

# California Counts

POPULATION TRENDS AND PROFILES

Hans P. Johnson, editor

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## At Home and in School

### *Racial and Ethnic Gaps in Educational Preparedness*

By Jennifer Y. Cheng

#### *Summary*

California's schools are becoming increasingly diverse in their student populations. Although all major racial/ethnic groups have experienced improvements in educational attainment over the past three decades, major gaps remain, especially for Hispanics, who represent the largest ethnic group in the state's K–12 public schools. This issue of *California Counts* looks at conditions from early childhood through high school that contribute to or indicate educational achievement, with a particular focus on differences across racial/ethnic groups.

Two influential conditions affecting early childhood development are parental education and family income. Mothers with more education generally have greater access to information about ways to provide early learning experiences, and higher family income is a strong indicator of more resources available for a child's education. It is commonly accepted that preschool also significantly helps children improve their readiness for school, yet over half of all children miss this experience, making it even more important for parents to undertake child development activities in the home, such as reading to their children. In this area, racial differences are pronounced. About 3 percent of white children ages 3–5 have not had a family member read to them in the past week, whereas almost 30 percent of Hispanic children have not been read to. English proficiency is another strong indicator of a child's learning opportunities in school. A 1995 survey found that 75 percent of Hispanic children and 67 percent of Asian children ages 5–14 spoke a language other than English at home; of these children, 23 percent of Hispanic children spoke English "not well" or "not at all," and 14 percent of Asian children did not speak English well. The availability of a home computer is another indicator of resources that provide educational opportunity. Although a majority of white and Asian children have a computer at home, 76 percent of Hispanic children and 62 percent of black children do not.

**About 16 percent of the teachers in schools attended by Hispanic and black students are not fully credentialed—twice the percentage of uncredentialed teachers in schools attended by white and Asian students.**

Looking beyond home resources, this report next examines school indicators. Two important measures of school quality are the percentage of fully credentialed teachers in a school and the availability of college preparatory courses. About 16 percent of the teachers in schools attended by Hispanic and black students are not fully credentialed—twice the percentage of uncredentialed teachers in schools attended by white and Asian students. Differences across ethnic groups in the availability of college preparatory math courses are less dramatic. Proficiency tests are another indicator of academic readiness. The performance of eighth grade students on reading and math tests reveals a wide spectrum of skills proficiency among California's students. More striking, however, is the dismal performance among all groups. Over 80 percent of black students, about 70 percent of Hispanic students, 42 percent of Asian students, and 37 percent of white students scored below basic proficiency on the National Assessment of Educational Progress (NAEP) math test. A final indicator of educational opportunity for higher education is high school completion rates. All groups except Hispanics have completion rates greater than 90 percent. Completion rates are 81 percent for U.S.-born Hispanics and 41 percent for immigrant Hispanics.

By almost every indicator, Hispanic and black children are at a disadvantage when compared to white and Asian children. Right now, concern about education is at center stage among policymakers not only in California but also at the federal level. This presents an opportunity to shape reforms in such a way that they specifically consider the needs of disadvantaged children. If we can improve the resources and opportunities available to these children at home and at school, we may be able to significantly reduce the racial and ethnic gaps in education that diminish the possibility of higher education for so many students.

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## Context

In a recent study of the social and economic well-being of Californians, PPIC researchers found substantial differences among racial and ethnic groups across multiple measures, including health status, education, labor market outcomes, economic conditions, and political participation (Reyes, 2001). Education is one of the most fundamental socioeconomic indicators, because differences in educational attainment contribute to racial and ethnic differences in other areas such as poverty, health care, employment, and earnings. Furthermore, research suggests that educational differences today are expected to play a role in continuing racial and ethnic gaps in well-being for the next generation. And yet, among socioeconomic indicators, education is particularly amenable to public policy, because most of California's children receive their education in public schools.

In the 1998–1999 school year, 40.5 percent of the student population in California's public schools were Hispanic. Non-Hispanic whites were the second largest group at 38.8 percent, followed by Asians at 11.1 percent, blacks at 8.8 percent, and Native Americans/Alaskans at 0.9 percent. Projections of the expected growth in the Hispanic and Asian populations indicate that the ethnic composition of California schools will continue to change.<sup>1</sup>

All of California's major racial/ethnic groups have experienced increasing educational attainment over the past three decades, yet substantial gaps persist. College completion rates are one important indicator of educational achievement. In the late 1990s, roughly 27 percent of young adults (ages 25–29) in California had graduated from a four-year college or university. Among the major racial/ethnic groups, Asians had the highest completion rates at just over 50 percent. Among non-Hispanic whites, 38 percent completed college. Blacks had a substantially lower rate of completion at only 20 percent. Hispanics had the lowest rate at 8 percent. The college completion rate of Hispanics is particularly affected by immigration, because foreign-born Hispanics tend to have low rates of college graduation (5 percent). However, even among U.S.-born Hispanics the college completion rate was only 13 percent.<sup>2</sup>

This issue of *California Counts* looks at the factors that contribute to racial and ethnic differences in educational attainment. We focus on home indicators and school indicators. Education begins in early childhood, with home conditions affecting the educational opportunities available to children. In examining the home environment, we look at parental education, family income, preschool attendance, family participation in

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child development activities, English proficiency, and the availability and use of home computers. We then look at the public school environment and two indicators of school quality: teacher credentials and the availability of college preparatory courses. We also examine two indicators of student achievement: proficiency scores in basic subjects and high school completion rates. For each of these indicators, this report provides the most recent available information. The information comes from a variety of data sources, and the most recent year of data varies, depending on the source and subject.

We focus on four major racial and ethnic groups in California: white non-Hispanics, Hispanics, Asians, and blacks. Within the major racial and ethnic groups, there is substantial variation across subgroups. In particular, although socioeconomic indicators for Asians often are similar to those of whites, subgroup analysis shows that Southeast Asians fare substantially worse. The data used for this report do not permit analysis by subgroup for most indicators.<sup>3</sup>

## Home Indicators

**E**arly educational experiences provided by the family are important to a child's development and preparedness for school. Some children experience many educational

opportunities within their families; others enter school already disadvantaged. Below, we examine indicators of resources, opportunities, and achievements that reflect education conditions in the home.

## Parental Education

One strong indicator of a child's educational opportunities is parental education (Manski et al., 1992; World Bank, 1993). Generally, parents with higher education are able to provide better financial resources for the family, and mothers with more education usually have better access to child development information and can provide better health and education for their children. As shown in Figure 1, there are large differences in educational achievement across racial and ethnic groups. In 1999, over half of Hispanic mothers did not have a high school diploma, compared to about 18 percent of black mothers, 12 percent of Asian mothers, and 8 percent of white mothers. Over 60 percent of white mothers and Asian mothers had some college education or a college degree, compared to 40 percent of black mothers and fewer than 19 percent of Hispanic mothers. Immigrant mothers generally have less education than mothers born in the United States (Reyes, 2001). Maternal education rates also differed dramatically among different ethnicities of Asians and Hispanics.<sup>4</sup> Among Asians, immigrant

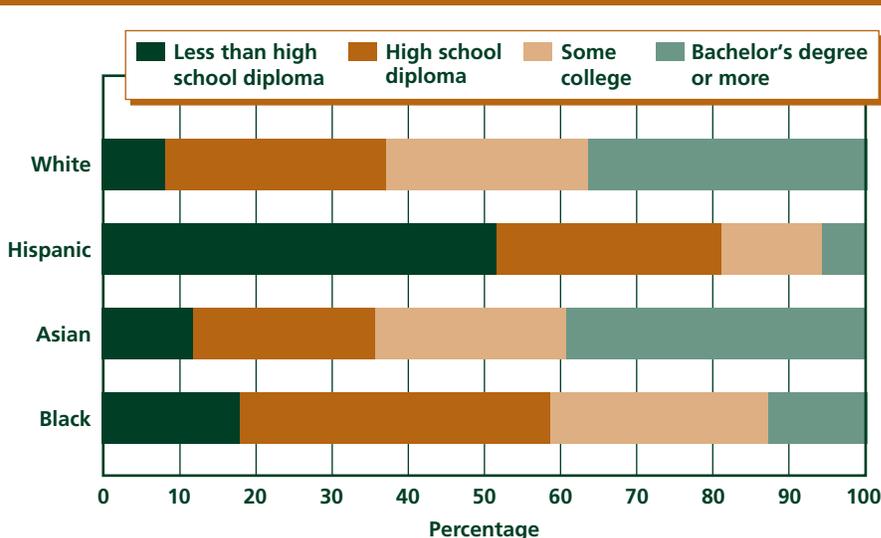
Southeast Asian mothers had the lowest high school completion rate; among Hispanics, immigrant Mexican mothers had the lowest completion rate.

Similar to Hispanic mothers, Hispanic fathers had the lowest high school completion rate, with 64 percent of immigrant Hispanic fathers and 28 percent of U.S.-born Hispanic fathers lacking a high school diploma. For other racial and ethnic groups, the proportions of fathers without a high school diploma were much lower: 8 percent of blacks, 7 percent of Asians, and 5 percent of whites.<sup>5</sup>

**Family Income**

Whereas more parental education may indicate better family information for improving child development, family income is a strong indicator of more economic resources available for a child's education and subsequent lifetime opportunities.<sup>6</sup> Median family incomes by race in 1998 showed a large range, with white children ranking highest, living in families with a median income of about \$56,500, and Asian children ranking second at a median family income of \$49,500. Black and Hispanic children ranked lowest, with median family incomes of about \$33,000 and \$25,500, respectively. As shown in Figure 2, 65 percent of Hispanic children and 53 percent of black children lived in families with incomes below \$35,000, compared to 27

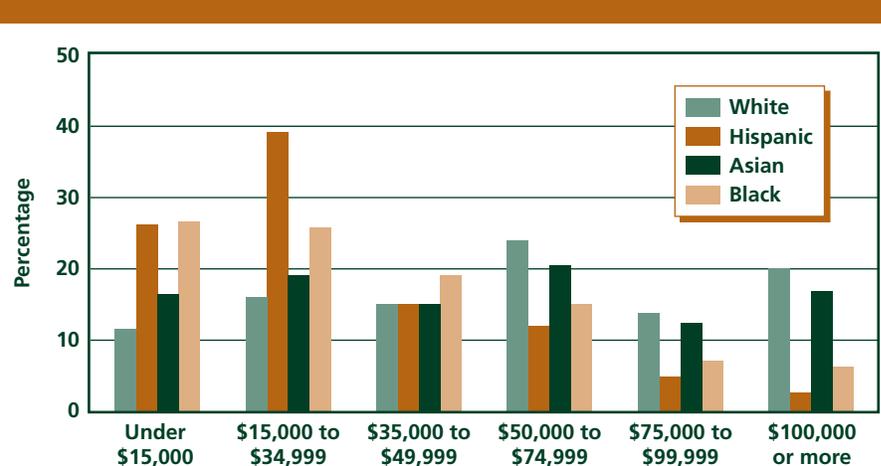
**Figure 1. Education Levels of Mothers Whose Children Were Born in 1999**



Source: Calculations from the Birth Public Use Tape, 1999, Center for Health Statistics, California Department of Health Services.

Note: The data include all births in 1999, excluding children whose mother's race was not identifiable.

**Figure 2. Distribution of Family Income, 1998**



Source: Data from the March Current Population Surveys, 1997–1999.

Notes: The reported statistics represent family income (primarily parental income) for children age 17 and younger. Income reflects pretax income from earnings and income transfer programs, not including Food Stamps, the Earned Income Tax Credit, or benefits other than money.

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percent of white children and 35 percent of Asian children. Families with low incomes are likely to have problems making ends meet for basic needs, such as housing, and thus have limited ability to pay for extras such as center-based child care or to save for their children's college education (Riches and Ross, 1999).

### Preschool

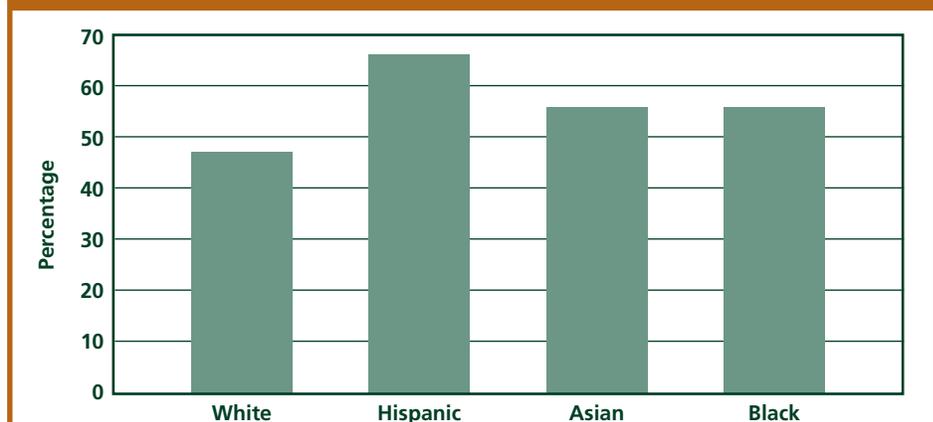
Organized educational activities such as preschool can help disadvantaged children start out on more equal footing. Studies have shown that early childhood development activities such as preschool can help children improve their school readiness and can produce

long-term educational improvements (Illig, 1998; Karoly et al., 1998; Sawhill, 1999). Although preschool activities are commonly understood as a positive enrichment for child development, many children ages 3–5 do not attend preschool (see Figure 3). Sixty-six percent of Hispanic children and just over half of Asian and black children do not attend preschool. These numbers would rise if families did not have access to publicly funded programs such as Head Start.

### Family Activities in Early Childhood

With over half of all children not attending preschool, many young

**Figure 3. Percentage of Children Ages 3–5 Who Did Not Attend Preschool, 1995–1997**



Source: Calculations from combined data of the October Current Population Surveys, 1995–1997. Notes: Information on school activity of children ages 3–5 is available beginning in 1994. The survey asked about participation in preschool, kindergarten, or elementary school activity (including Head Start), so it is unknown whether some four-year-olds were in kindergarten rather than preschool. The small sample size required combining three years of the survey. The difference between Hispanic and white children was the only statistically significant difference in California.

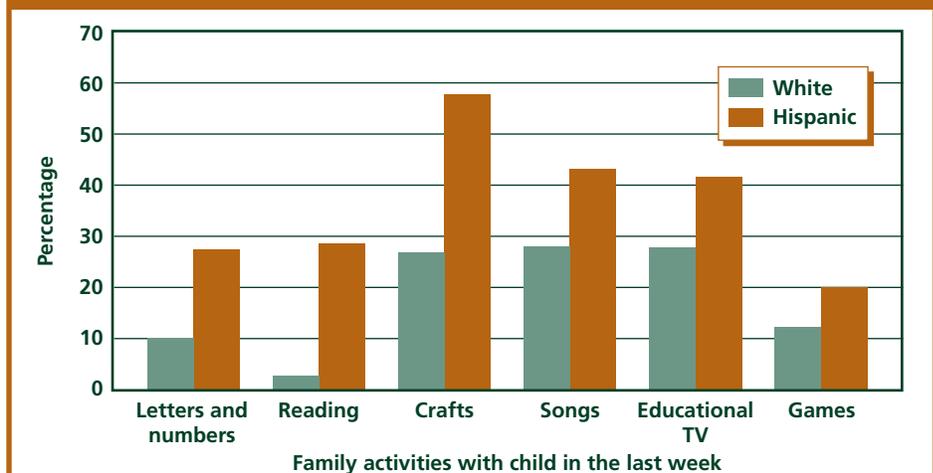
children depend on their families to provide child development activities. Tasks such as reading and practicing letters and numbers improve reading and arithmetic readiness, and activities such as crafts and games help develop motor skills. Other enrichment activities such as educational television and songs can also help children prepare for school. A supplement in the 1990 Current Population Survey asked parents how often in the past week the family participated in child development activities for children ages 3–5. Some families participated in such activities three or more times a week. Other families reported no participation. Small sample sizes for California allow for reliable activity rates only for white and Hispanic children. In reading activities, very few white children—around 3 percent—were not read to by a family member, whereas almost 30 percent of Hispanic children had not been read to in the past week (see Figure 4). Only 10 percent of white children did not have a family member who practiced letters and numbers with them, whereas almost 30 percent of Hispanic children did not have help learning letters and numbers. There were also gaps between whites and Hispanics for other activities such as crafts, songs, and educational television, but the Hispanic-white gaps were largest in the reading readiness activities.<sup>7</sup>

### English Proficiency

As might be expected, English proficiency helps improve a child's learning opportunities in the school system and future success in the labor market (Trejo, 1997). Although California schools identify limited English proficiency (LEP) students, it is not clear what level of English proficiency these children have. A 1995 CPS survey asked parents if their children ages 5–14 spoke a language other than English at home. A small share of white children and black children spoke another language—8 percent and 1 percent, respectively. In contrast, 75 percent of Hispanic children and 67 percent of Asian children

**Almost 30 percent of Hispanic children had not been read to in the past week.**

**Figure 4. Percentage of Preschool Children (Ages 3–5) Without Family Participation in Child Development Activities, 1990**



Source: Calculations from the October 1990 Current Population Survey.

Notes: Questions on child development activities were asked only in 1990. Gaps in educational television and game activities are not statistically significant. Other child development activities not listed asked about activities such as library, park, and museum use in the past month and past year. Similar Hispanic-white gaps existed for those activities as well.

**Among the children who spoke another language at home, 23 percent of Hispanic children did not speak English well or at all, and 14 percent of Asian children did not speak English well.**

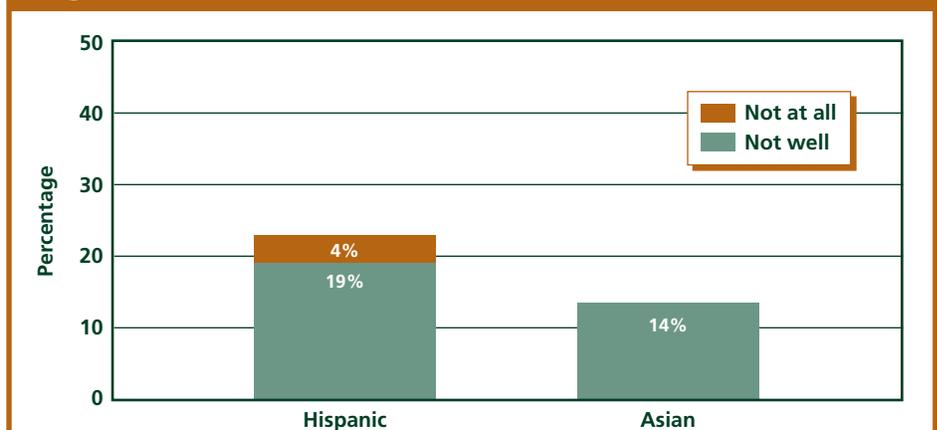
spoke a language other than English at home. Of the children who spoke a second language at home, a large majority spoke English “very well” or “well.” However, some parents reported that their children spoke English “not well” or “not at all.” These children were primarily Hispanic and Asian. Among the children who spoke another language at home, 23 percent of Hispanic children did not speak English well or at all, and 14 percent of Asian children did not speak English well (see Figure 5).

**Computer in the Home**

The availability and use of a home computer are other indicators of home resources that provide educational opportunity. Beyond encouraging knowledge of typing

and computing skills, computers in the home can serve as an educational resource for children writing research reports, doing math drills, or practicing Scholastic Assessment Test (SAT) skills. Families with higher incomes are more likely to own computers, but some school programs enable families to borrow a computer from school. As more initiative is taken toward bridging the “Digital Divide,” it is important to identify which students lack a home computer (Moller, 2000). Statistics from a 1997 CPS survey showed that many children do not have a computer at home. Although a majority of white and Asian children do, 76 percent of Hispanic children and 62 percent of black children do not have a computer

**Figure 5. English Language Abilities for Children Ages 5–14, 1995**



Source: Calculations from the October 1995 Current Population Survey.

Notes: Questions on language abilities for children ages 5–14 were asked in 1992 and 1995. Results in 1992 were similar to those in 1995.

at home (see Figure 6). However, owning a computer is not enough. Children must be encouraged to use it. Among children who do have computers at home, usage rates vary. White children with home computers are least likely to be nonusers at 18 percent, whereas almost one-third of Hispanic children and about one-quarter of Asian and black children who have home computers do not use them.

## School-Related Indicators

**B**yond home resources, skills development in the schools is essential to a child's opportunities for higher education. Measures of school quality include teacher cre-

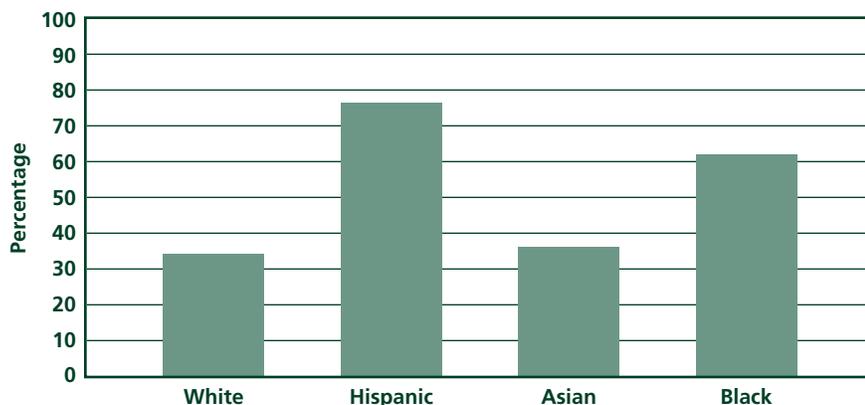
dentials and college preparatory classes. We examine these quality indicators here and we also look at student achievement in proficiency tests and at high school graduation rates, both of which reflect a mix of education conditions at home and in school.

### Teacher Credentials

The percentage of teachers who are fully credentialed provides a good measure of the concentration of qualified and experienced teachers in a school.<sup>8</sup> This measure is also highly correlated with other school resources such as class size and course offerings (Betts et al., 2000). Hispanic and black students are more likely to attend schools with a larger percentage of teachers who are not fully creden-

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**Figure 6. Percentage of Children Ages 5–14 with No Computer at Home, 1997**



Source: Calculations from the October 1997 Current Population Survey.

Notes: Questions on computer availability and use in the home among children ages 5–14 were asked in 1993 and 1997. Results in 1993 were similar to those in 1997.

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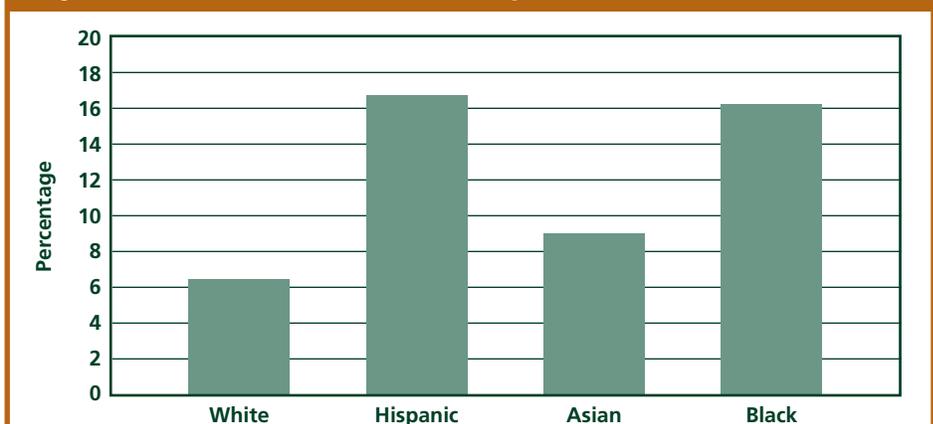
tiated (see Figure 7). About 16 percent of the teachers in schools attended by Hispanic and black students are not fully credentialed. This is double the share of teachers who are not credentialed in schools attended by white and Asian students.

### Availability of College Preparatory Classes

A measure of school quality at the high school level is the availability of college preparatory math courses that count for University of California A–F requirements. Math courses not only provide a foundation for science and technology but also serve as an indicator of future labor market opportunities

(Rose and Betts, 2001). Differences in course availability across racial and ethnic groups were not as dramatic as differences in other school quality measures, but the patterns matched those we saw in other school resources, with white students ranking above other racial and ethnic groups. Generally, a lower percentage of college preparatory courses was offered in urban high schools, but even when urban schools were separated from other high schools, group differences existed (see Figure 8). For urban schools, the average white student attended a school where 65 percent of the math courses were college preparatory. The average Hispanic, Asian,

**Figure 7. Percentage of Teachers Without Full Credentials by Students' Racial/Ethnic Group, 1998**



Source: Calculations from the California Basic Education Data System (CBEDS), California Department of Education, 1998.

Notes: Because California Department of Education data are reported at the school level and not at the student level, results show the school quality for the average student in the racial category. LEP students are not considered in calculating the school quality measures in these figures. Further findings from these data can be found in Bett et al. (2000).

or black student attended a school where 60 percent of the math courses were college preparatory.

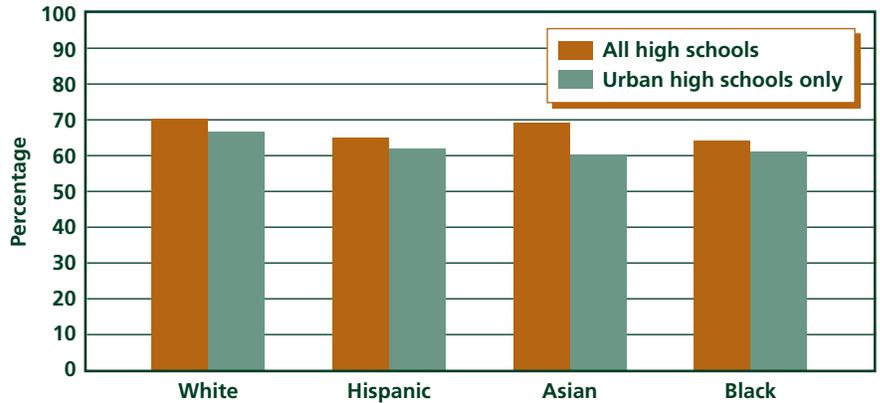
**Student Proficiency in Reading and Math**

Proficiency tests reflect a combination of individual student ability and experience in the educational system. Performance on the National Assessment of Educational Progress (NAEP) tests demonstrated the wide spectrum of skills proficiency among California’s students. The NAEP tests are designed to measure different levels of skills with scaled scores and to report results in four categories of proficiency—below basic, basic, proficient, and advanced. The scores for California eighth graders showed that a large majority of students across all racial groups were not performing at the proficient level in math or reading, and only 1 to 2 percent of white or Asian students performed at the advanced level.

In the case of reading skills, about half of Hispanic and black students, 28 percent of Asian students, and 18 percent of white students scored below basic proficiency (see Figure 9). About one-third of white students and one-quarter of Asian students scored at the proficient level, but only one-tenth of Hispanic and black students reached this level.

The proficiency test in math skills showed even larger numbers of students in all groups scoring

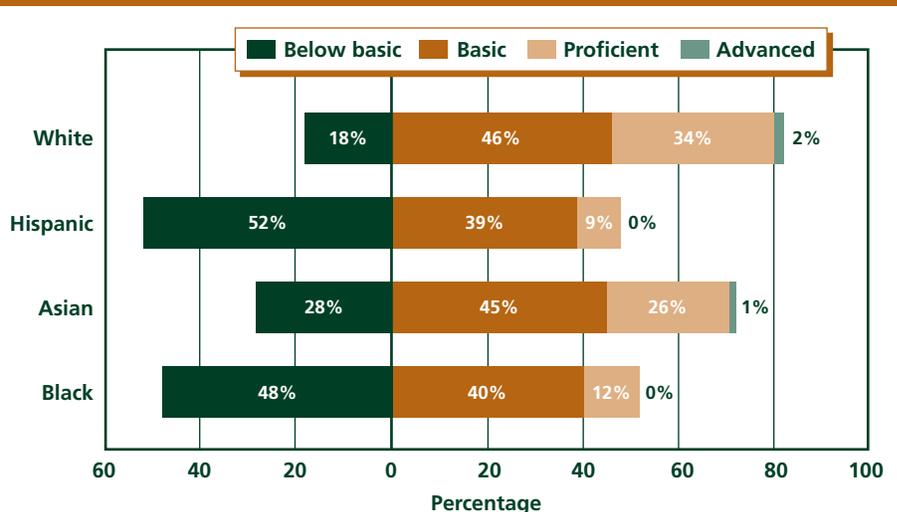
**Figure 8. Percentage of College Preparatory Math Classes Offered, 1998**



Source: Calculations from the California Basic Education Data System (CBEDS), California Department of Education, 1998.

Note: See the notes to Figure 7.

**Figure 9. Reading Proficiency Scores, Grade 8, 1998**

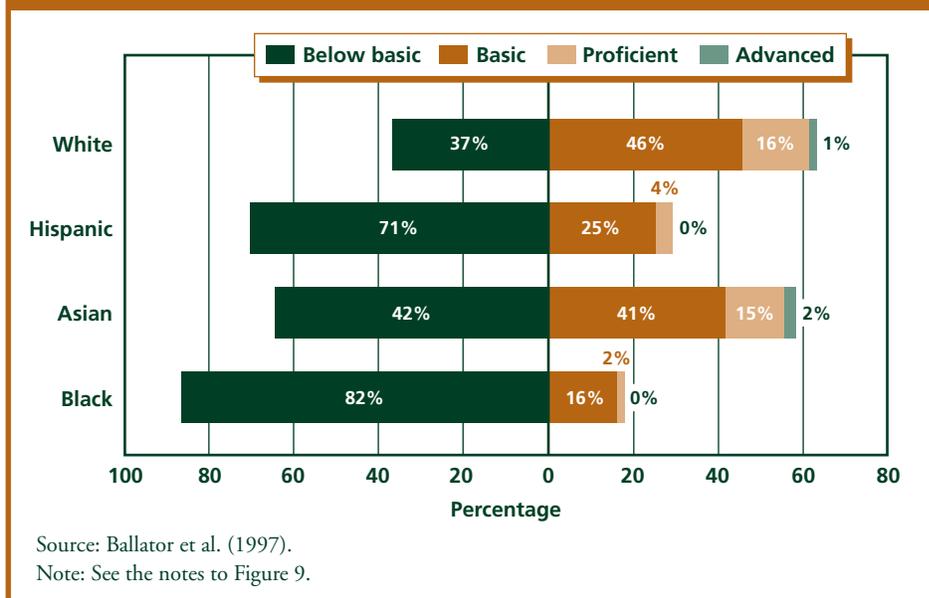


Source: Description of the skills proficiency levels can be found in Ballator and Jerry (1999).

Notes: Reported data are for public schools. Schools reporting scores for 80 percent or more students are included in the NAEP report. Differences between whites and Asians in California were not statistically significant. Differences between blacks and Hispanics in California were not statistically significant. Subject tests are periodically administered, with different testing years for different subjects.

**Effective policy changes focused on children with low levels of home and school resources will improve the racial and ethnic education gaps for today's children and for future generations.**

Figure 10. Mathematics Proficiency Scores, Grade 8, 1996



below basic. Over 80 percent of black students, about 70 percent of Hispanic students, 42 percent of Asian students, and 37 percent of white students scored below basic (see Figure 10). Few students scored at or above the proficient level: about one-eighth of white and Asian students, 4 percent of Hispanic students, and 2 percent of black students.

The generally low student skills reflected in the NAEP tests for eighth graders present a warning about these students' preparation for and access to college preparatory classes in high school. Without strong skills in reading and math, job opportunities will also be limited.

### High School Completion

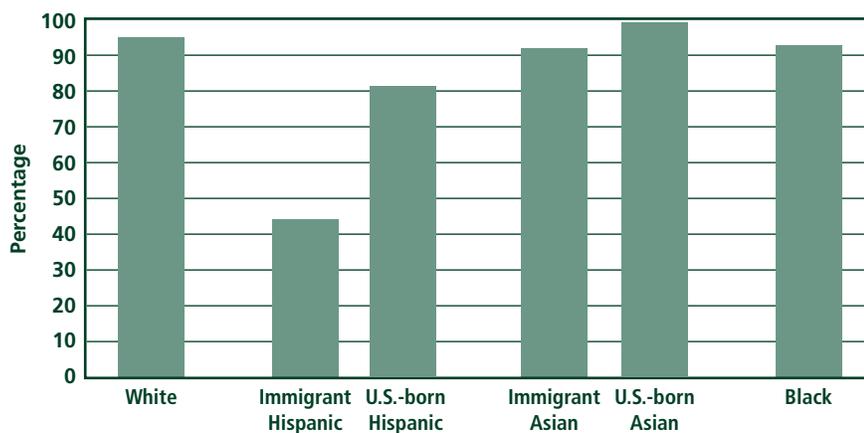
High school completion is one indicator of the high school experience and also an indicator of future job opportunities. Although high school education is usually finished by age 18, a look at completion rates for adults ages 25–29 included students who finished later or with equivalent certification. The overall completion rate was 81 percent. However, all groups except Hispanics completed high school at rates greater than 90 percent (see Figure 11). The large share of immigrants and different education conditions in the Hispanic population help explain the shortfall among Hispanics. Completion rates were 81 percent

for U.S.-born Hispanics and 45 percent for immigrant Hispanics.

### Conclusions

We find that by nearly every indicator of educational preparedness and opportunity, Hispanic and black children tend to fare worse than white and Asian children. Hispanic and black children tend to have fewer educational and income resources available in their families. They are more likely to attend lower-quality schools with fewer credentialed teachers and fewer college preparatory courses. By the eighth grade, Hispanic and black children

Figure 11. High School Completion Rates, 1999



Source: Current Population Survey, Outgoing Rotation Group, combined data from 1998, 1999, and 2000.

Notes: The reported statistic is the percentage with a high school diploma or the equivalent for young adults currently in the workforce (i.e., the data do not include young adults in school or in military or penal institutions). High school completion rates given here do not necessarily reflect graduation rates from California schools; they include young adults who were educated in other states and countries.

exhibit lower rates of basic skills in reading and math. These factors are early contributors to ultimate educational shortcomings, including substantially lower rates of college completion for Hispanics and blacks.

Although education has long been a fundamental indicator of well-being, there is a particular urgency to our current focus on racial and ethnic gaps in education. The population of California is expected to become increasingly diverse, with Hispanic children representing an even larger share of future student populations. Additionally, the value of education in the California labor market has increased substantially, so

that a college education is even more important today than in past decades for securing a well-paying job (Reed, 1999; Betts, 2000). Finally, education is in the public policy spotlight in California as well as at the federal level. Policymakers have the opportunity to use current reforms to improve school quality for the least-advantaged children. Effective policy changes focused on children with low levels of home and school resources will help close the racial and ethnic education gaps for today's children and for future generations. ♦

## Notes

<sup>1</sup> Enrollment statistics for grades K–12 are from the California Basic Educational Data System (CBEDS), California Department of Education, 1998. Population projections are from the California Department of Finance.

<sup>2</sup> College completion rates are based on the author's calculations from the Current Population Survey, Outgoing Rotation Group, 1998–2000.

<sup>3</sup> See Reyes (2001) for subgroup analysis using data from 1990.

<sup>4</sup> For more information on educational outcomes for Asian and Hispanic ethnic and immigrant groups, see Reyes (2001).

<sup>5</sup> These statistics are for fathers living with children ages 0–5 and are from the March Current Population Surveys, 1998–2000.

<sup>6</sup> For more information on differences across racial/ethnic groups in poverty and family income, see Reyes (2001).

<sup>7</sup> A more recent survey on child activities in 1999 by the National Survey of American Families (Urban Institute) showed that the gaps in family participation have persisted (Vandivere et al., 2000). Reading activities for children ages 0–5 were measured. The majority of Hispanic children were read to by a family member less than three times a week, and 16 percent of Hispanic children lacked reading activities altogether. Five percent of white children, 10 percent of black children, and 7 percent of children in the “other” race category (mostly Asian) lacked reading activities.

<sup>8</sup> Years of teaching experience and teacher credentials are highly correlated, so that either measure provides a reliable perspective on teacher quality.

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