

# Student and School Indicators for Youth in California's Central Valley

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# Preface

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This study was commissioned by The James Irvine Foundation as the first of two reports documenting the condition of youth in California’s Central Valley. This report documents trends in enrollment composition, student achievement, and other school-based indicators. The second report will describe social and economic trends among Central Valley youth. Together, these reports have three goals: to better understand the school and family circumstances of youth in the Central Valley; to provide information that can be used by policymakers, private foundations, and community-based organizations to target programs; and to present a statistical portrait that will help measure the success of ongoing and future policy efforts. However, the reports themselves do not attempt to link their statistical portrait to policy implications or to draw policy conclusions.



# Foreword

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Over the last decade, the Central Valley has become an icon of California's future. It is an area of vast reach—from the massive Shasta reservoir in the north to the oilfields of Bakersfield 400 miles to the south. It is a region that combines agricultural wealth and governmental and high-tech urbanization with seemingly endless stretches of undeveloped land on the valley floor and in the Sierra Nevada foothills. It is both a region that is striving to fulfill its potential and one that quite possibly has a greater potential for growth than any other region in the state. Certainly no other developing area in California can match the Valley in its availability of land, water, and other natural resources necessary for the rapid population growth the state is projected to experience over the coming decades.

Despite all this potential, a demographic portrait of the Central Valley today offers a troubling view of the future. The Valley has grown faster than the rest of the state, nearly doubling in size in the past twenty years: Its six million residents now represent about 17 percent of the state's total population. The growth among its Latino and Asian populations has far outpaced that of non-Hispanic whites since the 1970s, partly driven by the need for agricultural workers. This region has some of the highest poverty rates in the state: In most of the agricultural counties, roughly 18 percent of school-age children are eligible for welfare, and a full 50 percent of all students in the Central Valley are enrolled in subsidized lunch programs.

As part of a larger program of investment in understanding the future of the Central Valley, The James Irvine Foundation asked PPIC to prepare a statistical portrait of Central Valley school children. How do students perform on standardized tests? What percentage complete high school? How many enroll in college and complete a four-year course of studies?

The portrait presented here by Danenberg, Jepsen, and Cerdán raises some concern. If the future of the Central Valley is to be one of a vibrant, diversified economy fueled by a skilled workforce, there is a real danger that many of the Valley's future adults will be left behind. The authors do not explore the public policies necessary to lift the newest generations from limited educational attainment to levels commensurate with a thriving economy. But the statistical measures presented in this report provide a strong indication that state and local governments in California cannot afford to ignore the educational health of one of its most rapidly growing regions—a region that will truly be center stage by the middle of the 21st century.

David W. Lyon  
President and CEO  
Public Policy Institute of California



# Summary

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This report provides a profile of elementary, secondary, and postsecondary education in the Central Valley of California, comparing four regions in the Central Valley to each other and to the rest of the state. Figure S.1 provides a map of the Central Valley, showing the subregional groupings we use in this report: North Valley,<sup>1</sup> Sacramento Metro,<sup>2</sup> North San Joaquin,<sup>3</sup> and South San Joaquin.<sup>4</sup>

The main finding of the study is that although the Central Valley has one of the fastest growing populations in California, the region is faring worse than the rest of the state on several dimensions, including student socioeconomic status (SES), test scores, college preparation, and college attendance. However, it is difficult to characterize the Central Valley as a single unit, given the vast differences between its regions. Table S.1 illustrates this diversity by presenting selected student demographics, teacher characteristics, student achievement, high school course offerings, and college attendance for each Central Valley subregion, the region as a whole, and the rest of the state. Of the four Central Valley regions, the North and South San Joaquin regions are particularly disadvantaged, whereas the Sacramento Metro is the least disadvantaged and the most similar to the rest of the state with respect to many indicators in the table. Subregional similarities and differences are discussed in more detail below.

## Demographic Characteristics

Over one million students attend Central Valley public schools, compared to nearly five million in the rest of the state. In other words, 20 percent of the state's public school children are in the Central Valley, whereas approximately 17 percent of the state's population resides in the region.<sup>5</sup>

The Central Valley's population is diverse. Schools in the North Valley—and Sacramento Metro to a lesser extent—are predominantly white. Sacramento Metro has a sizable population of Asians, blacks, and Hispanics. The North San Joaquin Valley has equal shares of whites and Hispanics, whereas the South San Joaquin Valley, like the rest of the state, has a larger share of Hispanics than whites.

Similar diversity is seen in the percentage of students eligible for free lunch and the percentage of English Learner (EL) students. Sacramento and the North Valley have lower percentages of such at-risk students than the North and South San Joaquin regions. Despite the larger share of Hispanics in South San Joaquin, the region actually has a lower percentage of EL students than the rest of the state.

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<sup>1</sup> Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba Counties.

<sup>2</sup> El Dorado, Placer, Sacramento, and Yolo Counties.

<sup>3</sup> Merced, San Joaquin, and Stanislaus Counties.

<sup>4</sup> Fresno, Kern, Kings, Madera, and Tulare Counties.

<sup>5</sup> Approximately 10 percent of the state's residents live in the North and South San Joaquin regions, and approximately 7 percent live in the Sacramento Valley (North Valley and Sacramento Metro areas). The California Department of Finance (DOF) projects that the Central Valley region will have over 1.7 million school-age children (ages 5 to 17) by 2020 (still approximately 20 percent). There are no projections specific to English Learners.



**Figure S.1 - Subregions of the Central Valley**



**Table S.1**  
**Summary Table for 2000**

	North Valley	Sacramento Metro	North San Joaquin	South San Joaquin	Central Valley	Rest of State
<i>Demographics</i>						
Public school enrollment	115,739	335,196	271,241	464,906	1,187,082	4,865,791
<i>Race/Ethnicity</i>						
% Asian	7.4	12.2	11.9	7.1	9.6	11.4
% Black	2.2	10.8	6.5	5.9	7.1	8.8
% Hispanic	17.7	18.0	39.2	51.8	36.0	44.9
% White	68.3	56.3	40.7	33.9	45.1	33.6
% Other	4.4	2.7	1.8	1.3	2.1	1.3
% in lunch program	48.6	37.4	50.8	60.9	50.8	45.8
% English Learners	11.5	15.1	22.5	21.3	20.0	26.2
<i>Teachers and counselors</i>						
% uncredentialed teachers	4.0	4.0	9.3	11.2	8.0	14.3
% first-year teachers	5.0	6.2	7.8	6.7	6.6	8.8
Students per counselor, HS	356.9	457.8	491.0	491.0	462.9	490.2
<i>Student achievement</i>						
% above median, grade 5 math	61.1	66.7	55.6	54.2	59.4	64.7
% above median, grade 5 reading	54.5	61.5	46.4	45.3	51.9	57.8
Average API	5.7	6.6	4.5	4.0	5.0	5.3
Average SSR	4.2	5.4	4.3	4.7	4.8	5.7
SAT®I - % test-takers	31.1	37.2	29.7	31.0	32.6	43.1
SAT®I - average score	996	1,106	972	952	977	989
Three-year HS graduation rate (%)	71.4	72.9	69.8	70.7	71.3	71.8
<i>High school course offerings</i>						
% in schools offering AP math	62.7	78.4	53.7	73.5	69.4	77.7
% in schools offering AP English	78.4	64.7	71.5	71.4	70.3	81.0
% "a-g" high school graduates	28.7	35.0	29.8	28.3	30.6	37.0
<i>College attendance</i>						
% HS graduates attending UC	3.4	6.6	3.2	2.8	4.0	7.9
% HS graduates attending CSU	9.4	10.2	7.9	9.4	9.3	9.4
% HS graduates attending CCC	30.3	34.8	31.0	32.7	32.7	28.1

## **Teachers and Counselors**

The pattern for teachers is similar to that for students, with more unqualified teachers working in the North and South San Joaquin regions than in the Sacramento and North Valley regions. For example, the percentage of uncertified teachers is currently twice as high in the San Joaquin regions as in other Central Valley regions. At the same time, the percentage of such teachers is around 10 percent in the San Joaquin area, compared to 14 percent in the rest of the state. A similar although less dramatic pattern exists for teacher experience.

High school counselors represent an important school resource who provide students with advice and guidance on coursework and alternative choices following high school. Access to counselors in Central Valley high schools compares favorably with the rest of the state, although once again the San Joaquin regions have less favorable numbers when compared to the other two Central Valley regions.

## **K-12 Student Achievement**

Standardized test scores in the San Joaquin regions rank below those of the Central Valley as a whole and those in the rest of the state. This is also true for the state's Academic Performance Index (API)—an index that ranks schools into deciles based on school performance on a scale from 1 to 10, with 1 being the lowest-performing schools—and for the Similar Schools Ranking (SSR), where each school is compared to 100 schools with similar demographics and resources. Although not perfect measures, standardized test scores such as the SAT<sup>®</sup>I college entrance exam are often used to measure college-readiness. The San Joaquin regions have a lower percentage of students taking this test and lower average scores than the rest of the Central Valley and the rest of the state.

The high school graduation rate is difficult to measure because school data are often not suited to this type of measure. However, the estimated three-year high school graduation rate—the ratio of graduates to students who started tenth grade 3 years earlier—is about the same for the Central Valley and the rest of the state, approximately 70 percent.

## **Middle School and High School Course Offerings and Enrollment**

Preparation for college is an important element in the state's K-16 Master Plan for Education. In order to enroll in the University of California (UC) or California State University (CSU) immediately after high school, students are expected to complete a set of courses labeled "a-g." Thus, the percentage of high school graduates who complete these courses is a measure of readiness for the UC and CSU systems. The percentage of a-g graduates, regardless of race/ethnicity, is lower in the Central Valley than in the rest of the state. The exception is Sacramento Metro, where the overall percentage is nearly as high as the rest of the state. Regardless of region, the percentage of a-g graduates is well under 50 percent.

The most rigorous preparation for college is offered through Advanced Placement (AP) classes in high school. There is no region in the Central Valley that is clearly behind in its AP offerings in all subjects. However, urban areas in the Central Valley have a slightly higher percentage of students in schools with AP math than similar areas in the rest of the state, whereas the rural areas in the Valley have a slightly lower percentage (not shown).

## **College Enrollment and Completion**

Given that the level of college readiness defined by a-g graduates is lower in the Central Valley, is college attendance also lower? The answer is “yes” for UC schools. However, attendance at CSU is comparable between Central Valley regions and the rest of the state, with the exception of slightly lower attendance levels for high school graduates in the North San Joaquin area. Attendance at a California community college (CCC) is actually higher among high school graduates in the Central Valley than graduates in the rest of the state, perhaps a result of the low percentage of a-g graduates in the Valley. Among Central Valley regions, Sacramento Metro has the highest percentage of graduates attending UC, CSU, or CCC. Over half of this region’s graduates attend a public college in California, compared to 45 percent for the rest of the state (and smaller percentages for other Central Valley regions).



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# 1. Introduction

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This study presents a statistical portrait of California’s students and schools (K-16) in four subregions of the Central Valley, comparing the regions to each other and the rest of the state.<sup>1</sup> We define these regions as North Valley, Sacramento Metro, North San Joaquin, and South San Joaquin.<sup>2</sup> For each region, the study focuses on statistics in the following areas: student demographics, teacher qualifications, student achievement, course offerings in middle school and high school, and college enrollment and completion. Where the data are available, results are calculated by ethnic/racial group, subsidized lunch status, and type of community.<sup>3</sup> These results are reported when they are substantially different from the overall findings. Unless otherwise noted, measures are school-level averages within each subregion.

Although this study raises important questions about relationships between some of the indicators, the study is intended to be a statistical portrait and does not attempt to explain these relationships. We have chosen indicators that are highly relevant to current education policy debates in California. However, we do not attempt to link the data to policy implications or to draw policy conclusions. As such, this document should be considered a useful sourcebook rather than a policy-analytic report.

Chapter 2 begins with a description of the size of the K-12 student population, its ethnic/racial composition, socioeconomic status (SES), foreign language population and English proficiency, recent-immigrant enrollment, and migrant student enrollment by Central Valley subregion and compared to the rest of the state. Chapter 3 describes teachers and counselors who represent student access to selected school resources. Chapter 4 describes selected student performance indicators such as test scores and high school graduation rates. Chapter 5 presents information on course availability and enrollment in selected courses; and the final chapter provides college-attendance rates, transfer rates from community colleges to California’s four-year colleges, and graduation rates for California’s public and, where available, private colleges.

This report includes a data appendix detailing many of the multiple administrative data sources maintained by the State of California, including the California Basic Education Dataset (CBEDS), Title I and Title III Federal data collections, Standardized Testing and Reporting (STAR), and the California Postsecondary Education Commission (CPEC). The appendix also contains selected indicators for each county in the Central Valley. Additional information at the school, district, and county level can be readily obtained from the California Department of Education (CDE) Dataquest website: <http://data1.cde.ca.gov/dataquest/>.

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<sup>1</sup> Although the “rest of the state” is composed of other distinct regions such as the San Francisco Bay Area and the Los Angeles area, it is the best single comparison category given that the primary focus of this study is the Central Valley and its subregions. Comparisons are not made to other states in subsequent chapters.

<sup>2</sup> The counties in the North Valley are Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba; counties in the Sacramento Metro region are El Dorado, Placer, Sacramento, and Yolo; North San Joaquin counties include Merced, San Joaquin, and Stanislaus; and South San Joaquin counties include Fresno, Kern, Kings, Madera, and Tulare.

<sup>3</sup> The school’s community type, self-reported by schools until 1996, was defined as: (1) urban: population of 100,000 or more; (2) suburban: population of more than 5,000 but less than 100,000, near or part of a more-populated area; and (3) rural: population of less than 100,000, not part of a more-populated area. It is possible that large districts in the Central Valley such as Fresno Unified School District are driving results for urban schools.

Because various datasets are collected at different times during the school year, we use only the first year for the “school year” throughout the report—e.g., 2000 for school year 2000-2001—with the exception of graduation rates. We also use a consistent definition of racial/ethnic groups, in which Hispanics may be of any race, Asians include Pacific Islanders and Filipinos, whites and blacks are of non-Hispanic origin, and “other” represents Native Americans, no-response, and multiple-ethnicity responses.<sup>4</sup>

## California’s Central Valley

Approximately 400 miles long and 40 to 60 miles wide, the Central Valley encompasses over 40 percent of the state’s geography, and it includes some of the fastest-growing population areas in the state (Johnson, 2002). Whereas it contains about 17 percent of the state’s population, it enrolls close to 20 percent of the state’s public school children.<sup>5</sup>

Compared to all of the U.S. states and the District of Columbia in 1990, the Central Valley ranked among the top ten in the following categories: Asian population overall (8<sup>th</sup>); Cambodians, Hmong, and Laotians (2<sup>nd</sup>); Hispanics overall (6<sup>th</sup>); Mexican-origin Hispanics (3<sup>rd</sup>); people employed in farming, forestry, or fishing occupations (4<sup>th</sup>); households with more than seven people (10<sup>th</sup>); and population growth between 1980 and 1990 (9<sup>th</sup>). In contrast, the Central Valley ranked near the bottom for percentage of population enrolled in college (47<sup>th</sup>) and per capita household income (40<sup>th</sup>) (Lopez, 1996). In addition, unemployment rates in the Central Valley during the 1990s were higher than in the state as a whole (Kroll, Goldman, and Phelan, 1991; Umbach, 1998; Monroe and Jackman, 1999).

The Central Valley is California’s primary agricultural region—in 1995, almost 62 percent of the state’s farm employment was located within the Valley. Yet, the Central Valley’s economy is diverse. For example, in 1995 this region was home to 25 percent of the state’s service-sector employment (including finance, insurance, and real estate), 23 percent of government employment, 19 percent of the state’s employment in construction and mining, and 15 percent in trade (Monroe and Jackman, 1997).

The Central Valley includes several distinct metropolitan areas, including Bakersfield, Chico, Fresno, Merced, Redding, Sacramento, and Stockton.<sup>6</sup> The state government is located in the Sacramento Metro region and the Internal Revenue Service Western Processing Center is in Fresno. In addition, population “spillover” from the San Francisco Bay Area is creating new suburban areas in San Joaquin County (Umbach, 1998).

In a recent PPIC survey, Baldassare (2002) documents distinctive characteristics and concerns among the various regions of the Central Valley. For example, although 58 percent of the residents overall think their local public schools are good or excellent, only 53 percent of Sacramento Metro residents think so, compared to 62 percent of those who live in the South San Joaquin region. It is within this context of diversity that we describe variations in the students and schools of California’s Central Valley.<sup>7</sup>

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<sup>4</sup> Asians are a heterogeneous group of nationalities and cultures with substantial differences in characteristics such as education, income, and poverty (Reyes, 2001). Unfortunately, the CBEDS data do not contain information on Asian subgroups.

<sup>5</sup> Approximately 10 percent of the state’s residents live in the North and South San Joaquin regions, and close to 7 percent live in the North Valley and Sacramento Metro areas.

<sup>6</sup> We define metropolitan areas according to U.S. census definitions. For a more-detailed description, see <http://www.census.gov/population/www/estimates/aboutmetro.html>

<sup>7</sup> For more background on the history and diversity of the Central Valley, see Lopez (1996), Umbach (1998), and Monroe and Jackman (1997, 1999).

## 2. Student Demographics

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California's Central Valley contains a rapidly-growing population that has become increasingly diverse with time. It is important to understand this diversity because prior research has shown a close relationship between student demographics and academic achievement. This chapter describes the demographic characteristics of students in the Central Valley and compares these demographics to those for students in the rest of the state. It explores differences across regions of the Central Valley, as well as over time, in enrollment, race/ethnicity, participation in school lunch programs, English language ability, immigration status, and migrant-student status.

### K-12 Enrollment

California had over six million students enrolled in its public schools in the 2000-01 school year. Almost one-fifth (about 1.2 million) of these students attended schools in the Central Valley.<sup>1</sup> Throughout the decade, about 20 percent of California's public school students attended school in the Central Valley. South San Joaquin schooled the largest number of students (about 8 percent of the state's students), followed by the Sacramento Metro area (about 6 percent), North San Joaquin (about 5 percent), and North Valley (about 2 percent).

Table 2.1 shows that during the 1990s, the student body increased by more than one million students statewide, and by more than 200,000 students in the Central Valley. The increase in the student population in the Central Valley varied across regions. The fastest growing region was the Sacramento Metro area, with 28 percent more students in 2000 than in 1990 (see Table 2.1). The slowest growing region was the North Valley, with only 12 percent more students in 2000 and less than 1 percent growth between 1995 and 2000. The average growth in the rest of the state was 22 percent. Despite these differences in growth rates, the proportion of the Central Valley's students in each subregion changed little over the ten-year period. For example, South San Joaquin accounted for approximately 40 percent—and North Valley for about 10 percent—of the Central Valley's students in 1990 and 2000.

The change in enrollment over the past decade varied across grade levels. During the 1990s, elementary grades experienced a slower growth rate than other grade levels, both in schools in the Central Valley and in the rest of the state. Within the Central Valley, enrollment in Kindergarten through fifth grade grew 13 percent, whereas overall student growth increased by 23 percent. Between 1995 and 2000, K-8 enrollment in the North Valley actually declined. The fastest growth occurred in grades 9 through 12, with every region in the Central Valley experiencing more growth than the rest of the state. Over the

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<sup>1</sup> According to the California Department of Finance (DOF, 1998), approximately 1,239,534 school-aged children (ages 5 to 17) were in the Central Valley in 2000, which reflected 18 percent of *all* of California's school-aged children. Presumably, 52,452 children (4.2 percent) who were not attending public school were in private schools or not attending any school. The DOF projects that the Central Valley region will have over 1.7 million school-aged children by 2020. There are no projections specific to English Learners.

**Table 2.1****Student Enrollment Counts by Grade Level**

	1990	1995	2000	% Growth 1990 to 2000
<b>North Valley</b>				
K-5	51,928	54,335	50,875	-2.0
6-8	22,109	27,282	27,160	22.8
9-12	26,306	31,457	36,790	39.9
Ungraded	2,781	1,953	914	-67.1
Total	103,124	115,027	115,739	12.2
<b>Sacramento Metro</b>				
K-5	131,575	140,887	156,173	18.7
6-8	56,722	67,909	77,826	37.2
9-12	66,715	79,815	98,396	47.5
Ungraded	6,410	4,632	2,801	-56.3
Total	261,422	293,243	335,196	28.2
<b>North San Joaquin</b>				
K-5	111,977	117,645	127,699	14.0
6-8	45,972	56,300	62,578	36.1
9-12	52,849	64,928	79,044	49.6
Ungraded	5,479	3,783	1,920	-65.0
Total	216,277	242,656	271,241	25.4
<b>South San Joaquin</b>				
K-5	197,945	214,365	223,112	12.7
6-8	82,782	100,618	105,372	27.3
9-12	93,675	114,383	131,028	39.9
Ungraded	12,783	7,136	5,394	-57.8
Total	387,185	436,502	464,906	20.1
<b>Central Valley</b>				
K-5	493,425	527,232	557,859	13.1
6-8	207,585	252,109	272,936	31.5
9-12	239,545	290,583	345,258	44.1
Ungraded	27,453	17,504	11,029	-59.8
Total	968,008	1,087,428	1,187,082	22.6
<b>Rest of state</b>				
K-5	1,976,093	2,153,060	2,341,358	18.5
6-8	862,440	970,684	1,092,258	26.6
9-12	1,063,086	1,174,258	1,364,672	28.4
Ungraded	80,847	81,794	67,503	-16.5
Total	3,982,466	4,379,796	4,865,791	22.2

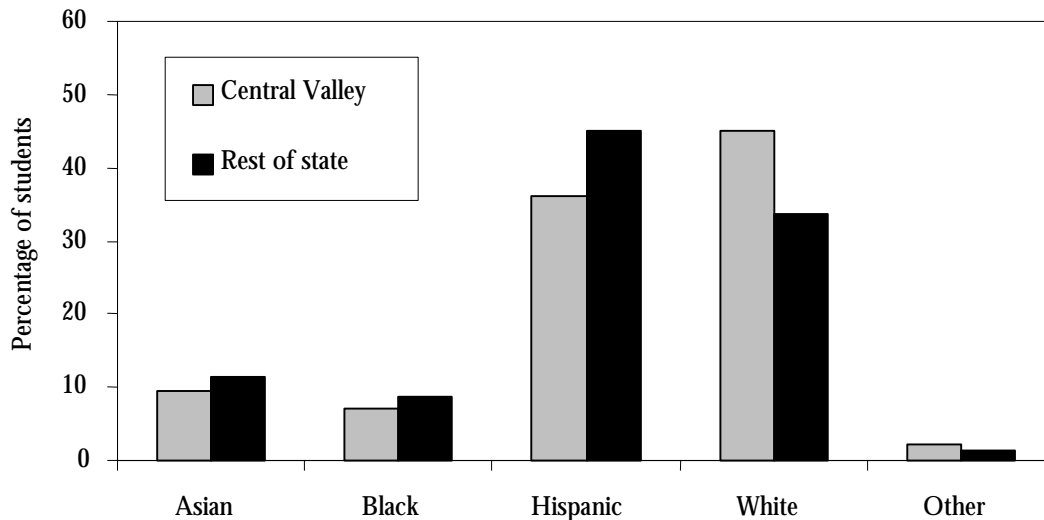
SOURCE: CBEDS. See Appendix A for more details.



decade, the 9-12 student population in the Central Valley grew by 44 percent, compared to 28 percent in the rest of the state.<sup>2</sup>

## Race/Ethnicity

Figure 2.1 illustrates student distribution by race/ethnicity. In 2000, the percentage of white students in the Central Valley was much higher than in the rest of the state (45 percent versus 34 percent) and the percentage of Hispanic students was much lower (36 percent versus 45 percent).<sup>3</sup> The Central Valley also had a slightly smaller percentage of both Asian students (10 percent versus 11 percent, respectively) and black students (7 percent versus 9 percent), and a slightly higher proportion of students categorized as “other” (which includes Native Americans and multiple race).



SOURCE: CBEDS. See Appendix A for more details.

**Figure 2.1 – Enrollment by Race/Ethnicity, 2000**

As shown in Table 2.2, the racial/ethnic mix of students in the Central Valley varied both within and across regions over the years. During the 1990s, the proportion of white students declined and the proportion of Hispanic students increased in all regions of the Central Valley. The North San Joaquin and South San Joaquin regions experienced the most dramatic changes in both proportions. By 2000, Hispanic students constituted a majority of the students in South San Joaquin. Enrollment trends among Asians and blacks differed: All regions experienced a slight increase in the proportion of black students over the decade;

<sup>2</sup> Enrollment in grades 9 to 12 grew from 26 to 29 percent of all graded enrollment—roughly corresponding to growth in the percentage of Central Valley children who were ages 14 to 17 (DOF, 1998). The growth may also reflect some movement from the ungraded category to the 9-12 category.

<sup>3</sup> Only 32 percent of urban students in the Central Valley were Hispanic, compared to 46 percent of urban students in the rest of the state, whereas 42 percent of rural students in the Central Valley were Hispanic, compared to 38 percent of rural students in the rest of the state.

**Table 2.2**  
**Percentage Enrollment by Race/Ethnicity**

	1990	1995	2000
North Valley			
Asian	6.1	7.9	7.4
Black	1.9	2.0	2.2
Hispanic	11.4	14.6	17.7
White	77.6	72.0	68.3
Other	3.0	3.5	4.4
Sacramento Metro			
Asian	10.0	11.8	12.2
Black	9.5	10.5	10.8
Hispanic	13.1	15.4	18.0
White	66.2	60.9	56.3
Other	1.2	1.4	2.7
North San Joaquin			
Asian	13.1	13.9	11.9
Black	4.9	5.6	6.5
Hispanic	28.9	33.9	39.2
White	52.5	45.8	40.7
Other	0.6	0.9	1.8
South San Joaquin			
Asian	7.2	7.9	7.1
Black	5.2	5.6	5.9
Hispanic	41.8	46.8	51.8
White	44.9	38.7	33.9
Other	0.9	0.9	1.3
Central Valley			
Asian	9.2	10.3	9.6
Black	5.9	6.5	7.1
Hispanic	27.9	32.0	36.0
White	55.8	49.8	45.1
Other	1.1	1.3	2.1
Rest of state			
Asian	10.9	11.4	11.4
Black	9.3	9.3	8.8
Hispanic	36.0	40.4	44.9
White	43.2	38.1	33.6
Other	0.7	0.8	1.3

SOURCE: CBEDS. See Appendix A for more details.

NOTES: Percentages for each region may not sum to 100 due to rounding. "Other" category includes multiple race/ethnicity and Native American.

however, with the exception of the Sacramento Metro area, the percentage of Asians grew in the first half of the decade but declined in the second. In 2000, the percentages of *both* Asian and black students in the Sacramento Metro area were higher than state averages. By

contrast, only 2.2 percent of students were black and 7.4 percent Asian in the North Valley, and only 5.9 percent were black and 7.1 percent Asian in the South San Joaquin region.

As might be expected, changes in the racial/ethnic composition of students in the Central Valley translated into changes in the racial/ethnic composition of the average school as well. Table 2.3 presents exposure indices for the Central Valley and the rest of the state. The exposure index, a measure of racial/ethnic segregation in schools, shows the degree of contact between a given type of student and other types of students—in this case the percentage of students of type *Y* in the school attended by the “average” *X* student.<sup>4</sup> For example, an Asian/white index of 40 means that the average Asian student attends a school that is 40 percent white.<sup>5</sup> A fully integrated school, with proportions of racial/ethnic groups identical to those in the state, would have exposure indices equal to the shares of students of each race/ethnicity in the state.

Non-whites’ exposure to whites declined throughout the state in the 1990s, in part because the percentage of white students declined and because white students tended to cluster together in certain schools. Thus, schools in the Central Valley were not fully integrated in the 1990s. In 2000, even though 45 percent of the students in the Central Valley were white, an average Asian, black, or Hispanic student went to a school with 35.1, 33.3, or 30.2 percent of whites, respectively.<sup>6</sup> Schools in the rest of the state also had a disproportional number of white students. An average Asian, black, or Hispanic student attended a school with 31.1, 21.2, or 19.3 percent whites, respectively, even though the percentage of white students in the rest of the state was 33.6. Thus, the exposure of nonwhites to whites, when compared to the percentage of white students in the area, is similar for the Central Valley and the rest of the state. The smaller black/Hispanic exposure index relative to the rest of the state is not surprising. In the Central Valley, blacks are

**Table 2.3**

**Exposure Indices by Race/Ethnicity**

	1990	1995	2000
<b>Central Valley</b>			
Asian/White	41.4	36.2	35.1
Black/White	41.8	37.2	33.3
Hispanic/White	38.8	33.9	30.2
Black/Hispanic	25.2	28.4	32.8
<b>Rest of state</b>			
Asian/White	37.4	33.4	31.1
Black/White	25.3	23.5	21.2
Hispanic/White	25.5	22.4	19.3
Black/Hispanic	32.8	36.6	41.4

SOURCE: Authors' calculations from CBEDS. See Appendix A for more details.

<sup>4</sup> Although exposure indices can be used to compare the exposure of any two groups to each other, we use whites as the primary comparison group because whites have historically been the majority population group in California.

<sup>5</sup> Appendix A contains the formula for the exposure index.

<sup>6</sup> There are more white students in rural areas in both the Central Valley and the rest of the state, and therefore the exposure rates to whites are higher in rural areas than in urban areas.

primarily located in the Sacramento Metro area, but Hispanics are primarily located in the North San Joaquin and South San Joaquin regions.

## Income

The struggles of low-income students, like the struggles of Hispanic and black students, are well documented. This section explores the differences in two indicators of income levels across regions—the percentage of students enrolled in free or reduced-price lunch programs and the percentage of children in the school attendance area who are eligible for Temporary Assistance for Needy Families (TANF)—known as CalWORKS in California.<sup>7</sup> These differences are presented by race/ethnicity and by community type. Note that the percentage of students enrolled in lunch programs and the CalWORKS percentage are proxies for socioeconomic status. They do not measure actual income or poverty level.

As shown in Table 2.4, the percentage of students enrolled in lunch programs increased dramatically in California in the 1990s, jumping from 35 percent in 1990 to 46 percent in 2000. Enrollment in lunch programs in the Central Valley over the same period rose from

**Table 2.4**  
**Percentage of Students Enrolled in Lunch Program**  
**and Eligible for CalWORKS, by Region**

	1990	1995	2000
<b>Lunch Program</b>			
North Valley	40.8	48.0	48.6
Sacramento Metro	26.0	37.1	37.4
North San Joaquin	41.4	50.6	50.8
South San Joaquin	47.2	55.5	60.9
Central Valley	39.5	48.7	50.8
Rest of state	34.5	45.9	45.8
<b>CalWORKS</b>			
North Valley	20.7	24.6	17.7
Sacramento Metro	20.7	24.9	17.0
North San Joaquin	26.7	28.8	17.7
South San Joaquin	24.0	26.7	19.3
Central Valley	23.4	26.5	18.1
Rest of state	14.6	19.3	11.4

SOURCES: CalWORKS and CBEDS. See Appendix A for more details.

NOTES: Percentage of students enrolled in lunch programs are available at school level. The reported means are weighted by the number of students in the school.

<sup>7</sup> Prior to the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), welfare recipients were receiving monetary assistance through Aid to Families with Dependent Children (AFDC). After welfare reform, such assistance has been provided through TANF.

40 percent to 51 percent. This growth, however, was more pronounced in the first part of the decade, with lunch participation in the Central Valley at 49 percent in 1995. As reflected in Table 2.4, the percentage of students enrolled in lunch programs was generally higher throughout the Central Valley than in the rest of the state, with the exception of the Sacramento Metro area. In 1990, South San Joaquin had the highest enrollment, at 47 percent, whereas the Sacramento Metro area had the lowest, at 26 percent. The other two regions, North Valley and North San Joaquin, both had 41 percent, higher than the rest of the state. Ten years later, South San Joaquin and the Sacramento Metro area continued to have the highest and lowest percentages, with 61 percent and 37 percent, respectively. The percentages for North San Joaquin (51) and the North Valley (49) were slightly higher than the rest of the state (46).

Statewide, the percentage of children eligible for CalWORKS is lower than the percentage enrolled in lunch programs (see Table 2.4, bottom panel).<sup>8</sup> This is because the eligibility requirements are much more restrictive for CalWORKS than for the lunch program. Despite the differences in eligibility, we observe similar patterns for both programs across regions in the Central Valley. In 2000, as with subsidized lunch enrollment, South San Joaquin had the highest percentage of children eligible for CalWORKS, whereas the Sacramento Metro area had the lowest. However, the difference between these two regions was less than 3 percentage points, much smaller than the gap for the lunch programs. In comparison, 11.4 percent of students were CalWORKS-eligible in the rest of the state. During the 1990s, the number of children eligible for CalWORKS increased in the first half of the decade and declined in the second in all regions within the Central Valley and in the rest of the state.<sup>9</sup>

Although numbers of students of each racial/ethnic group in lunch programs are not available, we can weight the percentage of students in the lunch program by the number of students in each racial/ethnic group to compare schools attended by the average student in each group. Table 2.5 shows that the percentages of students in the lunch program differ by racial/ethnic group in the Central Valley and the rest of the state. For example, in 2000, the average Hispanic student attended a school where almost two-thirds of the students were in lunch programs, the average black student attended a school where 59 percent of students were enrolled in free or reduced-price lunch programs, and the average Asian student attended a school where more than half of students were enrolled in lunch programs. The average white student attended a school with only 38 percent of students in the lunch program. By comparison, in the rest of the state the average Asian and white student attended a school with a lower share of students enrolled in lunch programs (35 percent and 27 percent, respectively), whereas the average black and Hispanic student attended a school with a proportion of students in the lunch program that was closer to the Central Valley (54 percent and 62 percent, respectively).

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<sup>8</sup> Whereas schools compile the lunch program enrollment, the CalWORKS percentage is the percentage of children in the school's attendance area. See Appendix A for more information about these two measures.

<sup>9</sup> MaCurdy, Mancuso, and O'Brien-Strain (2002) explore the decline in welfare caseloads in California after the 1996 reform.

**Table 2.5**  
**Percentage of Students Enrolled in Lunch Program,**  
**by Race/Ethnicity**

	1990	1995	2000
Central Valley			
Asian	49.1	56.9	55.2
Black	46.9	55.6	58.6
Hispanic	53.1	61.4	64.8
White	30.5	37.9	37.6
Other	37.1	46.3	46.1
Rest of state			
Asian	29.8	38.8	34.8
Black	44.0	55.6	53.7
Hispanic	49.9	61.4	61.7
White	20.8	29.2	26.7
Other	31.5	42.0	36.8

SOURCES: CalWORKS and CBEDS. See Appendix A for more details.

NOTES: Percentage of students enrolled in lunch programs are available at school level. Reported means are weighted by the number of students of a given race/ethnicity in the school.

We also consider differences in income by community type, comparing urban (including suburban) and rural schools (see Table 2.6). In 2000, the percentage of urban students participating in lunch programs was similar between the Central Valley and the rest of the state (50 percent and 46 percent, respectively). However, the percentage of rural students participating in the program was much higher in the Central Valley (53 percent versus 44 percent). These patterns are consistent throughout the decade.

### **Non-Native English-Speaking Students**

Non-native English-speaking students represent another student subpopulation of policy concern in California. Researchers often link English proficiency to student success, particularly on standardized tests (Heubert and Hauser, 1999; Thompson et al., 2002). Each spring, the California Department of Education (CDE) counts the number of K-12 students who speak a language other than English in the home.<sup>10</sup> Schools classify non-native English speakers as either English Learner (EL) or Fluent English Proficient (FEP).<sup>11</sup> We report the percentages of total non-native English speakers, as well as the percentages for EL and FEP students separately, for each region in the Central Valley and the rest of the state.

Almost 36 percent of the state's students overall are non-native English speakers (approximately 24 percent are classified as EL and 12 percent as FEP). Statewide, there is a higher share of all non-English speakers and of ELs in grades K-5 than in higher grades,

<sup>10</sup> Student counts by English language ability, grade level, and language are among the data that schools collect on the language census.

<sup>11</sup> California uses the term "EL" for limited English proficiency (LEP) students. However, the federal government and most other states use the latter term. See Appendix A for definitions of EL and FEP.

**Table 2.6****Percentage of Students Enrolled in Lunch Program and Eligible for CalWORKS, by Community Type**

	1990	1995	2000
<b>Lunch Program</b>			
Urban			
Central Valley	37.3	47.0	49.8
Rest of state	35.1	46.5	46.1
Rural			
Central Valley	43.3	50.9	53.4
Rest of state	29.8	40.9	44.4
<b>CalWORKS</b>			
Urban			
Central Valley	26.1	30.0	21.5
Rest of state	14.8	19.6	11.7
Rural			
Central Valley	18.7	21.4	14.3
Rest of state	12.8	16.5	9.7

SOURCES: CalWORKS and CBEDS. See Appendix A for more details.

NOTES: Percentage of students enrolled in lunch programs are available at school level. Reported means are weighted by the number of students in the school.

whereas there is a higher share of FEPs in higher grades than in grades K-5 (not shown). This pattern is also true across and within all regions of the Central Valley.

The percentages of non-native English-speaking, EL, and FEP students vary across regions, across grade levels, and over time. Table 2.7 shows that among the four Central Valley regions, students in the North Valley attend schools with the smallest percentage of ELs, whereas students in the South San Joaquin Valley generally attend schools with the highest percentage of ELs in each grade range. It is also evident that the share of ELs in most grade ranges throughout the Central Valley grew between 1990 and 2000. However, the share of ELs in grades K-5 and 6-8 grew faster in the Sacramento Metro and South San Joaquin Valley regions than in other Central Valley regions or the rest of the state. For example, the share of ELs more than doubled in Sacramento Metro grades 6-8—from 6.5 percent to 13.4 percent. In comparison, EL enrollment in these grades grew from 16.0 percent to 21.3 percent over the ten-year period in the North San Joaquin region (just to the south of Sacramento Metro), and from 17.6 to 21.9 percent in the rest of the state. Our data do not enable us to determine whether this rapid growth occurred because more EL students moved into these areas or because EL students initially classified as EL failed to acquire English proficiency by the time they reached middle school.

**Table 2.7****Percentage of Students by Language Proficiency and Grade**

	Language Other Than English			EL			FEP		
	1990	1995	2000	1990	1995	2000	1990	1995	2000
North Valley									
K-5	14.4	18.3	20.5	10.1	14.6	14.5	4.2	3.7	6.0
6-8	12.6	15.5	17.0	6.8	10.6	10.4	5.8	4.9	6.6
9-12	13.6	14.0	14.9	6.6	7.8	8.1	7.1	6.2	6.8
K-12 overall	13.6	16.3	17.8	8.3	11.6	11.5	5.3	4.7	6.3
Sacramento Metro									
K-5	13.9	18.8	23.0	10.1	16.3	18.7	3.9	2.5	4.3
6-8	12.3	17.1	19.3	6.5	12.4	13.4	5.8	4.7	5.9
9-12	13.2	15.0	18.0	7.5	9.4	10.9	5.7	5.6	7.1
K-12 overall	13.1	17.1	20.5	8.4	13.3	15.1	4.7	3.8	5.5
North San Joaquin									
K-5	31.3	36.0	37.7	23.5	28.8	27.8	7.8	7.2	9.9
6-8	28.0	34.6	34.9	16.0	21.7	21.3	11.9	13.0	13.6
9-12	31.0	30.6	31.6	16.0	13.6	15.5	15.0	17.0	16.1
K-12 overall	30.1	33.8	35.1	19.8	22.7	22.5	10.3	11.1	12.5
South San Joaquin									
K-5	30.7	37.0	39.5	19.2	28.6	29.9	11.6	8.5	9.6
6-8	30.6	34.2	36.4	14.2	19.9	23.5	16.4	14.3	12.9
9-12	30.4	28.8	31.8	16.3	15.5	16.2	14.2	13.2	15.6
K-12 overall	30.0	33.7	36.2	22.8	24.3	21.3	13.1	11.0	11.9
Central Valley									
K-5	24.7	30.0	32.8	16.8	23.9	24.9	7.9	6.1	7.9
6-8	23.1	27.7	29.2	11.7	17.3	18.8	11.4	10.4	10.4
9-12	23.9	23.8	26.0	12.7	12.6	13.7	11.2	11.2	12.4
K-12 overall	23.7	27.4	29.7	14.3	19.0	20.0	9.4	8.4	9.7
Rest of state									
K-5	34.5	41.0	45.1	24.2	32.1	34.0	10.3	8.8	11.2
6-8	33.5	38.2	40.0	17.6	21.8	21.9	15.9	16.3	18.1
9-12	36.8	34.4	35.8	19.4	16.8	16.2	17.4	17.6	19.7
K-12 overall	34.6	38.2	41.2	21.3	25.5	26.2	13.3	12.7	15.0

SOURCES: CBEDS and Language Census. See Appendix A for more details.

NOTES: Reported means are weighted by the number of students in each grade level.

Although there is some variation in the percentage of FEPs among the regions, the share of FEP students is generally lower than the share of EL students across all regions, grade levels, and over time. In most cases, any growth in the percentage of FEP students is quite modest compared to EL students, and in a few cases, the share of FEPs actually declined between 1990 and 2000.

Not surprisingly, Spanish is the most common non-English language in the state: Over 80 percent of students who speak a language other than English speak Spanish. However,



there are numerous languages spoken in California schools—at least 56 were enumerated in the 2000 CBEDS language census.<sup>12</sup> Tafoya (2002) documents regional differences throughout California in predominant non-English languages. For instance, less than 40 percent of EL students in Sacramento County speak Spanish, whereas relatively large numbers speak Southeast Asian and Eastern European languages.

## Recently Arrived Immigrant Students

The population of recently arrived immigrant students is another subset of students who may be of concern to policymakers for a number of reasons—for example, English language deficiency or difficulty in transitioning from one culture to another (Rumbaut and Cornelius, 1995; Ruiz-de-Velasco and Fix, 2000).<sup>13</sup> Data collected each February by school districts include counts of eligible students who arrived in the United States *within the last three years* under the Emergency Immigrant Education Program (EIEP), which is part of Title III of the Federal Elementary and Secondary Education Act (ESEA).<sup>14</sup> Because many immigrant students have been in the United States longer than three years and the EIEP data collection is the only statewide information collected by the CDE about the immigrant status of students, the count of total immigrant students is understated in these data.<sup>15</sup>

The percentage of EIEP students in the state overall appears to be declining, falling from 6.4 percent in 1990 to 4.6 in 1995 and to less than 4 percent by 2000. Historically, the Central Valley accounted for approximately 10 to 15 percent of the state's total EIEP students in any given year—for example, 9.8 percent in 1990, 14.1 percent in 1995, and 13.3 percent in 2000 (not shown).

Although the overall percentage of EIEP students in the state is small, Figure 2.2 shows that the share of these students has varied across and within regions over time. Districts in the South San Joaquin region had the highest percentage of recently arrived immigrant students in each of the three years, with the exception of 1990, when the North San Joaquin Valley had a slightly higher percentage. In 1990, school districts in the San Joaquin regions had over twice the percentage of EIEP students as the other regions in the Central Valley. However, by 2000, the four regions were more comparable in their shares of EIEP students, although the North Valley still had a smaller share than the others. It is notable that many students in the rest of the state are attending schools in districts that have higher percentages of EIEP students than districts in any of the Central Valley subregions—or indeed in the entire Central Valley. Despite the relatively large share of the state's EIEP students in Los Angeles Unified School District (LAUSD), the patterns for the rest of the state are still quite similar to those in the figure when LAUSD is removed from the sample (not shown).<sup>16</sup>

## Migrant Students

Migrant students represent another at-risk population. These are youth who are employed (or whose parents are employed) in migratory agricultural or fishing operations.

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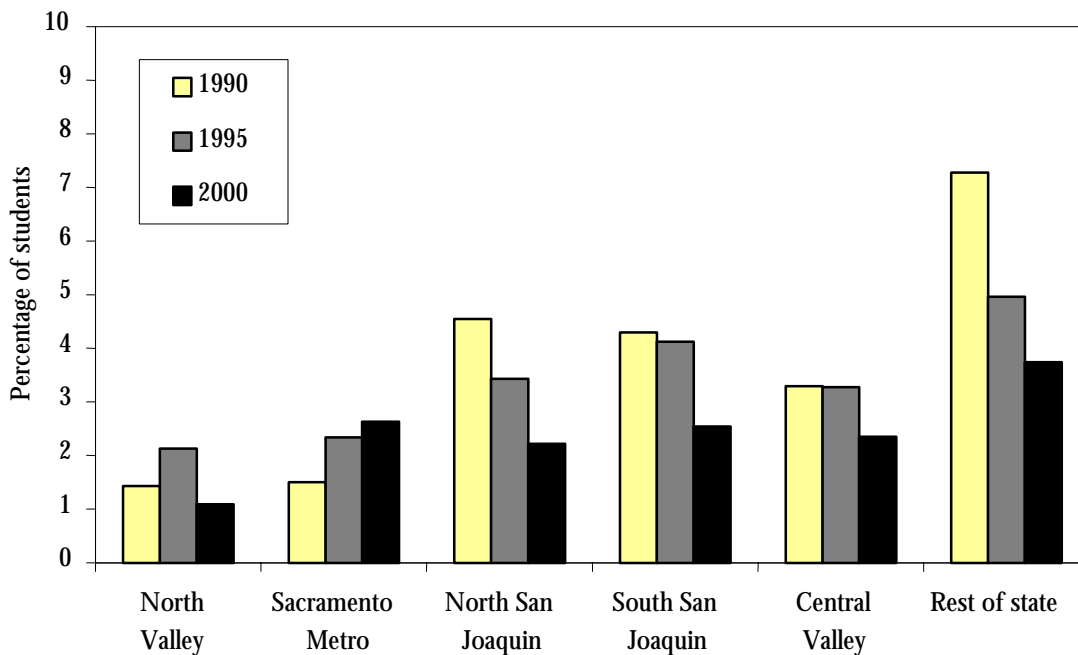
<sup>12</sup> The “other non-English” language category contains numerous languages.

<sup>13</sup> Because the data are collected at district level, this section uses data aggregated to the regional level rather than school-level means.

<sup>14</sup> This provision was formerly contained in Title VII. In the ESEA reauthorization signed by President Bush in 2002, it became part of Title III.

<sup>15</sup> A subsequent report in this series will use census data to look at immigrant status for Central Valley youth.

<sup>16</sup> LAUSD had over 26 percent of the state's EIEP students in 1990 and close to 18 percent in 1995 and 2000.



SOURCES: CBEDS and EIEP. See Appendix A for more details.

NOTES: Number of students who arrived in the United States in the last three years is only available at the district level.

**Figure 2.2 – Percentage of Students Who Arrived in the United States in the Last Three Years**

These students might be recently arrived immigrants, immigrants who have been in the United States more than three years, or they might not be immigrants at all. These young people often cross district and state boundaries several times in the course of a single academic year.<sup>17</sup> Although in 2000 only 3.5 percent of all California students qualified for migrant funding under the Migrant Education Program (MEP), their high mobility makes them one of the most vulnerable student populations in the state because they often face “educational disruption, cultural and language barriers, social isolation, various health-related problems, and other factors that inhibit the ability of the children to do well in school.”<sup>18</sup>

In 2000, almost half of the state’s migrant students overall could be found in the Central Valley: 3.5 percent in North Valley, 2 percent in Sacramento Metro, 12.1 percent in North San Joaquin, and 31.6 percent in South San Joaquin. Given the higher degree of urbanization in Sacramento Metro and the primarily agricultural economy of South San Joaquin, it is not surprising that these two regions have the lowest and highest percentages of migrant students, respectively.<sup>19</sup>

The percentage of migrant students in schools varies across Central Valley regions. For example, Figure 2.3 indicates that the *average* student in the Sacramento Metro area attends a

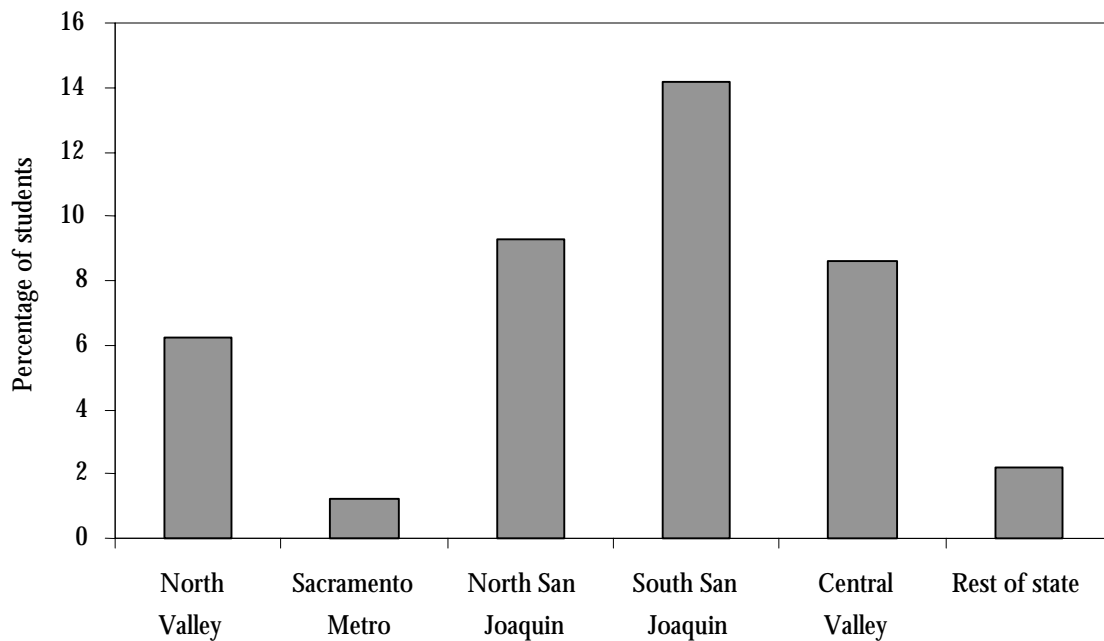
<sup>17</sup> See Appendix A for a more comprehensive definition of a migrant student.

<sup>18</sup> <http://www.cde.ca.gov/iasa/migrant2.html>.

<sup>19</sup> Monroe and Jackman (1999) use a slightly different definition of Central Valley subregions to show that the Sacramento region has the lowest level of agricultural output in the Central Valley.

school with only 1.2 percent migrant students. In contrast, the average South San Joaquin student attends a school with 14.2 percent migrant students. Appendix Table C.1 presents the share of EIEP and migrant students for each of the Central Valley counties.

As demonstrated in this chapter, the Central Valley’s student population is diverse and changeable. Yet certain characteristics predominate in one region or another. For example, the South San Joaquin region has higher populations of Hispanic, immigrant, and migrant students. In general, youth in the Central Valley face disadvantages that often contribute to poor educational outcomes.



SOURCES: CBEDS and MEP. See Appendix A for more details.

**Figure 2.3 – Percentage of Students Who Qualify for Federal Funding for Migrant Students, 2000**



### 3. Teachers and Counselors

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This chapter provides information about teachers and counselors in the Central Valley and the rest of the state. We present the percentage of teachers without full credentials, the percentage of inexperienced teachers, and the average number of counselors as indicators of the degree of students' access to instruction and guidance. Despite the large literature on teacher characteristics in California (including Betts, Rueben, and Danenberg, 2000; Jepsen and Rivkin 2002; Shield et al., 2001), little of this work has focused on the Central Valley.

#### Teacher Credentials

One characteristic often associated with teacher quality is certification. Jepsen and Rivkin (2002) note that almost every teacher in California's public elementary schools was fully certified in 1990 and 1995, with few differences across schools. However, California's class size reduction legislation in 1996 led to smaller classes—and hence more classes—and the need to hire thousands of new teachers, many without full credentials.<sup>1</sup> In 2000, the average student in California attended a school in which 13 percent of the teachers were uncertified.<sup>2</sup>

Table 3.1 shows that, in 2000, students in the Central Valley on average attended schools with lower percentages of uncertified teachers than did students in the rest of the state (8 percent versus 14.3 percent). Within the Central Valley, the North Valley and

**Table 3.1**

**Percentage of Students with an Uncredentialed Teacher, 2000**

	Overall	Urban	Rural
North Valley	4.0	9.7	3.3
Sacramento Metro	4.0	3.6	4.6
North San Joaquin	9.3	8.9	9.3
South San Joaquin	11.2	8.2	14.0
Central Valley	8.0	6.6	9.5
Rest of state	14.3	14.7	9.8

SOURCES: CBEDS. See Appendix A for more details.

NOTES: Percentage of students with an uncredentialed teacher are calculated for each school. Reported means are weighted by the number of students.

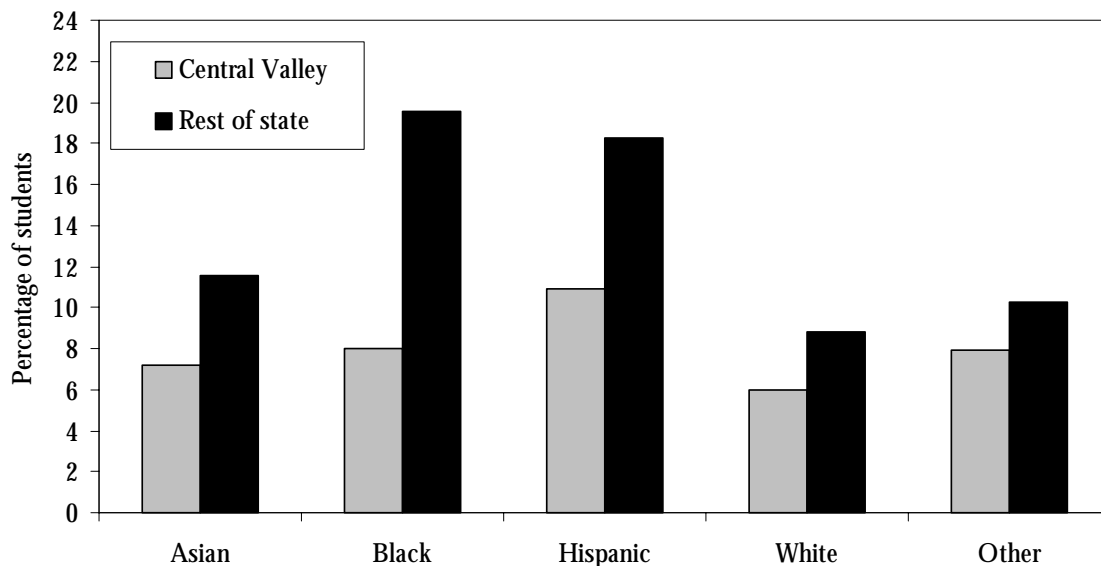
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<sup>1</sup> Average class size is often grouped with these resource measures (teacher experience and certification). We calculated average class size in a separate analysis (not shown) and found little variation among grade spans and Central Valley regions compared to the rest of the state. Class sizes range from 21.3 to 22.4 in K–6, from 27 to 29 in middle schools, and from 26 to 29 in high schools across the Central Valley subregions and the rest of the state.

<sup>2</sup> Uncertified teachers include teachers with internship and emergency credentials, as well as those with waived credential requirements. In this chapter, we often refer to teachers who do not have a full credential as uncertified or uncredentialed teachers.

Sacramento area had the lowest percentage of teachers lacking full certification (4 percent). South San Joaquin had the highest percentage at 11.2 percent, yet even this region had a lower percentage of uncredentialed teachers than the rest of the state. Rural schools in three Central Valley regions had a higher percentage of uncredentialed teachers than did urban schools. In the rest of the state, 14.7 percent of teachers in urban schools and 9.8 in rural schools were uncertified.

Figure 3.1 illustrates that the distribution of uncertified teachers in 2000 varied significantly across racial/ethnic groups in the state. That was also the case, although to a lesser extent, in the Central Valley. In the Central Valley, the average Hispanic student attended a school in which 11 percent of the teachers were uncertified, compared to 6 percent for the average white student. In the rest of the state, the proportions were 18 percent for Hispanics and 9 percent for whites. Blacks, the group with the highest percentage of uncredentialed teachers in the rest of the state (20 percent), were the group with the second highest percentage of uncredentialed teachers in the Central Valley (8 percent). The average Asian student in the Central Valley attended a school in which 7 percent of the teachers lacked a full credential as compared to 12 percent for Asian students in the rest of the state. In the rest of the state, the proportions were 18 percent for Hispanics and 9 percent for whites. Blacks, the group with the highest percentage of uncredentialed teachers in the rest of the state (20 percent), were the group with the second highest percentage of uncredentialed teachers in the Central Valley (8 percent). The average Asian student in the Central Valley attended a school in which 7 percent of the teachers lacked a full credential as compared to 12 percent for Asian students in the rest of the state.



SOURCE: CBEDS. See Appendix A for more details.

NOTES: Percentage of students with uncredentialed teachers are calculated for each school. Reported means are weighted by the number of students of each race or ethnicity.

**Figure 3.1 – Percentage of Students with an Uncredentialed Teacher, by Student Race/Ethnicity, 2000**

Across the four regions of the Central Valley, the differences in credentialing by student race/ethnicity were smaller than in the rest of the state (see Table 3.2). The disparities among racial/ethnic groups were close to 2 percentage points in all regions except South San Joaquin, where the group with the highest share of uncredentialed teachers (Hispanics with 13 percent) was 4 percentage points higher than the groups with the lowest (Asians and “other”). Although whites in all four regions went to schools with the lowest percentages of uncredentialed teachers, variation in the proportions existed among regions. White students in the North Valley attended schools with an average of 4 percent uncredentialed teachers, while those in the North and South San Joaquin Valley went to schools with an average of 8 percent.

**Table 3.2**  
**Percentage of Students with an Uncredentialed Teacher,**  
**by Student Race/Ethnicity, 2000**

	Asian	Black	Hispanic	White	Other
North Valley	5.1	4.5	4.9	3.5	5.3
Sacramento Metro	3.8	4.5	5.0	3.6	6.4
North San Joaquin	9.9	10.5	10.0	8.3	11.9
South San Joaquin	9.3	11.3	13.3	8.3	9.2
Central Valley	7.2	8.0	10.9	5.9	7.9
Rest of state	11.5	19.5	18.3	8.8	10.3

SOURCES: CBEDS. See Appendix A for more details.

NOTES: Percentage of students with an uncredentialed teacher is calculated for each school. Reported means are weighted by the number of students.

## Teacher Experience

Another indicator of teacher quality is experience. Regardless of profession, new employees are often less qualified in performing a job than more-experienced employees. This report focuses on two measures of teacher experience: average years of experience among teachers at a given school and the percentage of teachers in the first or second year of teaching. The proportion of inexperienced teachers in California public schools increased during the 1990s. The average student statewide attended a school in which the percentage of first-year teachers grew from 6 percent in 1990 to more than 8 percent in 2000, and the percentage of second-year teachers grew from 6 percent to 7 percent. Average experience declined from 15 years to 13 years over the same time period.

This trend, however, was not as clear in the Central Valley. Two regions in the Central Valley—Sacramento Metro area and North San Joaquin—experienced an increase in the percentage of first-year teachers, whereas the North Valley saw a slight decline in the proportion of these teachers (see Table 3.3). Moreover, at the end of the decade, the share of first- and second-year teachers was smaller in all regions of the Central Valley than it was

**Table 3.3****Teacher Experience**

	1990	1995	2000
<b>North Valley</b>			
% first year	5.3	4.3	5.0
% second year	5.5	3.8	4.5
Average experience (years)	14.2	14.8	14.3
<b>Sacramento Metro</b>			
% first year	4.4	5.8	6.2
% second year	5.6	5.2	5.5
Average experience (years)	14.2	13.8	13.1
<b>North San Joaquin</b>			
% first year	6.1	4.5	7.8
% second year	6.1	4.9	5.4
Average experience (years)	13.3	13.9	13.1
<b>South San Joaquin</b>			
% first year	6.8	5.0	6.7
% second year	6.2	5.5	6.5
Average experience (years)	13.0	13.6	12.8
<b>Central Valley</b>			
% first year	5.8	5.1	6.6
% second year	6.0	5.1	5.8
Average experience (years)	13.5	13.8	13.1
<b>Rest of state</b>			
% first year	5.8	6.1	8.8
% second year	5.6	5.3	7.5
Average experience (years)	14.7	14.5	12.7

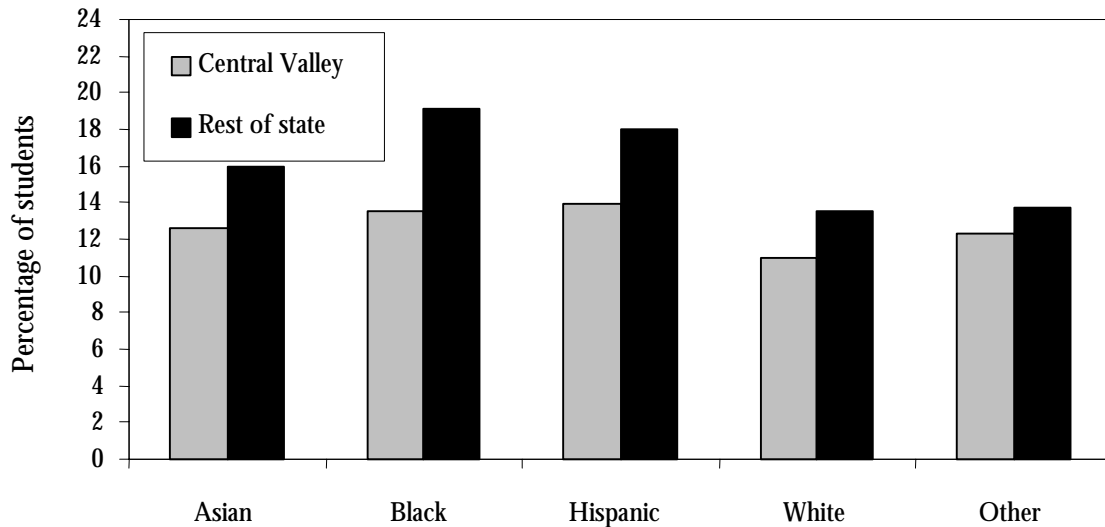
SOURCE: CBEDS. See Appendix A for more details.

NOTES: Percentages and average experience are calculated for each school. Reported means are weighted by the number of students.

in the rest of the state. North San Joaquin, with the largest percentage of first-year teachers, was still one percentage point below the rest of the state. In this region, an average student attended a school with 7.8 percent first-year teachers and 5.4 percent second-year teachers. The North Valley was well below the rest of the state in 2000, with an average of 5.0 percent of teachers in their first year, and 4.5 percent in their second year. The average in the rest of the state was 8.8 percent and 7.5 percent, respectively. There was little difference in average teacher experience across grade levels in each region, despite the large increase in K-3 teachers resulting from class size reduction in 1996 (see Appendix Table B.1).

As with uncredentialed teachers, the distribution of inexperienced teachers varied across racial/ethnic groups in 2000 (see Figure 3.2). White students had the lowest percentage of first- and second-year teachers in their schools in *both* the Central Valley and the rest of the state. Blacks and Hispanics in the rest of the state had more inexperienced teachers than





SOURCE: CBEDS. See Appendix A for more details.  
 NOTES: Percentages are calculated for each school. Reported means are weighted by the number of students of each race/ethnicity.

**Figure 3.2 – Percentage of Students with a First- or Second-Year Teacher, by Student Race/Ethnicity, 2000**

other groups. For all groups, the proportion of novice teachers was higher in the rest of the state than in the Valley.

Numerous studies have shown that schools with a high percentage of students in lunch programs have less-qualified teachers (Jepsen and Rivkin, 2002; Betts, Rueben, and Danenberg, 2000). This is true across all regions of the Central Valley, as well as in the rest of the state (not shown). However, even in schools where 75 to 100 percent of the students participate in a lunch program, average teacher qualifications are better in the Central Valley than in similar schools in the rest of the state. A similar pattern holds for both urban and rural schools. For example, urban schools in the Central Valley have higher shares of more-qualified teachers than urban schools outside the Valley (not shown).

### High School Counselors

High school counselors provide important information on academic courses and on alternatives following high school, such as college and work. In 2000, nine out of ten students in California statewide attended a high school in which there was at least one counselor (see Table 3.4). In the Central Valley, the number was slightly higher, 92.1 percent, although the proportion differed across regions.<sup>3</sup> Sacramento had the highest share of students attending high schools with at least one counselor, whereas North and South San Joaquin had the lowest. The average in the rest of the state was 90.5 percent—quite similar

<sup>3</sup> County-specific information on counselors is presented for the Central Valley in Appendix Table C.2.

**Table 3.4****Access to Counselors in High School**

	1990	1995	2000
Percentage of students with at least one counselor			
North Valley	92.5	89.9	93.2
Sacramento Metro	94.4	92.0	96.6
North San Joaquin	92.9	87.5	89.9
South San Joaquin	90.9	92.1	89.8
Central Valley	92.5	90.9	92.1
Rest of state	93.9	89.8	90.5
Number of students per counselor			
North Valley	344	392	357
Sacramento Metro	361	476	458
North San Joaquin	403	508	491
South San Joaquin	399	468	491
Central Valley	383	469	463
Rest of state	395	508	490

SOURCE: CBEDS. See Appendix A for more details.

NOTES: Presence of a counselor and number of students per counselor are calculated for each high school. Counselor may be part-time. Reported means are weighted by the number of students.

to the statewide percentage. Small schools, non-regular schools, and rural schools were more likely than other schools to be without a counselor.<sup>4</sup>

During the first half of the decade, all regions in the Central Valley (except South San Joaquin), as well as the rest of the state, experienced a slight decline in the share of students attending a high school with one or more counselors. However, in the second half, the trend reversed with all Central Valley regions (again, except South San Joaquin) increasing their share of students in such high schools. Over the decade as a whole, the North Valley and the Sacramento Metro area saw this proportion increase, whereas North and South San Joaquin saw it decline. In the rest of the state, the percentage of students attending a high school with one or more counselors fell from 93.9 percent in 1990 to 90.5 percent in 2000. Even though there are noticeable differences across regions in the share of students in such schools, the pupil-to-counselor ratio was relatively constant across regions in 2000. As shown in the bottom panel of Table 3.4, the regions throughout the Central Valley in 2000 had between 458 and 491 students per counselor (except North Valley, where the pupil-to-counselor ratio was 357). The number of counselors actually declined in all regions during the 1990s (not shown).

Overall, with regard to teacher characteristics, the Central Valley is in a better position than the rest of the state. Students in the Central Valley generally attended schools with

<sup>4</sup> Non-regular schools include special education schools, court/juvenile hall schools, California Youth Authority schools, continuation high schools, and some other schools that do not have a “regular” academic setting.

fewer uncertified or inexperienced teachers compared to the rest of the state, regardless of the time period or student race/ethnicity. In addition, high school students in the Central Valley had at least as much access to guidance counselors as students in the rest of the state.



## 4. Student Performance

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Student performance is arguably the most important education indicator for policymakers. Assessment and accountability are not new in the education field; however, public debate about accountability and “standards-based” reform in California schools has recently increased. This chapter briefly describes various components of the Public Schools Accountability Act (PSAA) of 1999, which governs some of the indicators discussed below.<sup>1</sup> We use several indicators of student performance, such as test scores and high school completion rates, to describe the achievement of K-12 public school students in California between 1990 and 2000.

### California’s Standardized Testing and Reporting (STAR) System

California’s STAR program tests students statewide from grades 2 through 11 in key subject areas. The main components of STAR are the Stanford Achievement Test Series, Ninth Edition, Form T (Stanford 9); the California Standards Tests; and the Spanish Assessment of Basic Education (SABE/2). We focus on the first two of these testing systems.<sup>2</sup>

#### *Stanford 9*

In the 1997 school year, after a brief hiatus between statewide achievement tests, California instituted the Stanford 9 as its statewide assessment tool.<sup>3</sup> This test, which became the cornerstone of the PSAA, is a multiple-choice exam that allows comparisons with a national sample of students. Students in grades 2 through 8 are tested in reading, writing, math, and spelling. Students in grades 9 through 11 are tested in reading, writing, math, science, and history/social science. We examined test scores in grades 2, 5, 8, and 11 because they represent “transition points.” That is, second grade is the earliest grade tested and represents an “entry point,” fifth grade is typically the exit grade from elementary school, eighth grade is typically the exit grade from middle school, and eleventh grade is the last year tested.

Table 4.1 shows the percentage of non-EL students in fifth grade who met or exceeded the 75<sup>th</sup>, 50<sup>th</sup>, and 25<sup>th</sup> percentiles of national performance for reading and math in each of the Central Valley regions and the rest of the state. We have chosen this example for three reasons. First, we focus on non-EL students because only 1.8 to 2 percent of the national sample consists of limited-English students, whereas some 24 percent of the students in California are classified as limited-English. Furthermore, research shows that standardized tests administered to EL students *in English* test little more than their ability to read English and are not an accurate measure of students’ knowledge about various subjects (Heubert and Hauser, 1999; Thompson et al., 2002). Second, we focus on fifth grade because presumably most students in this grade have moved from the “learning to read” to the “reading to learn”

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<sup>1</sup> For an overview of the PSAA of 1999 and its components, see <http://www.cde.ca.gov/psaa/>. For a discussion of the PSAA’s policy implications, see Betts and Danenberg (2002).

<sup>2</sup> For more details of the program, see <http://star.cde.ca.gov/>.

<sup>3</sup> California used the California Learning Assessment System (CLAS) for the last time in 1994. For an overview of the CLAS test results from the mid-1990s and the policy debate surrounding its cancellation, see Kirst et al., 1995.

**Table 4.1**  
**Stanford 9 Test Scores, Fifth Grade, non-EL**

	Percentage of Students Scoring At or Above Percentile					
	75 <sup>th</sup> Percentile		50 <sup>th</sup> Percentile		25 <sup>th</sup> Percentile	
	1997	2000	1997	2000	1997	2000
North Valley						
Math	13.0	32.4	36.0	61.1	58.7	79.5
Reading	18.7	24.9	43.2	54.5	68.6	79.3
Sacramento Metro						
Math	21.3	39.8	45.3	66.7	66.7	83.1
Reading	24.9	32.1	50.5	61.5	72.5	83.7
North San Joaquin						
Math	14.8	27.1	37.4	55.6	59.9	76.1
Reading	16.0	19.2	39.6	46.4	65.5	73.4
South San Joaquin						
Math	14.1	28.0	35.0	54.2	56.1	73.9
Reading	14.2	19.6	35.0	45.3	60.0	71.3
Central Valley						
Math	15.8	31.8	38.1	59.0	59.7	77.7
Reading	17.5	23.8	40.5	51.4	65.1	76.3
Rest of state						
Math	23.0	38.3	47.0	64.7	66.9	81.6
Reading	23.1	29.7	47.7	57.8	71.0	80.8

SOURCE: STAR. See Appendix A for more details.

NOTES: Test scores are calculated for each school. Statistics are weighted by the number of test-takers.

phase of reading ability.<sup>4</sup> (Appendix Tables B.2 through B.4 contain the same measures for grades 2, 8, and 11, which show similar patterns to those described in Table 4.1.) Finally, we discuss the 50<sup>th</sup> percentile because it represents a measure close to the “average” student—half of students nationally are below this percentile and half are above it.

Grade 5 test-takers in the 50<sup>th</sup> percentile in the Central Valley lagged behind their counterparts in the rest of the state in both reading and math in 2000. Within the Central Valley, the Sacramento Metro region had the highest percentage of fifth-grade students scoring at or above the national median for math and reading in both 1997 and 2000, whereas the South San Joaquin had the lowest percentage in each subject and year.

In terms of growth, the Central Valley regions have experienced moderate to relatively large gains in the share of students who score at or above the median—ranging from 7 to 25 percentage points, depending on the subject and region. Still, there is much variation across the Central Valley regions and compared to the rest of the state. For example, the North Valley had 25 and 11 percentage-point increases in the share of its students scoring at or above the median in math and reading, respectively. For Sacramento Metro, North San Joaquin, and South San Joaquin, the increases are roughly 20 percentage points for math and

<sup>4</sup> In addition, research has shown that students who enter schools in kindergarten or first grade as ELs are often redesignated as FEP by the time they reach grade five (New York City Board of Education, 2000).

10 percentage points for reading; and in the rest of the state they are 10 percentage points for math and 18 percentage points for reading.

The percentage of fifth-grade students scoring at or above the national median is lower in the Central Valley than in the rest of the state on a number of dimensions. Among urban students, 59.6 percent of fifth-grade students in the Central Valley score at or above the median in mathematics, compared to 65 percent of fifth grade students in the rest of the state. Among rural students, the percentages are 57.7 in the Central Valley and 62.2 in the rest of the state. Similar achievement gaps exist in other grades and in reading. In schools with high percentages of students in the lunch program, the fifth-grade mathematics percentages are 42.6 for students in the Central Valley and 46.2 for the rest of the state. The only instances where Central Valley students consistently showed higher achievement than the rest of the state were for eighth- and eleventh-grade mathematics and reading in schools with high percentages of students in the lunch program.

### ***California Standards Tests***

The California Standards Tests are relatively new in California—in fact, only the English language arts (ELA) tests are currently available for all grades in the 2000 dataset. This test, unlike the Stanford 9, does not allow comparison with a national sample of students. Rather, it contains items that are linked to a set of content standards that students in California are expected to know at particular points in their academic career.<sup>5</sup>

Table 4.2 shows the percentage of students in each ELA category in grades 2, 5, 8, and 11. Again, we present the non-EL scores for consistency and comparison. The table shows that the majority of students in all regions are clustered around the “basic” category—a pattern that approximates the “bell curve.” More importantly, well over 50 percent of students (in all regions) in all grades are performing at or above basic proficiency. For example, in fifth grade, 74.4 percent of non-EL students in North Valley, 79.6 percent in Sacramento Metro, 70.6 percent in North San Joaquin, and 67.2 percent in South San Joaquin, compared to 77.7 percent in the rest of the state are at or above basic proficiency. These numbers suggest that student performance may be better on the standards-based tests than the normed test that involves comparison with a national sample.

Still, the proportion of students in the “below basic” and “far below basic” categories are higher in the Central Valley than in the rest of the state. Again, this pattern is true regardless of community type or school poverty-level. There is also cause for concern in South San Joaquin, which has the highest percentage of failing students: 13.8 percent in second grade, 11.6 percent in fifth grade, 11.2 percent in eighth grade, and 12.9 percent in eleventh grade.

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<sup>5</sup> The scores are simple “correct percent of total answers” calculations. The state assigns ranges of scores that fall into the following categories: advanced, proficient, basic, below basic, far below basic. These categories roughly translate into letter grades A, B, C, D, and F. Over half of the items in the ELA standards tests are from the Stanford 9 test instrument (<http://star.cde.ca.gov/star2001/help/AboutSTAR.html>).

**Table 4.2**  
**California Standards Test, English/Language Arts, 2000**

	% Advanced	% Proficient	% Basic	% Below Basic	% Far Below Basic
<b>Second grade</b>					
North Valley	8.6	24.6	34.4	22.3	10.0
Sacramento Metro	16.0	29.7	30.8	16.8	6.8
North San Joaquin	8.4	23.2	32.2	23.7	12.5
South San Joaquin	8.9	22.0	31.5	23.9	13.8
Central Valley	10.9	24.8	31.7	21.6	11.0
Rest of state	14.9	28.3	30.4	17.9	8.6
<b>Fifth grade</b>					
North Valley	6.6	24.2	43.6	18.1	7.3
Sacramento Metro	11.3	29.4	38.9	14.5	5.9
North San Joaquin	5.5	21.7	43.4	20.3	9.1
South San Joaquin	5.8	20.2	41.2	21.1	11.6
Central Valley	7.5	23.7	41.3	18.6	8.9
Rest of state	10.5	27.5	39.7	15.5	6.9
<b>Eighth grade</b>					
North Valley	10.3	29.9	37.4	15.2	7.3
Sacramento Metro	13.3	31.2	35.6	13.0	6.9
North San Joaquin	7.9	25.5	40.3	18.0	8.4
South San Joaquin	7.8	23.5	38.4	19.2	11.2
Central Valley	9.7	26.9	37.9	16.7	8.9
Rest of state	12.0	28.0	37.0	15.1	7.9
<b>Eleventh grade</b>					
North Valley	9.8	24.5	36.4	19.7	9.6
Sacramento Metro	12.5	27.6	34.7	16.9	8.4
North San Joaquin	7.4	22.1	37.5	22.6	10.3
South San Joaquin	6.8	20.3	36.4	23.5	12.9
Central Valley	8.9	23.2	36.1	21.0	10.7
Rest of state	12.6	25.0	35.0	18.5	8.9

SOURCE: California Standards Test, California Department of Education.

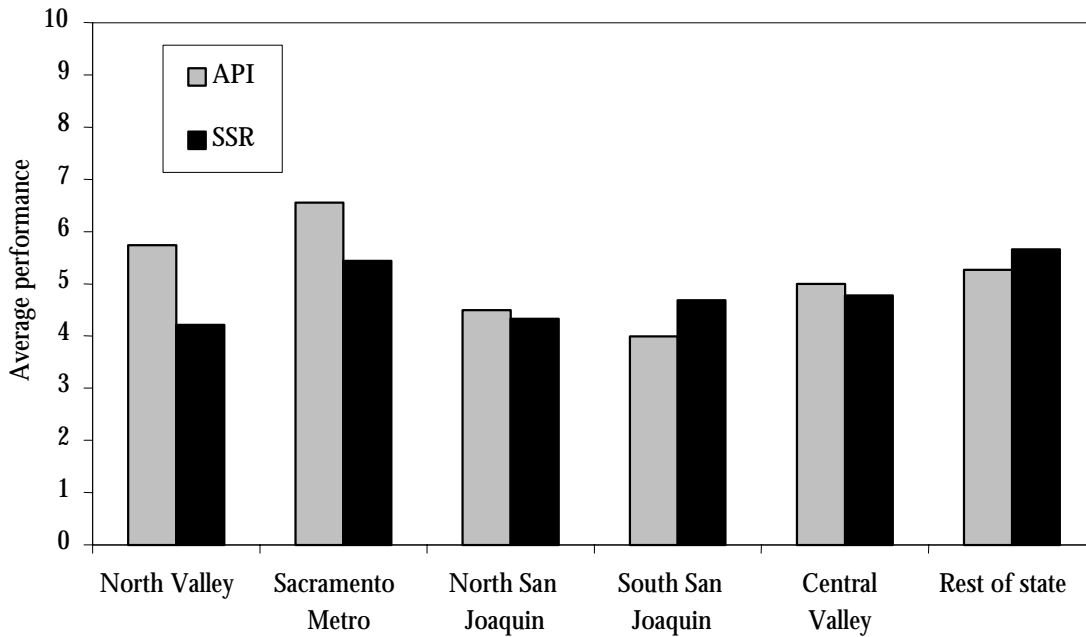
NOTES: Test scores are calculated for each school. Statistics are weighted by the number of test-takers.



## The Academic Performance Index (API)

A major component of the PSAA is the API—an index that ranks California’s schools into deciles on a scale of 1 to 10, with 1 being the lowest-achieving schools and 10 the highest. In addition to these rankings, the state computes a Similar Schools Rank (SSR), which adjusts for certain school, student, and teacher characteristics and ranks schools’ performance compared to other schools that have similar sets of these characteristics.<sup>6</sup> Until 2000, the API relied solely on the Stanford 9. However, the PSAA includes provisions to incorporate other factors into the API in the future such as standards-based exams, attendance rates, a high school exit exam, and high school graduation rates. In 2000, the average API rank statewide was 5.2 and the average SSR statewide was 5.5.

As shown in Figure 4.1, the average student in Sacramento Metro attends schools with the highest average APIs (6.6) and in South San Joaquin with the lowest average APIs (4). However, when we compare SSRs across Central Valley regions, South San Joaquin (4.7) is more comparable to the other regions: North Valley (4.2), Sacramento Metro (5.4), and North San Joaquin (4.3).<sup>7</sup> Still, the average student in the rest of the state attends a school



SOURCE: Academic Performance Index, California Department of Education. See Appendix A for more details.

NOTES: The API and SSR are reported for each school as a decile ranking. The figure shows the average decile weighted by the number of students.

**Figure 4.1 – Average Academic Performance Index and Similar School Ranking, 2000**

<sup>6</sup> For an overview of the API and SSR, see <http://www.cde.ca.gov/psaa/api/>.

<sup>7</sup> The state calculates APIs for “significant subgroups” such as race/ethnicity. However, such a group must constitute a minimum percentage of the school’s enrollment. This requirement may create misleading averages of API scores across a broader region if individual schools do not have large enough numbers to calculate the API for a particular subgroup.

with a higher SSR (5.7) than any Central Valley region. When looking at the percentage of schools above a rank of 3 rather than the average rank, a similar pattern emerges: South San Joaquin is noticeably below other regions in the API but is closer to other regions in the SSR (not shown).

## California High School Exit Exam (CAHSEE)

As part of the PSAA's provisions to incorporate a high school exit exam in the API, the CAHSEE was offered for the first time in spring 2001. The exam has two parts: ELA and math. The ELA test is aligned to ninth and tenth grade material and the math test is aligned to sixth and seventh grade material along with Algebra 1 (normally taken in eighth or ninth grade).<sup>8</sup> In spring 2001, ninth grade students (class of 2004) could volunteer to take the test and if they passed it, would not have to take it again. Beginning in 2002, tenth-grade students are required to take and pass both parts of this exam before they can graduate. If they do not pass the first time, they may try again in the eleventh and twelfth grades.<sup>9</sup> The CAHSEE involves high stakes—an individual who does not eventually pass it will not graduate from high school.<sup>10</sup>

Table 4.3 presents results of the 2001 “trial-run” of the CAHSEE. Reading-test passage-rates were higher than math passage-rates in all regions. North Valley had the highest percentage of students taking the exam and the second-highest percentage in both subjects who passed. Sacramento Metro had the highest pass-rates in both subjects, and South San Joaquin had the lowest. In fact, South San Joaquin is the only region with lower participation and pass rates than the rest of the state.

## High School Completion

Because graduation from high school is one of the strongest determinants of future labor market success, it is important to accurately measure how many students actually graduate. There has been considerable controversy surrounding the best way to measure high school graduation and dropout rates in California.<sup>11</sup> The state collects counts of dropouts from schools each year.<sup>12</sup> However, without a student-level database that tracks individual students over time, it is difficult for school officials to know whether students have enrolled in another school or have left school permanently. Much of the research about graduation and dropout rates suggests that the actual dropout rates are higher than those suggested in the CDE's official data.<sup>13</sup> Betts and Danenberg (2002) illustrate how

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<sup>8</sup> For background information on the CAHSEE and the specific legislation that authorizes it, see <http://www.cde.ca.gov/statetests/cahsee/backgroundinfo.html>. For grade-level math standards, see <http://www.cde.ca.gov/cdepress/math.pdf>.

<sup>9</sup> Students must also meet the individual district's requirements for graduation.

<sup>10</sup> Controversy has arisen over the possibility that the CAHSEE may adversely affect graduation rates. Heubert and Hauser, 1999, argue that exit exams in general increase dropout rates.

<sup>11</sup> For example, see Herendeen, 2002.

<sup>12</sup> A student is counted as a dropout if the student “has left school for 45 consecutive school days and has not enrolled in another public or private educational institution or school program, has not re-enrolled in the school, has not received a high school diploma or its equivalent, was under twenty-one years of age, and was formerly enrolled in a school or program leading to a high school diploma or its equivalent” (California Department of Education). For more information see <http://www.cde.ca.gov/demographics/glossary/index.html#d>.

<sup>13</sup> For example, see Heubert and Hauser, 1999; Betts, 2000; Betts, (forthcoming); Ruiz-de-Velasco and Fix, 2000.

different calculations can greatly change the rate: For example, CDE data indicate that the one-year dropout rate is quite low—about 3 to 4 percent over the latter half of the 1990s,

**Table 4.3**

**Percentage of Students Taking and Passing  
California High School Exit Exam, 2000**

	% Taking Test	% Passing
North Valley		
Math	84.3	49.2
Reading	85.2	70.0
Sacramento Metro		
Math	70.6	56.6
Reading	77.6	76.0
North San Joaquin		
Math	81.2	41.5
Reading	82.5	62.9
South San Joaquin		
Math	70.7	37.2
Reading	69.6	59.4
Central Valley		
Math	74.4	44.8
Reading	76.3	66.1
Rest of state		
Math	75.6	44.6
Reading	76.5	63.9

SOURCES: CAHSEE and CBEDS. See Appendix A for more details.

NOTES: Percentage of test-takers is available at the school level. Reported means are weighted by the number of students in ninth grade.

which implies a four-year dropout rate of approximately 12 to 16 percent.<sup>14</sup> However, a ratio of high school graduates to ninth grade enrollment three years earlier yields a much higher “left school rate” of around 25 to 30 percent.<sup>15</sup> Still, there is no foolproof way of knowing if students have left the school system entirely or migrated to another school.

Table 4.4 shows the percentage of entering twelfth-grade students who graduate from the same school the following spring.<sup>16</sup> This table suggests that between 9 percent and 17 percent of the students who start their final year of high school (twelfth grade) do not graduate the following spring, depending on the region and year shown in the table. For example, North Valley had a relatively low completion rate in each of the three years shown: 91.8 percent in 1990, 83.1 percent in 1995, and 83.4 percent in 2000. Even Sacramento Metro, which has fared quite well by most of the achievement indicators discussed in this chapter, had a completion rate of only 87 percent in 1995 and 2000. South San Joaquin,

<sup>14</sup> The CDE definition of the one-year *dropout* rate is the number of dropouts in a given year (grades 9-12) divided by grades 9-12 enrollment the same year. The one-year *graduation* rate used here is the number of graduates divided by the number of entering seniors from the prior fall.

<sup>15</sup> Colleges and universities often calculate a similar type of rate in their published graduation rates.

<sup>16</sup> Appendix Table C.3 contains county-level completion rates for the Central Valley.

**Table 4.4**

**Percentage of Entering Twelfth-Grade Students  
Who Graduate at End of Same School Year**

	1990	1995	2000
North Valley	91.8	83.1	83.4
Sacramento Metro	93.1	87.2	87.1
North San Joaquin	94.2	88.2	88.6
South San Joaquin	93.7	90.6	90.7
Central Valley	93.3	88.1	88.1
Rest of state	93.5	89.7	89.8

SOURCE: CBEDS. See Appendix A for more details.

NOTES: Percentages are calculated for each school. The reported means are weighted by the number of students in twelfth grade.

which has not fared as well as the other Central Valley regions by a number of achievement indicators, actually had the highest one-year graduation rate among the regions in the two most recent years shown in the table.

One-year completion rates in the Central Valley are comparable to those in the rest of the state for many groups of students, with two notable exceptions. First, the completion rate for rural students in the Central Valley was somewhat lower than for rural students in the rest of the state—81.7 percent versus 85.7 percent in 2000. Second, the completion rates in high-poverty schools (at least 75 percent of students enrolled in the lunch program) were lower in the Central Valley than in the rest of the state (76.7 percent versus 87.1 percent). Females in the Central Valley had slightly higher completion rates than males (1 to 5 percentage points depending on the region).

As an alternative measure of the graduation rate, Table 4.5 shows the ratio of graduates in 2000 to tenth-grade students in the fall of 1997.<sup>17</sup> As expected (based on our discussion above of various graduation rate calculations), this table shows that three-year completion rates may be much lower than one-year rates. Our calculations indicate that only 69.8 percent to 72.9 percent of students entering tenth grade graduate, depending on the region. In other words, 30.2 percent of tenth-grade students in North San Joaquin and 27.1 percent of tenth-grade students in Sacramento Metro do not graduate as twelfth-grade students in the same school in 2000.

<sup>17</sup> We use tenth grade rather than ninth grade as our denominator because we understand that ninth grade students are often counted twice when they are retained rather than promoted (personal communication from Lynn Baugher, CBEDS administrator, May 2001).

**Table 4.5**

**Percentage of Entering Tenth-Grade Students in 1997 Who Graduated in 2000**

	2000
North Valley	71.4
Sacramento Metro	72.9
North San Joaquin	69.8
South San Joaquin	70.7
Central Valley	71.3
Rest of state	71.8

SOURCE: CBEDS. See Appendix A for more details.

NOTES: Percentages are calculated for each school. The reported means are weighted by the number of students in tenth grade in 1997.

## Scholastic Achievement Test (SAT®)

The final achievement indicator we examine is the SAT® I.<sup>18</sup> Unlike the other indicators in this chapter, the state does not mandate or fund this test. As such, there may be certain selection issues surrounding *which* students participate in the test. For example, more-affluent students or students who have better information about the benefits of taking such a test may be more likely to take it. However, virtually every highly selective four-year college or university in the United States requires prospective students to take this test as part of the application process.<sup>19</sup> Furthermore, standardized test scores such as those from the SAT® I college entrance exam are often used to measure college-readiness nationally. Test participation rates are also an indication of intent to enter a highly selective four-year college immediately after graduating from high school.<sup>20</sup>

Table 4.6 shows the average percentage of twelfth-grade students taking the test and the average combined verbal and math score in the four Central Valley regions and the rest of the state. Participation rates in each of the Central Valley regions were well below the rest of the state in each of the three years shown (1990, 1995, and 2000); and North San Joaquin had the lowest participation rates in each of the years. The average scores in Sacramento Metro and North Valley were higher than in other Central Valley regions and in the rest of the state in every year. In addition, although South San Joaquin experienced a small increase

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<sup>18</sup> The SAT® I is published by the College Board, a registered trademark of the Educational Testing Service, Princeton, NJ. For an overview and history of the College Board, see <http://www.collegeboard.com/about/association/history.html>. For a list of current fees, see <http://www.collegeboard.com/sat/html/students/fees001.html>.

<sup>19</sup> There are other ways to gain entrance to a four-year school, such as attending community college and transferring, which is quite popular in California (see Chapter 6). Also, many colleges and universities accept the American College Test (ACT) in lieu of the SAT®.

<sup>20</sup> We explored the possibility of examining results from the Preliminary SAT®/National Merit Scholarship Qualifying Test (PSAT/NMSQT) tests, which are typically taken by students in the tenth and eleventh grades. However, the CDE does not acquire results from the test publisher, and they are not readily available from the publisher at any level below aggregated state-level. Thus, we are not able to include them in this report.

in participation rates, scores within the region have declined. In general, participation rates in all regions remained fairly flat during the 1990s, yet the small increases in Sacramento

**Table 4.6**  
**SAT®I Test-Taking and Test Scores for Twelfth-Grade Students**

	% Taking Test			Average Score		
	1990	1995	2000	1990	1995	2000
North Valley	33.4	31.3	31.1	999	1006	995
Sacramento Metro	35.0	37.4	37.2	1021	1015	1006
North San Joaquin	28.0	27.5	29.7	985	978	972
South San Joaquin	29.1	31.1	31.0	963	958	952
Central Valley	31.2	32.1	32.6	989	985	977
Rest of state	43.1	42.1	43.1	979	979	989

SOURCE: SAT®. See Appendix A for more details.

NOTES: Statistics are calculated for each school. The percentage of students taking the test is weighted by the number of students in twelfth grade, whereas the average score is weighted by the number of test-takers.

Metro, North San Joaquin, and South San Joaquin suggest that the percentage of students planning to attend four-year colleges rose somewhat during the decade.<sup>21</sup>

There are two dramatic trends when schools are divided into four categories based on the percentage of students in the lunch program (see Appendix Table B.5). First, in each category, the Central Valley has a lower percentage of test-takers than the rest of the state. Second, the Central Valley has higher average test scores than the rest of the state in all but the lowest-poverty schools (25 percent or fewer students in the lunch program).<sup>22</sup>

The data examined above indicate that student achievement in the South San Joaquin area often lags behind other regions, whereas achievement in the Sacramento Metro area often exceeds other regions in the Central Valley. Overall, the Central Valley experienced substantial gains on the Stanford 9 between 1997 and 2000—and on other achievement measures between 1990 and 2000—often at a greater rate than the rest of the state.

<sup>21</sup> We explored the possibility of including the percentage of students who take the SAT by race/ethnic groups. However, the racial/ethnic categories in the CBEDS and SAT® datasets are not comparable.

<sup>22</sup> The one exception is that in 1990, low-poverty as well as high-poverty schools in the Central Valley outperformed the rest of the state.

## 5. Middle and High School Courses and Enrollment

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Course availability and enrollment in certain courses help students prepare for eventual college entrance. For example, public universities in California require the completion of a specified set of courses for students entering immediately after high school. The courses, along with algebra in middle schools and Advanced Placement (AP) courses in high schools, are the focus of this chapter.

### Access to Algebra in Middle Schools

Research has shown a relationship between future earnings and courses taken in high school. Some of the strongest relationships are between earnings and the number and type of math courses (Rose and Betts, 2001). In turn, courses taken in high school depend on the preparation students receive in middle school. Therefore, it is important to look at access to algebra, type of algebra available, and enrollment in the classes that signal the most-advanced middle school students.<sup>1</sup>

One way to examine the availability of algebra courses is to compute the percentage of students who attend middle schools that offer the courses. As Table 5.1 shows, the share of students in schools offering algebra changed greatly in the Central Valley between 1990 and 2000.<sup>2</sup> The percentage of North Valley students with access to algebra rose from 77.6 percent in 1990 to 96.7 percent in 1995 and then fell to 86.5 percent in 2000. Over the same period, the relatively high level of access to algebra in Sacramento Metro declined slightly, whereas the shares in North and South San Joaquin steadily increased. Despite some

**Table 5.1**

#### Percentage of Students in Middle Schools Offering Algebra

	1990	1995	2000
North Valley	77.6	96.7	86.5
Sacramento Metro	89.1	87.5	87.7
North San Joaquin	77.8	87.5	93.8
South San Joaquin	75.8	79.3	82.2
Central Valley	80.1	85.1	86.7
Rest of state	88.4	86.6	93.0

SOURCE: CBEDS. See Appendix A for more details.

NOTES: Availability of algebra classes is calculated at the school level. The reported means are weighted by enrollment.

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<sup>1</sup> Beginning in 2000, the CDE identified seventh- and eighth-grade enrollment in intermediate algebra as important data to track in the CBEDS data collection.

<sup>2</sup> Appendix Table C.4 contains county-specific data on access to algebra for the Central Valley in 2000.

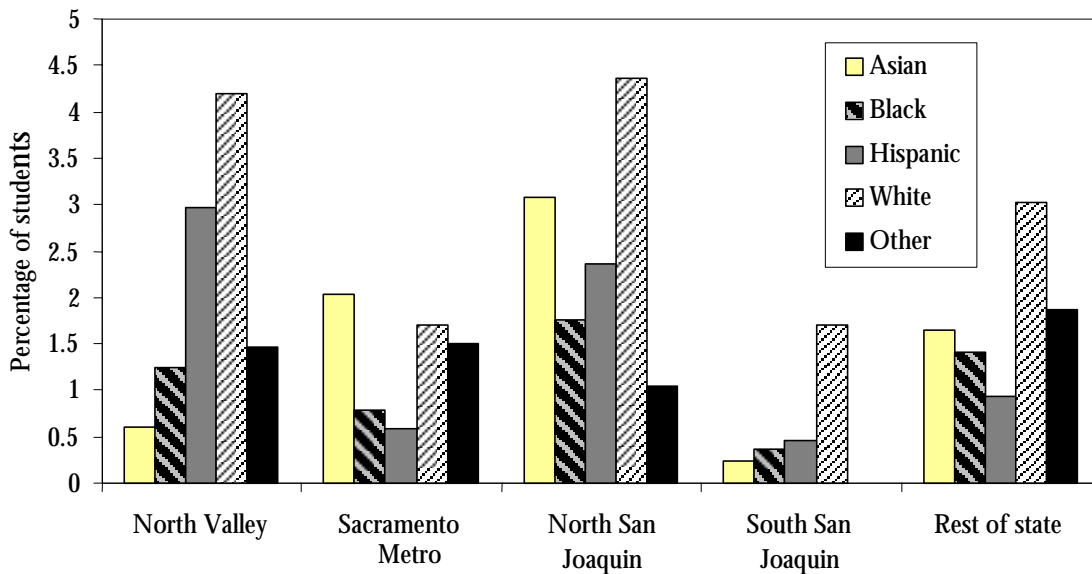
variation across and within regions, the vast majority of students attended middle schools that offered algebra, although access remained lower in the Central Valley than in the rest of the state.

Most of the schools that do not offer algebra—both in the Central Valley and the rest of the state—had smaller enrollments and had more low-income students. Roughly 15 percent of the schools that did not offer algebra were not regular middle schools.

### Middle School Enrollment in Intermediate Algebra Courses

Throughout the 1990s, the CDE collected intermediate algebra enrollment data for only high school grades; but beginning in 2000, the counts have included seventh and eighth grades as well. This is one of the few cases in which the state collects course enrollment data by student race/ethnicity. Although overall percentages are quite small (only about 2 percent of seventh- and eighth-grade students are enrolled in intermediate algebra statewide) enrollment in these earlier grades signals the presence of more-advanced students. As such, it is important to identify base-line variations that may exist—not only across regions, but across racial/ethnic groups as well. Unlike the section above, which measured the percentage of students attending schools offering any algebra courses, this section contains actual enrollment percentages in intermediate algebra.

Figure 5.1 shows the wide variation in racial/ethnic enrollment patterns in the Central Valley. Students in South San Joaquin are much less likely than students in other regions to



SOURCE: CBEDS. See Appendix A for more details.

NOTES: Percentage of seventh and eighth grade students taking intermediate algebra is calculated for each school. The reported means are weighted by the number of students of each race/ethnicity.

**Figure 5.1 – Percentage of Seventh- and Eighth-Grade Students Enrolled in Intermediate Algebra, by Race/Ethnicity, 2000**



enroll in an intermediate algebra course. White students are more likely than others to take an advanced algebra course, except in the Sacramento Metro area, where Asian students hold a slight edge. However, in two other regions (the North Valley and South San Joaquin), Asian students represent the lowest enrollment percentage.<sup>3</sup>

## **High School Graduates Completing University Entrance Requirements**

Because some racial/ethnic groups fare better than others in high school completion and college attendance, it is important to understand the geographic distribution of such students.<sup>4</sup> Among the few course enrollments that CDE collects by race/ethnicity are counts of high school graduates who complete a series of college-preparatory courses designed to meet University of California (UC) or California State University (CSU) entrance requirements (the “a-g” series) with a grade “C” or better.<sup>5</sup>

As shown in Table 5.2, graduates of every race/ethnicity in the Central Valley have lower a-g completion rates than the rest of the state.<sup>6</sup> Although there is much variation in completion rates across regions, racial/ethnic groups, and time, Asians and whites have the highest proportions of graduates completing college-preparatory courses, whereas blacks and Hispanics have the lowest proportions, just as in the rest of the state.<sup>7</sup>

The table also suggests that some racial/ethnic groups are faring better than others across time. Asians and whites experienced sizeable increases in course completion between 1990 and 2000 in both the Central Valley and the rest of the state, whereas Hispanics showed much more modest increases. Blacks experienced a sizable increase in the Central Valley but no increase in the rest of the state. The table also shows the relationship between schools with varying percentages of students participating in the lunch program and students completing a-g course requirements. Although the largest increases in the Central Valley were in schools with few students participating in the lunch program, all groups of schools demonstrated sizable increases in the percentage of graduates prepared for UC or CSU. The same cannot be said for the rest of the state, where schools in the middle range, with 25 to 75 percent of students eligible for lunch programs, had similar if not lower levels of course completion in 2000 than in 1990.

Because the percentage of a-g graduates among rural students increased dramatically in the Central Valley over the decade, the percentage of high school graduates completing a-g coursework was similar between the Central Valley and the rest of the state in 2000 (slightly less than 30 percent). However, the percentage of a-g students in urban areas of the Central Valley trailed the percentage in the rest of the state throughout the decade—in 2000, the percentages for urban students were 32.7 in the Central Valley and 37.9 in the rest of the state.

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<sup>3</sup> The CBEDS data do not allow disaggregation of Asian groups; however, the Central Valley ranks second nationwide in Cambodian, Hmong, and Laotian populations (Lopez, 1996).

<sup>4</sup> For example, Grogger and Trejo (2002) find that Mexican-American and black students have much lower overall high school completion rates than other groups in the United States.

<sup>5</sup> This series was formerly known as the “a-f” series of courses.

<sup>6</sup> Both males and females in the Central Valley have lower completion rates than their counterparts in the rest of the state. For all regions and years, males have lower completion rates than females.

<sup>7</sup> Reyes (2001) documents the lower college completion rates for blacks and Hispanics, so it not very surprising that these two groups would also have lower rates of college-preparatory course completion.

**Table 5.2**  
**Percentage of High School Graduates Completing “a-g”**  
**Requirements, by Race/Ethnicity, Lunch Program,**  
**and Community Type**

	1990	1995	2000
<b>Race/Ethnicity</b>			
Central Valley			
Asian	34.6	40.4	41.0
Black	16.2	21.8	21.5
Hispanic	15.8	18.3	18.6
White	28.3	34.2	36.2
Other	10.9	24.0	19.4
Rest of state			
Asian	43.9	53.1	57.5
Black	26.9	31.3	26.8
Hispanic	20.4	24.3	23.1
White	35.2	41.2	43.0
Other	20.7	28.6	21.6
<b>% of students in lunch program</b>			
Central Valley			
0-25	27.0	34.8	38.2
25-50	20.6	27.4	26.0
50-75	15.2	18.6	23.1
75-100	18.7	20.8	26.2
Rest of state			
0-25	32.0	40.9	43.6
25-50	30.1	32.4	30.6
50-75	32.6	30.1	28.9
75-100	24.5	38.1	28.9
<b>Community type</b>			
Urban			
Central Valley	28.0	32.1	32.7
Rest of state	31.8	37.5	37.9
Rural			
Central Valley	20.5	29.9	28.3
Rest of state	29.9	27.1	29.5

SOURCE: CBEDS. See Appendix A for more details.

NOTES: Number of graduates meeting “a-g” requirements and total number of graduates are aggregated by region.

## Advanced Placement Courses

Students who have passed AP courses in high school can often skip certain introductory-level college courses, thus completing college at a faster pace.<sup>8</sup> The availability of these courses and enrollment in them arguably signal the presence of the most advanced high school students.<sup>9</sup>

We compute the percentage of students attending high schools that offer AP courses as well as the actual enrollment counts in these courses in each region.<sup>10</sup> We estimate the percentage of high school students (grades 9 through 12) enrolled in these courses based on the assumption, for example, that a student would be unlikely to enroll in two AP math courses at the same time.<sup>11</sup> Eleventh- and twelfth-grade students are typically more likely to enroll in AP classes than ninth- or tenth-grade students. However, we use course enrollment and *total* high school enrollment to calculate the estimates because we find that students in these classes may be in any of grades 9 through 12 (not shown).<sup>12</sup>

As shown in Table 5.3, there is considerable variation across regions and subjects in both the percentage of students attending schools with AP courses and the estimated percentage of students in such courses.<sup>13</sup> There is no single Central Valley region that stands out as a clear leader or a clear “loser” in these measures. For example, within the four regions in 1995, South San Joaquin had the lowest percentage of students in schools with AP English but the highest percentage of students in schools that offered both AP science and AP social studies. In 2000, North San Joaquin had the lowest percentage of students in schools with AP math but the highest percentage of students in schools offering AP science. However, it should be noted that within every Central Valley region the percentage of students in schools offering AP subjects is lower than the percentage of students in schools offering AP subjects in the rest of the state (except for math classes in the Sacramento Metro area in 2000).

When we examine the estimated percentage of students enrolled in AP classes across and within the regions, we see that in 2000, for example, the percentage ranges from about 0.73 percent for foreign language in North Valley and North San Joaquin to 4.65 percent for social studies in the rest of the state.<sup>14</sup> Again, the only clear pattern is that the shares of students enrolled in AP classes in Central Valley regions are lower than those in the rest of

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<sup>8</sup> See <http://www.collegeboard.com/ap/students/benefits/index.html>.

<sup>9</sup> We do not study other types of honors courses because AP courses are the only ones that have their own set of CBEDS course codes and must meet a rigorous set of conditions. Therefore, we can be certain that they would be considered “honors” courses.

<sup>10</sup> AP math and English statistics for each county in the Central Valley are available in Appendix Table C.5.

<sup>11</sup> If this assumption is false, we are overstating the percentage of students enrolled in such courses. Because it is quite likely that a student could be taking an AP course in more than one subject area, we cannot reliably estimate the percentage of students taking AP courses overall. However, the percentage of overall student-course enrollment in AP courses is quite small. For instance, Danenberg (2001) uses a different combination of data and a student-course measure to document that in 1998 less than one-half percent of overall course-enrollment in English was in AP courses statewide, yet over 64 percent of the state’s high schools offered at least one section of AP English.

<sup>12</sup> Some students in schools that do not offer AP classes may be taking distance-learning courses over the internet or may be enrolled in comparable courses at community colleges. Because we do not have data for these types of enrollment, we may be underestimating the number of students who are taking advanced coursework. Given our assumptions and the data limitations, our estimates of the percentage of students enrolled in these courses should not be considered exact measures, but they are reasonable estimates at the school level.

<sup>13</sup> Data for 1990 are not available for these measures.

<sup>14</sup> This calculation uses data aggregated to the regional level rather than school-level means.

**Table 5.3**  
**AP Courses, by Subject**

	Percentage of Students in Schools Offering AP Courses		Percentage of Students Enrolled in AP Courses	
	1995	2000	1995	2000
<b>North Valley</b>				
Math	46.6	62.7	0.89	1.37
Science	30.2	45.9	0.93	1.04
English	65.1	78.4	2.25	2.29
Social studies	61.3	77.0	3.11	2.60
Language	24.4	52.6	0.66	0.76
<b>Sacramento Metro</b>				
Math	61.4	78.4	1.28	2.06
Science	39.5	46.7	1.05	1.07
English	71.5	64.7	1.81	1.57
Social studies	61.3	68.2	2.09	2.64
Language	47.8	41.7	1.00	0.72
<b>North San Joaquin</b>				
Math	45.8	53.7	0.53	0.86
Science	48.9	69.3	0.93	1.19
English	69.7	71.5	1.95	1.90
Social studies	53.9	67.0	2.79	3.07
Language	38.6	60.6	0.64	0.73
<b>South San Joaquin</b>				
Math	59.3	73.5	0.96	1.43
Science	52.8	61.1	1.20	1.38
English	56.7	71.4	1.48	2.09
Social studies	71.4	74.0	2.82	3.03
Language	54.6	54.0	1.32	1.23
<b>Central Valley</b>				
Math	55.6	69.4	0.94	1.75
Science	45.9	57.1	1.07	1.44
English	64.5	70.3	1.76	2.28
Social studies	63.7	71.1	2.64	3.42
Language	46.0	51.8	1.01	1.10
<b>Rest of state</b>				
Math	63.3	77.7	1.36	2.24
Science	59.4	72.5	1.92	2.44
English	75.0	81.0	2.56	3.08
Social studies	79.6	84.6	3.49	4.65
Language	63.9	76.4	2.02	2.25

SOURCE: CBEDS. See Appendix A for more details.

NOTE: Availability of AP courses by subject is calculated at the school level. The reported means are weighted by the number of students in ninth through twelfth grades.

the state. The table also shows that the percentage of students attending schools offering AP classes, as well as the estimated percentage of students enrolled in such classes, rose between 1995 and 2000 in almost all subject-region combinations. This increase may reflect the order of Governor Davis in 1999 to increase the number of AP classes in the state.

There is also variation in AP courses by the school's community type (not shown). For example, 81.8 percent of students in urban schools in the Central Valley in 2000 attended schools with at least one section of AP math, as compared to 80 percent in the rest of the state; in rural areas, these percentages were 57.5 percent in the Central Valley and 63 percent in the rest of the state. Overall, the set of schools in the state that do not offer AP math or English classes have smaller enrollments and more low-income students.<sup>15</sup>

This chapter has documented course offerings and enrollment that help students prepare for college. We find some variation in these indicators across time and regions in the Central Valley and between the Central Valley and the rest of the state. Most students have access to algebra in middle school. In high school, fewer graduates complete a-g courses and fewer students take AP classes in the Central Valley than in the rest of the state. However, there are no clear patterns among Central Valley regions.

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<sup>15</sup> When non-regular schools are excluded from the AP analysis, the results are virtually the same. Note that many non-regular schools, primarily magnet schools and charter schools, offer AP classes.



## 6. College Enrollment and Completion

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This chapter describes college enrollment in California and graduation rates for four-year institutions in the Central Valley and the state. We measure first-time enrollment in UC, CSU, and CCC, as well as transfers from CCC to four-year institutions. Due to data limitations, the chapter focuses on public institutions. However, we include private institutions when data are available. The measures in this chapter understate enrollment and completion because they do not include first-time freshmen attending private schools or schools out of state.<sup>1</sup>

### Public Postsecondary Institutions in California

Each of the three public higher education systems in California has a specific function envisioned by the state's Master Plan for Higher Education. Legislation known as the *Donahoe Higher Education Act*, passed in 1960, codified much of the Master Plan's vision, including mission statements for California's three public postsecondary institutions.<sup>2</sup> UC is the most-selective system, providing undergraduate, graduate, and professional instruction. It has sole authority to award the doctorate (except for joint doctoral programs with CSU) and is the primary state-supported academic agency for research. CSU is primarily an undergraduate institution that provides liberal arts and sciences instruction, instruction in certain professions requiring more than two years of postsecondary study, and teacher education. CCC offers instruction up to the fourteenth-grade level in one or more of the following areas: "1) college coursework for transfer, 2) vocational-technical fields, and 3) general/liberal arts."<sup>3</sup>

Admission guidelines that are not statutory are also included in the Master Plan. According to these guidelines, UC selects from among the top 12.5 percent of high school graduates statewide, CSU selects from among the top one-third, and CCC admits any student 18 years of age or older "capable of benefiting from instruction."<sup>4</sup> UC has recently amended its admission policies to include the top 4 percent of students in each high school and "dual admission," which is a guarantee of admission to a UC campus for high school students if they successfully complete a CCC transfer program.<sup>5</sup>

There are 109 CCC campuses in 72 college districts across the state, compared to 23 CSU campuses and 9 undergraduate UC campuses. Twenty-two of the CCC campuses (20.2 percent), five of the CSU campuses (21.7 percent), and one UC campus (Davis) are located in the Central Valley (CPEC, 2002).<sup>6</sup> UC plans to open a tenth campus in Merced, (i.e., in

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<sup>1</sup> We are unable to provide statistics by race/ethnicity in this chapter because the data are incomplete. Disaggregations by gender, community type, and income are only available for first-time freshmen. We explored the possibility of obtaining Cal-Grants data, which would give us a measure for college students comparable to the Title I data for K-12 students, but the data are not in a form comparable to the other data.

<sup>2</sup> For more details of Senate Bill 33, see <http://www.ucop.edu/acadinit/mastplan/SB33ExSess1960.pdf>.

<sup>3</sup> [http://www.sen.ca.gov/ftp/SEN/COMMITTEE/JOINT/MASTER\\_PLAN/\\_home/PROVISIONSMPHE.HTML](http://www.sen.ca.gov/ftp/SEN/COMMITTEE/JOINT/MASTER_PLAN/_home/PROVISIONSMPHE.HTML).

<sup>4</sup> *ibid.*

<sup>5</sup> See Koretz, D., et al. (2002), Testing and diversity in postsecondary education: The case of California, *Education Policy Analysis Archives*, 10(1), at <http://epaa.asu.edu/epaa/v10n1/>. <http://olam.ed.asu.edu/epaa/v10n1/>, and <http://www.cpec.ca.gov/CollegeGuide/UCSystemInformation.asp>.

<sup>6</sup> This section uses data aggregated to the regional level rather than school-level means.

the Central Valley) by the fall of 2004. However, plans for this new campus have been fraught with budgetary and site problems, and construction had not begun as of July 2002.<sup>7</sup>

## First-Time Freshmen

Chapters 4 and 5 show that the Central Valley has lower percentages of students completing college preparatory courses and taking college entrance exams than the rest of the state. Each of these measures would seem to indicate the intent to attend college immediately after high school graduation. In this chapter, we look at the percentage of high school graduates who actually enrolled in California's public colleges in the fall of 1990, 1995, and 2000. Statewide, the percentage of these graduates attending any California public postsecondary institution (UC, CSU, or CCC) was 49.8 percent in 1990, 50.7 percent in 1995, and 45.5 percent in 2000. A higher percentage of female graduates than male graduates attended a postsecondary institution in the fall following their high school graduation. In 1990, 1995, and 2000, the percentages for females were 50.9, 51.5, and 47.4, respectively; the percentages for males were 48.6, 49.7, and 43.5 in these same years.

Table 6.1 shows the percentages of high school graduates in the Central Valley and the rest of the state who attended UC, CSU, and CCC in 1990, 1995, and 2000.<sup>8</sup> Fewer than 8 percent of graduates in all regions have enrolled at a UC campus, and the percentages have remained relatively constant in each region across the years. All Central Valley regions have a lower percentage of UC-bound graduates than the rest of the state. Within the Central Valley, Sacramento Metro region has consistently accounted for the largest share of graduates and South San Joaquin has had a relatively low share of graduates attending UC.<sup>9</sup>

The percentage of students entering CSU ranges from approximately 6 to 10 percent among the regions of the Central Valley. In all three years, the percentage of high school graduates from North San Joaquin attending CSU campuses was lower than the percentage from other Central Valley regions and the rest of the state. All regions experienced slight increases over the decade in the percentage of graduates going on to CSU.

The highest percentage of college-bound graduates—in both the Central Valley and the rest of the state—attends CCC in the fall after graduating from high school. As shown in the table, there is some variation across regions and over time in the Central Valley, with approximately 20 to 40 percent of graduates entering the CCC system. In contrast to the growth apparent in the North Valley, the South San Joaquin exhibits a slight decrease in the percentage of students attending CCC: this percentage has fallen slightly from 37.0 percent in 1990 to 35.4 percent in 1995 and 32.7 percent in 2000.<sup>10</sup>

Adding the percentages across the three college systems for the year 2000 reveals that in that year, 43.1 percent of North Valley graduates, 51.6 percent of Sacramento Metro graduates, 42.1 percent of North San Joaquin graduates, and 44.9 percent of South San Joaquin graduates attended state schools as freshmen. Unfortunately, we have no comparable data on percentages of students attending private colleges or schools outside

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<sup>7</sup> For example, see Mello, Michael, "UC Merced Refrain: We'll Make It." *Modesto Bee*, July 16, 2002, at <http://www.modbee.com/local/story/3597700p-4623734c.html>.

<sup>8</sup> Appendix Table C.6 contains county-level attendance rates for the Central Valley.

<sup>9</sup> According to the University of California Office of the President (UCOP), UC Merced expects to enroll percentages of first-time freshmen, by region, that are comparable to the other UC campuses.

<sup>10</sup> We have no way of knowing if the gains in the percentage of students from South San Joaquin who attend CSU are direct offsets of the decline in the percentage attending CCC.



**Table 6.1**  
**First-Year College Students from Central Valley Public**  
**Schools as a Percentage of High School Graduates**

	1990	1995	2000
<b>UC system</b>			
North Valley	2.2	2.6	3.4
Sacramento Metro	6.1	5.8	6.6
North San Joaquin	3.1	3.1	3.2
South San Joaquin	3.1	2.9	2.8
Central Valley	3.8	3.7	4.0
Rest of state	7.3	7.8	7.9
<b>CSU system</b>			
North Valley	8.2	7.4	9.4
Sacramento Metro	8.2	8.7	10.2
North San Joaquin	6.1	7.3	7.9
South San Joaquin	8.5	8.7	9.4
Central Valley	7.9	8.3	9.3
Rest of state	10.0	8.7	9.4
<b>Community college</b>			
North Valley	20.3	29.4	30.3
Sacramento Metro	39.5	39.2	34.8
North San Joaquin	33.4	38.5	31.0
South San Joaquin	37.0	35.4	32.7
Central Valley	35.0	36.4	32.7
Rest of state	33.2	34.8	28.1

SOURCE: CBEDS and CPEC. See Appendix A for more details.

NOTE: Each number measures the percentage of previous year's graduates.

**California immediately after high school.<sup>11</sup>**

We also compared college attendance rates for different populations, (for example, by gender, community type, and lunch program participation). We found that females had higher attendance rates than males for all years and regions, with a difference of 1 to 4 percentage points. Compared to rural areas in the rest of the state, rural students in the Central Valley had lower attendance at UC but slightly higher attendance at CSU and CCC. In 2000, the percentages of rural students attending UC, CSU, and CCC were 2.9, 9.0, and 29.6 in the Central Valley, respectively, compared to 4.4, 7.7, and 26.7 for rural areas in the

<sup>11</sup> We selected 29 of the 79 private institutions in California to arrive at estimates of the percentage of their first-time freshmen from the Central Valley. (The list of schools is available from the authors on request.) Only four private four-year colleges are in the Central Valley, and none of these provided the information we requested. Most colleges we spoke with do not keep admissions records by region within California, but of those that do, anywhere from 2 to 22 percent of incoming freshmen are historically from the Central Valley.

rest of the state. For the Central Valley and the rest of the state, college attendance is higher among schools with lower percentages of students in the lunch program than among schools with higher percentages of students in the lunch program. This gap widened throughout the 1990s. By 2000, nearly half of the students in schools with low percentages of students in the lunch program in the Central Valley attended UC, CSU, or CCC, compared to only 30 percent of students in schools with high percentages. The corresponding percentages in 2000 for the rest of the state were 47 percent versus 38 percent.<sup>12</sup>

## **Transfers from Central Valley CCC Campuses to California's Four-Year Colleges**

Most of the colleges in the Central Valley are community colleges.<sup>13</sup> Therefore, along with the counts of first-time freshmen, transfer rates from CCC to four-year colleges are likely to be a relatively accurate measure of the educational progress of Central Valley students. However, because the CCC system has multiple missions under the Master Plan, the majority of CCC students are often enrolled part-time and may not be “university-bound.”<sup>14</sup> For example, in 2000 only 21 percent of CCC sophomore students statewide attended school full-time.<sup>15</sup> This situation creates a challenge for researchers to measure accurately the percentage of students who transfer. Although we have counts of transfer students, we do not have their “grade level,” so we assume that they are exiting sophomores.<sup>16</sup> We create two transfer rates in the hope of more fully describing the transfer scenarios that exist in the community colleges. The first scenario assumes that full-time students comprise the population more likely to have transfer intentions than part-time students.<sup>17</sup> The second scenario assumes that all students, whether full- or part-time, may transfer to four-year institutions. Of course, each scenario has data limitations because we have no information about the percentage of students who actually intend to transfer. In the absence of that information, these two scenarios provide us with more-optimistic and less-optimistic pictures of transfers.<sup>18</sup>

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<sup>12</sup> Note that the percentage of students completing a-g courses is higher than the percentage of students who attend UC and CSU right after high school, presumably because some students do not immediately enroll in college and others go to private and out-of-state colleges for which we have no data.

<sup>13</sup> According to UCOP, CCC campuses within driving distance of the UC Merced campus will be considered “feeder schools” for transfer purposes (personal communication).

<sup>14</sup> We do not examine the percentage of students who earn an Associate of Arts (AA) degree because transfer students often do not file a petition to receive this degree.

<sup>15</sup> In 2000, 29 percent of *all* freshmen and sophomores at Central Valley CCC campuses and 26 percent in the rest of the state were full-time students. These percentages are slightly higher than in 1990, when they were 27 percent and 23 percent, respectively. Thus, the Central Valley does not look much different from the rest of the state. The increasing full-time enrollment in CCC may reflect the Master Plan’s revision in 1989 that calls for a 40:60 ratio of lower to upper division students in UC and CSU as CCC increasingly assumes the role of providing lower-division coursework.

<sup>16</sup> Because the Master Plan states that the CCC system does not provide upper-division coursework, we assume that students may not transfer with a higher standing than sophomore rank. However, it is possible that some students may transfer with fewer or more units of coursework than the typical sophomore (56-60 units). See <http://www.cpec.ca.gov/CollegeGuide/CSUSystemInformation.asp>, and <http://www.ucop.edu/pathways/infoctr/at/atadmiss.html>.

<sup>17</sup> Personal communications with counseling staff at a few of the larger CCC campuses suggest that students are advised to carry full course loads when preparing to transfer—particularly to the UC campuses, where students are usually expected to carry full course loads.

<sup>18</sup> Because of data inconsistencies, this section uses the transfer rate in 1991 rather than 1990.

Table 6.2 shows the percentage of full-time sophomores who transfer to UC, CSU, and independent (i.e., private) colleges in California under the first assumption that full-time sophomores are the most likely to have transfer intentions. The table shows that Sacramento Metro generally has the largest share of full-time sophomores who transfer to UC (3.1 percent in 1991, 4.5 percent in 1995, and 4.9 percent in 2000).<sup>19</sup> Although the transfer rates to UC are quite low in the North Valley, the most dramatic gains have occurred in this region (from 0.5 percent in 1991 to 1.3 percent in 2000). Every Central Valley region saw an increase in its UC transfer rate during the 1990s (albeit negligible in

**Table 6.2**

**Transfers from Community College to Four-Year College as a Percentage of Full-Time Sophomores**

	1991	1995	2000
<b>To UC</b>			
North Valley	0.5	1.1	1.3
Sacramento Metro	3.1	4.5	4.9
North San Joaquin	1.4	1.8	2.7
South San Joaquin	1.9	1.7	2.0
Central Valley	1.8	2.4	2.9
Rest of state	2.5	4.4	5.3
<b>To CSU</b>			
North Valley	7.1	11.6	12.6
Sacramento Metro	13.6	18.2	18.4
North San Joaquin	9.9	15.1	19.7
South San Joaquin	19.7	19.8	18.1
Central Valley	12.1	16.7	17.4
Rest of state	8.5	14.0	15.3
<b>To independent colleges (private schools) in California</b>			
North Valley	0.4	1.4	3.1
Sacramento Metro	1.6	2.1	3.6
North San Joaquin	1.7	2.3	3.5
South San Joaquin	1.6	2.5	4.1
Central Valley	1.3	2.1	3.6
Rest of state	1.7	2.2	4.3

SOURCE: Authors' calculations from CPEC data.

NOTE: Because of data inconsistencies, this table uses 1991 rather than 1990 transfers.

<sup>19</sup> Note that UC Davis is in the Sacramento Metro region.

South San Joaquin). Still, all of the regions had lower transfer rates to UC than the rest of the state in 2000, although Sacramento Metro is only slightly lower than the rest of the state.

Transfer rates to CSU are much higher, ranging from roughly 7 percent to 20 percent depending on year and region in the Central Valley. All regions except South San Joaquin experienced substantial gains over the decade. For instance, the share of North San Joaquin students transferring to CSU doubled between 1991 and 2000 (9.9 percent to 19.7 percent). Transfer rates to independent colleges are in some ways similar to transfer rates to UC campuses. Although the transfer rates are relatively low, every region in the Central Valley experienced gains over the decade. Adding the percentages across the three college categories for the year 2000 shows that only 17.0 percent of North Valley, 26.9 percent of Sacramento Metro, 25.9 percent of North San Joaquin, 24.2 percent of South San Joaquin, and 24.9 percent of full-time sophomores in the rest of the state transferred to California public or private four-year schools in 2000.

Appendix Table B.6 shows the “less-optimistic” scenario that assumes any student in the CCC system might transfer to a four-year college, regardless of whether he or she attends community college full- or part-time as a sophomore. As expected, this table shows a much lower transfer rate in all regions and years than Table 6.2. For 2000, overall transfer rates for all sophomores ranged from 7.8 percent (North Valley) to 10.3 percent (Sacramento Metro). Clearly, even the more optimistic transfer rate scenario suggests that a relatively small share of community college students transfer to California’s four-year institutions.

## College Graduation

The final measure of the educational progress of students in postsecondary education is college graduation rates. Four-year institutions commonly cite graduates as a percentage of incoming freshman classes four, five, and six years earlier. However, a graduation rate that also includes incoming CCC transfers may be a more accurate measure of completion. This measure is worth reporting particularly in the UC and CSU systems, where transfers from community colleges are important.<sup>20</sup> Again, calculating graduation rates is a challenge without longitudinal data that track individual student outcomes. Unfortunately, the college data do not separate returning students from incoming first-time transfer students from CCC, nor can the measure used here incorporate students who transfer to and graduate from out-of-state institutions. However, in the absence of longitudinal data, it is the best estimate that can be made with these data.

Figure 6.1 shows bachelor’s degrees awarded in 2000 as a percentage of freshmen enrollment four years earlier plus transfers from CCC in the fall of the previous academic year.<sup>21</sup> This figure shows that in 2000, the UC system had a higher graduation rate than the CSU system or private schools. Note that there are only four private four-year colleges in the entire Central Valley, and their enrollment is quite small.<sup>22</sup>

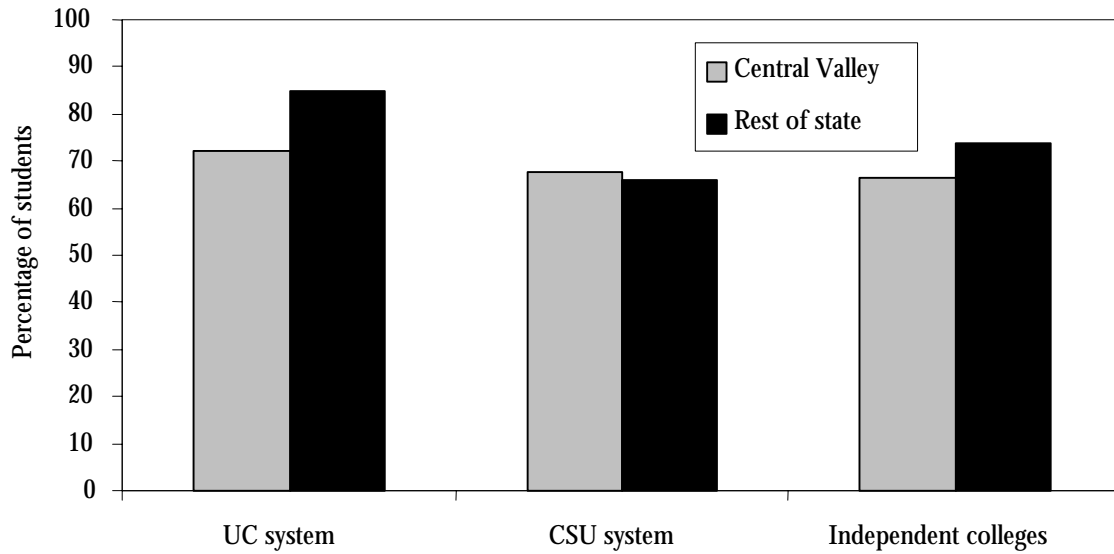
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<sup>20</sup> Unlike the CCC system, the majority of students enroll full-time in four-year colleges. In 2000, 79 percent of CSU enrollment and 88 percent of UC enrollment from the Central Valley was full-time, compared to 76 and 94 percent in the rest of the state, respectively. For this reason, we use total freshman enrollment in the calculation. Although some transfer activity is from UC to UC, CSU to CSU, CSU to UC, or UC to CSU, an examination of the data (not shown) shows this activity to be a very small share of total transfers.

<sup>21</sup> For example, the graduation rate for 2000 = (bachelor’s degrees 2000/freshmen 1996+CCC transfers 1998).

<sup>22</sup> These colleges, undergraduate enrollment in 2000, and locations are Simpson College (1,026) in Redding; Humphreys College (600) and University of the Pacific (5,600) in Stockton; and Fresno Pacific University (1,800) in Fresno (data from CPEC).

This chapter has examined first-time college enrollment, transfer rates, and graduation rates. Within the Central Valley, Sacramento Metro had the highest enrollment rates in the UC, CSU, and CCC systems in 2000. Overall, the Central Valley generally has lower first-time four-year college enrollment, lower transfer rates to UC and private colleges, and lower graduation rates from UC and private colleges than the rest of the state.



SOURCE: CPEC.

**Figure 6.1 – College and University Graduation Rates, 2000**



# Appendix A

## Data Sources and Methods

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This appendix contains information about data sources and methods for calculating various descriptive statistics used in the report.

### Data Sources

#### *California Data Collections*

**California Basic Educational Data System (CBEDS).** This is an annual data collection system maintained and supported by the Educational Demographics Unit in the California Department of Education (CDE). It contains individual-level credentialed-personnel data and summary-level student and program data at the school and district levels. These data are collected through three report forms each October: the Professional Assignment Information Form (PAIF), the School Information Form (SIF), and the County/District Information Form (CDIF). In 1999, a new data collection, the Public Schools File, added other information about the schools. This file is updated periodically.

Variables available at the individual level (PAIF) include gender, ethnicity, education level, experience, and types of credentials held for credentialed personnel in California's public schools. The PAIF also collects information on specific classes taught and student counts per section for each teacher.

The school-level data (SIF) contain variables of two general types: (1) staff and student counts, and (2) program types. Staff and student counts include classified staff counts and student enrollment, including student counts in specific types of programs (such as college preparatory and vocational education programs), as well as graduate and dropout counts. These variables are enumerated by gender and ethnicity. Program types include variables such as technology, educational calendar, and alternative education.

The Public Schools File information includes the school name, address, grade span, district type, school type, political representatives associated with the school's location, geographic coordinates, U.S. census tract number, community type served by the school, and certain California School Information Services (CSIS) identifiers for the school. We merge the community type information with other data in the study.

**Community Type.** The *community type* served by the school's attendance area was self-reported by school personnel in selected years on the SIF until 1996. The three categories were defined as (1) urban: community with a population of 100,000 or more; (2) suburban: community with a population of more than 5,000 but less than 100,000 near or part of a more-populated area; and (3) rural: community with a population of less than 100,000 and not part of a more-populated area. In 1999, the CDE began using a new set of seven categories provided by the U.S. Census Bureau to assign the school's urbanicity in the Public Schools File. We use a combination of methods to compare the new seven-category codes with the old three-category codes as well as to assign missing urbanicity to schools.

**The Language Census (LC).** This is a school-level summary that collects four types of data for the current school year each March. First, it enumerates the number of English

Learner (EL)—formerly Limited English Proficient (LEP)—and Fluent English Proficient (FEP) students in California public schools (K-12) by grade and primary language other than English.<sup>1</sup> Second, it counts the number of EL students enrolled in specific instructional settings or services by type of setting or service. Third, it summarizes the number of EL students from the prior year who are redesignated to FEP during the current year.<sup>2</sup> Fourth, it counts the number of bilingual staff providing instructional services to EL students by primary language of instruction. Our analysis calculates overall non-English-speaking numbers of students from the EL and FEP counts for each school, as well as percentages of total students for each category. Because these data are collected in March and the enrollment data are collected in October, the percentages of students who are EL and FEP are estimates rather than exact measures.

**Stanford 9.** The Standards, Curriculum, and Assessment Division of the California Department of Education maintains the STAR file. It contains results from the *Stanford Achievement Test* series, Ninth Edition, Form T (Stanford 9), administered by Harcourt, Brace & Co. These results are reported at the school level in two ways for each subject area and grade level (grades 2-11 only): first, for all students tested in the group, and second, for EL students tested. From these two measures, we also calculated non-EL students' test scores.

There are six subject areas: 1) reading, 2) math, 3) language (written expression), 4) spelling, 5) science, and 6) history/social science. Students in grades 2 through 8 are required by Senate Bill (SB) 376<sup>3</sup> to take tests in the first four subject areas above. Students in grades 9 through 11 are required to take tests in areas 1, 2, 3, 5, and 6 above. Our analysis focuses on the first two subject tests.

The following six statistics were reported at school, district, county, and state level: total number valid in each subject and grade, mean-scaled score (MSS), percentage of normal curve equivalency, percentage scoring above the 75<sup>th</sup> percentile (based on national norms), percentage scoring at or above the 50<sup>th</sup> percentile, and percentage scoring above the 25<sup>th</sup> percentile. We report the last three measures.

**California Standards.** “The California English Language Arts Standards scores are based on 75 questions for grades 2 and 3 and 90 questions for grades 4 through 11. For all grades, the California English Language Arts Standards tests have 35 questions. The additional 40 questions for grades 2 and 3 and 55 questions for grades 4 through 11 are taken from the Stanford 9 reading and language tests. Stanford 9 spelling test questions are also used in grades 2 through 8. Language arts experts matched the Stanford 9 questions to California's content standards and selected the specific questions to be used as part of the standards-based scores for each grade.”<sup>4</sup>

**Academic Performance Index (API).** This index measures the academic performance and growth of schools. It is a numeric index (or scale) that ranges from a low of 200 to a high of

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<sup>1</sup> EL students are students whose native language is not English and who have been determined to lack the clearly defined English language skills of listening comprehension, speaking, reading, and writing necessary to succeed in the school's regular instructional programs, based on state-approved oral language assessment procedures (grades K-12) and for reading in grades 3-12. FEP students are students whose native language is not English and who have met the district criteria for determining proficiency in English on the initial identification and students redesignated from EL to FEP.

<sup>2</sup> The redesignation assessment instruments varied across districts until 2001, when a statewide test published by CTB/McGraw-Hill was mandated. However, many districts use multiple measures to reclassify students, and there appears to be variation in the redesignation process and policies.

<sup>3</sup> California Department of Education site <http://star.cde.ca.gov/>.

<sup>4</sup> This description is taken directly from <http://star.cde.ca.gov/star2001/help/AboutSTAR.html>.



1000. Currently, the 1999 and 2000 base year APIs include only the results of the Stanford 9. In addition to the Stanford 9 results, other indicators of a school's academic performance will be added to the API as soon as they are available. These indicators could include results of the California Standards tests, as described above, and the High School Exit Examination, as described below, as well as graduation and attendance rates. The law mandates that test results constitute at least 60 percent of the API.<sup>5</sup>

**California High School Exit Examination (CAHSEE).** Education Code Section 60850(a) states: "The Superintendent of Public Instruction, with the approval of the State Board of Education, shall develop a high school exit examination in language arts and mathematics in accordance with the statewide academically rigorous content standards adopted by the State Board of Education..." The purpose of the CAHSEE is to ensure that students who graduate from high school can demonstrate grade-level competency in the state content standards for reading, writing, and mathematics. Data elements collected include the number and percentage taking and passing the test. These data are collected by grade level, gender, and racial or ethnic group, among other categories. However, we do not disaggregate by these categories because the data are still in the "test phase" and are problematic.

**California Postsecondary Education Commission (CPEC).** This data collection includes counts of first-time freshmen from California public high schools, college enrollment by grade, transfer students, and degrees awarded for all public colleges and universities in California, as well as for some independent colleges and universities (private schools).

### ***Data Collected in Compliance with Federal Programs***

**CalWORKS, formerly Aid to Families with Dependent Children (AFDC).** These data include counts and percentages of California children in families eligible for CalWORKS and children enrolled in free and reduced-price lunch programs. According to the CDE, these Title I data are collected each October through the cooperative efforts of the schools, districts, county offices of education, and the county offices of health and welfare. Schools report their lunch program enrollment data annually, based on their October lunch program enrollment files.

**Emergency Immigrant Education Program (EIEP).** These data, collected each February on the Application for Funding form submitted to the state by districts, include counts of eligible students in Part II, Eligible Immigrant Student Enrollment by Grade Level, and in Part IV, Student National Origin Report (SNOR).<sup>6</sup> This census of immigrant students is conducted as part of the requirements for local educational agencies (LEAs) to receive federal funding for eligible immigrant students under the No Child Left Behind Act of 2002, Title III (formerly, Improving America's School Act, Title VII, Part C). Both public school and private school students (through a public LEA) are eligible for funding if the LEA meets the following conditions: (1) it has enrollment of at least 500 eligible immigrant pupils and/or (2) the enrollment of eligible immigrant pupils represents at least 3 percent of the LEA's total enrollment.<sup>7</sup> If a LEA has eligible immigrant students but does not have enough students to qualify under the threshold described above, it will not participate in the census. Students from U.S. territories such as Saipan, Mariana Islands, Guam, Marshall Islands, Samoa, and

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<sup>5</sup> See <http://www.cde.ca.gov/psaa/api/>.

<sup>6</sup> The data PPIC obtained from the State Education Agency (SEA) are neither of these. Rather, they are total student counts per district.

<sup>7</sup> In practice, very few students are in private schools.

Puerto Rico are also excluded from the census. Therefore, the recent immigrant student count in California is likely to be understated.

**Migrant Education Program (MEP).** These data consist of counts of students under Part C of Title I of the Elementary and Secondary Education Act and by state laws that define the administrative framework for delivering MEP services in California. A migrant student is defined by federal law as “a migrant agricultural worker or a migrant fisher (as defined in Section 1309 of the statute) OR has a parent, spouse, or guardian who is a migrant agricultural worker or a migrant fisher; AND performs, or has a parent, spouse, or guardian who performs, qualifying agricultural or fishing employment as a principal means of livelihood (34 CFR 200.40(c), (e), and (f)); AND has moved within the preceding 36 months to obtain, or to accompany or join a parent, spouse, or guardian to obtain, temporary or seasonal employment in agricultural or fishing work; AND has moved from one school district to another.”<sup>8</sup> The data contain both attending and non-attending students. We use only attending students in our calculations. Students who attended more than one school and/or were enrolled in more than one grade during the given school year were counted once for each school and/or grade. Thus, there is some duplicate counting of migrant students, which may result in percentages of total enrollment exceeding 100. We top-code any migrant percentages that exceed 100 to 100 percent. Migrant students might be immigrants or recent immigrants or they might not be immigrants at all. We have no way of knowing exactly what percentage of migrant students are native-born U.S. citizens from the data we have.

### ***Other Data Collection: Scholastic Aptitude Test (SAT)<sup>®</sup> I***

The state of California purchases this data collection and makes certain information available on its website. These data include the number and percentage of twelfth-grade students taking the test at each school, average verbal score, average math score, average combined score, number testing above 1000 combined, and percentage testing above 1000 combined. We focus on the percentage of students taking the test and the combined verbal and math score.

## **Descriptive Methods**

### ***School-Level Teacher-Characteristic Means***

We take weighted means of overall teacher characteristics, such as the proportions for experience, education, and credentials for each school. These means are weighted by the teacher’s percent full-time equivalency (FTE). We then take means across schools, which are weighted by the number of students in the school. This allows us to approximate the “experience” of the typical student. In some cases, when we do not have data at the school level, we aggregate to regional level rather than taking means. These instances are noted in the main report.

### ***Means across Schools***

As noted in the data sources section above, information is generally available at the school level. Despite this, in weighting by the number of students in the school, we try to make most of the statistics equivalent to student-level counts. For example, by weighting the percentage

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<sup>8</sup> <http://www.ed.gov/offices/OESE/MEP/PrelimGuide/pt2b.html>.

of students enrolled in the subsidized lunch program by the number of students in the school, the reported mean at the regional level will be equivalent to the total number of students enrolled in lunch programs divided by the total number of students. This is always the case when the weight is the same as the denominator in the statistic at the school level. Because the population becomes the number of students, small differences in the means will be statistically significant. Differences too small to be statistically significant are not mentioned in our comparisons in the text.

### ***Exposure Index***

Exposure indices measure the degree of contact between a given type of student and other types of students. For example, the exposure of Hispanic students X to students of type Y is calculated as:

$$E_{XY} = \sum x_i (y_i/t_i) / \sum x_i = \sum [ (x_i / \sum x_i) (y_i/t_i) ]$$

Where  $t$  = total number of students,  
 $x$  = number of Hispanic students,  
 $y$  = number of students in the comparison group, and  
 $i$  indexes the schools.

In other words,  $E_{XY}$  measures the percentage of the students of type Y in the school attended by the “average” X student.<sup>9</sup>

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<sup>9</sup> The first term  $(x_i / \sum x_i)$  represents the share of the total pool of Hispanic students in school  $i$ , and the second term  $(y_i/t_i)$  represents the percentage of students of type Y in school  $i$ . Thus,  $E_{XY}$  is the weighted average of the percentage of students of type Y across schools, where the weight is the share of the total number of Hispanic students in the schools. (See White, 1986, for an overview of segregation and diversity measures in population distributions.)



# Appendix B

## Supplemental Tables

This appendix contains supplemental tables that provide additional information for the Central Valley and the rest of the state.

**Table B.1**

**Teacher experience by School Grade Level**

	K-5			6-8			9-12		
	1990	1995	2000	1990	1995	2000	1990	1995	2000
<b>North Valley</b>									
% first year	5.8	3.3	3.9	5.0	7.3	4.8	2.9	3.9	5.4
% second year	5.8	2.8	2.8	7.8	6.0	4.2	3.5	4.0	6.3
Average experience (years)	13.4	14.6	14.5	14.2	13.6	13.6	16.7	16.3	15.1
<b>Sacramento Metro</b>									
% first year	4.8	5.4	5.5	5.2	6.5	7.1	2.7	6.6	6.2
% second year	6.3	5.2	5.5	5.8	7.1	4.8	3.1	4.4	5.7
Average experience (years)	13.1	13.2	12.5	14.4	13.2	13.0	17.1	15.3	14.3
<b>North San Joaquin</b>									
% first year	6.5	4.1	7.5	6.6	5.5	9.3	4.0	5.3	7.8
% second year	7.1	4.4	5.0	5.8	4.5	5.5	3.4	4.8	5.3
Average experience (years)	12.3	13.4	12.7	13.2	13.2	13.3	16.1	15.5	14.3
<b>South San Joaquin</b>									
% first year	7.8	4.7	5.7	7.5	5.5	6.6	4.2	5.1	7.7
% second year	6.6	5.3	5.8	5.8	5.9	6.8	4.9	5.3	8.0
Average experience (years)	12.1	13.1	12.3	13.0	13.0	13.2	15.2	15.1	13.5
<b>Central Valley</b>									
% first year	6.4	4.6	5.9	6.4	5.9	7.2	3.6	5.4	7.0
% second year	6.6	4.8	5.3	6.0	6.0	5.7	3.9	4.8	6.6
Average experience (years)	12.5	13.3	12.6	13.5	13.1	13.2	16.1	15.3	14.0
<b>Rest of state</b>									
% first year	6.4	6.2	8.6	6.9	7.0	10.1	4.0	5.5	7.9
% second year	6.5	5.5	7.6	6.0	5.8	8.0	3.6	4.6	7.1
Average experience (years)	13.7	13.8	11.8	14.7	14.1	12.6	16.9	16.2	14.3

SOURCE: CBEDS. See Appendix A for more details.

NOTE: Each school is classified by its grade level, and then the percentages are calculated. Reported means are weighted by the number of students in the school.

**Table B.2****Stanford 9 Test Scores, Second Grade, non-EL**

	Percentage of Students Scoring at or above Percentile					
	75 <sup>th</sup> Percentile		50 <sup>th</sup> Percentile		25 <sup>th</sup> Percentile	
	1997	2000	1997	2000	1997	2000
North Valley						
Math	15.3	32.6	37.4	60.6	61.0	81.8
Reading	16.5	27.8	40.7	58.9	62.2	81.0
Sacramento Metro						
Math	21.5	43.1	46.0	68.9	68.8	86.3
Reading	23.8	38.9	50.3	69.5	72.1	87.3
North San Joaquin						
Math	17.7	32.8	40.1	59.8	64.5	80.4
Reading	14.7	24.8	37.1	53.5	59.9	76.3
South San Joaquin						
Math	19.3	33.2	40.8	58.0	63.1	78.0
Reading	15.4	24.6	37.3	52.3	59.4	75.1
Central Valley						
Math	18.9	36.0	41.4	61.9	64.5	81.3
Reading	17.1	29.2	40.4	58.3	62.6	79.6
Rest of state						
Math	24.4	43.0	47.8	67.9	69.7	85.1
Reading	21.7	34.8	47.1	64.3	68.2	83.6

SOURCE: STAR. See Appendix A for more details.

NOTE: Test scores are calculated for each school. Statistics are weighted by the number of test-takers.

**Table B.3****Stanford 9 Test Scores, Eighth Grade, non-EL**

	Percentage of Students Scoring at or above Percentile					
	75 <sup>th</sup> Percentile		50 <sup>th</sup> Percentile		25 <sup>th</sup> Percentile	
	1997	2000	1997	2000	1997	2000
North Valley						
Math	16.9	28.0	44.5	58.6	69.4	80.9
Reading	20.1	26.1	52.1	61.2	77.6	84.9
Sacramento Metro						
Math	23.5	32.2	50.6	61.0	74.1	81.5
Reading	25.5	30.9	58.4	66.2	81.7	87.1
North San Joaquin						
Math	18.0	23.7	43.5	53.6	69.1	77.3
Reading	17.8	20.5	48.7	54.2	75.8	81.3
South San Joaquin						
Math	15.2	22.0	38.5	49.5	63.9	73.5
Reading	17.0	21.0	45.2	51.9	71.3	77.9
Central Valley						
Math	17.6	26.0	42.6	54.8	67.7	77.5
Reading	19.0	24.3	49.2	57.6	75.0	82.1
Rest of state						
Math	22.7	30.6	47.5	57.8	70.3	78.9
Reading	22.5	26.9	53.4	60.2	77.9	83.9

SOURCE: STAR. See Appendix A for more details.

NOTE: Test scores are calculated for each school. Statistics are weighted by the number of test-takers.

**Table B.4****Stanford 9 Test Scores, Eleventh Grade, non-EL**

	Percentage of Students Scoring at or above Percentile					
	75 <sup>th</sup> Percentile		50 <sup>th</sup> Percentile		25 <sup>th</sup> Percentile	
	1997	2000	1997	2000	1997	2000
North Valley						
Math	22.2	28.1	48.8	54.7	72.6	78.3
Reading	17.4	21.8	41.2	47.4	69.8	74.5
Sacramento Metro						
Math	27.0	34.7	51.7	59.6	74.6	79.4
Reading	20.7	25.4	42.9	51.3	68.8	77.2
North San Joaquin						
Math	19.9	25.2	45.7	50.7	70.9	75.0
Reading	15.6	16.8	37.3	39.3	67.1	68.6
South San Joaquin						
Math	19.0	23.4	42.3	46.7	67.5	71.5
Reading	14.5	15.5	34.2	36.2	62.3	64.6
Central Valley						
Math	21.1	27.5	45.6	52.2	70.3	75.3
Reading	16.2	19.3	37.3	42.5	65.5	70.2
Rest of state						
Math	26.6	32.9	50.1	55.8	72.9	77.0
Reading	20.4	22.8	42.6	46.0	70.2	73.2

SOURCE: STAR. See Appendix A for more details.

NOTE: Test scores are calculated for each school. Statistics are weighted by the number of test-takers.



**Table B.5****SAT®I Test-Taking and Test Scores for Twelfth-Grade Students,  
by Lunch Program**

% Students in lunch program	% Taking Test			Average Score		
	1990	1995	2000	1990	1995	2000
Central Valley						
0-25	33.2	36.5	38.0	1012	1022	1029
25-50	26.5	29.0	29.0	937	961	963
50-75	25.2	23.0	27.0	898	904	899
75-100	14.1	23.0	26.0	982	861	882
Rest of state						
0-25	44.3	48.0	49.4	1003	1035	1053
25-50	38.5	36.2	36.5	916	941	949
50-75	38.8	32.5	36.0	806	895	890
75-100	46.6	37.6	36.7	818	794	834

SOURCE: SAT®. See Appendix A for more details.

NOTE: Statistics are calculated for each school. The percentage of students taking the test is weighted by the number of students in twelfth grade, whereas the average score is weighted by the number of test-takers.

**Table B.6**

**Transfers from Community College to Four-Year  
Colleges as a Percentage of All Sophomores**

	1991	1995	2000
To UC			
North Valley	0.2	0.6	0.6
Sacramento Metro	0.6	1.7	1.9
North San Joaquin	0.4	0.8	1.1
South San Joaquin	0.4	0.7	0.8
Central Valley	0.4	1.0	1.2
Rest of state	0.6	1.7	1.9
To CSU			
North Valley	2.3	5.8	5.8
Sacramento Metro	2.7	6.9	7.0
North San Joaquin	2.6	6.7	7.8
South San Joaquin	3.8	7.8	7.1
Central Valley	2.9	6.9	7.0
Rest of state	2.0	5.4	5.6
To independent colleges (private schools) in California			
North Valley	0.1	0.7	1.4
Sacramento Metro	0.3	0.8	1.4
North San Joaquin	0.5	1.0	1.4
South San Joaquin	0.3	1.0	1.6
Central Valley	0.3	0.9	1.5
Rest of state	0.4	0.8	1.6

SOURCE: CPEC.

NOTE: Because of data inconsistencies, this table uses 1991 rather than 1990 transfers.

# Appendix C

## County Tables

This appendix contains tables for selected indicators for each county in the Central Valley (as well as the rest of the state). These county-level tables focus on indicators or measures that are *not* easily obtained from the CDE website <http://data1.cde.ca.gov/dataquest/>.

**Table C.1**  
**Percentage of Recently Arrived and Migrant Students,**  
**By County**

	% Recently Arrived			% Migrant 2000
	1990	1995	2000	
North Valley				
Butte	0.97	1.87	0.24	4.40
Colusa	8.35	9.15	7.75	28.70
Glen	4.76	4.74	1.07	16.30
Shasta	0.52	0.00	0.00	0.82
Sutter	0.05	4.68	3.72	14.21
Tehama	0.73	0.26	1.68	2.81
Yuba	2.90	2.91	0.00	4.53
Sacramento Metro				
El Dorado	0.00	1.46	0.72	0.00
Placer	0.74	0.40	0.29	0.00
Sacramento	1.65	2.90	3.18	1.09
Yolo	3.21	2.41	4.78	6.05
North San Joaquin				
Merced	6.44	6.37	2.94	9.47
San Joaquin	4.46	3.00	1.77	10.07
Stanislaus	3.63	2.36	2.40	8.14
South San Joaquin				
Fresno	5.11	4.33	2.73	12.24
Kern	2.82	2.73	2.50	15.43
Kings	1.47	1.81	1.01	20.64
Madera	8.56	6.10	4.29	12.45
Tulare	4.66	6.09	2.17	14.69
Rest of state	7.28	4.96	3.74	2.18

SOURCES: CBEDS, EIEP and MEP. See Appendix A for more details.

NOTE: Recently arrived students are defined as students who arrived in the United States in the last three years.

**Table C.2**

**Percentage of Students in a High School with At Least One  
Counselor, by County**

	1990	1995	2000
North Valley			
Butte	95.6	98.3	93.8
Colusa	52.8	82.3	90.4
Glen	81.7	92.3	93.9
Shasta	98.5	98.0	93.3
Sutter	85.2	75.1	93.7
Tehama	96.0	95.1	88.5
Yuba	94.0	61.7	95.5
Sacramento Metro			
El Dorado	96.4	94.1	97.3
Placer	96.5	75.0	94.6
Sacramento	93.5	95.3	97.2
Yolo	95.9	98.6	95.7
North San Joaquin			
Merced	89.8	82.2	83.6
San Joaquin	93.4	96.2	90.4
Stanislaus	94.1	81.4	93.3
South San Joaquin			
Fresno	88.5	93.1	87.4
Kern	92.4	90.3	94.0
Kings	92.3	91.4	87.8
Madera	98.0	96.6	95.2
Tulare	90.8	92.4	86.6
Rest of state	93.9	89.8	90.5

SOURCE: CBEDS.

NOTE: The reported means are weighted by the number of students in the school.

**Table C.3**  
**Percentage of Entering Twelfth-Grade Students**  
**Who Graduate at End of Same School Year,**  
**by County**

	1990	1995	2000
North Valley			
Butte	86.4	88.0	84.0
Colusa	91.5	69.4	88.0
Glen	88.7	81.3	88.0
Shasta	99.8	81.1	83.8
Sutter	92.1	86.8	89.1
Tehama	92.7	78.2	76.2
Yuba	85.4	81.2	75.3
Sacramento Metro			
El Dorado	89.3	88.8	89.2
Placer	93.8	86.2	90.3
Sacramento	94.2	87.1	86.2
Yolo	87.9	88.2	84.2
North San Joaquin			
Merced	90.8	83.7	89.4
San Joaquin	96.7	91.3	86.7
Stanislaus	93.3	87.7	90.3
South San Joaquin			
Fresno	92.4	93.7	94.5
Kern	95.5	92.9	96.4
Kings	92.7	89.8	74.9
Madera	96.2	91.0	89.2
Tulare	93.1	82.9	81.6
Rest of state	93.5	93.5	93.5

SOURCE: CBEDS. See Appendix A for more details.

NOTE: Percentages are calculated for each school. The reported means are weighted by the number of students in twelfth grade.

**Table C.4**  
**Percentage of Students in Middle Schools Offering**  
**Algebra, by County, 2000**

	Percentage of Students	Number of Schools
<b>North Valley</b>		
Butte	100.0	11
Colusa	55.4	2
Glen	59.1	14
Shasta	83.4	58
Sutter	100.0	2
Tehama	64.9	57
Yuba	55.0	8
<b>Sacramento Metro</b>		
El Dorado	89.8	6
Placer	61.0	21
Sacramento	80.2	19
Yolo	94.9	65
<b>North San Joaquin</b>		
Merced	86.4	27
San Joaquin	94.4	10
Stanislaus	92.3	30
<b>South San Joaquin</b>		
Fresno	80.8	4
Kern	64.8	7
Kings	93.3	31
Madera	85.6	5
Tulare	83.9	6
<b>Rest of state</b>	<b>93.0</b>	<b>886</b>

SOURCE: CBEDS. See Appendix A for more details.

NOTE: Availability of algebra classes is calculated at the school level. The reported means are weighted by the number of students.

**Table C.5****AP Math and English Courses, by County, 2000**

	Percentage of Students in Schools Offering AP Courses		Percentage of 9-12 Students Taking AP Courses		Number of Schools
	<u>Math</u>	<u>English</u>	<u>Math</u>	<u>English</u>	
North Valley					
Butte	71.7	82.2	1.84	2.95	16
Colusa	0.0	42.0	0.00	1.84	7
Glen	0.0	15.7	0.00	0.93	8
Shasta	78.2	89.4	2.14	2.75	17
Sutter	62.9	77.5	0.61	3.01	8
Tehama	81.8	81.8	2.23	2.41	10
Yuba	20.2	75.3	0.35	0.79	6
Sacramento Metro					
El Dorado	95.0	58.5	3.63	3.98	13
Placer	50.4	58.5	0.90	1.90	21
Sacramento	84.7	69.0	2.29	1.41	49
Yolo	69.9	50.6	3.71	1.14	10
North San Joaquin					
Merced	60.7	76.5	0.91	1.39	19
San Joaquin	57.4	73.3	1.17	3.03	28
Stanislaus	43.8	65.6	0.79	1.53	23
South San Joaquin					
Fresno	73.8	81.3	1.37	2.72	51
Kern	80.1	64.6	1.97	1.81	42
Kings	68.8	76.9	0.82	3.51	13
Madera	95.2	63.4	1.37	1.00	12
Tulare	57.5	63.5	1.50	2.05	32
Rest of state	77.7	81.0	2.24	3.08	1,106

SOURCE: CBEDS. See Appendix A for more details

NOTE: Availability of AP courses by subject and enrollment are calculated at the school level. The reported means are weighted by the number of students in ninth through twelfth grades.

**Table C.6**

**First-Year College Students from Central Valley Public Schools as a Percentage of High School Graduates, by County**

	UC System			CSU System			Community College		
	1990	1995	2000	1990	1995	2000	1990	1995	2000
<b>North Valley</b>									
Butte	3.2	3.2	4.1	12.7	10.9	14.0	27.1	28.6	39.8
Colusa	2.3	1.6	2.2	15.0	11.7	12.7	16.8	24.6	11.6
Glen	0.0	1.4	0.6	9.0	8.6	15.6	11.7	12.0	38.6
Shasta	2.1	2.6	3.7	3.7	4.2	5.4	11.6	36.4	33.4
Sutter	2.3	3.2	3.4	7.4	7.3	7.1	30.9	27.7	14.5
Tehama	1.3	2.2	2.5	9.3	7.3	7.7	14.0	31.0	33.2
Yuba	1.9	1.0	2.2	4.7	3.1	5.1	22.8	23.0	11.6
<b>Sacramento Metro</b>									
El Dorado	3.4	4.0	4.9	10.2	7.9	9.2	34.8	35.3	35.8
Placer	4.7	4.8	5.2	7.7	7.8	10.0	40.3	40.4	31.8
Sacramento	5.8	5.7	6.5	7.7	9.0	11.0	41.3	40.9	37.6
Yolo	13.0	11.0	13.3	10.8	9.2	9.8	29.3	30.4	22.9
<b>North San Joaquin</b>									
Merced	2.8	2.4	3.3	5.7	6.5	10.0	32.4	38.0	30.5
San Joaquin	3.4	3.6	3.4	5.4	6.4	6.9	42.1	39.3	30.3
Stanislaus	2.9	2.9	2.8	7.1	8.5	8.0	23.3	36.9	32.0
<b>South San Joaquin</b>									
Fresno	3.8	3.9	3.2	11.4	12.2	11.6	35.5	42.6	31.3
Kern	2.4	2.0	2.3	7.2	7.0	8.5	41.9	24.3	34.3
Kings	1.9	2.4	3.2	5.5	5.7	9.1	25.0	37.6	41.8
Madera	2.4	1.3	2.5	7.8	9.4	8.7	26.9	31.1	26.0
Tulare	3.2	3.1	2.7	5.7	5.3	6.2	38.0	40.4	31.6
<b>Rest of state</b>	7.3	7.8	7.9	10.0	8.7	9.4	33.2	34.8	28.1

SOURCES: CBEDS and CPEC.

NOTE: Each number measures percent of the previous year's graduates.



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