for school choice. University of California programs such as Eligibility in the Local Context increase opportunities for students from high schools and communities that have had low admission rates.

Despite considerable public policy effort and a variety of approaches, disparities in educational outcomes by race and ethnicity have proven difficult to eliminate. Even with strong new policy initiatives, we cannot expect these disparities to disappear quickly. However, Californians have demonstrated their resolve to work toward quality and equity in education, a resolve that has not been thwarted by the difficulty in eliminating the disparities.

Deborah Reed is a research fellow and director of the population program at PPIC. *Weiyi Shi and Richard Van Swearingen provided valuable research assistance. The author acknowledges the helpful comments and thoughtful reviews of Gary Bjork, Raymond Colmenar, Eric Hanushek, Hans Johnson, Heather Rose, and David Roth. Views expressed are those of the author and do not necessarily reflect the views of PPIC.*

Introduction

College education is a key factor in economic success. Workers with a college education are more likely to be employed and have higher earnings capacity (Reed, 2003; Betts, 2000). Children whose parents have a college education are more likely to live above poverty and to go on to college themselves. College-educated workers provide the state with a skilled workforce. Recognizing the importance of education, California makes the public education system from kindergarten through university its largest investment in children and youth.

Providing an equitable educational playing field has been an important policy goal in California for many decades. Yet, not all racial and ethnic groups fare equally well in the educational system. Understanding the factors that contribute to educational differences is particularly important because education plays a role in determining racial and ethnic differences in other areas of social and economic well-being such as poverty, health status, employment, home ownership, and civic participation (Reyes et al., 2001).

This issue of *California Counts* explores the connections between family resources, school quality, public policy, and racial and ethnic differences in educational outcomes. We begin by examining racial and ethnic differences in college completion among young adults. We use attainment of a bachelor's degree as a key indicator because it measures a high level of success that, for many people, marks the completion of formal education. We then examine racial and ethnic differences in factors that influence college completion, beginning with early childhood through high school and college.

Providing an equitable educational playing field has been an important policy goal in California for many decades. Yet, not all racial and ethnic groups fare equally well in the educational system.

Identification of Race and Ethnicity

The data sources used for this study are not consistent in the categories used to describe racial and ethnic groups. Identification of race and ethnicity differs depending on the nature of questions posed, including whether respondents were allowed to choose multiple racial categories or a "some other race" category. In reporting these data, we seek to provide as much consistency as possible across sources. Where possible, we use the major racial and ethnic groups typically reported by the California Department of Education (CDE): Hispanic, white (non-Hispanic), Asian, black (non-Hispanic), Filipino, American Indian, and Pacific Islander. We follow CDE convention in using "Asian" to refer to combined Asian groups excluding Filipinos.

The 2000 Census permitted respondents to choose multiple racial categories and to separately identify a Hispanic ethnicity. In our analysis, Hispanics of any race are included as Hispanics, and we exclude non-Hispanics identifying more than one race. In general, the results would not differ substantially if we included in each non-Hispanic race group all those identifying that group alone or in combination with other races except in the case of American Indians, as is noted throughout the text.[1]

Information from the University of California, Office of the President, and the California Postsecondary Education Commission is based on the categories reported by those entities.

Disparities in College Graduation

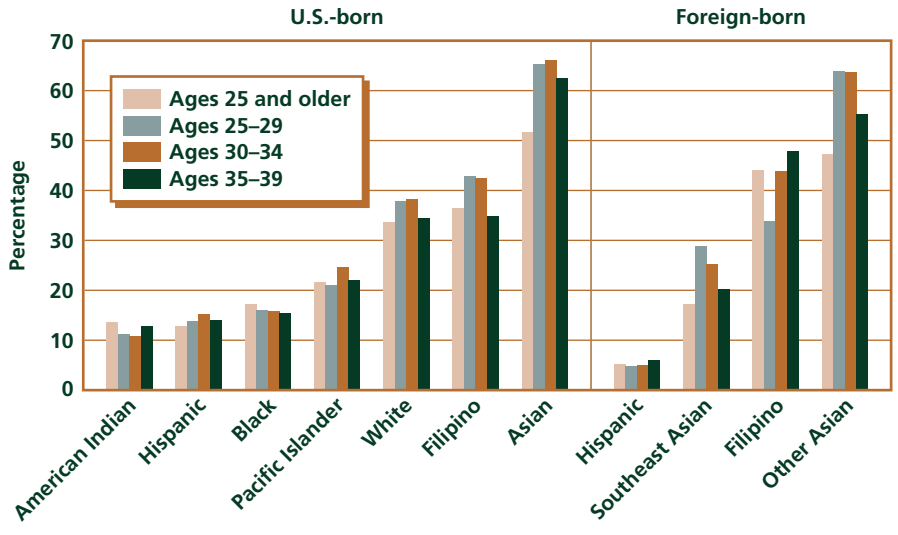
Analysis of bachelor's degree completion demonstrates the tremendous variation in educational attainment across major racial and ethnic groups in California (Figure 1). Among U.S.-born Californians ages 25 and older, college completion is low for American Indians (14 percent), Hispanics (13 percent), blacks (17 percent), and Pacific Islanders (22 percent).[2] College completion is substantially higher for whites (33 percent) and Filipinos (36 percent) and even higher for Asians (51 percent).

Foreign-born Hispanics have the lowest levels of college graduation, with only 5 percent of those ages 25 and older holding a bachelor's degree. Immigrants from Southeast Asian refugee-sending countries also have low college completion at 17 percent.[3] Because the purpose of this study is to investigate racial and ethnic differences in the California education system, it is appropriate not to combine U.S.-born and foreign-born populations in measures of college completion. Among immigrants ages 25 to 29, for example, almost three in four (73 percent) came to the United States at ages 16 or older. For Hispanic immigrants who arrived at ages 16 or older, even those under age 19 have a low share attending school in California—only 37 percent. Thus, the educational attainment of these immigrants is primarily determined by education and other experiences in their country of origin as well as the determinants of migration to the United States.

Interstate migration also plays a role in determining the educational attainment of adults in California because the state tends to attract college-educated migrants from other states (Johnson, 2000). For this reason, to measure college completion for Californians who recently moved through the education system, we use the 2000 Census sample for people ages 25 to 29 who were born in California (regardless of state of current residence).[4] Some young adults who were born in California left for other states at young ages and were not primarily educated here—about 20 percent of 18-year-olds born in California were living in other states in 2000.[5] However, in the 2000 Census, college completion rates for those born in California are not substantially different from the college completion rates of those born in California and living in California in 1995 (Figure 2).

Among young adults born in California, American Indians have college completion rates of 11 percent. If we were to include all peo-

Figure 1. Bachelor's Degree Completion in California by Age, Race, Ethnicity, and Nativity, 2000



Source: Author's calculations from the 2000 Census.

Notes: Among the U.S.-born, Asian excludes Filipinos. Among the foreign-born, "Other Asian" excludes Southeast Asians and Filipinos. See the text box for details on defining racial and ethnic categories.

ple identifying as non-Hispanic American Indian alone or in combination with other races, we find that 13 percent have a bachelor's degree—a similar share as Hispanics and slightly below that of blacks (15 percent) and Pacific Islanders (18 percent). Whites have substantially higher completion at 31 percent, as do Filipinos at 40 percent; Asians have even higher completion at 62 percent.

Among the states, California is ranked 14th highest in state budget allocation per capita for higher education (Palmer, 2004).[6] Nevertheless, college completion rates among Californians are fairly similar to the rates of people from other states, with the exception that Filipinos and Asians from other states have higher completion rates than their Californian counterparts (Figure 2).[7] Because California is able to attract college-educated people from other states, young white adults living in California have substantially higher college completion than their counterparts in the rest of the United States.

Educational attainment for the major racial and ethnic groups masks the variation within groups.[8] Among Hispanics, for whom the share with a bachelor's degree was 13 percent, the share was 12 percent for Mexican Americans, who make up 80 percent of the California-born Hispanic population ages 25 to 29 (subgroup statistics are not shown in Figure 2). Among Puerto Ricans, the share with a bachelor's degree was 16 percent and among Cubans, the share was 34 percent.[9] Among California-born Asian subgroups, the share completing college was 40 percent for Filipinos, 61 percent for Japanese, 64 percent for Indians, 68 percent for Koreans, and 70 percent for Chinese.[10]

During the 1970s, after the Master Plan, civil rights legislation, and the initiation of affirmative action policies, college completion improved more among blacks and Hispanics than among whites in California (Table 1). It is difficult to gauge progress over the 1980s because of changes in the decennial Census survey question between 1980 and 1990. During the 1990s, bachelor's degree completion im-

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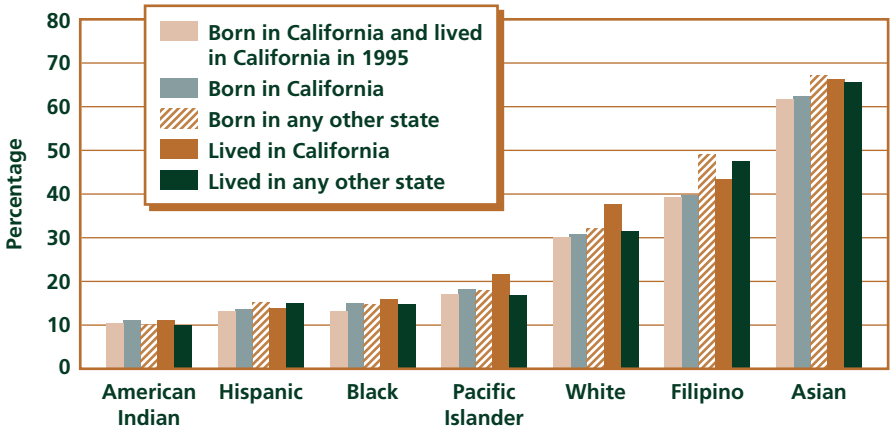
Figure 2. Bachelor's Degree Completion in California and the Rest of the United States, by Race, Ethnicity, and Nativity, Ages 25 to 29, 2000



Source: Author's calculations from the 2000 Census.

During the 1990s, bachelor's degree completion improved substantially for whites, Filipinos, and Asians but much less so for Hispanics and blacks.

Table 1. Four-Year College Completion Rates, by Race, Ethnicity, and Place of Birth, Ages 25 to 29, 1970, 1980, 1990, and 2000 (percent)

	16 Years of Education			Bachelor's Degree		
	1970	1980	Change	1990	2000	Change
Born in California						
American Indian		8		7	11	
Hispanic	4	10	5	10	13	3
Black	5	13	8	12	15	3
Pacific Islander					18	
White	21	24	2	23	31	7
Filipino		18		28	40	12
Asian	41	52	11	53	62	10
All	19	22	2	21	25	4
Born in any other state						
American Indian	5	8	2	6	10	
Hispanic	5	10	5	12	15	3
Black	6	11	5	11	15	4
Pacific Islander					18	
White	18	25	6	25	32	7
Filipino	14	17	2	30	49	19
Asian	28	42	13	42	67	25
All	17	22	6	22	28	6

Sources: Author's calculations from the 1970, 1980, 1990, and 2000 Censuses.
Notes: For some groups, the measured change between decades is affected by rounding. The 1970 sample was too small to compute California statistics for American Indians and Filipinos. Statistics for American Indians in 2000 are not comparable to those in 1990 because of respondents' ability to identify more than one race in the 2000 Census (see the text box). Statistics for Pacific Islanders before 2000 are not provided because of changes in identification across Census surveys.

proved substantially for whites, Filipinos, and Asians but much less so for Hispanics and blacks. For American Indians, the measured change in college completion over the 1990s depends on how multiracial American Indians are classified. The 1990 Census recorded only one race for each person, and 7 percent of those who identified as American Indian had completed college. The 2000 Census allowed respondents to select more than one race and of those who identified as American Indian alone, 11 percent completed college, whereas those who identified as American Indian alone or in combination with other races completed college at a rate of 13 percent.

Thus, despite improvements in the share with a bachelor's degree during the 1990s, the gap with whites grew larger for Hispanics, blacks, and American Indians. The same was true nationally. Growth in the education gaps during the 1990s may reflect changes in affirmative action programs. In California, race-based admission policies at public universities in California ended with the passage of Proposition 209 in 1996.[11]

Early Childhood Education

The previous section documented the substantially lower college completion rates of Hispanics, blacks, American Indians, and Pacific Islanders relative to those of whites, Filipinos, and Asians. We now turn to the factors that influence racial and ethnic gaps in education, beginning with early childhood education. Disparities in school preparation begin before children enter elementary school. Research at the state and national levels has found that black and Hispanic children are more likely than white or Asian children to

enter kindergarten with fewer school-related skills (Bridges et al., 2004; U.S. Department of Education, 2004, p. 118).[12]

Several family factors are believed to be related to young children's educational development, preparation for school, and early literacy. These include having a mother who has completed high school, having a mother who speaks English, living with both parents, and having family income above the poverty level.[13] Family resources available to young children differ substantially across racial and ethnic groups (Table 2). Parental education, particularly maternal education, is strongly linked to a child's cognitive development and school success (Haveman and Wolfe, 1995). Less than half of young Hispanic children have a mother with a high school diploma and less than 10 percent have a parent with a bachelor's degree. Black, American Indian, and Pacific Islander children also have low parental education. Among children in most racial and ethnic groups in California, over 90 percent have a mother who speaks English, but the share is substantially lower among Asian and Hispanic children. The share living with two parents is particularly low among black children and also relatively low among American Indian, Hispanic, and Pacific Islander children.[14]

Black, Hispanic, and American Indian children are less likely than Asian and white children to be growing up in a family with income above the poverty level.[15] Less than half of Hispanic, black, and American Indian young children are growing up in families with incomes above twice the federal poverty level.

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Preschool attendance is particularly low among Hispanic, Pacific Islander, and Filipino children in California. Less than half of these four-year-olds attend preschool, whereas for other groups over 60 percent attend preschool (Table 3).[16] Rates of preschool attendance are fairly similar in California to those in the rest of

Table 2. Family Resources of California Children, by Race and Ethnicity, Ages 0 to 5, 2000 (percent)

	Share of Children	Mother Has High School Diploma	Parent Has Bachelor's Degree	Mother Speaks English	Lives with Two Parents	Family Income Above Poverty	Family Income Above Low Income
American Indian	<1	74	14	96	50	73	46
Hispanic	48	49	9	65	66	72	38
Black	6	80	16	99	38	67	43
Pacific Islander	<1	72	16	92	65	79	50
White	32	92	46	98	80	91	77
Filipino	2	93	53	98	79	94	78
Asian	7	82	56	74	88	85	69
All	100	71	27	82	71	80	55

Source: Author's calculations from the 2000 Census.
Notes: Parents include coresident biological, adoptive, and stepparents. "Mother Speaks English" is the percentage who speak only English at home plus those whose mother speaks English "well" or "very well." The low-income threshold is twice the federal poverty threshold for each family.

Improving school readiness is a major goal of local, state, and federal policies.

the United States. In contrast, kindergarten attendance by five-year-olds is relatively similar across racial and ethnic groups at about 60 percent and is higher in California than in the rest of the nation. California offers noncompulsory public kindergarten for children who are age 5 by December 2 of the school year—allowing younger children than most states.[17]

Improving school readiness is a major goal of local, state, and federal policies. In 1998, California voters passed an initiative to tax cigarettes to provide funding for health and school readiness programs for children ages 0 to 5. In 2002–03, the tax brought in approximately $580 million dollars—20 percent of which goes to the statewide commission and 80 percent to county commissions. The First 5 commissions support a wide variety of school readiness programs including provision of early childhood education programs, parenting support services, health services, and training of early childhood educators. Several of the commissions are developing plans for universal preschool. The annual cost of a universal preschool for California has been estimated at between $3.2 billion and $5 billion.[18]

Head Start is a federal school readiness program targeted toward young children in low-income families. In 2003, Head Start allocated over $811 million to California and enrolled almost 99,000 children in the state.[19] Numerous evaluations show that Head Start improves children's development and school readiness, but the evidence for a lasting effect of Head Start on academic achievement is mixed.[20]

Table 3. Preschool and Kindergarten Attendance in California and the Rest of the United States, by Race and Ethnicity, 2000 (percent)

	Preschool Age 3		Preschool Age 4		Kindergarten Age 5	
	California	Rest of U.S.	California	Rest of U.S.	California	Rest of U.S.
American Indian	37	32	61	59	66	46
Hispanic	24	26	43	47	63	51
Black	46	46	63	67	64	53
Pacific Islander	23	22	45	49	59	56
White	45	37	65	62	57	44
Filipino	21	27	46	50	63	56
Asian	42	39	63	62	67	54
All	34	37	54	60	62	47

Source: Author's calculations from the 2000 Census.

Elementary School

In this section, we describe school quality, school resources, and student outcomes by student race and ethnicity for California's public elementary schools. Throughout the section, we discuss policies that affect resources for K–12 schools. In the next section, we describe similar measures for high schools as well as recent policy measures designed to improve equity in future K–12 resources and outcomes.

In California, school performance is measured by a standardized test from which the Academic Performance Index (API) is calculated and then converted into a state rank from 1 to 10. Schools with an API rank of 3 or below fall in the lowest 30 percent and are considered "low-performing."[21] Many low-performing schools have high shares of students from low-resource families (Rose et al., 2003). Thus, low performance may be related to less academic preparation among these students. Whether this is viewed as a failure of the schools to meet student needs, a failure of parents and the early childhood education system to adequately prepare students, or both, it is clear that students bear the costs of attending a low-performing school. Research shows that students in classrooms with more academically skilled peers tend to learn more (Betts, Zau, and Rice, 2003).[22] Thus, attending a low-performing school likely has adverse effects on student learning.

In California, only 10 percent of white elementary students attend low-performing schools (Table 4). In contrast, 52 percent of Hispanic students and 43 percent of black students attend low-performing schools. The share in low-performing schools is also relatively high for American Indians (29 percent) and Pacific Islanders (26 percent).[23] There is a strong correlation between low-performing schools and those with large shares of low-income students, and we find that Hispanic and black students, and to a lesser extent American Indian and Pacific Islander students, are more likely than other

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Table 4. School Resources of California Elementary Students, by Race and Ethnicity (percent)

	Share of Students	Low-Performing School	Low-Income Students	Teachers with a Full Credential	Teachers with 3+ Years of Experience	Teachers with a Master's Degree	Overcrowded School
American Indian	1	29	55	96	90	26	7
Hispanic	49	52	72	91	89	29	27
Black	8	43	64	90	88	28	24
Pacific Islander	1	26	54	94	89	29	12
White	30	10	34	97	91	31	4
Filipino	2	16	48	94	88	31	12
Asian	8	15	42	96	89	30	14
All	100	34	56	93	89	29	18

Sources: Author's calculations from data from the CDE. Information on school performance is based on the API from 2003. Information on low-income students is based on the CalWORKs data collection from 2002. Information on teacher credentials and experience is from the Professional Assignment Information Form (PAIF) for 2003–04. Information on overcrowded schools is from the CDE list of critically overcrowded schools in 2004.

Hispanic and black students are much more likely than white students to be in overcrowded schools.

students to be in schools with a high share of low-income students.[24]

During the 1970s, California made major reforms in school financing in an attempt to address equity issues. In 1971, the California Supreme Court in *Serrano vs. Priest* determined that the system of local school finance denied constitutional rights to equal protection. A major element of the plaintiff's argument was that inequalities in revenues per student were systematically related to race and wealth because the local property tax base was much lower in black, Hispanic, and low-income neighborhoods. The *Serrano* case was followed by a series of efforts to redesign the school finance system. Then, in 1978, Proposition 13 essentially turned the property tax into a statewide tax. The state now controls 90 percent of school district revenue (Sonstelie, Brunner, and Ardon, 2000).

As intended by law, "revenue limit" funds are relatively equally distributed across school districts. State and federal "categorical programs" (such as state Economic Impact Aid and federal Title I) bring further revenue to high-poverty schools. Considering all revenue sources in 2001–02, Rose et al. (2003) find that unified districts (those providing elementary through high school) received an average augmentation of $1,018 per low-income student or 17 percent more than the base revenue of $6,019 per student. In elementary districts, the average augmentation was lower at $451, and high school districts actually receive an average of $301 *less* per low-income student. However, these averages mask substantial variation in revenues, with some high-poverty school districts receiving less than $6,000 per student.[25]

District finances provide an incomplete picture of school resources. Districts face different teacher salary costs, related to local costs of living and other factors (Rueben and Herr, 2001). School finance reform did not include building-related funds and schools with limited capital funds may face greater operating costs, for example, because of maintenance needs for older or more crowded facilities. Finally, school-level resources may not align with district revenues as a result of interdistrict spending allocations and other choices made by districts and schools.

Researchers disagree as to whether there is a consistent, systematic link between student achievement and measures of school resources.[26] Although evidence suggests that high-quality teachers make a difference, researchers have not found a consistent, strong, causal link between standard measures such as credential status and student achievement.[27] Indeed, a principal might prefer to hire high-quality teachers who meet specific needs, regardless of credential status. Nevertheless, in light of the recent strong incentives to improve teacher credential rates under the federal No Child Left Behind legislation, low credential levels among teachers are likely to indicate a school with difficulty attracting and retaining quality teachers.[28] Across all racial and ethnic groups in California, elementary teacher credential rates are 90 percent or higher, but the lowest rates are found for blacks (90 percent, see Table 4) and Hispanics (91 percent) and the highest rates are found for whites (97 percent).[29]

Teacher experience shows relatively little variation across racial and ethnic groups. The share of teachers with a master's degree also shows little variation, although it is lower for American Indian students. On average, there are 23 elementary students per teacher, although Hispanic students are in schools where the average is 24 students per teacher (not shown in the table).

School resources may vary more widely in the area of school facilities, because facilities funding

was not included in California's school finance reform.[30] The Critically Overcrowded School Facilities program set aside $4.1 billion of the $21.4 billion in new state bond funds for overcrowded schools. The Department of Education measures overcrowding based on the number of students per acre.[31] Hispanic and black students are much more likely than white students to be in overcrowded schools (Table 4).[32] However, overcrowding is a limited and problematic measure of school facilities. A rural school with a leaking roof may not be overcrowded, whereas an urban school with an agreement to use city parks as fields may measure as overcrowded, despite adequate classroom space. Currently, no comprehensive data are available to assess school facilities.[33]

In light of the differences in family and school resources, it is perhaps not surprising that Hispanic and black elementary school students, and to a lesser extent American Indian and Pacific Islander students, are less likely than white, Filipino, and Asian students to be proficient in English and math. Only about one in four Hispanic and black students are proficient in English (Figure 3). A higher share are proficient in math in the second grade, but by the fifth grade proficiency falls to about one in four.[34]

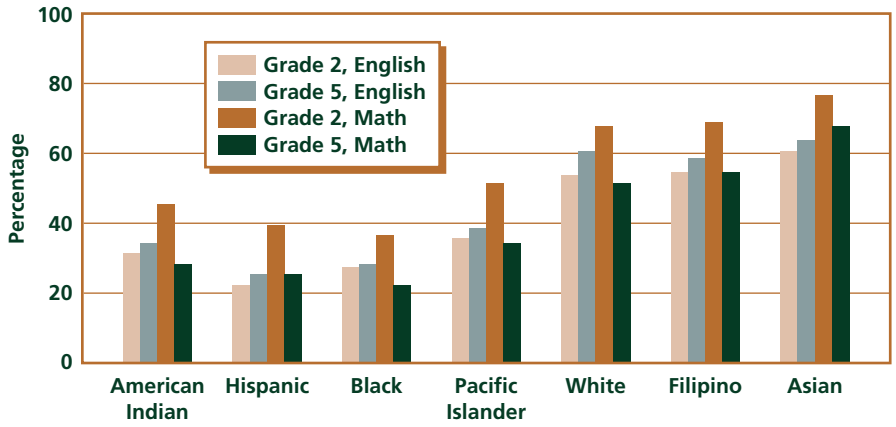
In recent years, there have been additional policy changes aimed at reducing the gaps in K–12 public school resources and performance in California. Before turning to a discussion of these reforms, we first describe high school conditions. For brevity, we do not describe school resources for middle schools, but the patterns are very similar to those for high schools (Table 5).

On average, Hispanic and black students attend schools where about 85 percent of teachers have credentials, compared to an average of 92 percent credentialed teachers in schools attended by white students.

High School

For high schools, we use the same measures of school quality and resources as we used for elementary schools and find very similar patterns (comparing Tables 4 and 5). More than half of Hispanic students and over 40 percent of black students are in low-performing schools, compared to only 11 percent of white students. On average, Hispanic and black students attend schools where about 85 percent of teachers have credentials, compared to an average of 92 percent credentialed teachers in schools attended by white students. Teacher experience and the share of teachers with a master's

Figure 3. Proficiency in English and Math in the Second and Fifth Grades in California, by Race and Ethnicity, 2004



Source: California Standards Test results from the CDE.
Note: The figure shows the percentage scoring at or above proficient.

Table 5. School Resources of California High School Students, by Race and Ethnicity (percent)

	Share of Students	Low-Performing School	Low-Income Students	Teachers with a Full Credential	Teachers with 3+ Years of Experience	Teachers with a Master's Degree	Overcrowded School
American Indian	1	23	31	92	89	36	6
Hispanic	41	52	46	85	87	37	22
Black	8	43	41	84	86	36	24
Pacific Islander	1	31	33	89	87	38	12
White	36	11	22	92	89	39	5
Filipino	3	27	32	89	88	38	15
Asian	9	16	30	91	88	39	15
All	100	31	35	88	88	38	15

Source: Author's calculations from the CDE.

Note: See Table 4 for information on measurement.

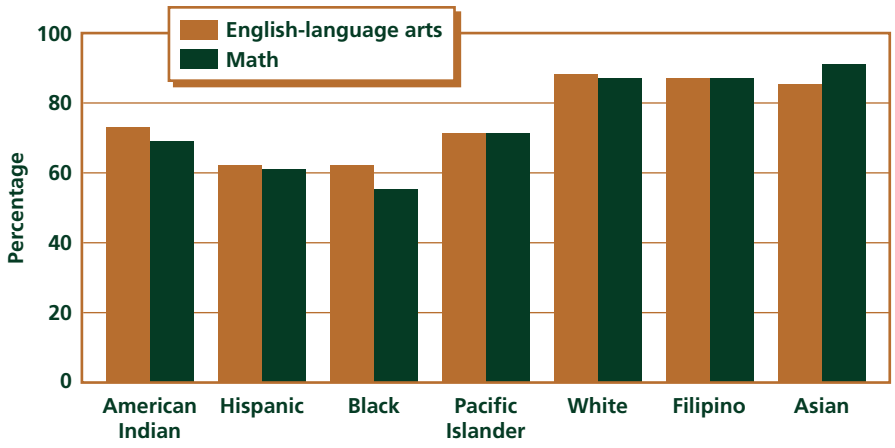
degree are also lower for Hispanic and black students, but the differences are small. The number of students per teacher also is fairly similar across racial and ethnic groups (an average of 29 to 30 students per teacher, not shown in the table). More than 20 percent of Hispanic and black students are in overcrowded schools, compared to only 5 percent of whites.

Beginning in the 2005–06 school year, students must pass the California High School Exit Examination, in addition to fulfilling district requirements, to graduate from high school. The exam is based on English-language arts content standards through grade 10, and mathematics through Algebra 1. The first opportunity to take the test is in the second half of tenth grade. After that, students have another five opportunities to pass the test (including one after completion of grade 12). Results for tenth graders in 2004 show relatively low passage rates for Hispanics and blacks at roughly 60 percent and somewhat higher passage rates for American Indians and Pacific Islanders at about 70 percent (Figure 4). Whites, Filipinos, and Asians passed at rates of over 85 percent.

High school completion rates for young adults born in California show the same pattern of racial and ethnic disparities (Table 6).[35] The share of Hispanics, blacks, and American Indians with a high school diploma was less than 80 percent. The share of whites with a high school diploma was 89 percent and the share of Filipinos and Asians was even higher. High school completion rates for Californians are similar to those for young adults in the rest of the United States for each of the racial and ethnic groups, with the exception of American Indians, who have higher completion rates in California. In contrast, during the 1970s, Californians had substantially higher completion rates for every group. Perhaps in part because California had higher rates of completion in the 1970s, the state did not experience the substantial growth in high school completion rates that occurred in the rest of the nation, especially among Hispanics, blacks, and American Indians.

The disparities in resources and outcomes in K–12 education have been the focus of several recent policies that seek to improve quality and equity. The Public School Accountability Act of 1999 included standardized performance assessments, performance targets, rewards and sanctions

Figure 4. Passage Rates for the California High School Exit Examination in the Tenth Grade, by Race and Ethnicity, 2004



Source: California Department of Education (2004).

The disparities in resources and outcomes in K–12 education have been the focus of several recent policies that seek to improve quality and equity.

based on performance, and assistance for low-performing schools (funds and expert assistance). Since implementation of the act, API scores have increased substantially, particularly in low-performing elementary schools (Rose et al., 2003). However, there remains concern about the capacity of low-performing schools to continue to improve student learning (O'Day et al., 2004).

In May 2000, the American Civil Liberties Union and others filed a lawsuit, known as the Williams case, against the state of California. The plaintiffs argued that the state was failing to provide public school students, particularly low-income students and students from racial and ethnic backgrounds other than white, with educational necessities including textbooks, trained teachers, and adequate facilities. In settling the case in August 2004, the state agreed to provide qualified teachers, to end shortened school years in overcrowded schools, and to fund instructional materials and school facilities.

The focus on qualified teachers in the Williams case is also found in the federal No Child Left Behind legislation, which requires qualified teachers in every classroom. This task may prove difficult because it requires attracting and retaining qualified teachers in low-resource schools. Improving the facilities and other conditions in these schools may be helpful. Supportive teacher development programs may also be helpful. In addition, programs such as the Assumption Program of Loans for Education (APLE) provide incentives for teachers to work in low-performing schools. Participants in APLE who obtain an initial teaching credential are eligible for up to a total of $11,000 in educational loan assumption payments with four consecutive years of teaching service in a qualifying California public school. The Governor's Teaching Fellowship, which provided similar incentives, has not been funded since 2002.

In contrast to the equity-based reforms of the 1970s, new approaches are considering "adequacy-based" reforms (Rose, 2001). The California Quality Education Commission, created by

In light of the challenges faced by schools that serve high concentrations of disadvantaged students, one approach is to redistribute the students.

Table 6. High School Completion Rates, by Race, Ethnicity, and Place of Birth, Ages 20 to 24, 1970, 1980, 1990, and 2000 (percent)

	12 Years of Education			High School Diploma		
	1970	1980	Change	1990	2000	Change
Born in California						
American Indian		73		77	79	
Hispanic	71	74	2	72	74	2
Black	81	81	1	77	77	0
Pacific Islander					85	
White	87	87	–1	87	89	3
Filipino		90		89	92	3
Asian	98	97	–1	94	96	1
All	86	85	–1	83	83	1
Born in any other state						
American Indian	55	66	11	73	74	
Hispanic	57	68	11	72	73	1
Black	61	73	12	75	75	0
Pacific Islander					86	
White	82	86	3	88	89	1
Filipino	82	88	6	94	94	0
Asian	89	92	4	94	96	2
All	79	83	4	85	85	0

Sources: Author's calculations from the 1970, 1980, 1990, and 2000 Censuses.
Notes: In 1990 and 2000, the high school diploma category includes those earning a General Equivalency Diploma. See the notes to Table 1 for measurement issues.

Assembly Bill 2217 in 2001–02, is charged with examining what it will take "so that the vast majority of pupils can meet academic performance standards established by the state" for K–12 education. The governor has not yet appointed commissioners and the California Performance Review recommended against having a commission, but commission funding is available from private foundations. If the commissioners are appointed, they will have the opportunity to consider what resources are necessary to provide adequacy in education for low-performing schools in terms of teacher-pupil ratios, counseling staff, special programs, and other features.

In light of the challenges faced by schools that serve high concentrations of disadvantaged students, one approach is to redistribute the students. Within-district transfers are allowed in California, subject to space constraints.[36] Under federal No Child Left Behind legislation, districts are required to allow students in failing schools to transfer to other schools in the district. That legislation also supports magnet schools, charter schools, and other school choice programs. Research on the effectiveness of school choice programs provides mixed evidence. Academic improvements have been shown for some programs, but the question remains whether these programs could be effectively implemented on a broad level (Fuller et al., 1999; Gill et al., 2001).

College

The goals of California's 1960 Master Plan for Higher Education were access, quality, and affordability. Under the plan, the top 12.5 percent of high school graduates would be accepted into the University of California (UC), the state's premier research system. The top third of high school graduates would be accepted into California State University (CSU), which had as its primary mission education through the master's degree level, including teaching

degrees. Any student who would "benefit from instruction" was accepted into the California Community Colleges (CCC) system. From the community colleges, all who qualified were to be offered transfers into public university.

Eligibility into the UC and CSU schools is based on merit, particularly high school grades, required coursework, and test scores. Eligibility rates are low for Hispanic, black, and American Indian high school students (Table 7). Race-based admissions policies ended after the passage of Proposition 209 in November 1996. However, the UC system has several admissions policies designed to promote educational opportunities. With the entering class of Fall 2001, UC began implementation of "Eligibility in the Local Context" (ELC). ELC guarantees admission to junior-level high school students in the top 4 percent of their high school class to increase opportunities for students from high schools and communities that generally have had low admission rates.[37] In addition, starting with the entering class of 2002, the most selective UC campuses used a "comprehensive review" admissions strategy whereby academic and nonacademic "life challenges" were considered for students who met the eligibility requirements. UC systemwide, Berkeley, and UCLA campus admissions data for the period suggest that these policies have not substantially increased admissions for traditionally underrepresented students (Figure 5).[38]

In addition to affecting eligibility, differences in academic preparation can affect the decision to prepare for, apply for, and enroll in a university. Students in low-performing and low-resource schools are less likely to follow a college preparatory track in high school. For example, Hispanic and black high school students are much less likely to participate in advanced placement courses (College Board, 2001; Education Trust, 2004). The fact that many of these students' own parents have not graduated from college (as shown in Table 2) may lead to lower expectations of their own potential to graduate from college (U.S. Department of Education, 1997, Table 18).

In light of the lower income levels of Hispanic, black, and American Indian students (as shown in Table 2), the cost of university is likely another factor in racial and ethnic differences in college completion. Although student fees in California public higher education are low relative to national standards (California Postsecondary Education Commission, 2004a), the intent of the Master Plan was to provide free public higher education. During the state's current fiscal crisis, fees have been rising. Under a recent agreement with the governor, undergraduate fees increased by

Eligibility rates are low for Hispanic, black, and American Indian high school students.

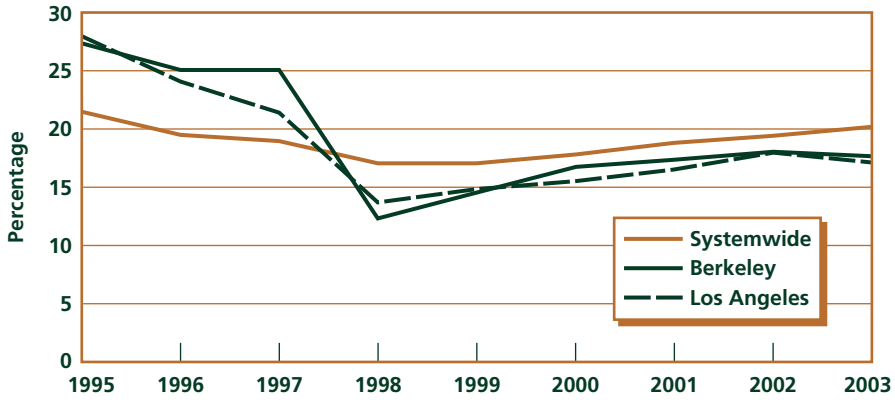
Table 7. Eligibility Rates for California's High School Seniors, by Race and Ethnicity, 2003 (percent)

	CSU	UC
American Indian	19.7	6.6
Hispanic	16.0	6.5
Black	18.6	6.2
White	34.3	16.2
Asian	47.5	31.4
All	28.8	14.4

Source: California Postsecondary Education Commission (2004b).
Note: Asian includes Filipinos and Pacific Islanders.

If the transfer function is not effective, the result is a serious challenge to the Master Plan's promise of access and affordability.

Figure 5. Underrepresented Minorities as a Share of UC Admissions Among California Resident Freshmen, 1995–2003



Source: University of California (2004).

Notes: The University of California, Office of the President (UCOP) uses the term "underrepresented minorities" to include American Indian, black, Chicano, and Latino students. Over this period, the number of admitted students of "unknown" racial and ethnic background increased substantially.

14 percent in 2004–05 and will increase by 8 percent in each of the next two years. Growing fees reduce access for students who face financial hardships—although fees are relatively low compared to other costs of attending university such as room and board and the loss of earnings for students who would otherwise be working full-time. Financial aid can offset some of these costs. For example, for financially needy students, federal Pell grants provided up to $4,000 per student in 2002–03 to cover costs of attendance. Substantial tuition fees could provide additional funding for grants to low-income students to cover fees, books, and cost of living.

Differences in academic preparation, eligibility, expectations, and financial resources lead to UC classes that are remarkably different from the population of high school graduates, with the share of Hispanics and blacks lower by more than half (Table 8).[39] The demographic differences between CSU enrollees and public high school graduates are not as great, but Hispanic students are underrepresented. The demographics of the graduating classes in UC and CSU and enrolling freshmen look fairly similar. However, the probability of graduating varies greatly by race: Graduation rates in the UC system are lower for Hispanics (70 percent), American Indians (66 percent), and especially blacks (62 percent) than for whites (80 percent), Filipinos (76 percent) and Asians (80 percent).

First-time freshmen students enrolled in the CCC system have roughly the same racial and ethnic distribution as California's high school graduates. The Master Plan envisioned university access for students who were not eligible for admission into UC or CSU immediately after high school through taking lower division courses at CCC and then transferring to a university. The importance of the transfer function and concern over the low number of transfers have led to a number of policies to increase transfers (see

Table 8. Racial and Ethnic Distribution of Higher Education in California (percent)

	Public High School Graduates	UC Enrollees	UC Graduates	UC Graduation Rate	CSU Enrollees	CSU Graduates	CCC Enrollees	CCC Transfers
American Indian	1	1	1	66	1	1	1	1
Hispanic	33	14	12	70	23	20	33	20
Black	7	3	3	62	7	5	7	5
White	43	37	40	80	39	43	39	42
Filipino	3	5	4	76	6	4	4	3
Asian	12	33	30	80	14	14	10	14

Sources: Author's calculations from CPEC data on public high school graduates for 2002, on college enrollments in Fall 2002, on bachelor's degrees for 2002, and on CCC transfers in Fall 2002. UC graduation rates are from the University of California (2003).
Notes: CCC transfers include transfers to private universities and colleges. Pacific Islanders are included with Asians. Columns do not add to 100 percent because some students do not identify their race or ethnicity.

California Postsecondary Education Commission, 2002, for a summary). Nevertheless, as of 2000–01, transfers remained fairly consistent at about 48,000 per year to CSU, about 11,000 per year to UC, and about 8,000 a year into private institutions. In the context of growing enrollment at CCC, this means that the share of CCC entering students who successfully transfer to university has declined. The share transferring to four-year institutions is particularly low for Hispanics (Table 8, final column). If the transfer function is not effective, the result is a serious challenge to the Master Plan's promise of access and affordability. On the other hand, one explanation for low transfer rates is that students attend CCCs for other programs such as workforce training, vocational or occupational education, and remedial education. Thus, the CCC system provides important opportunities for educational attainment beyond simply the transfer function.

Perhaps because of the extensive public higher education system and especially the CCC system, the share of Californians who have attended college is higher than the share in the rest of the nation among blacks and American Indians, and to a lesser extent, Hispanics (Table 9). This is in contrast to the finding about bachelor's degrees (Table 1), which showed similar completion in California and the rest of the nation. Nevertheless, the share who have attended college is relatively low, 49 to 55 percent, among American Indian, Hispanic, black, and Pacific Islander Californians ages 25 to 29. Among whites, 70 percent have attended college and among Filipinos and Asians, the shares are over 80 percent. During the 1970s, the growth in college attendance in California was greater for Hispanics and blacks than for whites. During the 1980s, there was very little growth for any group. During the 1990s, growth was greater for whites than for blacks and Hispanics.

Conclusion

Among young adults educated in California, the share who have achieved a bachelor's degree is remarkably low for American Indians, Hispanics, blacks, and Pacific Islanders. State and federal policies of the 1960s and 1970s—including the California Master Plan for Higher Education, civil rights, and affirmative action—were followed by a closing of col-

. . . strategies that go beyond early childhood development and school reform will likely prove important for reducing racial and ethnic education gaps.

Table 9. Share with Some College Coursework, by Race, Ethnicity, and Place of Birth, Ages 25 to 29, 1970, 1980, 1990, and 2000 (percent)

	1970	1980	1990	2000
Born in California				
American Indian		45	45	50
Hispanic	24	43	44	49
Black	34	53	53	54
Pacific Islander				55
White	53	61	61	70
Filipino		62	70	83
Asian	78	88	84	89
All	50	59	58	62
Born in any other state				
American Indian	18	36	36	46
Hispanic	16	34	42	48
Black	17	37	41	48
Pacific Islander				56
White	37	52	56	65
Filipino	36	46	70	85
Asian	53	72	72	86
All	34	49	53	62

Sources: Author's calculations from the 1970, 1980, 1990, and 2000 Censuses.
Notes: For measurement issues, see the notes to Table 1. The table shows the share of people ages 25 to 29 who have ever attended college. Unlike high school and college completion, college attendance can be compared across all four decades of the Census.

lege education gaps. However, during the 1990s, the gaps grew as college attendance and completion increased more for whites than for blacks and Hispanics.

Several factors contribute to racial and ethnic education gaps among Californians. Black, Hispanic, American Indian, and Pacific Islander children are less likely than white and Asian children to be in families with resources that are associated with educational development, preparation for school, and early literacy—having a mother who has completed high school, living with both parents, and having family income above the poverty level. These children, particularly blacks and Hispanics, are more likely than whites and Asians to be in low-performing K–12 schools. As young adults, they are less likely to graduate from high school, and even among high school graduates, they are less likely to be eligible for California's public university system.

We have described a number of new education policy initiatives that seek to improve equity in California. In addition, strategies that go beyond early childhood development and school reform will likely prove important for reducing racial and ethnic education gaps. Policies that support families such as Food Stamps, Medi-Cal, and housing subsidies provide basic needs, enabling children and families to focus on development and education

(Mayer, 1997). Adult education programs in English language, vocational skills, and academics can help improve earnings capacity and other resources for parents and families. Economic development in disadvantaged communities would also improve family resources. Economic development and affordable housing programs that successfully reduce economic stratification across neighborhoods would likely lessen the concentration of disadvantaged students in low-performing schools.

Looking over the last few decades, California's experience has shown that leveling the educational playing field is a complex problem that will not be easily solved. Yet, the demonstrated resolve of Californians to continue working toward quality and equity in education fuels the hope that the future will be brighter for all our students. ◆

Notes

[1] See Hill, Johnson, and Tafoya (2004) for analysis of the multiracial California population.

[2] U.S.-born includes those born in the 50 states and those born abroad of American parents. Among U.S.-born non-Hispanic Californians ages 25 and older who identified as American Indian alone or in combination with other races, the college completion rate was 18 percent.

[3] The Southeast Asian category includes only those countries from which many refugee-status immigrants have come to the United States: Laos, Vietnam, and Cambodia.

[4] Among people ages 25 to 29 who had not completed a bachelor's degree, 14 percent were enrolled in college in 2000. Among the U.S.-born, college completion rates by ages 30 to 34 are similar to the rates of people ages 25 to 29 (Figure 1).

[5] The calculation is based on the 2000 Census and does not include people born in California who were not living in the United States in 2000.

[6] State budget comparisons are based on state allocations and not actual expenditures. In 2002, the most recent year for which state and local appropriations are available, California ranked fourth for total per capita appropriations (after Wyoming, New Mexico, and Nebraska).

[7] College completion rates are statistically significantly higher (at the 95 percent level) for people from the rest of the nation relative to people from California for whites, Hispanics, Filipinos, and Asians.

[8] For whites, Hispanics, and blacks, the share of women with a bachelor's degree is 4 or 5 percentage points higher than that of men (for ages 25 to 29). Among Filipinos and Asians, the share for women is about 10 percentage points higher than the share for men. Among American Indians, the share is about the same for women and men. Among Pacific Islanders, men appear to have substantially higher rates by about 10 percentage points but the difference is not statistically significant because of the small sample size.

[9] Among California-born Hispanics ages 25 to 29, 13 percent did not identify a specific Hispanic subgroup. Puerto Ricans were the second-largest identified group (less than 2 percent) and Cubans were the third-largest (about 1 percent).

[10] Among California-born Asians ages 25 to 29 who identified a single Asian subgroup, the largest groups were Filipino (32 percent), Chinese (26 percent), Japanese (18 percent), Korean (7 percent), and Indian (5 percent).

[11] See Horn and Flores (2003) for analysis of the effects of ending affirmative action in California, Texas, and Florida.

[12] Jencks and Phillips (1998) show lower school skills in kindergarten for black children than white children when comparing families with similar parental education and socioeconomic status.

[13] Racial and ethnic minority is also considered an independent risk factor. For a discussion of family factors associated with children being at risk of low reading scores and school failure, see Denton, West, and Walston (2003). Mayer (1997) finds that family income has only a small effect on educational attainment nationally. She calculates that if family income were doubled for poor families, the overall high school dropout rate would fall from 17.3 to 16.1 percent. She argues that the effect is small because many basic necessities are met through government programs including Food Stamps, Medicaid, and housing subsidies.

[14] If we include all children who identify as non-Hispanic American Indians regardless of other racial identification, the overall share of the young child population is slightly over 1 percent and each of the family resource measures would be somewhat higher, particularly the share whose mother has a high school diploma (81 percent).

[15] The 2000 Census measures poverty in 1999. Since 1999, a recession and unstable economic conditions have led to mild growth in poverty (Reed, 2004). See Reed and Swearingen (2001) for a study of poverty trends adjusted for higher rental costs in California.

[16] See also Lopez and de Cos (2004). Bridges et al. (2004) measure attendance in center-based programs and find higher overall attendance but similarly low attendance rates for Hispanic children (37 percent attend in the year before kindergarten).

[17] See Stipek (2002) for a review of research on entry age to kindergarten. White children are less likely than those in other groups to be attending kindergarten at age 5 but are more likely at age 6 (41 percent for whites versus an overall rate of 36 percent).

[18] Legislative analysis of Assembly Bill 56 from 2004 estimated operating costs at $3.2 billion plus facilities costs of $4.7 billion by 2014. O'Brien-Strain, Moyé, and Sonenstein (2003) estimate the annual cost of universal preschool at up to $5 billion.

[19] At the time of the 2000 Census, there were close to 600,000 poor children ages 0 to 5 in California and of those ages 3 to 5, about 145,000 were not enrolled in school. Head Start statistics are from the Head Start Bureau of the Administration for Children and Families at the U.S. Department of Health and Human Services (www.acf.hhs.gov).

[20] For a recent evaluation, see U.S. Department of Health and Human Services (2003). For a brief review of the research, see Barnett (2002).

[21] A state rank of 3 or below is low-performing as defined in the settlement agreement of the Williams case (discussed in the next section). Incentive programs for teachers define low-performing as a rank of 5 or below. The Public School Accountability Act defines low-performing as failure to meet performance goals and no significant improvement in performance.

[22] See also Hanushek et al. (2003) and Hoxby (2000) for evidence on the effects of peers' academic skills on student learning.

[23] We rely on the API rank, which, by construction, includes 30 percent of schools each year. Since 1999, the API scores of low-performing schools has increased (Rose et al., 2003).

[24] In Table 4, the number of "low-income students" is measured by the percentage of students in the school who are enrolled in the free or reduced-price meals program.

[25] See also Education Trust (2004).

[26] In his reviews of the literature, Hanushek (1997, 2003) concludes that researchers have not found a consistent link between school resources and student achievement. Kruger (2003) concludes that improved resources, particularly smaller class sizes, are systematically related to higher student achievement.

[27] For discussions of the relationships between teacher quality and student outcomes, see Education Trust (1998); Walsh (2001); Esch and Shields (2002); Rivkin, Hanushek, and Cain (2002); and Darling-Hammond (2002).

[28] See Harris (2002) for a survey of California teachers that suggests that teacher staffing and retention is linked to other measures of school quality.

[29] Teacher credential levels are measured in the PAIF. Alternative measures from the API data show lower credential levels but similar patterns across racial and ethnic groups, with rates of 95 percent for white students, 87 percent for Hispanic students, and 86 percent for black students.

[30] See Legislative Analyst's Office (2001) for a discussion of equity in school facilities finance.

[31] Schools are "critically overcrowded" according to the Department of Education if they have 115 or more students per acre for elementary schools or 90 or more students per acre for middle and high schools.

[32] If we add multitrack schedule schools to the measure of overcrowding, the share of whites in overcrowded elementary schools is 16 percent and is 42 percent for Hispanics and 40 percent for blacks.

[33] Several recent reports have called for a statewide inventory and prioritization of need including the Legislative Analyst's Office (2001), the Little Hoover Commission (2000), and the Joint Committee to Develop a California Master Plan for Education (2002).

[34] Statistics for Asian and Pacific Islander subgroups are available at http://star.cde.ca.gov. Results for California from the National Assessment of Educational Progress (2003) also show large gaps between blacks and Hispanics compared to whites and Asians (National Center for Education Statistics, 2004).

[35] Dropout information from California high schools is somewhat inaccurate because schools track when students leave, but they are not consistently able to track whether leaving students enter other high schools or return in later years.

[36] Under the Public School Accountability Act, the Superintendent of Public Instruction may permit cross-district transfers to students in a low-performing school. See Fuller et al. (1999) for a discussion of school choice policy in California.

[37] In 2003–04, UC had a "dual admissions program" whereby students who were in the range of the top 4 to 12.5 percent of their high school class were guaranteed admission to a specific UC campus if they successfully completed a transfer program at CCC. This program has been discontinued because of funding cuts.

[38] Compared to other university systems in the nation, UC has a strong record for enrollment of low-income students (Mortenson, 2004). The evidence on racial and ethnic admissions for specific campuses is mixed (see University of California, 2004). UCOP calculates underrepresented minority rates as a share of domestic admissions (as opposed to using the California resident admissions, as in Figure 5). Statistics by race are available for black, American Indian, Asian, Chicano, East Indian/Pakistani, Filipino, Latino, and white students (University of California, 2004).

[39] Enrollment data include first-time freshmen enrollees from private high schools and from out of state. If limited to graduates from California public high schools, the share of whites would be slightly lower (34 percent) and the share would be higher for Latinos (15 percent) and Asians (35 percent).

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ISSN #1554-401X

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