

A PROFILE OF

The California Partnership Academies 2004-2005

MARCH 2007



ConnectEd

The California Center for College and Career

Career Academy Support Network **University of California, Berkeley**

This report has been prepared by ConnectEd: The California Center for College and Career and The Career Academy Support Network at the University of California, Berkeley, in collaboration with the California Department of Education. The views and opinions expressed herein are those of the authors and do not necessarily represent those of the California Department of Education. The James Irvine Foundation founded ConnectEd and provided support for this report.

ConnectEd: The California Center for College and Career
www.connectedcalifornia.org

Denise Bradby

Aaron Malloy

Career Academy Support Network
University of California Berkeley
casn.berkeley.edu

Tracy Hanna

Charles Dayton

FOREWORD

ConnectEd: The California Center for College and Career is pleased to join the Career Academy Support Network (CASN) in an examination of the latest data from California's 290 Partnership Academies.

ConnectEd is dedicated to working with educators, industry, and policymakers to promote multiple pathways to postsecondary education and career. These pathways are organized around major industries including agriculture and natural resources; arts, media, and entertainment; biomedical and health science; building and environmental design; information technology; engineering and design; and manufacturing. They combine challenging career and technical courses with rigorous academics to offer students opportunities to engage in intensive work-based learning. And they deliver supplementary services, especially additional instruction in reading and mathematics, that many high school students need in order to succeed in demanding programs of study.

CASN is housed in the Graduate School of Education at UC Berkeley and works primarily in high schools with large proportions of students at risk of not receiving a diploma. CASN has particular interest and expertise in developing small learning communities (SLCs) and career academies, which bring together cross-curricular teams of teachers to work with groups of students over time, show students the relevance of what they are learning, and point them toward college and careers. CASN works nationally, although several of its projects are based in California.

California Partnership Academies, along with a growing number of unaffiliated career academies, offer some of the most promising strategies for delivering multiple pathways to both postsecondary education and career—for at-risk students, as well as a cross-section of all students. What educators and policymakers alike have missed is a sizeable and sound body of information on the Partnership Academies' impact. Therefore, in collaboration with the California Department of Education, ConnectEd and CASN are pleased to offer this profile.

We gratefully acknowledge the guidance of Barbara Weiss, Paul Gussman, and Patrick Ainsworth from the California Department of Education, as well as assistance from California Department of Education staff in obtaining and analyzing the data. We alone, however, take responsibility for reporting and interpreting the findings. Finally, ConnectEd and CASN appreciate the support of the James Irvine Foundation in making this report possible.

Gary Hoachlander
President
ConnectEd: The California Center
for College and Career

Charles Dayton
Coordinator
Career Academy Support Network
University of California, Berkeley

EXECUTIVE SUMMARY

State legislation launched the California Partnership Academies (CPAs) in 1984. Now operating in more than 200 comprehensive high schools, CPAs have been used as a model for high school reform in California and elsewhere. Academies typically feature multi-age learning groups, team teaching and career-based instruction. Teachers help students connect high school lessons to future employment scenarios. Several evaluations have found positive student effects associated with academies.

This report provides a picture of the CPAs for the 2004-05 school year based on annual reports each site sends to the California Department of Education. More information on academies and the supporting legislation is available at www.cde.ca.gov/ci/g/hs/cpagen.asp, the CPA website. A capsule summary of this report follows.

Snapshot of the academies

During the 2004-05 school year, California was home to 1,128 comprehensive high schools with a total enrollment of approximately 1.4 million students in grades 10, 11 and 12. That same year, 290 California Partnership Academies served 33,028 students in these grades (approximately 2% of the students enrolled statewide). CPAs serve 35 of California's 58 counties. Three of California's more populous counties—Los Angeles, Riverside, and Sacramento—have 66, 26, and 25 CPAs respectively. Gender and ethnic breakouts show CPA students are 57% female and 43% male. Student enrollment is 46% Latino, 26% white, 11% black, 10% Asian, 4% Filipino, and 3% other. Female and non-white student enrollment is higher than state averages; male and white student enrollment is lower. CPA high schools have higher than average representation among Academic Performance Index (API) 1-4 schools and lower than average representation among API 7-10 high schools. (API ratings are scaled from 1-10, with 10 being the highest).

Career fields

Each CPA focuses its career program in one of the 15 industry sectors established for Career Technical Education by the California Department of Education. While at least a few academies support 13 of these sectors, some sectors are much more heavily represented than others. For example, 51 CPAs support health sciences and medical technology; 47 finance and business; 45 arts, media and entertainment; 27 public services; and 26 education, child development and family services.

Attendance

Of the 32,547 CPA students with reported attendance, 84% attended school at least 90% of the time. More than half—56%—reported 96% or better attendance, with 28% reporting attendance of 90% to 95%. Twelve percent maintained 80% to 89% attendance, and 4% attended school less than 80% of the time.

Credits

CPAs reported credits attempted and completed for 32,626 students. A full 84% completed at least 90% of their attempted credits, with another 5% completing between 80% and 89%. Ten percent of students completed less than 80% of their attempted credits. Among students who achieved the 90% completion rate, 58% attempted and completed more courses than necessary, earning over 100% of the credits required.

CAHSEE pass rates

The data of 12,618 sophomores from 287 CPAs were compared to those of 460,471 California sophomores who took the exam. The English Language Arts (ELA) test had 84% of CPA students and 76% of students statewide passing. On the mathematics exam, 80% of CPA students passed, compared with 74% of students statewide. Male CPA students passed both the ELA and mathematics exams at rates almost 10 percentage points higher than the general population. The margin for female students was less. Native American, Latino, Pacific Islander and black students from CPAs passed both the ELA and math exams at substantially higher rates—ranging from 10 to 17 percentage points—than students of the same ethnicity within the general population. White, Asian and Filipino students from CPAs showed little or no variation from statewide averages.

Graduation

As the data available for this study included only information for the current year, reviewers computed the number of graduates divided by the number of seniors enrolled. In this case, 9,190 CPA seniors enrolled at 273 schools were compared to 409,560 enrolled seniors across the state. Ninety-six percent of academy seniors graduated at the end of the 2004-05 year, compared with a statewide figure of 87%. Examining gender differences, 98% of female and 95% of male academy students graduated as compared to 91% of female and 83% of male students statewide. Native American, Latino, Pacific Islander and black CPA students all graduated at rates 10 to 16 percentage points higher than students of the same ethnicity within the general population, while white, Filipino, and Asian CPA students did so by smaller margins.

Postsecondary plans and preparation

CPAs reported that 70% of the students expecting to graduate planned to earn a college degree (either two- or four-year) while 23% planned to enter the workforce after finishing high school. A total of 4,075 CPA students were enrolled in Advanced Placement or International Baccalaureate courses (20% of CPA juniors and seniors); 4,522 were enrolled in courses for which they earned college credit while in high school (22% of CPA juniors and seniors). CPAs reported that half of their seniors (4,655 students) fulfilled the UC/CSU A-G subject requirements, compared to 35% of high school graduates statewide. In 2004-05, 7,992 CPA 11th-graders participated in mentorships (72% of the total number of juniors). Just under 5,000 seniors (53%) participated in a work-based learning experience related to their academies' industry focus; about 4,500 seniors (49%) participated in a job experience unrelated to their academy theme (some did both).

State, district, and employer support

Local contributions constitute about 76% of support for California Partnership Academies. The three sources of support include: a) grants from the California Department of Education (CDE); and 100% required matches (via either direct or in-kind support) from b) school districts, and c) employer partners (i.e., a two-for-one local match). In total, CDE grants amounted to \$20.6 million, while school district matches totaled \$31.6 million and employer matches \$33.8 million. On average, CPAs received about \$72,000 in state grant funds, \$109,000 in matching district support, and \$116,000 in matching employer support. The matches from the districts and employers were primarily in the form of personnel time to support a variety of activities, including instruction, tutoring and academic support from schools and school districts, along with internships, mentorships, and other forms of involvement from employers.

Commentary

Now in their 22nd year of operation, California Partnership Academies have proved a durable model, although they remain rather sparsely distributed throughout the state. The average per pupil annual funding of about \$625 is complemented by generous local support. CPAs support a broad range of career themes. Gender and ethnic data suggest good diversity. They could achieve a more representative student population by enrolling equal numbers of girls and boys in the future and seeking stronger gender balance across career themes. Student performance measures show academy students outperform statewide averages. The student population includes at-risk students who come from relatively low performing high schools.

While these are generally positive findings, important cautions remain. First, the data available for the report came from academy self-reports, and while these were highly structured and contained substantial student performance data, accuracy is not guaranteed. Also, too little information was available about student selection to confirm whether the at-risk requirements of the program were consistently met. Thus where there are differences favoring academy students, it is impossible to determine the degree to which they are due to student selection versus program performance. CPAs are also complex programs that are difficult to implement well, and vary in their quality.

The main purpose in developing this report was to provide a descriptive picture of the California Partnership Academies rather than passing judgment on them. While the data available for this report were insufficient to allow firm conclusions, they do suggest the academy concept of combining preparation for both college and careers is demonstrating success.

TABLE OF CONTENTS

PAGE	
5	LIST OF FIGURES
6	INTRODUCTION
8	SNAPSHOT OF THE ACADEMIES
12	STUDENT PROFILE
15	STUDENT PERFORMANCE
20	STUDENT INTENTIONS AND EXPERIENCES
24	DISTRICT SUPPORT AND SCHOOL-RELATED COMPONENTS
27	EMPLOYER INVOLVEMENT AND SUPPORT
29	COMMENTARY
32	REFERENCES
33	APPENDIX A: PERCENTAGE OF CALIFORNIA PARTNERSHIP ACADEMIES RESPONDING "YES" AND "NO" TO VARIOUS QUESTIONS ON THE 2004-05 ANNUAL REPORT TO THE CALIFORNIA DEPARTMENT OF EDUCATION
34	APPENDIX B: SUMMARY STATISTICS FROM CALIFORNIA PARTNERSHIP ACADEMIES, 2004-05
36	APPENDIX C: NUMBER AND PERCENTAGE OF STUDENTS ENROLLED IN CPAS, BY GENDER, BY INDUSTRY AREA, AND NUMBER OF ACADEMIES FOCUSING ON EACH INDUSTRY AREA, 2004-05
37	APPENDIX D: NUMBER AND PERCENTAGE OF STUDENTS ENROLLED IN CPAS, BY RACE/ETHNICITY, BY INDUSTRY AREA, AND NUMBER OF ACADEMIES FOCUSING ON EACH INDUSTRY AREA, 2004-05

LIST OF FIGURES

PAGE	
9	1 NUMBER OF CPAs IN EACH CALIFORNIA COUNTY
10	2 NUMBER OF CPAs WITHIN UNIFIED AND HIGH SCHOOL DISTRICTS
10	3 NUMBER OF CPAs WITHIN HIGH SCHOOLS
11	4 NUMBER OF CPAs BY INDUSTRY SECTOR
11	5 CPA FUNDING SOURCES AND AMOUNTS
12	6 TOTAL, FUNDED AND UNFUNDED STUDENTS ENROLLED IN CPAs
12	7 PERCENTAGE OF CPAs WITH STUDENTS ELIGIBLE FOR FUNDING
13	8 CPA AND CALIFORNIA 10TH- TO 12TH-GRADE ENROLLMENT BY RACE/ETHNICITY
13	9 CPA AND CALIFORNIA 10TH- TO 12TH-GRADE ENROLLMENT BY GENDER
14	10 CPA ENROLLMENT BY INDUSTRY AND GENDER
16	11 10TH-GRADE CAHSEE PASS RATES BY SUBJECT TEST
16	12 10TH-GRADE CAHSEE PASS RATES BY SUBJECT TEST AND GENDER
17	13 10TH-GRADE CAHSEE PASS RATES BY SUBJECT TEST AND RACE/ETHNICITY
18	14 CPA AND CALIFORNIA 12TH-GRADE GRADUATION RATES
19	15 CPA AND CALIFORNIA 12TH-GRADE GRADUATION RATES BY GENDER
19	16 CPA AND CALIFORNIA 12TH-GRADE GRADUATION RATES BY RACE/ETHNICITY
20	17 POSTSECONDARY PLANS OF CPA SENIORS
21	18 SENIORS REPORTED TO MEET A-G SUBJECT REQUIREMENTS
21	19 PERCENTAGE OF CPAs REPORTING PROPORTIONS OF THEIR SENIORS HAVING MET A-G SUBJECT REQUIREMENTS
22	20 PERCENTAGE OF CPAs REPORTING PROPORTIONS OF JUNIORS IN MENTORSHIPS
23	21 PERCENTAGE OF CPAs REPORTING PROPORTIONS OF SENIORS IN WORK-BASED LEARNING EXPERIENCES RELATED AND UNRELATED TO THE CPA'S INDUSTRY FOCUS
24	22 DISTRIBUTION OF CPAs BY DISTRICT MATCH
25	23 TOTAL DISTRICT CONTRIBUTIONS TO CPAs BY TYPE OF SUPPORT
26	24 PERCENTAGE OF CPAs USING SPECIFIC SUPPORT SYSTEMS AND STRATEGIES
27	25 DISTRIBUTION OF CPAs BY EMPLOYER PARTNER MATCH
28	26 TOTAL EMPLOYER PARTNER CONTRIBUTIONS TO CPAs BY TYPE OF SUPPORT

INTRODUCTION

In 1984, the California State Legislature passed Assembly Bill 3104, calling for the replication of a successful pilot project in 10 new sites and effectively launching the California Partnership Academies (CPAs). Through renewals of this bill (Senate Bill 605 in 1987 and Senate Bill 44 in 1993) and nine statewide rounds of grant competition, the academies have grown into a network of 290 programs in over 200 comprehensive high schools in 35 counties. They have also served as a model for high school reform within and beyond California. For example, many of the districts receiving federal Small Learning Community (SLC) grants have employed “career academies” based on California’s CPAs in some or all of their SLCs. It is estimated that roughly 600 such academies exist in the state and 3,000 in the nation, with both continuing to grow.

For several reasons, the number of academies continues to increase. In the 1980s and 1990s, a series of evaluations employing comparison groups in California suggested that academies were having a positive effect on a number of academic outcomes, including reducing dropout rates and increasing attendance, credits, grade point averages, graduation rates, and college attendance rates (Dayton, et al., 1989; Maxwell and Rubin, 2000; Stern, et al., 2006). A national longitudinal study still underway (Kemple, 2004) found that four years after high school, academy graduates earned more than randomly selected non-academy control students. A report conducted for the California Department of Education concluded “California Partnership Academies are effective across all six components analyzed” (Warren, 1998, p. ii).

Beyond these indications of effectiveness, CPAs combine a number of high school reform features generally considered to be effective. They:

- Group 10th- through 12th-grade students into several related classes
- Organize cross-curricular teams to teach these classes
- Frame these classes within a broadly defined career theme
- Show students connections between their academic subjects and this theme
- Show students connections between coursework and life beyond high school: college and career
- Incorporate employer and community support in the form of advisory groups, speakers, field trips, mentors, and internships

Details of this model are available at the CPA website (www.cde.ca.gov/ci/g/hs/cpagen.asp).

Among other features of the law that governs them, CPAs are required to enroll at least 50% at-risk students in each incoming class of sophomores. Criteria for “at-risk” status include: 1) having a poor attendance record, 2) being significantly behind in credits, 3) demonstrating low motivation for the regular school program, 4) being economically disadvantaged, 5) having low state test scores, or 6) having a low grade point average. Students may be classified as at-risk if they meet three of the first four criteria or one of the last two. CPAs are required to match the state grant with either funding or in-kind support twice each year, once with district support and once with employer support, thereby tripling the value of the state grant. Funding is performance-based: The grant amount is calculated based on the number of students who meet the qualifications for attendance, credits and graduation up to an annual maximum of 90 students and \$81,000. CPAs are required to submit yearly performance data for each enrolled student.

The California Department of Education receives the annual student performance data from each academy. Over the years, information of other types has been added to this data collection, helping to describe implementation in each academy. For the past five years, these reports have been submitted electronically, building a rich database. The sections that follow draw on these student performance and program data. Appendices A and B contain summaries of CPA responses to annual report questions, as well as other descriptive statistics.

Since no written report had been issued on the CPAs since 1998, ConnectEd: The California Center for College and Career, a newly established state policy center sponsored by The James Irvine Foundation, in partnership with the Career Academy Support Network (CASN) at UC Berkeley, undertook the task of examining the 2004-05 CPA self-reports, the latest available at the time this analysis was conducted, to develop a statewide CPA profile. The result is this document, which includes:

1. Statewide snapshot of the academies
2. Student profile/enrollment
3. Student performance
4. Student post-graduate plans and secondary experiences
5. District support
6. Employer support
7. Commentary

This report is presented with several caveats. First, the information within it is only as accurate as the 290 CPA reports from which it is derived. While this information is considered generally reliable, conflicting or inconsistent information appeared, in some cases, within a single report. Second, CPA reports must provide information that determines the academies' compliance with state requirements, which may lead to some data bias. Third, little information was available on student selection procedures. While academies are required to enroll at least 50% at-risk students, no precise information is provided regarding the degree to which CPAs adhered to this requirement. Where data showed higher academy performance than that of statewide populations, reviewers were unable to discern the role that student selection played in this perceived program achievement.

Statewide rankings of the 208 schools (within which the 290 academies operate) provide a glimpse into the possible "at-risk" status of students enrolled in CPAs. Schools with California Partnership Academies are more likely to be in the lower-performing percentiles of the state's Academic Performance Index (API). On a scale of one to 10, with 10 being the highest possible, 48% of the CPA schools achieved an API between one and four. Statewide, 40% achieved the same API. Only 13% of CPA schools received a high-performance rating of eight, nine or 10, while 30% of schools received the same statewide.

With these limitations, the picture of California Partnership Academies that emerges is clearer than those available for many state programs. This review has surfaced a number of suggestions for changes to CPA reporting practices, including:

- Adding a student identification number to the database to allow year-to-year tracking of a given cohort over time (considered a better measure of program effects than comparisons with statewide figures)
- Gathering more information about students' pre-program performance to gauge the extent of CPA compliance with at-risk requirements and to view performance in grades 10 to 12 against the backdrop of ninth-grade performance.

In the meantime, this document represents the best picture of the California Partnership Academies in almost a decade.

SNAPSHOT OF THE ACADEMIES

During the 2004-05 school year, California was home to 1,128 comprehensive high schools with a total enrollment of approximately 1.4 million students in grades 10, 11 and 12: 497,197 10th-graders, 459,125 11th-graders, and 409,576 12th-graders. The same year, a total of 290 California Partnership Academies served 33,028 students in these three grades: 12,699 10th-graders, 11,044 11th-graders, and 9,285 12th-graders. Most of these academies were well established in terms of length of existence, with 92% in at least their third year of funding.

California Partnership Academies are represented in 35 of California's 58 counties. Less than half (17) of these counties have three or fewer CPAs. Fifteen counties have between four and 20 CPAs. Three of California's more populous counties—Los Angeles, Riverside, and Sacramento—have 66, 26, and 25 CPAs respectively. Figure 1 presents a map of California, indicating the number of CPAs in each county.

CPAs were present in 105 school districts (about one quarter of California's 417 unified and high school districts) and served approximately 2% of students enrolled in California's comprehensive public high schools. Figure 2 shows the percentage of unified and high school districts with and without CPAs and the number of CPAs districts had in 2004-05. CPAs existed in 208 high schools (18% of those in the state), with approximately a third of those schools operating more than one CPA. Figure 3 shows the percentage of high schools with and without CPAs and the number of CPAs schools had in 2004-05.

FIGURE 2: NUMBER OF CPAs WITHIN UNIFIED AND HIGH SCHOOL DISTRICTS

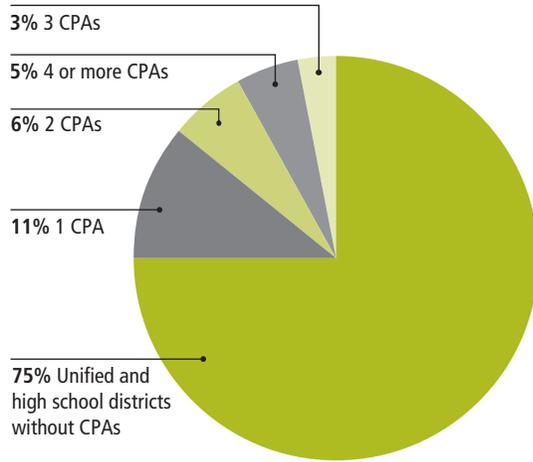
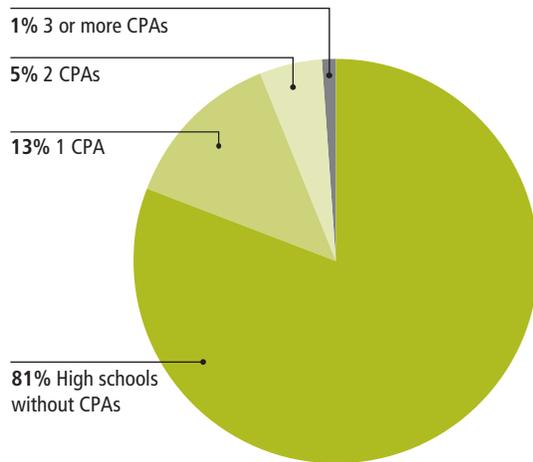
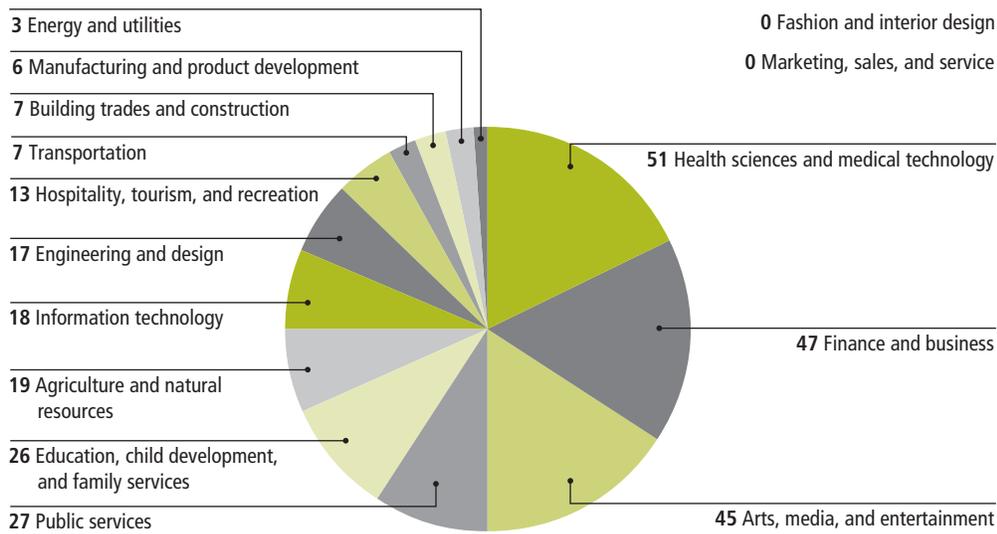


FIGURE 3: NUMBER OF CPAs WITHIN HIGH SCHOOLS



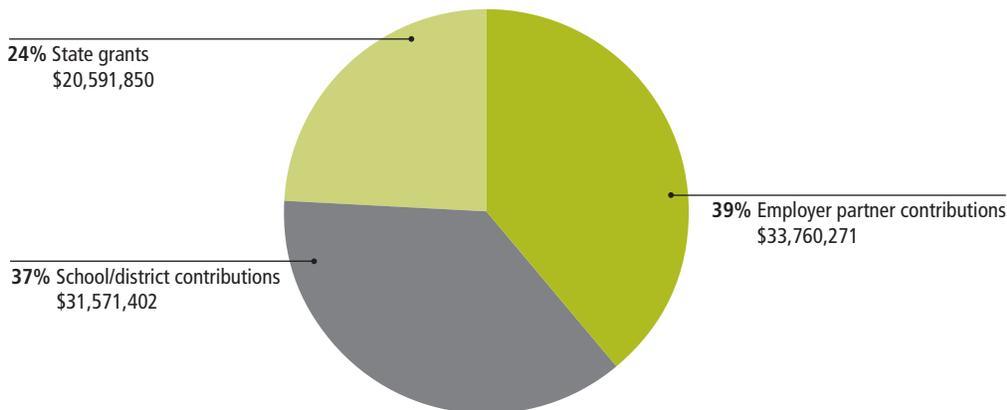
Each CPA focuses its career program on at least one of the 15 industry sectors established for Career and Technical Education by the California Department of Education. (The sectors are also used for Perkins Act funding, a career-technical education funding stream.) These industry sectors provide a framework for developing curriculum standards, structuring school offerings, and creating related materials and opportunities for students. In practice, CPAs occasionally address multiple overlapping industry sectors to suit needs and labor market trends of their individual communities. Figure 4 shows the number of CPAs focused on each of these industry sectors.

FIGURE 4: NUMBER OF CPAs BY INDUSTRY SECTOR



Financial support for California Partnership Academies comes from three main sources: direct grants from the California Department of Education (CDE); direct and in-kind support from school districts; and direct and in-kind support from individual CPA employer partners in the public, private, and nonprofit sectors. Together, CDE grants accounted for nearly a quarter of the resources supporting CPAs in 2004-05; school district and employer partnership contributions each account for almost 40% of the resources devoted to CPA operation (see Figure 5).

FIGURE 5: CPA FUNDING SOURCES AND AMOUNTS



STUDENT PROFILE

California Partnership Academies receive funding to serve students in grades 10, 11 and 12. Sophomores and juniors are eligible for full funding (\$900 per student) if they complete 90% or more of their attempted credits, attend school at least 80% of the time they are enrolled, and participate in the academy both semesters of the school year. Seniors are eligible for full funding if they are enrolled both semesters and graduate.

For all three grade levels, students who meet the criteria in only one semester are eligible for partial funding of \$450. CPAs receive funding for up to 90 students, even if they enroll more than 90 eligible participants in their academies. Figure 6 presents the total CPA enrollment at each grade level and the number of students for which funding was received. In the 2004-05 year, CPAs received funding for approximately 84% of the total number of students enrolled, although almost 86% were eligible. Academies did not receive funding for the over-enrollment of an additional 2% of eligible students. Figure 7 depicts the distribution of academies by percentages of students eligible for funding.

FIGURE 6: TOTAL FUNDED AND UNFUNDED STUDENTS ENROLLED IN CPAs

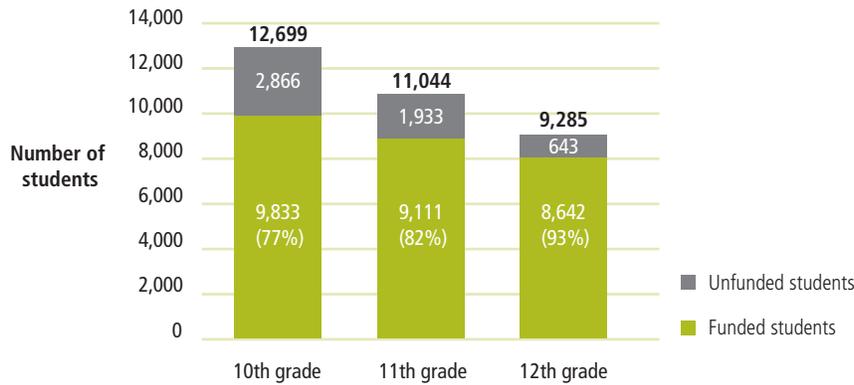
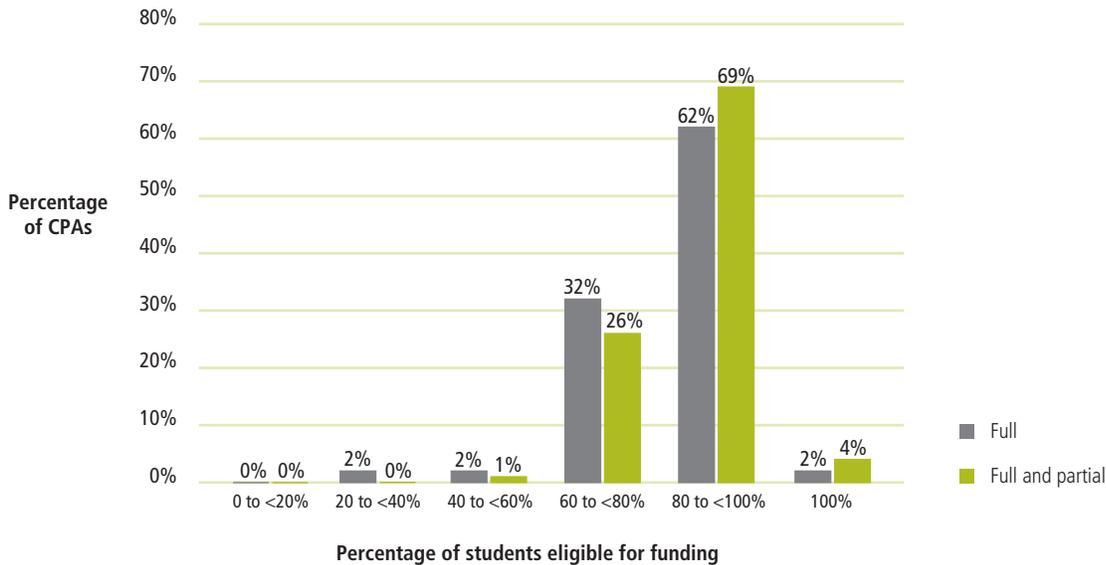
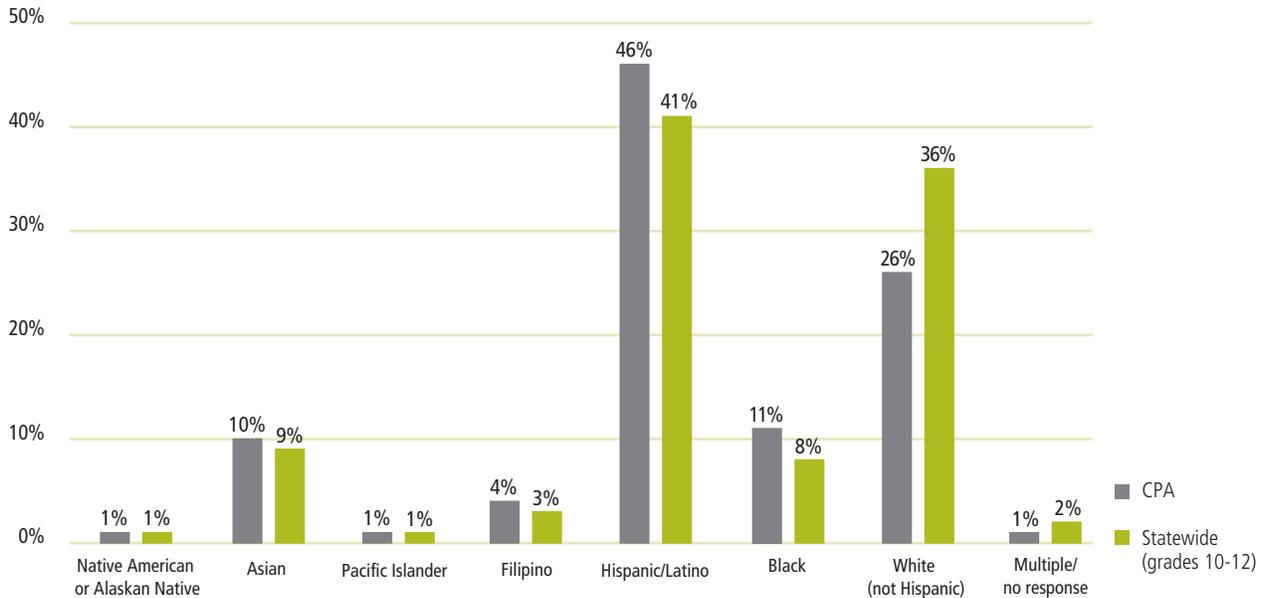


FIGURE 7: PERCENTAGE OF CPAs WITH STUDENTS ELIGIBLE FOR FUNDING



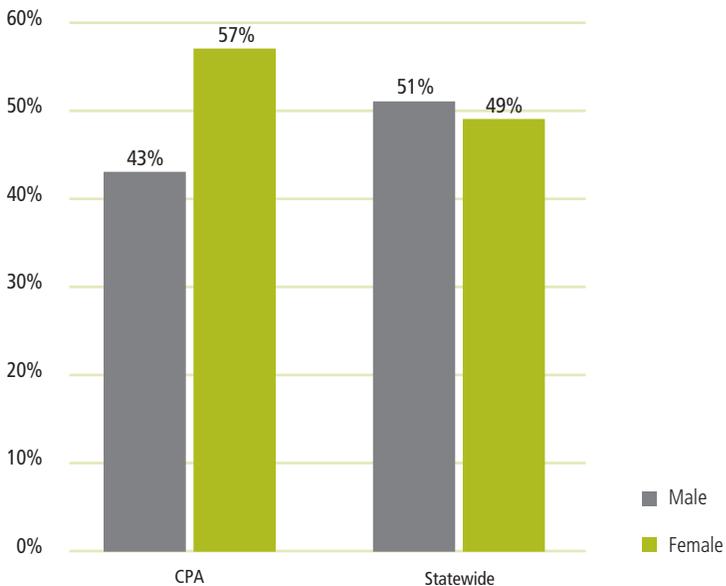
As illustrated in Figure 8, CPAs enrolled a noticeably higher proportion of Hispanic/Latino and black students relative to the statewide 10th- through 12th-grade enrollment (46% versus 41% and 11% versus 8%, respectively), and they enrolled a lower proportion of white students (26% versus 36%).

FIGURE 8: CPA AND CALIFORNIA 10TH- TO 12TH-GRADE ENROLLMENT BY RACE/ETHNICITY



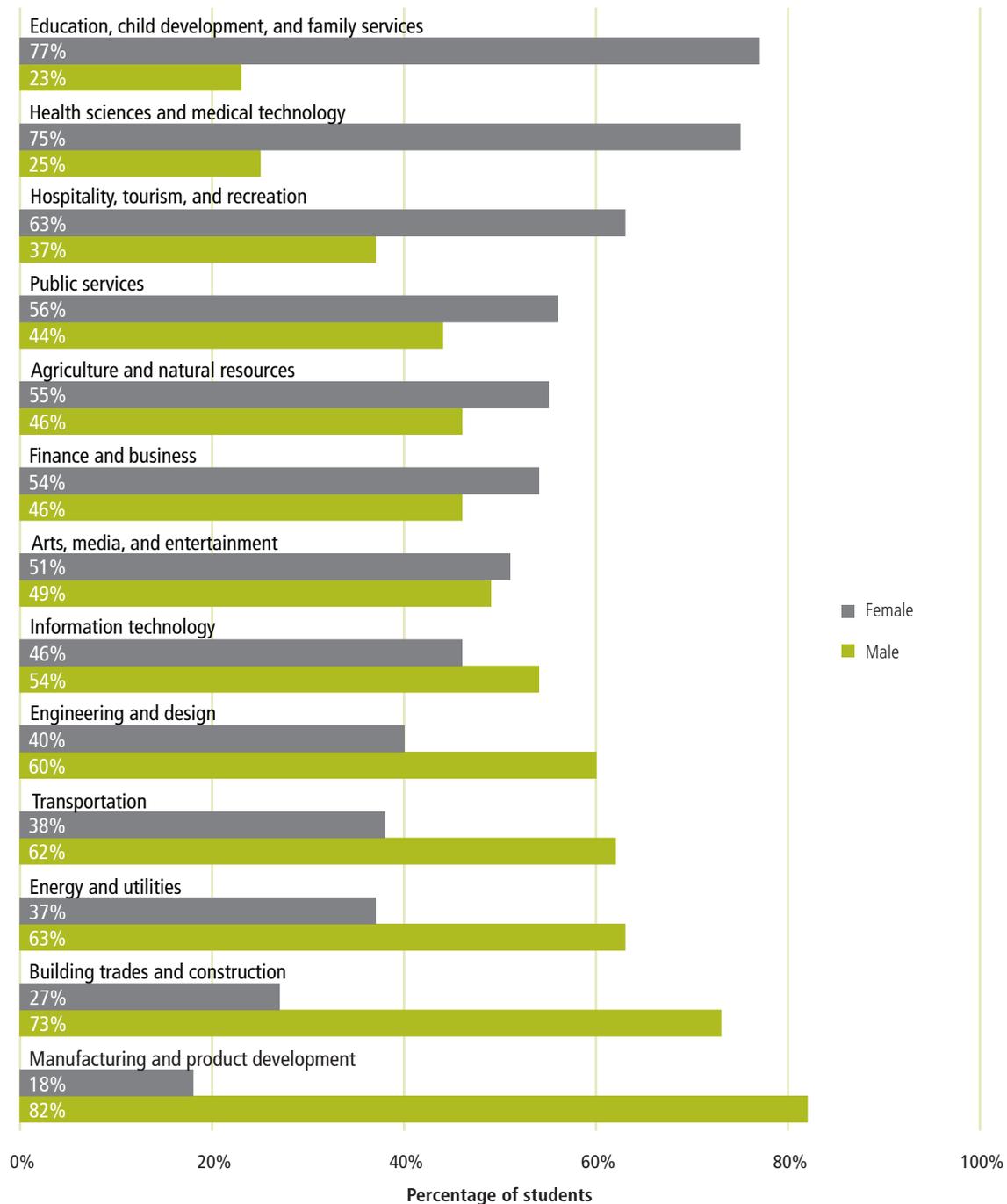
Statewide, K-12 enrollment in California is approximately 51% male and 49% female. This trend continues in 10th- to 12th-grade statewide high school enrollment (www.cde.ca.gov, 2007). But, as illustrated in Figure 9, CPA enrollment is more predominantly female (57% female versus 43% male).

FIGURE 9: CPA AND CALIFORNIA 10TH- TO 12TH-GRADE ENROLLMENT BY GENDER



Each Partnership Academy is associated with a particular industry; therefore, it is possible to examine the gender balance (or imbalance) within each industry focus. Figure 10 shows the percentages of female and male students enrolled in each of the 13 sectors associated with the 290 CPAs, with female-dominated sectors presented first. Appendix C presents this information in tabular form, and Appendix D presents a similar breakout associating industry sectors and race/ethnicity.

FIGURE 10: CPA ENROLLMENT BY INDUSTRY AND GENDER



STUDENT PERFORMANCE

Most California Partnership Academies recruit students in their freshman year to enroll in the academies as sophomores and matriculate to graduation, although some CPAs were relatively new and had implemented only one or two grades in 2004-05. While similar data, such as grade point average, credits and attendance are collected for all three grades, the California Department of Education also collects data that reflect particular grade-specific expectations, including sophomores' performance on the California High School Exit Exam (CAHSEE) and seniors' graduation rates. This section frames performance measures as they relate to specific classes and data across grade levels.

Attendance

Generally, CPAs reported high attendance for all funded and non-funded students. Of the 289 Academies that provided attendance information, 98% reported over 80% attendance, as an average for all enrolled students, and 90% reported at least 90% attendance. Individualized student data provide a more interesting if not more informative picture of student performance. Of the 32,547 CPA students with reported attendance, 84% attended school at least 90% of the time. More than half—56%—reported 96% or better attendance, with 28% reporting attendance of 90% to 95%. Twelve percent maintained 80% to 89% attendance, and 4% attended school less than 80% of the time. One of the California Department of Education funding requirements is that students achieve an attendance rate of at least 80%; almost 96% of students in 2004-05 met this eligibility criterion.

Credits

Performance is also measured by the credits students earned each year. Students must complete at least 90% of the credits required in a given year to be eligible for funding. CPAs reported credits required and completed for 32,626 students. Ten percent of those students completed less than 80% of their required credits, 5% completed between 80% and 89%, and 85% of CPA students completed at least 90% of their required credits. Among students who achieved the 90% completion rate, 58% attempted and completed more courses than necessary, earning over 100% of the credits required. This may have been a result of students enrolling in and passing extra elective courses as a requirement of the academy (career technical courses) or college classes taken through a dual-enrollment program that allows the students to count credits toward both high school graduation and a college degree.

CAHSEE pass rates

Beginning with the graduating class of 2006, California required that all students pass an exit exam in order to receive a high school diploma. Students take the test for the first time during the second semester of their sophomore year. Those who do not pass often receive additional tutoring, may enroll in CAHSEE-focused classes, and are allowed to take the test multiple times during specified testing windows up until one year beyond 12th grade or up to age 22 for students enrolled in a charter school (CDE, 2006).

To evaluate CAHSEE pass rates, reviewers compared the data of 12,618 students from the 287 CPAs that provided this information to the data of 460,471 students across California who took the exam as sophomores during the 2004-05 school year. In almost all cases, academy students passed the tests at higher rates than did the general state population. For example, 84% of CPA students passed the English Language Arts (ELA) test, compared to 76% of students statewide. On the mathematics exam, 80% of CPA students passed, compared with 74% statewide (see Figure 11). Male CPA students passed both the ELA and mathematics exams at rates almost 10 percentage points higher than the general population. Female students in CPAs passed both exams at slightly higher rates than their statewide counterparts (see Figure 12).

FIGURE 11: 10TH-GRADE CAHSEE PASS RATES BY SUBJECT TEST

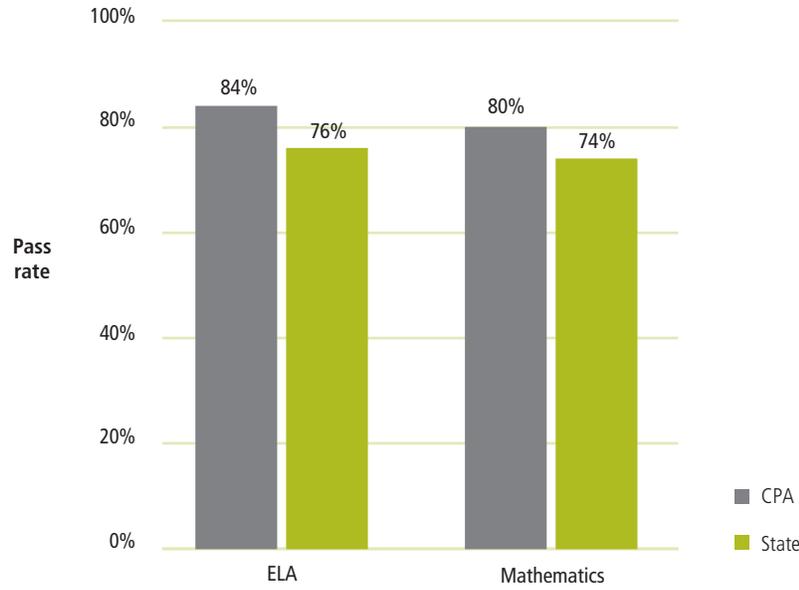
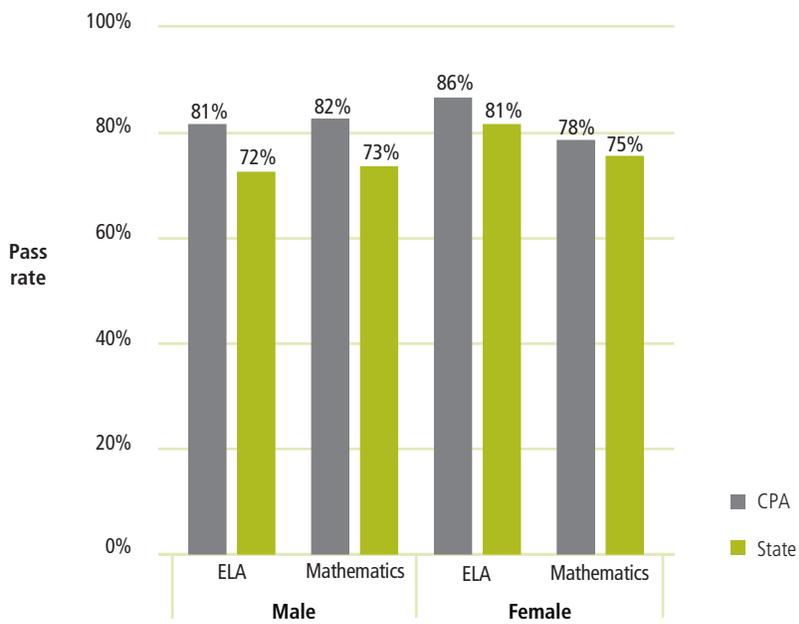
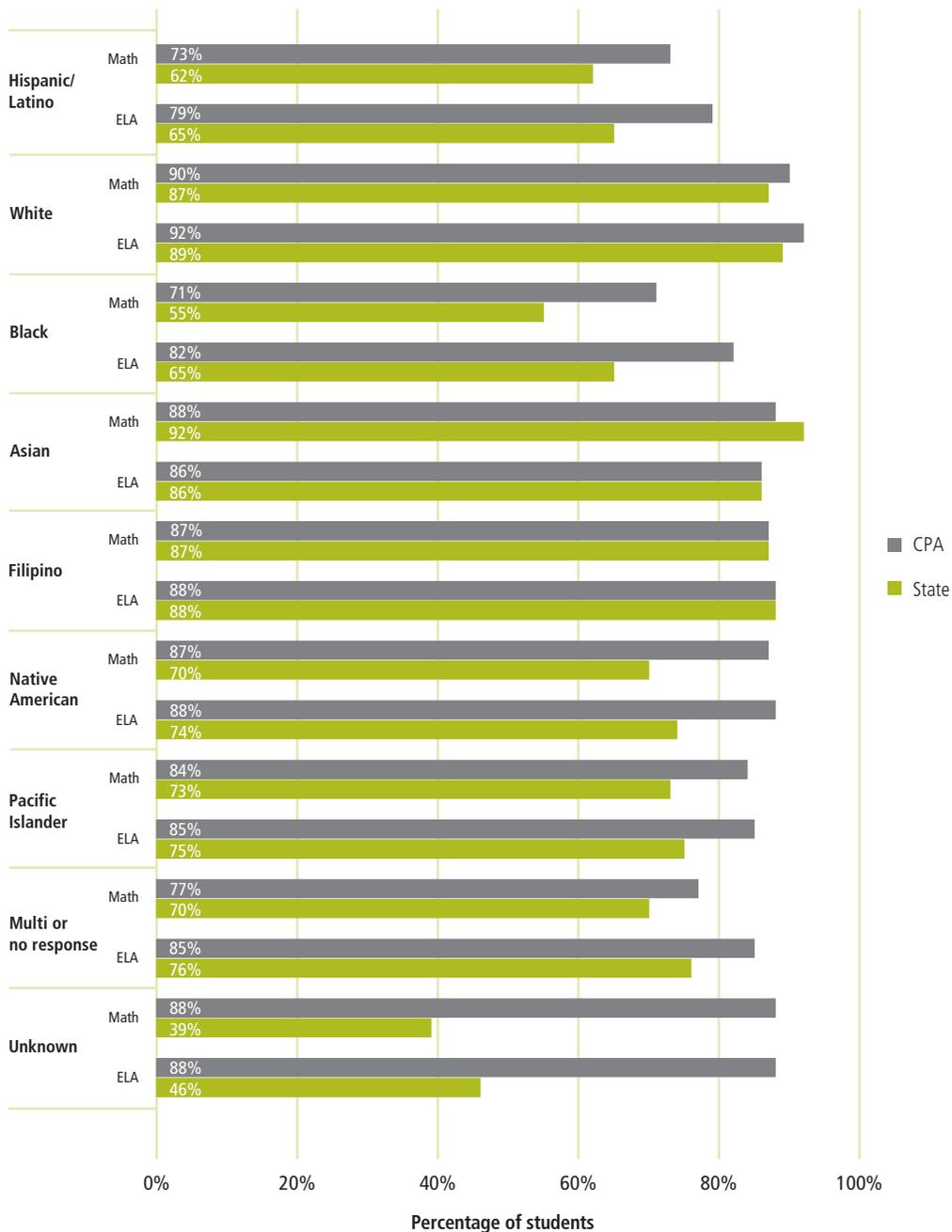


FIGURE 12: 10TH-GRADE CAHSEE PASS RATES BY SUBJECT TEST AND GENDER



Perhaps the most significant CPA-statewide contrast is apparent when scores are sorted by student ethnicity. Native American, Hispanic/Latino, Pacific Islander and black students from CPAs passed both the ELA and math exams at substantially higher rates—ranging from 10 to 17 percentage points—than students of the same ethnicity within the general population (see Figure 13). Little or no differences in achievement were found between academy and state students of white, Asian and Filipino descent. In only one respect did state students outperform those in CPAs: More Asian students in the state population passed the mathematics section than did Asian CPA students.

FIGURE 13: 10TH-GRADE CAHSEE PASS RATES BY SUBJECT TEST AND RACE/ETHNICITY



Graduation

Graduation rates are calculated in California through several complex methods that compare the number of graduates to either freshmen enrollment four years prior, dropout information for the previous four years, or senior enrollment during the current year (see California Department of Education Statewide Graduation Rates for greater detail). As the data available for this study included only information for the current year, reviewers used a method in which the number of graduates is divided by the number of seniors enrolled: In this case, 9,190 CPA seniors enrolled at 273 schools were compared to 409,560 seniors enrolled across the state in the same year.

Similar to data collected on CAHSEE pass rates, graduation rates of CPA seniors during the 2004-05 year were higher than those of the statewide population (see Figure 14). Ninety-six percent of academy seniors graduated at the end of the 2004-05 academic year, compared with a statewide figure of 87%. Examining gender differences, 98% of female and 95% of male academy students graduated as compared to 91% of female and 83% of male students graduating statewide (see Figure 15).

Differences in graduation rates were most apparent among Native American, Hispanic/Latino, Pacific Islander and black CPA students: All graduated at rates 10 to 15 percentage points higher than the general population (see Figure 16). Similarly, students who were classified as multi-racial or who were not classified by ethnicity also graduated at higher rates if they were part of a CPA. While white, Filipino, and Asian CPA students were more likely to graduate than state students of the same ethnic background, these differences were smaller.

FIGURE 14: CPA AND CALIFORNIA 12TH-GRADE GRADUATION RATES

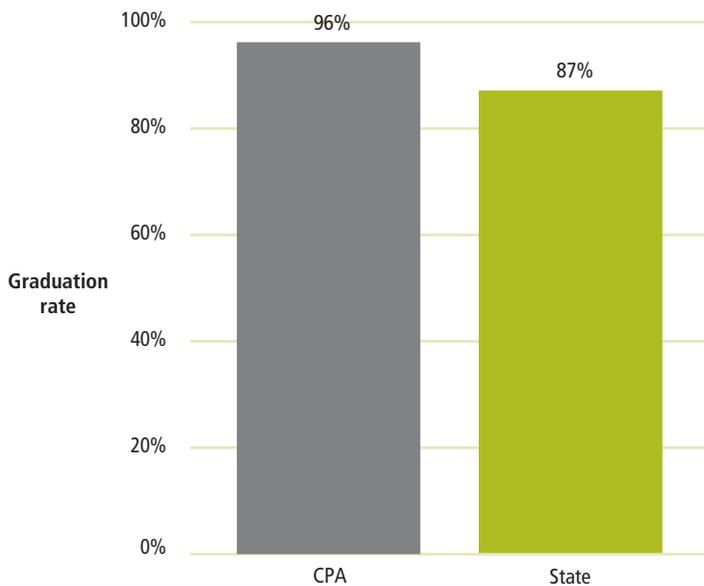


FIGURE 15: CPA AND CALIFORNIA 12TH-GRADE GRADUATION RATES BY GENDER

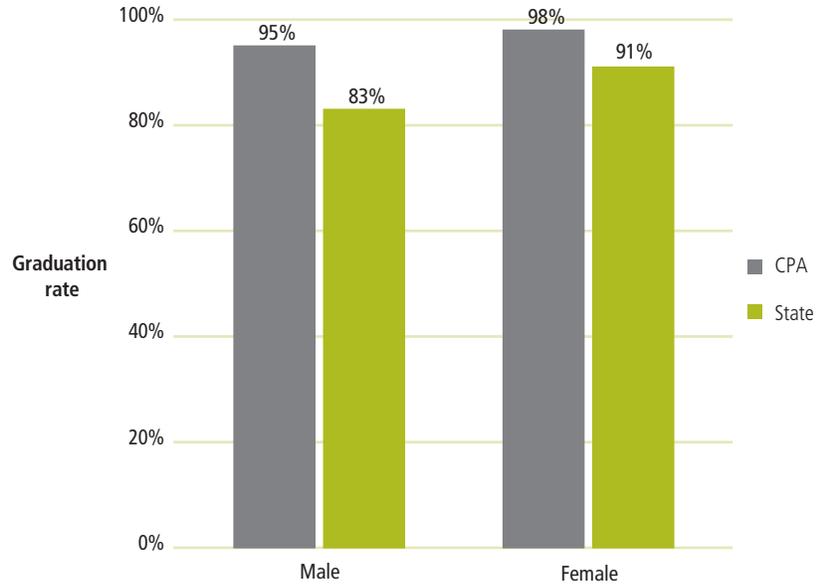
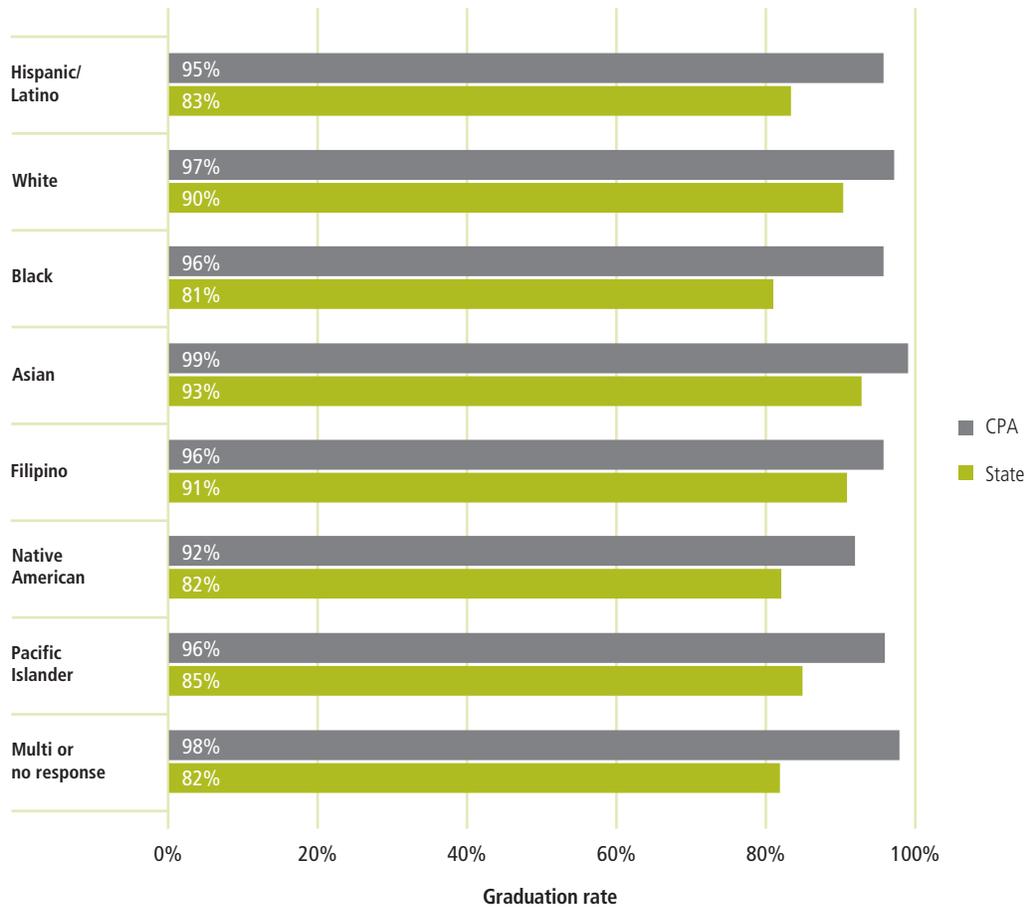


FIGURE 16: CPA AND CALIFORNIA 12TH-GRADE GRADUATION RATES BY RACE/ETHNICITY



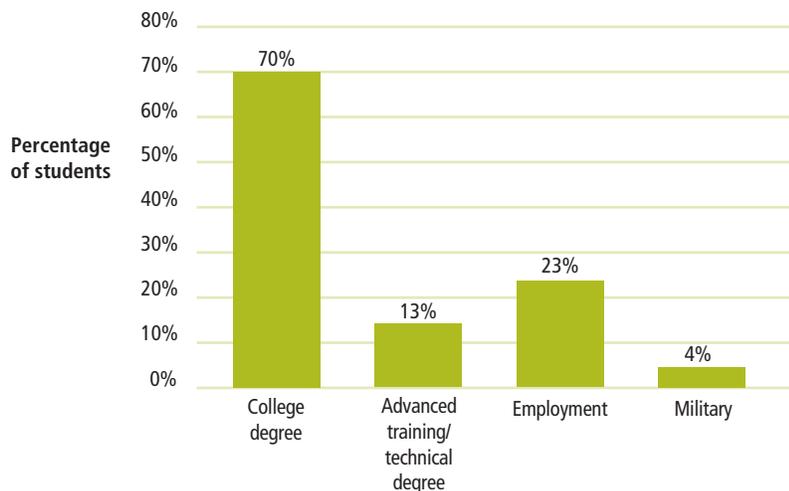
STUDENT INTENTIONS AND EXPERIENCES

California Partnership Academies pursue both academic and career-related goals. The academies are intended to increase students' academic motivation and preparedness by providing context for what students are learning in their core academic classes. At the same time, they are intended to prompt students to consider future career possibilities and focus on career interests in tandem with their academics. CPAs view these as congruent goals, not opposing ones, since most higher-paying jobs require education beyond high school, and the higher an education level students attain, the more productive their careers are likely to be. Thus, CPAs are often described as preparing students for both college and career, and the data that follow describe results relative to both goals. Most of this section's content regarding the experiences of CPA students derives not from individual student files, but rather from aggregated information provided by CPA directors (or staff designated to fill out the required annual report). The information can be viewed not only as an indication of CPA students' experiences overall, but also as an indication of how well CPAs are meeting the challenge of providing their students with opportunities to prepare for post-secondary and career success.

Postsecondary plans and preparation

In 2004-05, CPAs reported that 70% of the students expecting to graduate planned to earn a college degree (either two- or four-year) while 23% planned to enter the workforce after finishing high school (see Figure 17). Measures of CPA success in preparing students for their postsecondary academic plans include the number of students taking Advanced Placement (AP) or International Baccalaureate (IB) coursework and the number of students taking courses while in high school that offer college credit, either through enrollment in local college classes or dual-enrollment arrangements. In 2004-05, the CPA students reported as being enrolled in AP or IB courses numbered 4,075 (12% of the total number of students served by CPAs and 20% of CPA juniors and seniors). Students reported as being enrolled in courses for which they earned college credit while in high school numbered 4,522 (14% of the total served and 22% of CPA juniors and seniors).

FIGURE 17: POSTSECONDARY PLANS OF CPA SENIORS



For California high school students, fulfilling University of California/California State University (UC/CSU) A-G subject requirements—a specific course pattern covering seven academic subjects required for admission—is a major stepping stone toward postsecondary education. CPAs reported that 4,655 seniors (50%) fulfilled the UC/CSU A-G subject requirements. Using 2004-05 California Department of Education data as a comparison, a higher percentage of CPA seniors have met A-G subject requirements than high school graduates statewide (50% versus 35%, see Figure 18). Almost a quarter (23%) of the 2004-05 CPAs report that at least 80% of their seniors have fulfilled the A-G subject requirements; however, 17% report that less than 20% of their seniors have done so (see Figure 19).

FIGURE 18: SENIORS REPORTED TO MEET A-G SUBJECT REQUIREMENTS

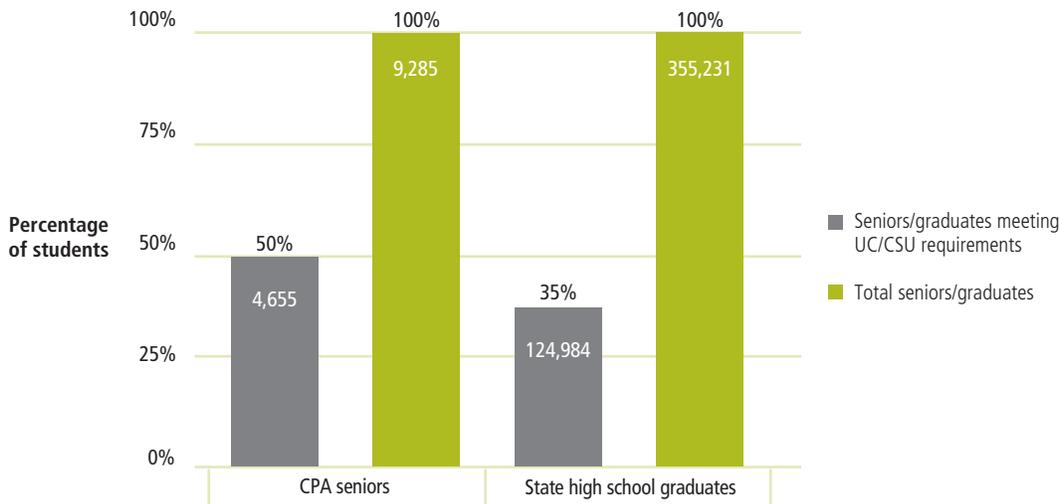
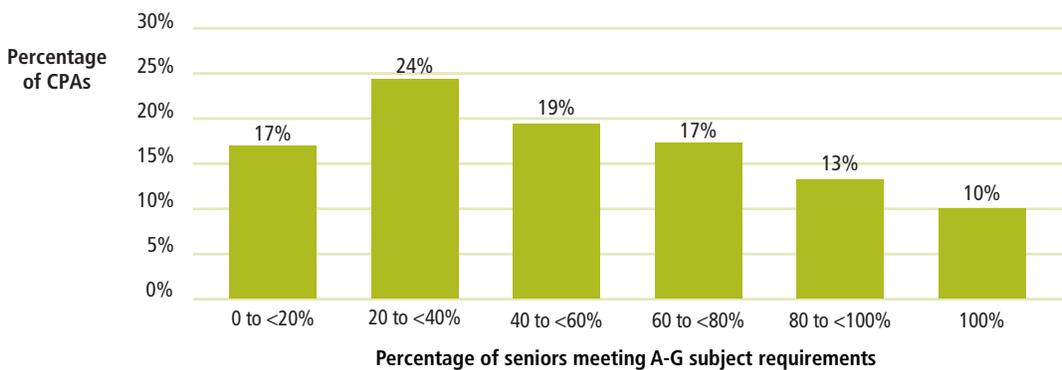


FIGURE 19: PERCENTAGE OF CPAs REPORTING PROPORTIONS OF THEIR SENIORS HAVING MET A-G SUBJECT REQUIREMENTS



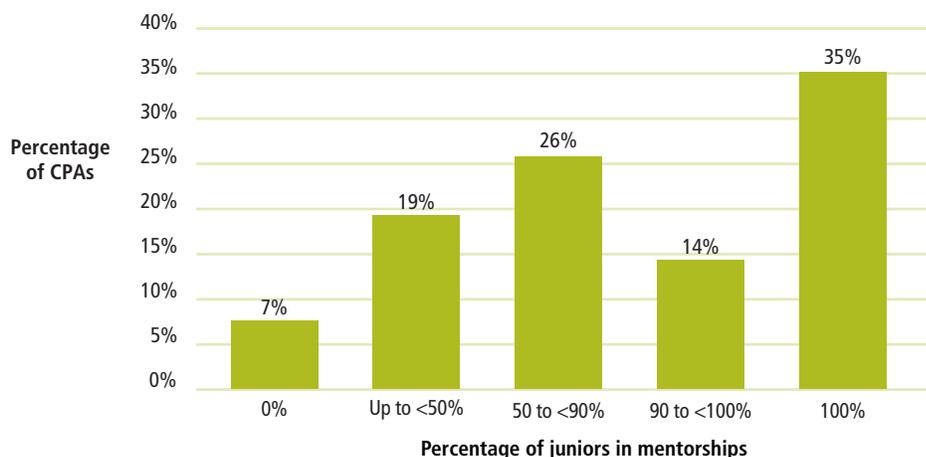
One explanation for academy students meeting the A-G requirements at higher rates could be that CPAs offer more UC/CSU-approved academic and career technical courses in order to maintain their dual focus on college and career. In fact, the UC/CSU system encourages such goals by regularly approving career technical courses with specific academic content and, most recently, partnering with Agricultural Education Programs across California to add a range of science and business courses (University of California Office of the President, 2006). Still, responsibility lies with individual academies and schools to ensure that courses are submitted (and occasionally resubmitted multiple times) for approval.

It is difficult to determine whether CPAs are, in fact, offering more A-G approved courses. In narrative reports, CPAs often referred to academy courses using abbreviations or general terms (for example, science and math as opposed to chemistry and calculus) that may or may not appear on the official list articulated between UC/CSU and the high school (available at www.ucop.edu/doorways). Presumably, many of these classes would also be offered to other students outside the academy as they satisfy general high school graduation requirements. But electives in the career-technical focus area that, in most cases, define a CPA are typically offered to academy students only. In comparing these courses to the articulation lists from 2004-05, reviewers found that very few (13%) were UC/CSU-approved electives, although 99% of the academies offered students at least one elective, and 92% offered at least two. Thus, while CPA students took more A-G classes, they did not necessarily do so because the classes were academy offerings. Recently, California Department of Education staff has begun to work extensively to assist academies in adding their courses to the articulation lists. An analysis of current offerings would likely reveal a higher percentage of A-G approved courses.

Career-related preparation

CPAs intend to have students meet and learn from professionals in the community, gain an understanding of professional workplaces, and experience career possibilities. Accordingly, measures of CPA success in preparing students for college and career include the number and proportion of students participating in mentorships and completing a work-based learning experience (regardless of whether this experience is related to the industry focus of an academy). In 2004-05, 72% of CPA 11th-graders (7,992 students) participated in mentorships. Figure 20 shows that 49% of CPAs report placing at least 90% of their juniors in mentorships.

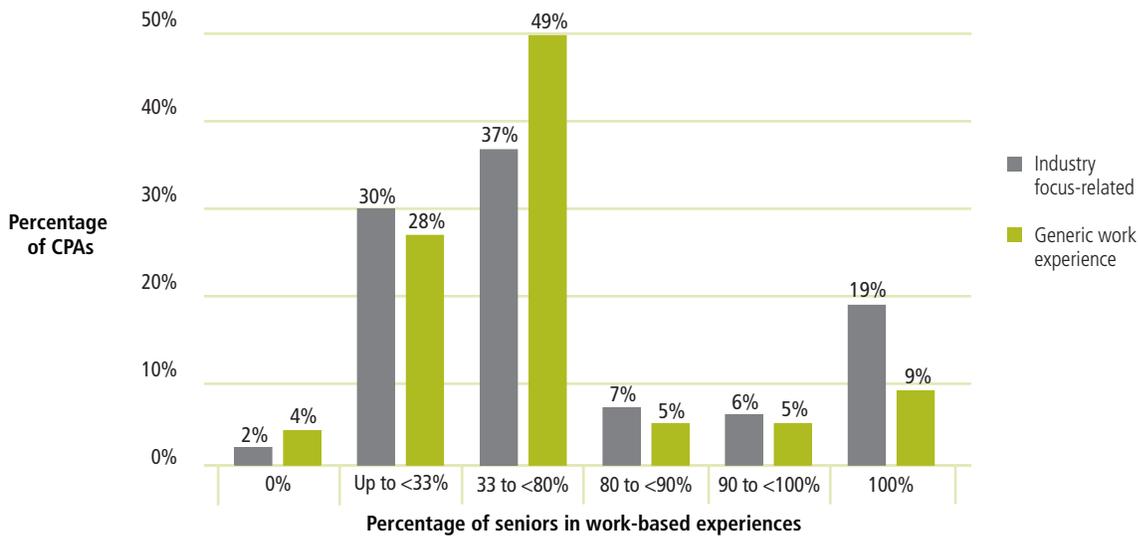
FIGURE 20: PERCENTAGE OF CPAs REPORTING PROPORTIONS OF JUNIORS IN MENTORSHIPS



Many CPA 12th-graders participate in internships, industry employment related to their academy career field, or unrelated work experience. The CPA work-based learning component is intended to build students' workplace skills and real-life experiences related to each CPA's industry sector focus. Almost 5,000 seniors (53%) participated in a work-based learning experience related to their academies' industry focus in 2004-05. About 4,500 seniors (49%) participated in an unrelated job experience. Some students, throughout the course of the year, may have participated in both.

Some CPAs report difficulty placing their students in workplaces. For instance, an academy with a public safety focus reported the barrier presented by a minimum age requirement of 18 in many public safety positions. Another academy in a small rural community noted student transportation to healthcare sites as a "continuous challenge." A CPA focused on the finance and business sector reported that it has struggled to place students in internships, stating that a majority of its students live in low-income households, reducing the viability of unpaid internships. Nevertheless, 68% of CPAs reported placing at least 33% of their seniors in work experiences related to the academy focus. Figure 21 presents the distribution of CPAs with various proportions of their seniors participating in work-based learning experiences.

FIGURE 21: PERCENTAGE OF CPAs REPORTING PROPORTIONS OF SENIORS IN WORK-BASED LEARNING EXPERIENCES RELATED AND UNRELATED TO THE CPA'S INDUSTRY FOCUS

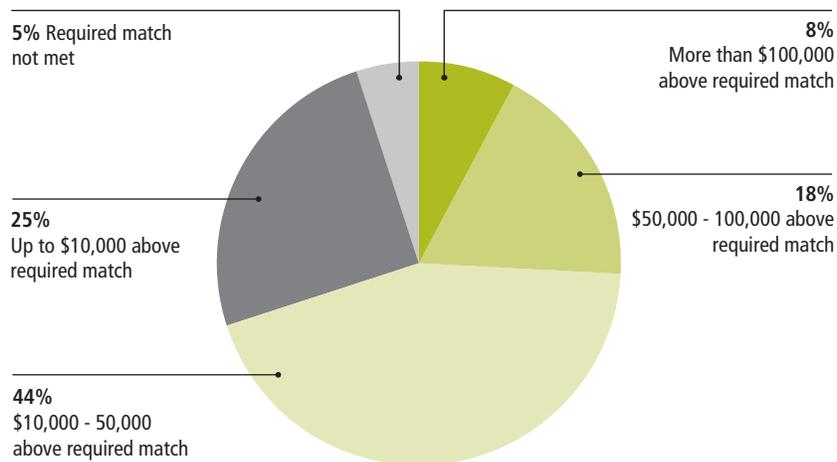


DISTRICT SUPPORT AND SCHOOL-RELATED COMPONENTS

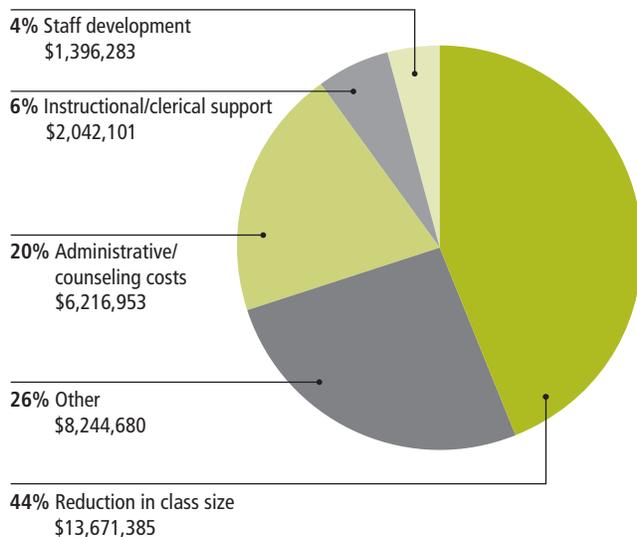
To successfully serve their students, CPAs need the support of the schools and districts in which they operate. In fact, CPAs are required to obtain matching support, in the form of funds or in-kind support, from their schools and/or districts equal to the amount of funding received from the state. This match must supplement, not supplant, funds already being spent by the district and must be directed to academy students. In 2004-05, CPAs reported that they surpassed this requirement, securing almost \$31.6 million from their schools and districts, gaining one and a half times as much support as required. State grants totaled about \$20.6 million, an average of approximately \$72,000 per academy. This is lower than the \$81,000 typically given to CPAs because newly implemented academies typically have fewer eligible students; in addition, some funding is withheld due to student ineligibility.

The vast majority (95%) of CPAs met or exceeded their required district/school match. Although the average district match totaled \$108,867, 26% of the CPAs received more than \$50,000 above the required match. Figure 22 illustrates the distribution of CPAs by the amount of district/school matching funds received.

FIGURE 22: DISTRIBUTION OF CPAs BY DISTRICT MATCH



District matches took various forms, including additional grant monies, teacher salaries above the normal full-time equivalent for extra preparation periods, staff development, curriculum development and materials, and other costs. CPAs can only claim matching funds that come from district sources and are provided to specifically support the academy. Figure 23 presents the total amount of district support given to the 290 CPAs in 2004-05, categorized by type of match. As illustrated, the largest portion of district support translated to reduced class sizes for the academies. On average, CPAs received \$47,143 to support small academy classes; \$28,430 for miscellaneous supports, such as facilities, equipment, transportation, and supplies; and \$21,438 for administrators and counselors working with academies and their students.

FIGURE 23: TOTAL DISTRICT CONTRIBUTIONS TO CPAs BY TYPE OF SUPPORT

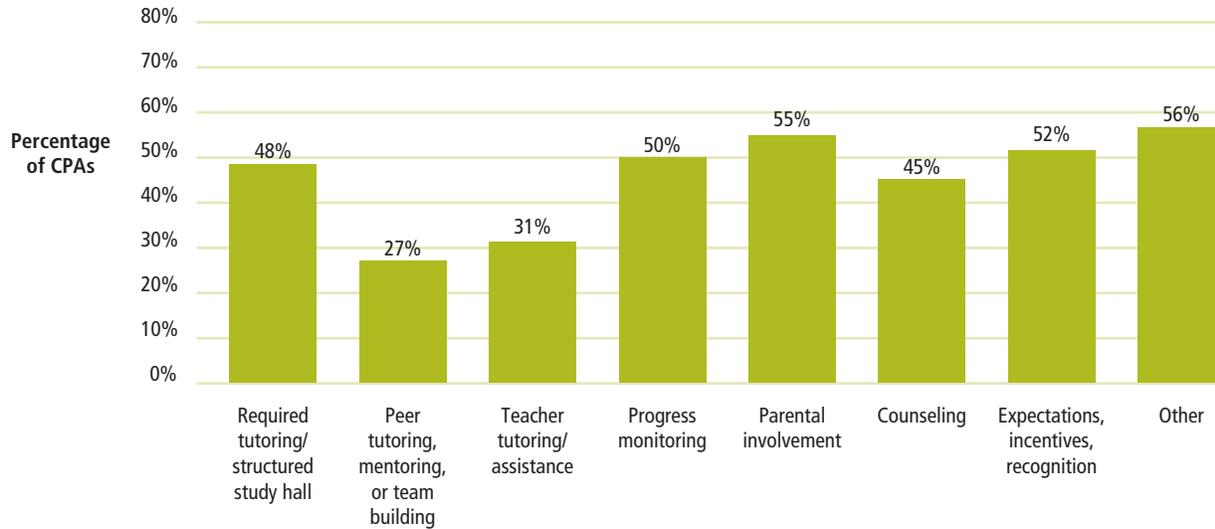
In keeping with the amount of district money spent on class size reduction, about 84% of the academies reported that the sizes of their academy classes are below the district average and smaller than classes in the rest of the school. In addition, the vast majority (94%) reported that they have “strong site and district administrative support.”

School-related components

CPA annual reports do not specifically account for how academies spend their funds. They do, however, request narrative answers that provide additional insight into CPA activities. CPAs are expected to develop partnerships with educational programs outside of their respective high schools. Almost all of the academies (98%) report that they have developed linkages to postsecondary institutions. For example, one Health Careers Academy reported receiving considerable support from its stakeholders and described linkages with a local community college and the CSU in its region. These two higher education institutions designed programs specifically for the CPA students, offering opportunities such as college credit, priority registration, tours, speakers and campus tutors.

Many CPAs noted using academic support systems to assist students in meeting attendance and achievement standards and to encourage their progress toward timely graduation. These supports took the form of progress reports, requests for parental involvement, required tutoring (including peer tutoring), and the establishment of expectations, incentives, student recognition and team-building activities. A review of the narrative answers provided the data illustrated by Figure 24, which indicates the percentage of CPAs using the most common support systems.

FIGURE 24: PERCENTAGE OF CPAs USING SPECIFIC SUPPORT SYSTEMS AND STRATEGIES

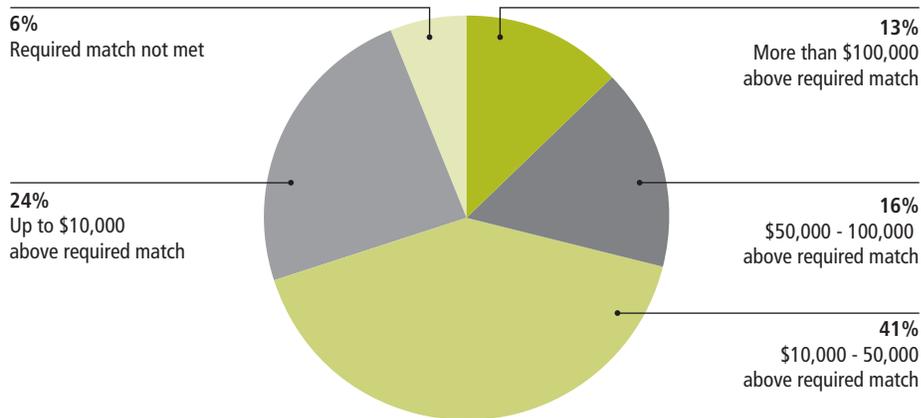


Each CPA is expected to convene an advisory committee consisting of individuals involved in academy operations, including district and school administrators, lead teachers, and representatives of the private sector. CPAs reported that these committees assisted in various ways. A CPA in the hospitality, tourism, and recreation sector reported that its steering committee provided industry insight, including changes in laws, building and equipment installation codes, and newly developed products. Other CPAs reported advisory committees assisting in thematic career technical curricula review, strategic decision making and networking.

EMPLOYER INVOLVEMENT AND SUPPORT

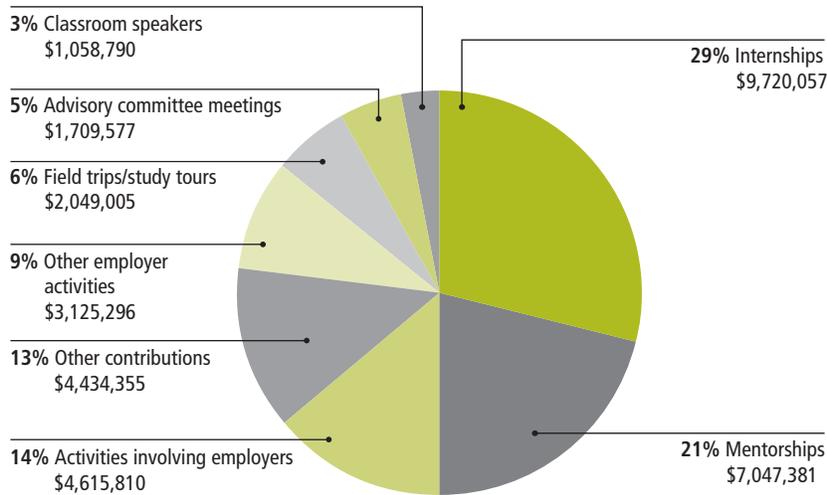
CPAs are required to obtain matching support from their employer partners (private, public, or nonprofit) equal to the amount of funding received from the state. As with the district/school match, the vast majority of CPAs (94%) met or exceeded this requirement in 2004-05, receiving the equivalent of about \$33.8 million from employer partners (state grants totaled \$20.6 million). These partners provided a range of services, including the following: service on the CPA advisory committee; provision of mentors, speakers, job shadowing positions, field trip opportunities, and internships for academy students; assistance with curriculum development; and provision of facilities, equipment, supplies, and direct financial resources. The average employer partner match totaled \$116,415. Nearly 30% of the CPAs received more than \$50,000 over and above the required match. Figure 25 illustrates the distribution of CPAs by the amount of employer partner matching funds received.

FIGURE 25: DISTRIBUTION OF CPAs BY EMPLOYER PARTNER MATCH



Approximately 30% of the value of business partnership contributions can be ascribed to the internships offered to CPA students (see Figure 26). Students are typically provided with an academy-related internship or job during the summer after their junior year, or a part-time experience during their senior year. Many CPAs reported difficulty securing related internships for every student. Professional mentorships, most typically provided during a student's junior year, accounted for the second largest proportion of partner support.

FIGURE 26: TOTAL EMPLOYER PARTNER CONTRIBUTIONS TO CPAs BY TYPE OF SUPPORT



The CPA narrative reports supplied numerous examples of support from employer partners. One arts, media, and entertainment CPA reported that its partners included two museums through which students received docent training and were invited to serve as docents for a major art exhibition. Another partner of this CPA, a gallery owner, sponsored a one-day workshop bringing in several artists to teach students. The partnerships this CPA has developed have also provided the opportunity for students to display and sell their work.

In addition to exposing students to “real life” application of their coursework, employer partnerships enable CPAs to organize motivational events. For example, an information technology-focused CPA awards its graduates and their families with an exclusive graduation ceremony in a venue provided by a large information technology corporation. This CPA also reported hosting an awards ceremony recognizing academy students for academic achievement and an end-of-year academy picnic bringing together teachers, students, parents and mentors before summer break. It was reported that both of these events were paid for in part by employer partner donations.

COMMENTARY

Now in their 22nd year of operation, California Partnership Academies have proved a durable model, and they continue to grow. Though a categorical program, academies require local initiative: They have been supported entirely through competitive grants, not formula funding. In recent years, the state has witnessed a turnover of approximately 10% among funded CPA sites. The California Department of Education has closed some academies for non-compliance, but their places have been filled by other high schools ready to start new academies. Academies have endured and grown for, apparently, multiple reasons: They have been linked to student success; a dearth of effective reform models at the high school level; and support provided by state grants, the U.S. Department of Education, private foundations, and others.

Still, CPAs are represented only sparsely in California high schools. To date, they have been implemented in about a quarter of districts having high schools and in 18% of comprehensive high schools, serving about 2% of California's high school students. While stakeholders debate the optimal number of CPAs for California or the optimal enrollment within them, even those who argue that they represent a good option for a relatively small proportion of students may see reason for expansion.

Some have argued that CPAs are too expensive for further expansion—an important consideration. While students who meet the annual attendance and credit requirements earn their academies \$900 each, up to a maximum of 90 students and \$81,000, some students fail to meet these requirements, some academies fail to qualify 90 students, and some academies have more than 90 qualifying students. Dividing the total dollars spent by the state on CPAs in 2004-05 by the actual number of students enrolled in CPAs yields a figure of \$623 per student in state grant funds that year, and an average grant amount of \$72,000. Another part of this equation is the amount of local support these state funds leverage. Using the figures above, the state-to-local support ratio is about 1:3. That is, for each state grant dollar expended, roughly three are provided in matching support from local districts and employers. This calculation suggests a substantially higher investment per student per year as well as a healthy state-local partnership.

The intent of these matches is to demonstrate district/school and employer commitment to this approach, which seems beneficial. At the same time, a two-for-one local match is unusually stringent, and there is question about the reality of these claimed matches, especially on the district/school side. The matching figures in the reports may be inflated since matching is a matter of compliance, most of the matches are reported as in-kind, and the amounts reported are not corroborated by additional evidence.

District matches also raise the question about whether these contributions draw support away from non-academy students. Other grants and funding streams may be counted toward this match (for example, federal Title I and Perkins funds, state Regional Occupation Program and bonds funds) if directed toward academy use, but most districts report primarily staff time in this category. If their reporting describes the reallocation of existing staff time to academy students, and this occurs in proportion to the number of students represented within the high school's overall enrollment, a CPA may not draw resources away from non-academy students. Further information would be needed to confirm this. Employer matches, while also given largely in-kind (most often in the form of donated employee time), seem less subject to this concern, as they represent new resources gathered for academy students and the educational endeavor.

California Partnership Academies represent a broad range of career themes. Generally, these themes have been selected locally, based on student and teacher interest and available employer support/labor market information. The California Department of Education has recently encouraged high schools to focus more strongly on labor

market information to help direct students toward thriving fields. Some fields have proven especially fertile for academies, such as health sciences and medical technology; arts, media, and entertainment; and finance and business. But almost all of the 15 of the industries included in the California Department of Education's taxonomy are represented by at least a few academies.

CPA gender and ethnicity-specific data suggest good program diversity, as well as some possible concerns. The higher proportions of black and Hispanic/Latino students than the state average suggest that CPAs are seeking diversity, or at least reflecting the makeup of their high school populations. The fact that 57% of academy students are female also suggests CPAs are not designed primarily for boys—a common criticism of Career Technical Education (CTE) programs. At the same time, boys can benefit from programs illustrating the relevance of school lessons, and they often face greater risk of dropping out of high school than do girls. For this reason, CPAs might seek to increase the number of boys they enroll. CPAs may also be improved by further encouraging students to consider careers beyond the confines of gender norms—though the perpetuation of traditional gender associations with certain industries is not as extreme among CPAs as it is among some CTE programs (for example, Regional Occupational Programs in the construction and automotive fields).

If one makes the assumption that at least 50% of students in the CPAs are, in fact, at-risk according to the state criteria, or even that they represent the average risk of students in their high schools (since academy high schools have lower than average APIs), the student performance data reflect positively on the academies. Quite significantly, academy students are passing the CAHSEE their sophomore year by eight percentage points higher in English and six percentage points higher in mathematics than state averages, with even larger margins achieved by male and Hispanic/Latino, black, and Native American CPA students. On average, these groups perform below statewide achievement levels. Likewise, the rate at which seniors are graduating from academies is nine percentage points higher than statewide averages, again with even larger margins achieved by CPA males and the mentioned ethnic groups. Assuming one of the goals of an academy is to help those who need it most, these facts represent clear success.

Another facet of program impact is reflected in the proportion of students who met the A-G subject requirements for the UC and CSU systems. Fifty percent of academy graduating seniors met this requirement, compared with a statewide rate of 35%. Twenty percent of academy juniors and seniors were also taking Advanced Placement or International Baccalaureate courses. Likewise, 22% of academy juniors and seniors were taking courses for college credit (early college courses or articulated dual-credit courses for which they received both high school and college credit). In addition, 70% of academy seniors were reported to be planning on pursuing a college degree immediately after high school. While parallel statewide figures for students taking AP/IB courses are not available for comparison, these data also suggest that academies are offering rigorous academic programs.

According to CPA data, some but not all enrolled students are experiencing mentorships and internships. The CPA mentor program operates in grade 11, and 72% of juniors are reported to be involved. The CPA internship program operates primarily over the summer following the junior year, or sometimes part-time during the senior year. Academies report that 53% of their students participate in an experience related to their academy career focus, and 49% in one not closely related to the focus (some students do both). These percentages vary considerably by academy. Where the numbers approach 100% academies should be commended, but where they fall substantially short, there is room for improvement. More information to evidence the quality of the mentor and internship programs is desirable.

CPAs, like any program, vary in the quality of implementation. Narrative reports reflect this variation and surface a variety of problems. Among these are inadequate teacher buy-in for CPAs, difficulty in complying with federal and state regulations for under-performing schools (for example, No Child Left Behind and rules governing School Assistance and Intervention Terms) and grant requirements, lack of time for teachers to collaborate and plan collectively, staff turnover, challenges of operating an academy within a larger school master schedule, lack of administrative support, and difficulty in securing mentors and internships for students.

In this vein, it should be acknowledged that partnership academies are not easy programs to implement. They require several activities new to most high schools, such as establishing cross-curricular teams of teachers with a career-technical focus, showing students connections between their academic subjects and a career theme, and involving employers and higher education representatives in a variety of ways. While it is difficult to illustrate statistical correlations between student success and the degree to which the required program features are well implemented, such correlations appear to exist. Those considering starting new academies should be aware of these complexities and should expect neither easy implementation nor quick results.

This report's primary objective was to describe the California Partnership Academies, not to pass judgment on them. Still, an examination of the available data, though insufficient to allow firm conclusions, revealed a picture of California's Partnership Academies that suggests they are meeting the challenge of preparing students for both college and career. The benefits of showing academy students the relevance of their academic classes to possible future careers appear to be real. More and better data are needed to confirm this suggestion, though all data available were largely supportive of this approach.

In the consideration of additional research, it is important to reiterate the applicable caveats. The data come from self-reports. In some cases, data relate to compliance and may be biased to reflect the positive. Additionally, too little is known about student selection. Academies may attract students more motivated than their peers. The resulting enrollment may account for positive results such as higher CAHSEE passing rates in grade 10. Conversely, in some schools, academies may enroll students who are less motivated or more troubled than their peers. These enrollment factors are unknown. Thus, this analysis leads to the following recommendations:

- Gather more pre-program (9th grade) data reflecting the performance of students before they enter the academy
- Add student identification numbers to the data to allow year-to-year tracking of cohorts
- Conduct case studies, particularly of academies/high schools reporting the lowest and highest performance, to learn more about the data's accuracy, highlight possible accuracy improvements, and offer local insight on improving performance through better implementation

California Partnership Academies exist between two worlds: the academic and career-technical. As a result, they may be viewed with suspicion. Those wedded to a traditional view of high schools may dislike that CPAs are not purely academic. But unlike vocational programs often viewed as an alternative to the "college track," CPAs do not limit students' career orientation. They do not demand the choice between college or career. Instead, CPAs consider the benefit higher education is known to exert on careers and, accordingly, present a third option: college *and* career.

REFERENCES

- California Department of Education. *California High School Exit Examination (CAHSEE) Options for Students Not Passing the Exam*. Sacramento, CA. 2006.
- California Department of Education. *California Public Schools—Statewide Report: Enrollment by Gender, Grade and Ethnic Designation*. Retrieved 1/25/2006 from <http://data1.cde.ca.gov/dataquest>.
- Dayton, C., Weisberg, A., and Stern, D. *California Partnership Academies: 1987-88 Evaluation Report*. Berkeley, CA: Policy Analysis for California Education (PACE), 1989.
- Ed-Data. *State of California Education Profile—Fiscal Year: 2004-05*, Retrieved 3/7/2007 from <http://www.ed-data.k12.ca.us/welcome.asp>
- Kemple, J. and Scott-Clayton, J. *Career Academies: Impacts on Labor Market Outcomes and Educational Attainment*. MDRC, 2004.
- Maxwell, N. and Rubin, V. *High School Career Academies: A Pathway to Educational Reform in Urban School Districts?* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2000.
- Stern, D., Dayton, C., Wu, C., and Maul, A. "Learning by Doing Career Academies," *Improving School to Work Transitions*. David Neumark (ed.). New York: Russell Sage, 2006.
- University of California, Office of the President. *Agricultural Courses Approved*. Retrieved 2/5/2006 from <http://www.ucop.edu/a-gGuide/ag/whatsnew.html#151>.
- Warren, E. *Four-Year Report on the Effectiveness of California Partnership Academies, 1992-93–1995-96*. Sonoma State University, 1998.

APPENDIX A

Percentage of California Partnership Academies Responding "yes" and "no" to Various Questions
on the 2004-05 Annual Report to the California Department of Education

	Yes	No	Number missing
The district provides 100% match of state funds received, in the form of direct and in-kind support	97.9	2.1	2
Private, public, and/or nonprofit sectors provide 100% match of state funds received, in the form of direct and in-kind support	97.2	2.8	4
State funds provided by the partnership academy program are only used for the development, operation, and support of partnership academies	99.7	0.3	4
Academy classes are restricted to academy students	75.3	24.7	2
Academy classes are block scheduled in a cluster, whenever possible, to form a school within a school	89.6	10.4	2
Academy teachers work as a team in planning, teaching, and trouble-shooting program activities	98.6	1.4	2
Academy teachers have a common planning period to exchange student and educational information	68.1	38.2	2
The district (or school) has established an advisory committee consisting of individuals involved in academy operations, including school district and school administrators, lead teachers, and representatives of the private sector	96.9	3.1	3
Of CPAs enrolling 10th- and 11th-graders, during grades 10 and 11, academy students are provided instruction in at least three academic subjects that contribute to an understanding of the occupational field of the academy and one technical "laboratory" class related to the academy's occupational field	94.9	5.1	16
Of CPAs enrolling 12th-graders, academy classes (at least one academic core and one career technical) are offered during 12th grade	97.4	2.6	17
Of CPAs enrolling 11th-graders, students are provided with a mentor from the business community during the student's 11th-grade year	89.1	10.9	16
Of CPAs enrolling 11th-graders, during the summer following the 11th grade, students are provided with an internship or paid job related to the academy's occupational field or work experience to improve employment skills (may occur during the 12th-grade school year if student was unable to fulfill this during summer)	83.8	16.2	19
The academy reaches out to students who meet at-risk criteria identified in the law with at least one-half of entering 10th-grade students (15 out of 30) meeting the "at-risk" criteria	99.7	0.3	3
Teachers and counselors identify students who may be eligible to participate in the academy during the 9th-grade year	96.2	3.8	4
Students volunteer to participate in the academy	99.7	0.3	3
Parent permission is required for student participation in the academy	97.6	2.4	3
Teachers volunteer to participate in the academy	97.9	2.1	2
The academy has strong site and district administrative support, including adequate facilities and equipment	94.1	5.9	2
One teacher serves as the "lead" and has release time for academy activities	88.9	11.1	2
Sufficient time is allocated for academy planning and coordination	93.4	6.6	2
The academy has developed linkages to postsecondary education	98.3	1.7	3
The academy class sizes are reduced to sizes that are below the district average from the rest of the school	84.4	15.6	2

APPENDIX B

Summary Statistics from California Partnership Academies, 2004–05

	Mean	Sum	Min	Max
Total number of students enrolled in the academy for the 2004-05 school year (10th to 12th grade)	114	33,028	23	326
Number of 10th-grade students enrolled in the academy during the 2004-05 school year	44	12,699	0	110
Number of 11th-grade students enrolled in the academy during the 2004-05 school year	38	11,044	0	110
Number of 12th-grade students enrolled in the academy during the 2004-05 school year	32	9,285	0	110
From the academies serving 12th-graders, number of academy students who graduated	32	8,561	0	80
From the academies serving 11th-graders, number of 11th-grade academy students who participated in mentorships	29	7,992	0	101
From the academies serving 12th-graders, number of 12th-grade academy students who have participated in an internship or paid job experience related to the academy's occupational field	18	4,940	0	66
From the academies serving 12th-graders, number of 12th-grade academy students who have participated in unrelated work experience to improve employment skills	17	4,530	0	65
Number of academy students (as indicated in #1) in Advanced Placement courses or International Baccalaureate	14	4,075	0	189
Number of academy students (as indicated in #1) taking courses for college credit (community college articulation, CSU, early college high school)	16	4,522	0	173
From the academies serving 12th-graders, number of academy seniors that met A-G UC/CSU requirements and are eligible based on coursework to enter the university system	18	4,655	0	71
From the academies serving 12th-graders, number of academy graduates planning to pursue a college degree immediately after high school	24	6,493	1	74
From the academies serving 12th-graders, number of academy graduates planning to pursue advanced training/technical degree immediately after high school	5	1,227	0	65
From the academies serving 12th-graders, number of academy graduates planning to pursue employment immediately after high school	8	2,158	0	55
From the academies serving 12th-graders, number of academy graduates planning to pursue military careers immediately after high school	1	342	0	10
Cost for reduced academy class size	47,142.71	13,671,385.00	0	181,760.00
Cost for instructional assistants/clerical support allocated to the academy	7,041.73	2,042,101.00	0	53,600.00

APPENDIX B, *continued*

Summary Statistics from California Partnership Academies, 2004–05

	Mean	Sum	Min	Max
Cost for administrators/counselors working with the academy (salary per hour multiplied by number of hours)	21,437.77	6,216,953.00	0	170,664.00
Cost for staff development	4,814.77	1,396,283.00	0	72,779.00
Cost of other forms of school site or district support	28,429.93	8,244,680.00	0	400,000.00
Total match received from district	108,866.90	31,571,402.00	0	481,000.00
Estimated value of advisory committee meetings	5,895.09	1,709,577.00	0	50,000.00
Estimated value of classroom speakers	3,651.00	1,058,790.00	0	80,000.00
Estimated value of activities involving business (i.e., job shadowing)	15,916.59	4,615,810.00	0	162,000.00
Estimated value of mentors	24,301.31	7,047,381.00	0	250,000.000
Estimated value of field trip/study tour	7,065.53	2,049,005.00	0	80,000.00
Estimated value of internships	33,517.44	9,720,057.00	0	493,640.00
Estimated value of other business partner activities, such as teacher internships, community service, etc.	10,776.88	3,125,296.00	0	194,428.00
Value of other activities/business contributions not mentioned	15,290.88	4,434,355.00	0	331,267.00
Total match received from business partners	116,414.73	33,760,271.00	0	589,000.00

APPENDIX C

Number and Percentage of Students Enrolled in CPAs, by Gender, by Industry Area, and Number of Academies Focusing on Each Industry Area, 2004-05

	Females	Males	No. of CPAs
Percent of students	57.3%	42.7%	
Total number of students	18,675	13,911	2
Agriculture and Natural Resources	54.5% 1,096	45.5% 914	19
Arts, Media, and Entertainment	51.0% 2,761	49.0% 2,655	45
Building Trades and Construction	27.2% 148	72.8% 396	7
Finance and Business	54.4% 3,021	45.6% 2,535	47
Education, Child Development, and Family Services	76.9% 2,141	23.1% 643	26
Energy and Utilities	36.8% 123	63.2% 211	3
Engineering and Design	39.6% 781	60.4% 1,192	17
Health Sciences and Medical Technology	75.0% 4,845	25.0% 1,611	51
Hospitality, Tourism, and Recreation	63.1% 835	36.9% 488	13
Information Technology	45.8% 984	54.2% 1,165	18
Manufacturing and Product Development	18.3% 94	81.7% 419	6
Public Services	56.3% 1,554	43.7% 1,207	27
Transportation	38.1% 292	61.9% 475	7

APPENDIX D

Number and Percentage of Students Enrolled in CPAs, by Race/Ethnicity, by Industry Area,
and Number of Academies Focusing on Each Industry Area, 2004-05

	Native American	Asian	Pacific Islander	Filipino	Hispanic/ Latino	Black	White	Multiple/ no response	No. of CPAs
Percent of students	0.7%	9.6%	1.1%	3.9%	46.3%	11.1%	26.2%	1.1%	
Total number of students	211	3097	361	1251	14923	3585	8463	368	290
Agriculture and Natural Resources	0.9%	5.5%	1.9%	1.9%	39.7%	6.2%	43.1%	0.8%	19
Arts, Media, and Entertainment	0.4%	9.5%	1.2%	4.2%	46.6%	11.9%	25.2%	1.0%	45
Building Trades and Construction	0.0%	7.0%	0.4%	1.8%	60.3%	5.5%	23.8%	1.1%	7
Finance and Business	0.5%	10.3%	1.3%	2.6%	47.7%	11.5%	24.4%	1.7%	47
Education, Child Development, and Family Services	1.0%	8.1%	1.0%	6.1%	42.7%	12.9%	27.6%	0.6%	26
Energy and Utilities	0.3%	13.8%	4.2%	6.3%	47.0%	2.4%	25.7%	0.3%	3
Engineering and Design	0.1%	17.2%	1.2%	4.4%	32.3%	8.9%	34.9%	0.8%	17
Health Sciences and Medical Technology	1.0%	10.7%	1.1%	3.2%	46.2%	11.3%	25.3%	1.3%	51
Hospitality, Tourism, and Recreation	1.7%	7.0%	0.8%	8.8%	46.3%	8.4%	25.2%	1.7%	13
Information Technology	0.7%	8.7%	0.2%	6.2%	40.3%	15.4%	27.1%	1.3%	18
Manufacturing and Product Development	0.4%	11.9%	0.8%	8.0%	41.3%	11.1%	25.9%	0.6%	6
Public Services	0.4%	6.5%	0.9%	2.1%	60.2%	13.9%	14.9%	1.1%	27
Transportation	0.3%	8.6%	0.5%	1.6%	58.0%	5.0%	26.1%	0.0%	7



Transforming today's education for tomorrow's economy

ConnectEd's mission is to support the development of multiple pathways by which California's young people can complete high school, enroll in postsecondary education, attain a formal credential, and embark on lasting success in the world of work, civic affairs, and family life.

A Profile of the California Partnership Academies 2004-2005

ConnectEd: The California Center for College and Career

Career Academy Support Network

University of California, Berkeley

March 2007

© 2007 ConnectEd: The California Center for College and Career