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Independent Evaluation of the California High School Exit Examination: 2012 Biennial Report

D.E. (Sunny) Becker, Lauress L. Wise, Michele M. Hardoin, and Christa Watters (Editors)

Prepared for: **California Department of Education Sacramento, CA**

Prepared under: **Contract #100235**

January 20, 2012

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INDEPENDENT EVALUATION OF THE CAHSEE: 2012 BIENNIAL REPORT

Executive Summary

In 1999, the California Legislature established the requirement that, beginning with the Class of 2004, students pass a graduation examination in English-language arts (ELA) and mathematics (Senate Bill [SB]-2X, written into Chapter 9 of the California *Education Code [EC]* as sections 60850–60859). In July 2003, after the completion of the 2002–03 California High School Exit Examination (CAHSEE) testing, the State Board of Education (SBE) voted to defer the CAHSEE requirement to the Class of 2006.

The legislation establishing the CAHSEE requirement also called for an independent evaluation of the impact of this requirement and of the quality of the CAHSEE tests. The Human Resources Research Organization (HumRRO) has served as the independent evaluator of the CAHSEE since January 2000. Over the past 11 years, HumRRO has gathered, analyzed, and reported a wide range of information as part of the independent evaluation of the CAHSEE. Copies of our annual and biennial evaluation reports may be found on the California Department of Education (CDE) CAHSEE Independent Evaluation Reports Web page at: http://www.cde.ca.gov/ta/tg/hs/evaluations.asp.

As stated in the *EC* Section 60855(d), the evaluation contractor is required to issue biennial reports to the governor, the Office of the Legislative Analyst, the State Superintendent of Public Instruction, the SBE, and the chairs of the education policy committees in both houses of the Legislature by February 1 of even-numbered years. This biennial report covers analyses of test results and other evaluation activities conducted in 2010 and 2011. Evaluation activities are reported under the following topics, each of which is summarized briefly here:

- Introduction to the CAHSEE evaluation, including an historical overview of recommendations made since the outset of the evaluation in 2000 (Chapter 1).
- Review of the quality of the assessment (Chapter 2)
- Analyses of test results, including passing rates (Chapter 3)
- Analyses of student questionnaire responses (Chapter 4)
- Analysis of Assembly Bill (AB) 2040 Panel recommendations (Chapter 5)
- Examination of other indicators of student achievement and success, including overview of the Post-High School Outcomes Study (Chapter 6)

The final chapter (Chapter 7) of this biennial report includes both a summary of key findings from each of these activities and a number of general policy recommendations for further improving the CAHSEE and its use.

CAHSEE Test Quality Continues to be Good

As in prior years, HumRRO reviewed the alignment of CAHSEE test forms to the blueprints specifying the content standards to be assessed. Good alignment provides the key evidence for the validity of the interpretation of the CAHSEE test scores as an indicator of competency in the required content. Alignment results from 2011 were mostly consistent with results from 2005 and 2008 for mathematics and with results from 2005, 2008, and 2009 for ELA. The CAHSEE test forms continue to surpass, for most strands, the minimum criterion for each alignment measure, although for some strands the alignment outcomes are consistently somewhat lower than for others. The 2011 CAHSEE mathematics test form was aligned with all or most of the targeted content strands for each alignment measure. The ELA test form was aligned with the majority of targeted content strands for two alignment measures, with more than half of the targeted content strands for one measure, and for less than half the strands for the fourth measure.

HumRRO worked with the National Center on Educational Outcomes (NCEO) to conduct the accessibility review of CAHSEE test design relative to the various student populations who take the CAHSEE. The test forms demonstrated many instances of fidelity to universal design considerations, including appropriate grade level vocabulary and sentence complexity, inclusion of commonly used words, sensitivity to test-taker characteristics, and identifiable questions. Some concerns about visual presentation of items were noted.

We continued analyses of the accuracy with which the essay portion of the ELA test was scored and found acceptable accuracy similar to that observed in prior years. Two-thirds of the time, two independent scorers assigned the exact same score for each essay. Independent scores differed by more than one point about one percent of the time. We also found that the test forms used in different administrations were of comparable difficulty, as indicated by consistency in the raw-to-scale score tables resulting from test form equating. Further, we conducted a detailed replication of item analysis and equating for the March 2011 form that fully confirmed the operational results.

Test Scores Have Been Improving

Among many arguments for instituting the CAHSEE was the belief that this requirement would lead schools to improve the effectiveness of instruction in the content judged important for success after high school and lead students to work harder to master this content. Figure ES.1 shows that competency in the CAHSEE content, as indicated by scores from the initial testing of grade ten students, has improved over the past eight years. The percentage of students passing both parts on the first try has increased steadily from 64.3 percent in 2004 (Class of 2006) to 73.8 percent in 2011 (Class of 2013). Initial passing rates for Hispanic, African-American, and economically disadvantaged students showed even larger gains, indicating a modest reduction of achievement gaps at grade ten for these groups.

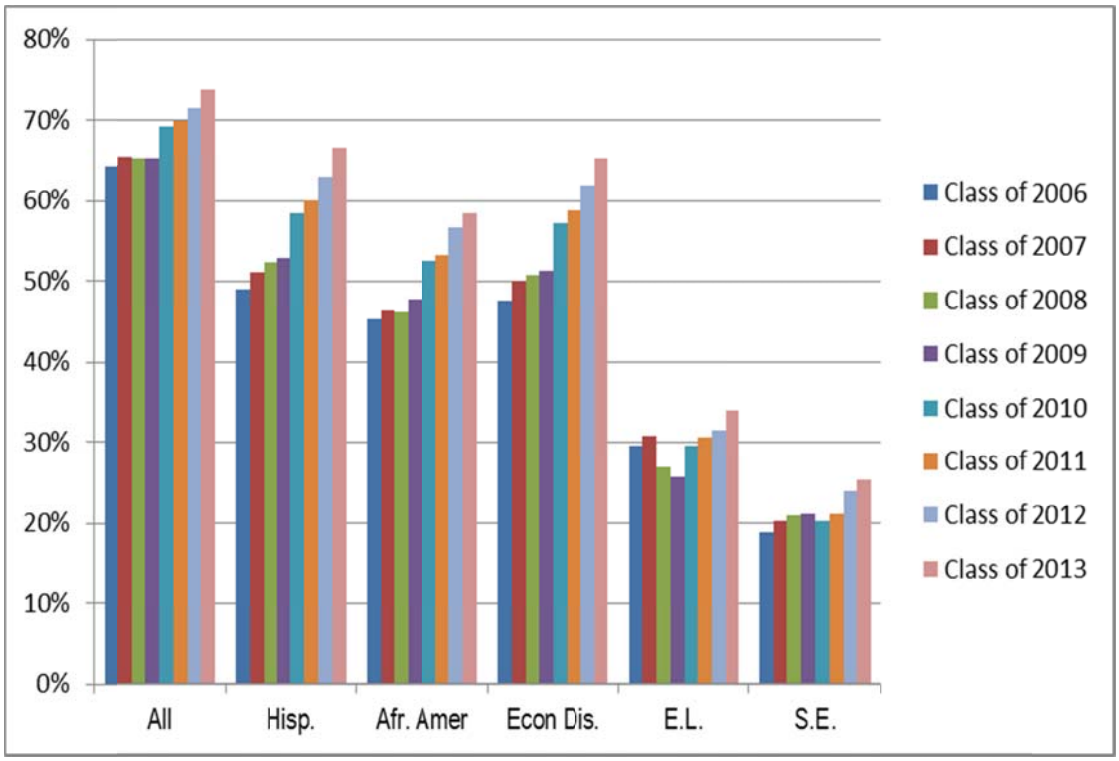


Figure ES.1. Trends in overall grade ten passing rates for selected groups. (Reproduction of Figure 3.2)

Note: Hisp. = Hispanic or Latino, Afr. Amer. = African American or Black, Econ Dis. = Economically Disadvantaged, EL = English Learner, SE = students in special education.

One particular problem addressed by the CAHSEE requirement is student participation in elective high school mathematics courses. When the CAHSEE requirement was first passed, school districts established graduation requirements and some districts did not require students to take specific mathematics courses to receive a high school diploma. A statewide requirement that students take Algebra I was added shortly thereafter. Since the CAHSEE requirement was implemented for the Class of 2006, the percentage of grade ten students who have already taken Algebra I and are taking even higher level mathematics courses has increased steadily and dramatically, from 56 percent for the Class of 2006 to 73 percent for the Class of 2013 (Table 3.25). For all groups except English learners and Native Americans, the percentage taking courses beyond Algebra I continued to increase. However, the percentage of economically disadvantaged, Hispanic, and African American students taking courses beyond Algebra I continued to lag behind that of white and Asian students. For example, the percentage of Black or African-American students taking courses beyond Algebra I in the most recent year (67 percent) was about the same as the percentage of white students taking courses beyond Algebra I five or six years ago.

Increases in the grade ten passing rates indicate improved effectiveness of instruction prior to the point at which students take the CAHSEE for the first time. There

is also evidence for improved remediation for students who do not initially pass the CAHSEE. The calculation of cumulative pass rates beyond grade ten is a difficult and controversial process, particularly given assumptions that must be made with an incomplete set of data. For example, when a student does not pass the CAHSEE in grade ten and does not retest in grade eleven, he or she may have dropped out or may have moved out of the state and continued high school elsewhere. Similarly, the test data available to HumRRO cannot identify when a student passes the CAHSEE in grade ten and then moves out of state. While the assumptions are subject to debate, HumRRO has retained consistent assumptions over time to facilitate interpretation of trends. Recognizing some difficulty in tracking students across grade levels, HumRRO estimates that cumulative passing rates for grade twelve general education students have increased from 91.2 percent for the Class of 2006 to 94.2 percent for the Class of 2011 (Table 3.9).

One new analysis HumRRO conducted looked more closely at the 2010–11 testing status of students in the Class of 2011 who had not passed one or both parts of the CAHSEE as grade eleven students, with testing status defined as either “continuing” or “not continuing” to test in grade twelve. As might be expected, the percentage of students not continuing to test was higher for those who had passed neither the ELA nor mathematics test through grade eleven (35.5%) than for those who had passed one of the two tests, with 21.5 percent of those who had passed ELA not continuing, and 18.6 percent of those who had passed mathematics not continuing (Table 3.10). When testing status was compared to the prior mean CAHSEE score earned by students on the test they had yet to pass, the prior mean was found to be only very slightly higher for students who continued to test compared to the mean for students who did not. This seems to indicate that there is a reason other than prior test performance that may be responsible for students choosing not to continue testing, hence denying themselves the opportunity to be successful on the CAHSEE.

One final indication of the impact of the CAHSEE requirement on student achievement is the significant number of students not passing the CAHSEE by the end of grade twelve who continue to work to pass in a fifth or subsequent year of high school. Roughly 25,500 general education students and 16,000 students in special education who were first-time seniors in 2010 had not met the CAHSEE requirement by May 2010 (Table 3.31). Of these, nearly 9,400 general education students and about 2,400 special education students took the CAHSEE at least once this year. Slightly over one-quarter of the general education students, but just about a tenth of the special education students who took the CAHSEE in their fifth year of high school completed the requirement. Also nearly 2,500 general education students in the Class of 2009 who had not yet passed the CAHSEE continued to try to pass it this year, and over 600 of these students did pass (Table 3.28). While there is no comparable data on fifth-year seniors prior to the CAHSEE requirement, the number now continuing to work to meet the new requirement is quite significant.

Significant Gaps in Passing Rates Persist

While performance on the CAHSEE has increased for key demographic groups, significant gaps in CAHSEE passing rates persist. As shown in Figure ES.1 above, there has been a modest reduction in gaps in initial passing rates for Hispanic or Latino, African American or Black, and economically disadvantaged students. Notwithstanding this modest reduction, their passing rates are still 7–15 percentage points below overall passing rates. Initial passing rates for ELs have increased only modestly, with about a third of these students meeting the CAHSEE requirement in grade ten. Almost by definition these students will have great difficulty passing at least the ELA portion of the CAHSEE until they achieve proficiency in English and are no longer classified as ELs. Trends for ELs are better captured by trends in scores on the California English Language Development Test (CELDT) reported elsewhere (see http://celdt.cde.ca.gov/). Finally, while there has been some improvement for students in special education, less than one quarter of these students met the CAHSEE requirement in grade ten.

Students Report Varying Perspectives on the CAHSEE

As part of the independent evaluation, students complete a brief questionnaire after each part of the CAHSEE. The questions are designed to identify different ways that students are affected by the CAHSEE requirement. Responses to several questions suggest that, overall, increases in student CAHSEE scores result from a combination of increased help and increased effort. For example, this year 43 percent of all grade ten students said that a teacher spent time in class helping them get ready to take the CAHSEE ELA test and 27 percent said a teacher spent time helping them get ready to take the CAHSEE mathematics test (Table 4.4). In addition, the percentage of this year's grade ten students saying they used the CAHSEE on-line prep increased to 12 percent for ELA and to 10 percent for mathematics (Table 4.6).

Trends in student responses indicate teachers have increasingly focused coursework on the skills tested by the CAHSEE. This year about 49 percent of all grade ten students said that all of the questions on the CAHSEE ELA test were similar to those encountered in class, up from 41 percent in 2005. Similarly, 44 percent of students said that all of the questions on the CAHSEE mathematics test were similar, compared to 35 percent in 2005 (Table 4.19). About 95 percent of all grade ten students said most or all of the topics on the ELA test were covered in their courses, up from 92 percent of grade ten students in 2005. For mathematics, the percentage saying most or all of the topics were covered in their courses rose from 89 to 91 percent over the same period (Table 4.17). The rigor of related courses has also increased. The percentage of grade ten students saying that the questions on the CAHSEE were more difficult than questions encountered in their course work dropped from 18 percent in 2005 to 12 percent in 2011 for ELA and from 22 percent in 2005 to 19 percent in 2011 for the mathematics test (Table 4.21).

In contrast to these generally positive perceptions, grade ten minority and low income students (ED), students with disabilities (SWD), and English learners (EL)

continue to report a somewhat different picture. For example, ED, SWD and EL students report at higher levels than other students that test questions and topics on the CAHSEE differ from what they have seen in class and are more difficult than questions they see on classroom tests and homework. ED, SWD, and EL students were more likely than the general population to report nervousness as preventing them from doing as well on the test as they could. Hispanic or Latino, African American, and American Indian/Native Alaskan groups also report higher levels of difficulty with the test content than the general population reported.

As to graduation expectations and post-high school plans, grade ten students continue to be optimistic. About 84 percent of all grade ten students expect to graduate from high school on time, and about 62 percent of them plan to attend a four-year university. About 10 percent of grade ten students said they expect to graduate but may need additional coursework beyond their senior year (Table 4.8). That optimism declines for those who struggle to pass the CAHSEE, with only about 20 percent of this year's grade twelve students still taking the CAHSEE reporting that they plan to attend a four-year university (Table 4.33). However, when asked what they would do if they did not pass this time, only about 4 percent of the grade twelve students who actually did not pass said they would give up trying to get a diploma (Table 4.38). The rest were willing to keep trying through additional courses, community college programs, or the GED program.

Feasibility of Alternative Means for Students with Disabilities

Since 2009, SWD were exempted from the CAHSEE requirement until the SBE made a determination about whether alternative means for SWD are feasible. The AB 2040 Panel, an advisory panel of educators and others with experience working with SWD or assessment, developed recommendations for alternative means of meeting the CAHSEE requirement for eligible SWD. HumRRO conducted an independent evaluation of those recommendations in 2010.

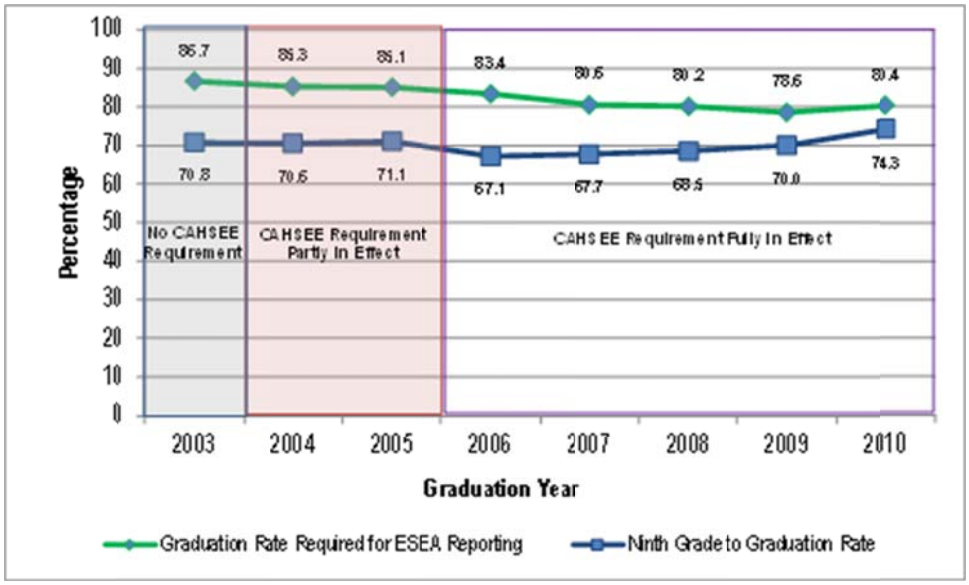
Findings from our 2010 analyses of the AB 2040 Panel recommendations, originally presented in our 2010 Annual Report and included in this report, suggested that consideration of evidence from work samples, collected over a period of weeks or months rather than just a few hours, appeared to be a feasible alternative. HumRRO found that additional work and a pilot test of the alternative means process was needed to establish the comparability and equivalency of this type of evidence to the current CAHSEE requirement, to ensure uniformity throughout the state, and to keep the generation and evaluation of work samples from becoming prohibitively expensive.

The SBE determined in July 2010 that alternative means to the CAHSEE are feasible, and in February 2011 the SBE extended the implementation regulations date for alternative means to July 2012. These actions continue the CAHSEE exemption for SWD until the implementation of alternative means occurs. In 2011 CDE further developed and pilot tested an alternative means process, and our 2010 findings remain relevant.

Graduation Rates Increased and Dropout Rates Decreased, but Gaps Persist

We examined trends in other academic indicators to see if there might be changes that could be associated with the implementation of the CAHSEE requirement, beginning with the Class of 2006. Details of the indicators analyzed and findings from these analyses are reported in Chapter 6 and summarized here.

Graduation rates dropped when the CAHSEE took effect as a graduation requirement in 2006, but the pattern has been more complicated since. The four-year adjusted cohort graduation rate complies with the U.S. Department of Education's 2008 guidance and accounts for students who transfer in and out of California schools from grade nine on. This rate is represented by the blue line with rectangular pointers in Figure ES.2 and shows a steady climb after the 2006 dip, reaching its highest level in several years in 2010. A second calculation, the grade-nine-to-graduation rate, is calculated simply as the number of graduates divided by the number of grade nine students four years prior. This calculation is depicted as the green line with diamond-shaped pointers in Figure ES.2. Although this rate had continued its decline after the 2006 dip, it rose in 2010. Gaps in graduation rates have narrowed but continue to be large, ranging from 59.0 percent for African American students to 89.4 percent for Asian students.



Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed August 24, 2010).

Figure ES.2. Trends in two graduation rates.

(Reproduction of Figure 6.5)

The 2010 increase in graduation rates was accompanied by a decline in dropout rates. Table ES.1 shows the four-year dropout rates by demographic groups. Aside from an anomalous upward spike for the Class of 2009, the dropout rates have declined

each year from 2007 to 2010, to a low of 17.7 percent for the Class of 2010. Large differences in dropout rates persist, from a low of 7.1 percent for Asian students to a high of 30.3 percent for African American students.

Table ES.1. CDE Four-Year Dropout Rates by Demographic Group (Extracted from Table 6.3)

Demographic Group	Four-Year Derived Dropout Percentage				Percentage Point Decrease in Dropout Rate
	2006–07	2007–08	2008–09	2009–10	
Race/Ethnicity					
African American (not Hispanic)	35.8%	32.9%	36.8%	30.3%	5.5
American Indian	28.1%	24.1%	30.0%	23.8%	4.3
Hispanic	26.7%	23.8%	26.7%	22.0%	4.7
Pacific Islander	24.8%	21.3%	25.4%	18.8%	6.0
White	13.3%	11.7%	14.1%	10.8%	2.5
Filipino	10.6%	8.6%	10.7%	7.3%	3.3
Asian American	9.0%	7.9%	9.6%	7.1%	1.9
Multiple/No Response	26.8%	23.3%	N/A	N/A	N/A
Other Demographic Groups					
Socioeconomically Disadvantaged	25.4%	23.2%	25.2%	18.9%	6.5
LEP†	23.5%	21.7%	26.4%	22.7%	0.8
Special Education ‡	26.6%	23.6%	27.0%	15.0%	11.6
State Totals	21.1%	18.9%	21.5%	17.7%	3.4

Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed July 7, 2011).

† Limited English Proficient for federal reporting includes English learners and fluent-English proficient students that have not yet tested at the proficient or above level for three years on the CST ELA test.

‡Special education students in the Classes of 2006, 2007, 2010 and 2011 were exempt from the CAHSEE requirement.

Students are Participating in More College Preparation

One concern with the CAHSEE requirement was that it might lead to a focus on more basic courses at the expense of advanced coursework. Among other indicators we have tracked, the percentage of students taking and passing Advanced Placement (AP) tests has been an important check of this concern. In fact, participation in AP examinations has increased both before and after the CAHSEE requirement took effect. Nearly a third of the 2010 graduating class (32 percent) took at least one AP examination and over one-fifth (21 percent) achieved a score of 3 or better on at least one AP examination.

Participation in the SAT college entrance examination continued its slight decline in the 2009–10 school year. Participation on the ACT—which had only about one-quarter of the participation among California students that the SAT program did—increased. We presented achievement on the SAT and ACT using two metrics each and

found inconsistent results for both examinations. Mean SAT scores continued a three-year increase, but the percentage of students earning a combined score of 1500 or better continued a two-year decline. Mean scores on the ACT decreased slightly but the percentage of students achieving a score of 21 or higher increased.

The CDE is Making Meaningful Improvements in Data and Reporting

The CDE recently implemented a new data collection system, the California Longitudinal Pupil Achievement Data System (CALPADS), with the potential to expand and improve available data. The CALPADS system aggregates data from a student-level database. In addition, the CDE online system, the California Basic Educational Data System (CBEDS), has been enhanced with select new reports. Four-year adjusted cohort graduation and dropout rates provide outcomes for a cohort of students (i.e., a graduating class) over time. We also note that CDE added disaggregated graduation rates for graduating cohorts in 2010 for the first time, making this important educational indicator more transparent.

Recommendations

As in past years, we offer a number of recommendations for improving the CAHSEE and its use. For this Biennial Report, we have three general recommendations for consideration by the Legislature and the governor as well as by CDE and SBE. We also offer a number of more specific suggestions targeted primarily to CDE and the CAHSEE test development contractor.

Based on our analyses over the past several years, we conclude that the CAHSEE is a reasonably accurate measure of competency in the required ELA and mathematics content and that it has had a positive, albeit moderate, influence on increasing student competencies in these subjects. Six high school classes (2006 through 2011) have been required to demonstrate competency in the targeted content by passing the CAHSEE ELA and mathematics tests, and both initial and grade twelve passing rates have increased. When the CAHSEE was first introduced, the SBE indicated an intention of reviewing and strengthening the required levels of competency as standards-based instruction improved. Our first recommendation suggests the need to review the CAHSEE content requirements in light of six years of experience in helping students to meet them.

General Recommendation 1: The SBE and the CDE should review the content and rigor of the CAHSEE requirement and propose alternatives for consideration by the Legislature and the governor.

It has been more than ten years since the content requirements for the CAHSEE were first adopted by the SBE. Over this time only one minor change was introduced, reducing slightly the scope of the mathematics test. Since then, instruction has improved, initial passing rates for grade ten students have increased, and the proportion of students passing by the end of grade twelve has increased steadily. It is reasonable to ask whether expectations for high school graduates should now be increased.

California recently adopted the Common Core State Standards (CCSS) and is participating as a governing state in the Smarter/Balanced Assessment Consortium (SBAC). By the 2014–15 school year, a new set of assessments measuring competency in the CCSS will be in place. The CCSS were developed to build student knowledge and skill toward a rigorous conception of college and career readiness by the end of high school. It is reasonable to ask whether expectations for high school graduation should be aligned to the new CCSS.

Many states have moved away from a single graduation test to a series of end-of-course tests (Zabala, Minnici, McMurrer & Briggs, 2008). In addition to demonstrating competency in core ELA and mathematics courses, students are often given options for demonstrating competencies in additional areas of study, such as science, social studies, foreign language, or even the arts. It is reasonable to ask whether competencies in subjects beyond ELA and mathematics should be required and whether students should be allowed to demonstrate these competencies whenever they complete the related course. It may also be instructive to review the experience of other states in introducing high school graduation tests and to review their plans for further changes as most of them transition to one of the common assessments.

As part of the current CAHSEE evaluation contract, HumRRO is engaged in an effort to relate scores on each of the CAHSEE tests to post-high school outcomes, including college attendance and graduation. Initial results will be reported in 2012. In the spirit of assessing college and career readiness, this information would be helpful to a new panel appointed by SBE and CDE to consider recommendations for revision to the CAHSEE requirement.

The CAHSEE cannot be changed overnight. A High School Exit Examination committee met for over a year to develop initial recommendations for CAHSEE content. If changes in graduation requirements are identified, it is important to provide sufficient lead time in implementing these changes to allow adjustment of both the high school and earlier curriculum to make sure students are prepared to meet any new requirements. As required by AB 250 (Curriculum Support and Reform Act of 2011), instruction will be revised at all grade levels over the next few years to align with new content standards based on the CCSS. Now would be an appropriate time to also introduce curricular changes corresponding to any new CAHSEE requirements. Sufficient lead time is also needed for revisions to the CAHSEE or other assessments to be sure that test quality is not compromised.

Our second recommendation concerns the desirability of preventive efforts to ensure that more students are successful in their first attempt to pass the CAHSEE. Significant effort and funding has been put into helping students who do not initially pass the CAHSEE. The idea of the second recommendation is that it may be more cost-effective and certainly better for the students to provide help before grade ten. Our second recommendation is:

General Recommendation 2: Interventions should be targeted at earlier grades, using test scores to identify students who have fallen behind their classmates and are at risk of failing to meet the CAHSEE requirement.

In our 2009 evaluation report (Becker and Watters, 2009), we showed that virtually all students who score at or above the mean on the grade seven ELA and mathematics CSTs were able to pass the CAHSEE on their first attempt. At the same time, students who scored well below the mean in grade seven were at significant risk of not passing the CAHSEE in grade ten. Thus, it is clearly possible to identify students who need additional help in preparing to pass the CAHSEE while they are in middle school and reasonable to ask whether middle school interventions could significantly reduce the percentage of students who struggle to pass the CAHSEE. Another key finding was that a high proportion of the students who score low on seventh grade assessments will need additional help to meet the CAHSEE requirement by the end of grade twelve (Becker, Wise & Watters, 2010a).

Over the next several years, the assessments used for accountability at all grades will be realigned to the CCSS. It will be important to develop linkages between middle school assessment results, college and career readiness at the end of high school, and the knowledge and skill required by the CAHSEE or its successor.

Beyond simply identifying students who may need more help during middle school, it is important to study the effectiveness of various ways of providing that help. With recent improvements to longitudinal student data bases, it should be possible to identify middle schools that are particularly effective in helping struggling students catch up with their classmates. Studying the programs used in these exemplary schools should provide information that can be used to improve effectiveness in other schools.

Our final general recommendation concerns the need to clarify expectations for SWD. Policy concerning graduation requirements for SWD has been inconsistent, with two years of exemption, two years of being required to pass the CAHSEE, and now another three years of exemption for these students. This leads us to suggest:

General Recommendation 3: California should set and maintain consistent requirements for students with disabilities with respect to the CAHSEE.

The CAHSEE requirement was appropriately deferred for two years for all students, from 2004 to 2006, to allow time for instruction at earlier grades to prepare students to take and pass Algebra I and also to prepare students to meet high school ELA expectations. The requirement was deferred two additional years for SWD, from 2006 to 2008, while a law suit on behalf of these students was resolved. This second delay provided additional time to adjust individual education programs (IEPs) at earlier grades to prepare students for the high school requirements. For the high school classes of 2008 and 2009, SWD had to meet the CAHSEE requirement to receive a

diploma, although waivers were granted if students needed a testing modification to receive a passing score. During the period from 2004 through 2009 initial passing rates for SWD increased, reflecting more rigorous and effective instruction for SWD.

Under current law, the CAHSEE requirement has once again been deferred for SWD, leaving teachers, parents, and the students themselves uncertain as to what is expected of them. Issues leading to the current exemption need to be resolved so that efforts to improve instruction for SWD will resume in full. Findings from CDE's study of the second tier (evidence collection and scoring) of an alternative means process for eligible SWD indicate that additional refinement is needed before the procedures can be fully implemented (ETS CAHSEE Alternative Means Pilot Study, 2011). Until such time as an alternative means is in place, expectations for SWD are still unresolved, and this uncertainty impacts SWD educational outcomes and future success. Resolution of these issues will require agreement on appropriate alternative ways that SWD can demonstrate required knowledge and skills, and might include identifying appropriate goals for students who are not able to participate in regular academic instruction.

Several more specific recommendations for improving the CAHSEE were noted during our review of CAHSEE processes. The first aims to improve the provision of appropriate testing variations for SWD.

Specific Recommendation 1: *California should ensure that LEAs and school site test administration personnel are trained to deliver appropriate accommodations and modifications to students with disabilities.*

Our limited observations of test administration identified weaknesses in the process for identifying and delivering appropriate testing accommodations and modifications to SWD, for example with respect to the "test questions read aloud" sessions. CDE should review the training materials provided through ETS to LEAs and school site personnel and ensure the IEP decision-making team is engaged in the test preparation process for SWD—the subgroup that has demonstrated the greatest difficulty meeting the CAHSEE requirement. CDE might also ask its test contractor to suggest approaches to ongoing monitoring of the effectiveness of test administration training at all levels (i.e., district coordinator, test site coordinator, test examiner, and test proctor).

Our next specific recommendation concerns the statewide data systems that support analysis and interpretation of CAHSEE results.

Specific Recommendation 2: *California should ensure that statewide student data systems are as accurate and up-to-date as possible.*

CDE is responsible for an extremely large and geographically dispersed educational system. With such size and diversity come many challenges, and an effective data system is crucial to understanding, monitoring, and improving the effectiveness of our educational systems. The California Longitudinal Pupil Achievement Data System (CALPADS) includes a comprehensive design for the collection and integration of student data. CALPADS is a very significant step in

providing data for research and policy analyses that can lead to significant improvements in curriculum and instruction. Budget limitations and other constraints have slowed the full implementation of this system, including key quality assurance components. As in prior years, we found, for example, the exit information collected on high school students was not consistent with information from the CAHSEE test records. We were thus not able to identify unambiguously students who left high school having completed all requirements except the CAHSEE. Further work on training and monitoring those responsible for providing data to CALPADS, as well as additional consistency checks to detect and correct submission errors, might be useful at this time.

The following two specific recommendations address the outcomes of our alignment reviews of CAHSEE test forms with respect to content and accessibility.

Specific Recommendation 3: *California should work with its test administration vendor to achieve improved content alignment of items assessing the content standards in the strands of Mathematical Reasoning and Reading and Comprehension.*

While the overall content alignment of the CAHSEE in both mathematics and ELA is quite positive, we believe alignment for these two strands can be strengthened. For both the Mathematical Reasoning and Reading and Comprehension strands, the issue is that test items may be assessing students at a lower level of rigor than called for by the content standards. It may be that, when California responds to our first general recommendation, the content standards for these strands will be changed or clarified, but until that time greater attention is needed to verify the content of items targeted to these areas.

Specific Recommendation 4: *California should examine the visual presentation of the CAHSEE to achieve closer alignment with the principles of universal design for assessment.*

Small changes in the visual presentation of items, which should not impact the validity of the items' ability to measure certain California state standards, are advised so as to improve the accessibility of the test to SWD. There may be cost implications to making such changes, so further study of particular populations' visual presentation needs may be warranted. As new versions of tests emerge, CDE should direct test designers to attend to visual and sensitivity aspects so as to help create assessments that closely align with universal design principles.

Specific Recommendation 5: *California education leaders and educators should encourage students who do not pass in four years to continue to work to achieve competency in the content assessed by the CAHSEE, and work to improve effectiveness of fifth-year programs.*

Research shows that attaining a high school diploma is associated with positive life outcomes including higher income and subsequent achievements

such as completing military contracts. We have seen evidence that some struggling students persist in seeking a high school diploma after their graduating class. We recommend that California educators communicate the importance of a high school diploma to students and educate them on the opportunities to develop competency in the content assessed by the CAHSEE after the regular high school years. At the same time, the effectiveness of fifth-year programs should be monitored and improved upon. A study of effective schools might yield best practices that could be shared with the wider education community.

Another recommendation concerns identification and dissemination of programs that are effective in helping students meet the standard of academic achievement required to pass the CAHSEE, particularly students in groups that currently have the most difficulty in meeting the CAHSEE requirement.

Specific Recommendation 6: *Study schools that are doing a better job in helping all and particular groups of students to meet the CAHSEE requirement. Identify approaches and programs that might be effectively adopted in other schools.*

We see variations across schools and districts in CAHSEE pass rates and in gaps in passing rates for racial and ethnic minority students, economically disadvantaged students, EL, and SWD. A careful study of higher performing schools could identify programs that are effective in helping students who have fallen behind in academic achievement to catch up and meet the CAHSEE requirement by the end of high school. Programs that are effective for particular groups, such as helping ELs become more proficient speakers, readers and writers or providing students with specific disabilities better access to general education instruction are also needed to reduce gaps in passing rates for these groups. Detailed study is needed to determine what makes these programs successful and how they might be adopted in other districts and schools.

We also note an increasing concern that the state's dire economic situation may make continued improvement in CAHSEE results difficult and might even make it difficult to sustain improvements already achieved. This leads to our next recommendation.

Specific Recommendation 7: *California should study the impact of fiscal constraints on systems to help students master the skills required by the CAHSEE.*

California, like many states, has been struggling financially, resulting in cutbacks, furloughs, and an eye toward cost savings. The effects of reductions in and reallocation of funding may have implications for student success in the future, including loss of effective teachers and increases in class size. In particular, reductions in remediation offerings could reverse progress made in recent years. We recommend that programmatic changes resulting from fiscal constraints be carefully monitored, evaluated, and adjustments made if necessary.

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INDEPENDENT EVALUATION OF THE CAHSEE: 2012 BIENNIAL REPORT

Chapter 1: Introduction

D. E. (Sunny) Becker and Lauress L. Wise

Eighteen states had exit examinations in place in 2002, and another six states, including California, were phasing in exit examinations but not yet withholding diplomas (Center on Education Policy, 2002). By 2010, 28 states were withholding diplomas from students based on their exit examination performance. "Public schools in these states enroll 83 percent of the nation's students of color and more than three-quarters of the country's low-income pupils" (Center on Education Policy, 2010).

History of California High School Exit Examination

In 1999, the California Legislature enacted the requirement that, beginning with the Class of 2004, students pass a graduation examination in English-language arts (ELA) and mathematics (Senate Bill (SB)-2X, written into the California *Education Code (EC)* as Chapter 9, sections 60850–60859). This requirement was modified in 2002 through the passage of Assembly Bill (AB) 1609. The revised legislation gave the State Board of Education (SBE) authority to postpone the California High School Exit Examination (CAHSEE) requirement, based in part on the results of a study that examined the extent to which both test development and standards-based instruction met standards for this type of examination (Wise et al., 2003a). In July 2003, after completion of the 2002–03 CAHSEE testing, the SBE voted to defer the CAHSEE requirement to the Class of 2006. It has been in effect ever since.

The requirement for students with disabilities (SWD), however, has varied over time. In 2002, a lawsuit (Kidd et al. vs. O'Connell et al., formerly referred to as the Chapman case) was filed on behalf of SWD. While the suit was pending, the parties agreed that SWD in the classes of 2006 and 2007 could receive a diploma even if they did not pass the CAHSEE, as long as they met all other local and state requirements. Many of these students continued to take the CAHSEE despite the dispensation. A final settlement was reached in March 2008 reinstating the requirement that SWD pass the CAHSEE and requiring the California Department of Education (CDE) to conduct a study of SWD who are unable to pass. On September 30, 2008 the Legislature enacted AB 2040, establishing *EC* sections 60852.1 and 60852.2, which require an advisory panel be established to develop findings and recommendations for alternative means (from the CAHSEE) for eligible SWD to demonstrate that they meet the same standard of academic achievement required to pass the CAHSEE. In 2009 the AB 2040 Panel, an advisory panel of educators and others with experience in assessment or in working with SWD, developed recommendations that addressed the components of the AB 2040 statute requirements, including the definition of eligible students, specific options, scoring, uniformity, cost, and level of administration.

Independent Evaluation of the CAHSEE

The original legislation mandating the requirements for the high school exit examination specified an independent evaluation of the CAHSEE. The CDE awarded the evaluation contract to the Human Resources Research Organization (HumRRO). The original contract period operated from 1999 through 2004; a second contract was awarded to HumRRO to continue the evaluation through 2007, a third contract continued the evaluation through 2010; and a fourth contract continues the evaluation through October 2014.

HumRRO's efforts have focused on analyses of data from tryouts of test questions and from the annual administrations of the CAHSEE. Reports have included analyses of trends in pupil performance, retention, graduation, dropout, and college attendance rates, although no direct causal relationship between the CAHSEE and these various outcomes is assumed. The legislation also specified that evaluation reporting would include recommendations to improve the quality, fairness, validity, and reliability of the examination. The legislation required an initial evaluation report in June 2000 and biennial reports to the governor, the Legislature, the SBE, and the CDE in February of even-numbered years.

HumRRO has now been analyzing and reporting on the CAHSEE evaluations for more than ten years. Over this time, our staff's professional judgment as evaluators, reinforced by their conversations with stakeholders and policy-makers, has helped formulate the questions we address and the analyses we perform for these reports.

In addition to the legislatively mandated biennial evaluation reports, the contracts for the evaluation require an annual report of evaluation activities. In fall of 2011, HumRRO issued a report that meets the contract requirement for a report of activities and findings during the 2010–11 evaluation (Becker, Wise, Hardoin, and Watters, 2011). That report adds to results and recommendations included in prior evaluation reports (Wise, Hoffman, & Harris, 2000; Wise, Harris, Sipes, Hoffman, & Ford, 2000a; Wise, Sipes, George, Ford, & Harris, 2001; Wise et al., 2002b; Wise et al., 2003; Wise et al., 2004a; Wise et al., 2004b; Wise et al., 2005; Wise et al., 2006; Becker & Watters, 2007; Becker, Wise, & Watters, 2008; Becker, Wise, & Watters, 2009, Volumes 1 and 2; Becker, Wise, & Watters, 2010a; Becker, Wise, and Watters, 2010b). All of these reports are available on the CDE Web site at http://www.cde.ca.gov/ta/tg/hs/evaluations.asp.

Other states are facing similar challenges and issues to those encountered by California. The Center for Education Policy (CEP) has been reporting on high school graduation tests across the country since 2002. Recent reports have focused on trends in gaps in pass rates (Zabala and Minnici, 2008), transitions toward end-of-course examinations (Zabala, Minnici, McMurrer, & Briggs, 2008), issues for English learners (Minnici, Zabala, & Bartley, 2007), issues for SWD (Zabala, 2008), alternate pathways (Zhang, 2009), conflicts between state policy and school practice (Zhang, 2009), and

graduation requirements in states that do not require students to pass an exit examination in order to receive a diploma (Dietz, 2010).

Research Questions

As part of this biennial report, we refer back to the 2011 annual evaluation, which was guided by research questions drawn from three sources. The first was the legislation requiring the evaluation. Three questions are specified in *EC* Section 60855(a):

1. **How have students performed on the examination?** "Analysis of pupil performance, broken down by grade level, gender, race or ethnicity, and subject matter of the examination, including any trends that become apparent over time" (Section 60855 (a)(1)).

2. **What effect has the CAHSEE requirement had on high school completion and college attendance?** "Analysis of the exit examination's effects, if any, on college attendance, pupil retention, graduation, and dropout rates, including analysis of these effects on the population subgroups" (Section 60855(a)(2)).

3. **Does the CAHSEE requirement have differential effects on different demographic groups?** "Analysis of whether the exit examination is likely to have, or has, differential effects, whether beneficial or detrimental, on population subgroups" (Section 60855(a)(3)).

Besides summarizing the past academic year's evaluations, we attempt here to meet the specific requirements for biennial reports, which suggest the following three general questions for analysis in addition to those specified in the *EC*:

4. **Is the examination a valid, fair, and efficient assessment of competency in the knowledge and skills specified in the test blueprints?** This question underlies all of the activities specified under Request for Proposal (RFP) Section 3.3 (pp. 13-14) involving review of test development, administration, scoring, and equating.

5. **What programs or strategies are schools using to help students prepare for and pass the CAHSEE, from middle school through grade twelve and beyond, and how effective are the programs or strategies?** This question is implied by requirements 2, 3, and 4 for the biennial reports specified in RFP Section 3.3.C (p. 16).

6. **How effective are test variations for students with disabilities and for English learners?** This question is implied by requirements 5 and 6 for the biennial reports specified in RFP Section 3.3.C (pp. 16-17).

The source for the final research question was HumRRO staff's professional judgment as evaluators, founded on current issues in educational assessment as well as input from stakeholders and policy-makers during the more than ten years of the CAHSEE evaluation:

7. **Is the CAHSEE requirement sufficiently rigorous to ensure that students receiving a diploma are ready for college or careers?** This question is at the heart of the recent national debate over common standards for K–12 student achievement and California's decision to adopt the Common Core State Standards (CCSS).

Summary of Findings from Prior Evaluation Activities

To provide a context for the current study, in this section we summarize key findings that have emerged over more than ten years of evaluation activities:

- **CAHSEE test quality is good.** In prior years, HumRRO reviewed the alignment of CAHSEE test forms to the blueprints specifying the content standards to be assessed. Good alignment provides the key evidence for the validity of the interpretation of the CAHSEE test scores as an indicator of competency in the required content. Results indicate that CAHSEE test forms assess the target content standards fairly and fully and, with minor exceptions, measure the depth of knowledge specified in the content standards. This year, we continued analyses of the accuracy with which the essay portion of the ELA test was scored and found acceptable accuracy similar to that observed in prior years. Two-thirds of the time, two independent scorers assigned the exact same score for each essay. Independent scores differed by more than one point less than one percent of the time. We also found that the test forms used in different administrations were of comparable difficulty as indicated by consistency in the raw-to-scale score tables resulting from test form equating.

- **Test scores have been improving.** Among many arguments for instituting the CAHSEE is the belief that this requirement would lead schools to improve the effectiveness of instruction in the content judged important for success after high school and lead students to work harder to achieve competency in this content. The percentage of students passing both parts on the first try increased steadily from 64.3 percent in 2004 to 71.5 percent in 2010. In addition, since the CAHSEE requirement was implemented for the Class of 2006, the percentage of grade ten students who have already taken Algebra I and are taking even higher level mathematics courses has increased steadily and dramatically, from 56 percent for the Class of 2006 to 72 percent for the Class of 2012. Increases in the grade ten passing rates indicate improved effectiveness of instruction prior to the point at which students take the CAHSEE for the first time. There is also evidence for improved remediation for students who do not initially pass the CAHSEE. Recognizing some difficulty in tracking students across grade levels, HumRRO estimates that cumulative passing rates for grade twelve general

education students have increased from 91.2 percent for the Class of 2006 to 94.4 percent for the Class of 2010. One final indication of the impact of the CAHSEE requirement on student achievement is the significant number of students not passing the CAHSEE by the end of grade twelve who continue to work to pass in a fifth or subsequent year of high school.

- **Significant gaps in passing rates persist.** While performance on the CAHSEE has increased for key demographic groups, significant gaps in CAHSEE passing rates persist. Initial passing rates for minority and low income students have increased but are still 10–15 percentage points below overall passing rates. Initial passing rates for English learners (ELs) have been relatively flat, with less than a third of these students meeting the CAHSEE requirement in grade ten. Finally, while there has been some improvement for students in special education, less than one quarter of these students met the CAHSEE requirement in grade ten.

- **Students report getting more help and working harder.** As part of the independent evaluation, students complete a brief questionnaire after each part of the CAHSEE. The questions are designed to identify different ways students are affected by the CAHSEE requirement. Responses to several questions suggest that increases in student CAHSEE scores result from a combination of increased help and increased effort. Responses also indicate that teachers have increasingly focused coursework on the skills tested by the CAHSEE. Responses to some of the questions suggest that students are working harder to learn required material because of the CAHSEE requirement.

- **More students are continuing to grade twelve, but somewhat fewer graduate on time.** We examined trends in other academic indicators to see if there might be changes that could be associated with the implementation of the CAHSEE requirement, beginning with the Class of 2006. While more students are continuing to stay in school, the percentage graduating on time has dropped since the CAHSEE requirement took effect for the Class of 2006. Analysis indicated a 4 percent decline in four-year graduation rates starting with the Class of 2006. While this rate has since recovered somewhat, it is still significantly below the pre-2006 rate.

- **Many students who do not meet the CAHSEE requirement by the end of grade twelve continue to try to pass the CAHSEE in a fifth year of high school or in an adult education course.** While the percentage of students graduating on time declined by one to four percentage points after the CAHSEE requirement was put in place, more than that number continue to try to meet the CAHSEE requirement in a fifth and, in some cases, sixth and seventh year of school.

- **Students are taking and passing advanced courses.** One concern with the CAHSEE requirement was that it might lead to a focus on more basic courses at the expense of advanced coursework. Among other indicators we have tracked, the percentage of students taking and passing Advanced Placement (AP) tests

has been an important check of this concern. In fact, participation in AP courses has increased both before and after the CAHSEE requirement took effect.

Summary of Earlier Evaluation Report Recommendations

In preparing this year's Biennial Report of the Independent Evaluation of the CAHSEE, we reviewed recommendations included in prior reports. Appendix A lists recommendations from prior biennial and annual reports beginning with the first evaluation report in June 2000. To show continuing themes, we sorted the recommendations into the general categories and topics in Table 1.1.

Table 1.1 Recommendation Categories and Topics from HumRRO's Independent Evaluation of the CAHSEE, 2000–2011

General Category	Specific Recommendation Topic
Recommendations about the CAHSEE	Initial Implementation
	Clarification of the CAHSEE Requirements
	Setting Passing Levels
	Revising Test Content Specifications
	Improving Test Quality
	Test Administration
Recommendations to Help Students Pass the CAHSEE	Early Identification of At-Risk Students
	Improving Preparation for the CAHSEE
	Improving Remedial Programs for Students Who Do Not Pass
	Alternative Means of Meeting the CAHSEE Requirement
Recommendations for Students with Disabilities and English Learners	Testing Accommodations
	Considerations for Students with Disabilities
	Considerations for English Learners
Other Recommendations	Student Data Systems
	Technical Oversight

Many of our prior recommendations have been addressed by the CDE, and in some cases, by the SBE or the Legislature, and are not relevant to the CAHSEE as it is today. Many other recommendations, however, reflect continuing themes that continue to warrant attention and thought. Before proceeding to describe evaluation activities and findings from the period covered by this current report, we briefly summarize themes from the recommendations included in our prior reports.

Recommendations about the CAHSEE

Early recommendations concerning the sequencing of instructional improvements and the implementation of the CAHSEE requirement were largely resolved with the deferral of implementation from the Class of 2004 to the Class of 2006. It should be noted, however, that similar issues will need to be confronted as

California moves to implement the Common Core State Standards (adopted by the SBE on August 2, 2010) with any corresponding change in the content requirements for the CAHSEE. There will need to be a period of instruction in the new standards before they are added to the CAHSEE as knowledge and skills required for graduation. Similarly, early recommendations to clarify the CAHSEE requirements have similarly been resolved through CDE regulations and informational material supplied by the CDE and the CAHSEE contractor.

Two kinds of recommendations about the CAHSEE are ongoing. First, some very specific recommendations for improving the alignment of test forms to the content standards, for simplifying access to the test for all students, and for improving administration procedures continue to flow from continuing evaluation observations and analyses. Second, we have increasingly recommended a thorough policy review of the content and rigor of the CAHSEE now that it has been administered for over ten years with only very minor revision to the content specifications.

Recommendations to Help Students Pass the CAHSEE

CAHSEE passing rates have improved each year, but significant gaps still persist. A second category of recommendations concerns continuing to help students to meet the CAHSEE requirement. One recommendation is to identify effective programs to help students prepare for taking the CAHSEE in grade ten, including programs to identify, as early as middle school, at-risk students who may need additional help. Another recommendation is to study the effectiveness of remedial programs to help students who do not pass the CAHSEE on their first try in grade ten and of programs that encourage and help students to continue beyond four years of high school as needed to develop the requisite knowledge and skills.

More recently, we have reviewed efforts to identify alternative ways students might demonstrate mastery of the required knowledge and skill. While the focus of AB 2040 has been on SWD, other factors, such as test anxiety or other non-cognitive barriers to being able to demonstrate achievement through tests, may apply to all students.

Recommendations for Students with Disabilities and English Learners

CDE and the test development contractors have worked to implement appropriate testing accommodations, first for SWD and, more recently, for EL as well. Early recommendations concerned the need for consistency across schools in the availability and implementation of these accommodations. Subsequent findings that participation in the regular curriculum was closely related to the likelihood of passing the CAHSEE led to recommendations concerning the need to provide SWD with the highest level of instruction appropriate to them.

For English learners, we recommended studies to find out why many EL students persist in this status for long periods of time and to identify effective programs for helping students transition out of EL status. We also recommended developing

instructional plans, similar to IEPs, for students who come to California schools at higher grade levels, after initial instruction in their native language.

Other Recommendations

At the outset of our evaluation a decade ago, we were concerned that development of the CAHSEE was proceeding rapidly, with little independent technical oversight. CDE's Technical Advisory Group now routinely provides such independent review of technical issues. A more persistent concern has been the need for longitudinal data sets with information such as who has passed the CAHSEE and other achievement and outcome information for California students, including reasons for exiting high school (e.g., graduation, dropout, GED, transfer). In recent years, the CALPADS system has begun to provide the required information, but considerably more work needs to be done to provide a system usable by local educational agencies (LEAs) and the CDE for analysis of factors that promote or impede student success in meeting the CAHSEE requirement.

Organization and Contents of 2012 Biennial CAHSEE Evaluation Report

The 2012 Biennial CAHSEE Evaluation Report covers activities performed in the independent evaluation from September 1, 2009 through June 30, 2011. It includes results from CAHSEE administrations during the 2009–10 and 2010–11 school years as well as findings from HumRRO's 2010 special study on alternative means and our 2011 review of CAHSEE test items for content alignment and accessibility.

Chapter 2 presents HumRRO's spring 2011 review of CAHSEE test items for content alignment and accessibility. The alignment review investigated the match between the CAHSEE test items and the ELA and mathematics content standards measured by the CAHSEE, while the accessibility review involved an evaluation of universal test design relative to various student populations. This chapter also reports findings from HumRRO's in-person observations of CAHSEE test item development, test administration, and scoring processes with respect to the standardization, quality, efficiency, and security of these program areas. Also included in this chapter are findings from our analyses of scoring consistency results for the essays and the results of our independent replication of score equating for the March 2011 administration.

Chapter 3 analyzes results from the 2010–11 CAHSEE administrations, reporting results for grade twelve students in the Class of 2011 and comparing their passing rates to those of grade twelve students in the classes of 2006, 2007, 2008, 2009, and 2010. In addition, we compare passing rates for grade ten students in the Class of 2013 to passing rates for grade ten students in previous classes, and passing rates and score gains for grade eleven students in the Class of 2012 who did not meet the CAHSEE requirements during their sophomore year. This chapter also analyzes the rates of persistence and progress of students from the classes of 2006 through 2010 who did not meet the CAHSEE requirement in time to graduate with their classes.

Chapter 4 investigates the challenges and impacts of the CAHSEE program from the student perspective. Brief questionnaires were administered to students upon completion of each CAHSEE test. Analyses include comparisons of the 2011 test taker responses to response patterns in previous years, as well as comparisons among distinct groups of students (e.g., students who passed the CAHSEE versus those who did not).

Chapter 5 describes the procedures and findings from a special one-time study. In 2010 the CDE requested that HumRRO, as part of its independent evaluation of the CAHSEE, conduct an analysis of the AB 2040 Panel's recommended two-tier alternative means process of meeting the CAHSEE requirement for eligible SWD. The goal of the analysis was to collect information about (a) the feasibility of the proposed alternative means and (b) how the level of academic achievement demonstrated by those alternative means compares to the level of academic achievement in the content standards required for passage of the CAHSEE.

Chapter 6 presents trends in educational achievement and perseverance through analyses of data on year-by-year high school enrollment trends, graduation and dropout rates, college preparation, and Advanced Placement (AP) test achievement. While these do not directly reflect effects of the CAHSEE, trends over time can be informative in assessing shifts in student achievement. These analyses draw on publicly available data from external sources such as the CDE's DataQuest, which provides access to the California Basic Educational Data System (CBEDS). This chapter also describes the early stages of a study currently underway to evaluate the relationship between student performance on the CAHSEE and subsequent post-high school outcomes such as college, military, and careers.

Finally, Chapter 7 presents our findings and recommendations based on the data analyses and results presented in previous chapters.

Chapter 2: Review of CAHSEE Test Quality

Leslie R. Taylor, Christopher Johnstone[1], Lauress Wise, Michele M. Hardoin, Susan Fry

Introduction

HumRRO conducted a variety of evaluation activities in 2010 and 2011 with regard to the quality of the California High School Exit Examination (CAHSEE). The primary task was an evaluation of 2011 CAHSEE test forms through a review of content alignment and accessibility. Our efforts to monitor CAHSEE quality also included an independent review of processes for CAHSEE test development, test administration, and training for essay scoring. In addition to our analyses of essay test score accuracy, we also performed test form equating in 2011. This chapter presents the outcomes of these test quality activities.

CDE contracted with HumRRO to conduct alignment and accessibility reviews of CAHSEE mathematics and English-language arts (ELA) items based on forms administered during the 2010–11 school year. These tasks were conducted in a single workshop with panels of reviewers for mathematics and for ELA. HumRRO led the alignment review to investigate the match between CAHSEE test items and the subset of the California content standards to which the CAHSEE assessment is written, and the National Center on Educational Outcomes (NCEO) facilitated an accessibility review to evaluate universal test design relative to the various student populations who take the CAHSEE. We will summarize in turn the method and outcomes of the alignment and universal design evaluations.

Alignment Review

Background on Alignment Review

Reviews of alignment and accessibility contribute to accurate estimations of test validity. An alignment study evaluates the extent of content overlap between the test items and the content standards to determine whether the material on which students are assessed is the same as what they are expected to know. Content alignment results should demonstrate that the assessments (a) represent the full range of the content standards and (b) measure student knowledge in the same manner and at the same level of complexity as specified in the content standards. In addition, assessments must be accessible to the widest possible range of students for whom the test was designed. A review of test accessibility falls under the domain of universal test design with the purpose of determining that test items are appropriate in format, scope, and content (e.g., unbiased language) for all student groups, such as English learners and SWD.

CAHSEE items undergo substantial review during the test development phase as part of standard procedures imposed by the test vendor. However, state and federal

[1] National Center for Educational Outcomes (NCEO)

requirements call for *independent* evidence of the validity of the assessments used to calculate Adequate Yearly Progress (AYP). Furthermore, all states receiving Title I funds must present evidence from an external evaluator that they have established a fair and consistent assessment system based on rigorous standards, sufficient alignment between standards and assessments, and high-quality educational results.

HumRRO previously conducted item reviews of the CAHSEE for the CDE in 2002, 2005, 2008, and 2009. In 2002, the development of substantial new CAHSEE test items in ELA and mathematics led to the need for the first alignment review. In 2004, the CAHSEE test specifications underwent modest revision, and the examination was restarted for the Class of 2006, prompting additional alignment evaluations. HumRRO began applying the alignment method of Norman Webb (1997; 1999; 2005) beginning in 2005. In addition, we added an evaluation of universal design under the guidance and assistance of the NCEO in 2005 and in 2008. We applied similar methods in the 2009 review, although the focus was limited to ELA and the universal design review was reduced in scope.

Alignment Method

Reviewers. HumRRO and NCEO staff served as expert reviewers to establish a fully independent evaluation, with four reviewers for mathematics and five for ELA. Initially, mathematics included a fifth reviewer; however, this reviewer (a HumRRO staff member directing the review) was not able to complete all item ratings because she was attending to workshop issues. All reviewers included in the alignment process were highly familiar with large-scale assessment and standards, including the CAHSEE. In addition, the reviewers had extensive content knowledge relevant to the portion of the CAHSEE they evaluated.

Content Alignment Criteria. The Webb Alignment method (2005) includes four major dimensions to evaluate content alignment. These alignment dimensions correspond with statistical procedures used to assess how well individual portions of the assessments match state standards documents. Each dimension provides different information about the degree of alignment between the assessment and content standards; hence, all four of Webb's dimensions must be considered for a complete picture of alignment. The four alignment criteria are as follows:

1. *Categorical concurrence* is a broad measure of content match between the test and state standards indicating the number of items assessing each general content strand. Webb suggests that the mean number of items per strand should be at least six for acceptable content coverage.

2. *Depth-of-knowledge* (DOK) measures the type of cognitive processing required by items compared to the processing expected by the content standards. The purpose of using DOK as a measure of alignment is to determine whether a test item (or performance task) and its corresponding standard are both written at the same level of cognitive complexity. Webb

recommends that at least 50 percent of the test items in the assessment should match the DOK expected in the content standards.

3. *Range-of-knowledge correspondence* examines the breadth of content assessed compared to the state standards. The range indicates the number of standards assessed by at least one item. The minimum level of acceptability is that at least 50 percent of the objectives must be matched to one or more items.

4. *Balance-of-knowledge representation* focuses on the specific number of items matched to each content standard per strand. The balance-of-knowledge representation is determined by calculating an index, or score, for each standard. The number of items should be distributed relatively evenly between standards to achieve good balance. According to Webb, the minimum acceptable index for a single strand is 0.70 (on a scale of 0 to 1, with 1 representing perfect balance). An index of 0.70 or higher suggests that items broadly assess the standards matched to items by reviewers instead of clustering around one or two standards.

These criteria serve as guidelines for determining extent of alignment, and they must be considered within the context of available state documentation (e.g., test blueprints; grade-level expectations). There are cases when assessments may not meet the minimum criteria on some Webb dimension, but the assessments do meet the expectations of the state content standards. If a state provides sufficient rationale for the content emphasis given in the standards and on the assessment, failure to adhere to certain Webb alignment criteria is of less concern.

Materials. Reviewers evaluated the alignment of the CAHSEE by comparing one March 2011 test form with the current CAHSEE test blueprint[2]. For the purposes of this study, HumRRO removed item specification information from the printed test blueprints distributed to reviewers to ensure maximum objectivity.

Table 2.1 presents the number of assessed strands and standards included in the CAHSEE test blueprints for mathematics and for ELA. One particular standard for ELA, Writing Applications, varies per test administration in the specific standard(s) assessed. One Mathematics strand, Mathematical Reasoning, is assessed with items that each are also linked to one other Mathematics strand. On individual student score reports, performance on Mathematical Reasoning items is not reported separately but is reported under the linked strands.

[2] Approved by the State Board of Education on July 9, 2003. These blueprints can be accessed on the CDE website: http://www.cde.ca.gov/ta/tg/hs/resources.asp .

Table 2.1. Number of Strands and Standards in Mathematics and ELA CAHSEE Test Blueprints

Content Area	Strands	Standards
ELA	6	33
Mathematics	6	53

Table 2.2 describes item composition of the test forms alongside the number of assessment reporting categories. The ELA test form contained 73 operational items, including 25 linking items anchored across multiple year forms. The mathematics form consisted of 80 total operational items with 24 linking items.

Table 2.2. Characteristics of the March 2011 CAHSEE Test Forms

Subject	Total Items per Form	Operational Items		Field-Test Items	Selected Response Items	Constructed Response Items	Number of Reporting Categories
		Non-anchor	Anchor linking items				
ELA	80	48	25	7	79	1	6
Mathematics	92	56	24	12	92	0	6

Procedures. The workshop began with an introduction of staff and observers. Reviewers then read and signed an affidavit of nondisclosure regarding any secure materials they would be reviewing during the workshop. HumRRO and NCEO staff each provided a brief presentation on tasks reviewers would perform.

Following the general introduction, reviewers split into content groups to begin alignment tasks. A HumRRO staff member facilitated each group by (a) discussing the rating procedures in more detail relative to the content area and (b) training reviewers on sample assessment items. Each reviewer received a laptop with the rating forms already uploaded and formatted. Reviewers received brief instructions on using the electronic forms.

After reviewing sample DOK evaluations as a group, reviewers proceeded to make DOK ratings of content standards from the CAHSEE blueprint document. They first made independent evaluations without discussion. Once all reviewers had completed their ratings, the HumRRO facilitator led the group through a discussion of the objectives to achieve consensus DOK ratings. Reviewers entered consensus ratings into the laptop spreadsheet.

Next, staff provided more specific instructions for rating the assessment items. In particular, staff instructed reviewers to assign a *primary standard* to an item based on a judgment that the item clearly measured this content expectation. Reviewers could assign an *additional standard* only if the item seemed to assess another standard as clearly as the primary standard. Reviewers then evaluated and discussed released items as a group. After completing released items, reviewers proceeded to rate the

2011 test form. Again, they entered these ratings individually into electronic rating forms on their laptops. Group leaders conducted item rating calibration checks periodically to evaluate the level of agreement between raters.

Many reviewers continued their ratings into the beginning of the second day, particularly in the ELA group. Once all reviewers finished alignment ratings, they completed a debriefing survey asking for general comments on alignment of the test form overall. Reviewers were allowed to discuss their perspectives as a group.

Results of the 2011 Alignment Review

This section presents the results of the alignment analyses, including agreement analyses, the Webb measures, and accessibility analyses. We include results only on operational items (not field-test items) in this report because it is these items that are used in calculating AYP.

Inter-Rater Agreement. HumRRO performed two types of agreement analyses on reviewer alignment ratings. Reviewers rated the alignment of each item on two major dimensions: DOK and content match. The DOK rating required reviewers to rank items using a scale, while the content rating involved a categorical judgment on the standards assessed by items. In each case, it is important to determine the extent to which reviewers tended to provide exactly the same ratings on items (Shavelson, Webb, & Rowley, 1989; Tinsley & Weiss, 1975).

For item DOK ratings, Webb (2005) uses the intraclass correlation (ICC) coefficient. This type of agreement statistic involves the calculation of the ICC (C, k) statistic (Shrout & Fleiss, 1979). This statistic indicates the amount of agreement by producing a statistic between 0 and 1 (similar to a correlation coefficient). An ICC (C, k) result approaching 1 represents high agreement. Conversely, as the ICC approaches 0, we interpret this outcome to mean that reviewers assigned quite different ratings to the same dimension, resulting in weak agreement. Generally, ICC outcomes can be interpreted based on the following decision criteria:

- Exact agreement: 1.00
- Good agreement: 0.80 to 0.99
- Adequate agreement: 0.70 to 0.79
- Weak agreement: 0.69 or less

Table 2.3 presents inter-rater agreement outcomes (ICC) for item DOK ratings on the March 2011 CAHSEE test form. The ICC (C, k) results in Table 2.3 indicate that reviewers consistently applied the same DOK ratings to the same items. All ICCs indicate “good agreement” between reviewers.

Table 2.3. Intraclass Correlation Coefficients on Item DOK Ratings for March 2011 CAHSEE Test Form

Content Area	ICC Agreement Level
Mathematics	0.87
ELA	0.84

Evaluating agreement between categorical ratings, such as standards matched to items, requires a different form of agreement statistic. Several agreement measures exist to analyze categorical ratings (see Gwet, 2001; Webb, 2005). Webb uses a statistic that essentially estimates the percentage of agreement between reviewers.[3] This analysis involves a pairwise (one-to-one) comparison of each reviewer's ratings with all other reviewers per item. Results are averaged across reviewers per test form. Webb's decision criteria for pairwise comparisons are comparable to those for the ICC, although calculations leading to these agreement categories are slightly less stringent.

- Exact agreement — 1.00
- Good agreement — 0.70 to 0.99
- Adequate agreement — 0.60 to 0.69
- Weak agreement — 0.59 or lower

Table 2.4 includes content match results at two levels of agreement. The first correlation presented for each content area presents exact agreement results, reflecting agreement between reviewers at the Strand, Substrand, and Standard levels. The second correlation indicates degree of partial agreement, reflecting an evaluation of agreement between reviewers at the Strand level only. Reviewers were quite consistent in their determination of content assessed by items.

Table 2.4. Pairwise Comparisons for Reviewer Content Agreement on CAHSEE Items

Test Form	Exact Content Match (Strand, Substrand, Standard)	Partial Content Match (Strand only)
Mathematics	0.81	0.92
ELA	0.77	0.87

Webb Alignment Statistics. All of Webb's measures begin with calculations for each reviewer and build to a summary of results across both raters and standards. First, we calculated item frequency ratings per standard for each reviewer. Next, we calculated descriptive statistics (means and standard deviations) across reviewers for each content strand. For categorical concurrence, the statistic presented is the mean

[3] Refer to *Webb, N. L. (2005). Webb Alignment Tool (WAT): Training Manual* for a detailed discussion of the agreement analysis based on pairwise comparisons.

number of items matched to each strand. Note that, in some cases, the number of items matched to each strand can be higher than the target number listed in the test blueprint because reviewers could match items to *two* different content strands/standards; hence, some items essentially are counted twice. For DOK, the statistic is the mean percentage of items with complexity levels at or above the level of the standards within each strand. Regarding range of knowledge (ROK), the statistic is the mean percentage of standards matched with at least one item per strand. Finally, the balance of knowledge representation (Balance Index) column indicates the mean balance index per strand, which provides a measure of how evenly items are distributed among standards. Table 2.5 provides a summary of the decision criteria for each alignment indicator.

Table 2.5. Decision Criteria per Alignment Statistic

Alignment Level	Categorical Concurrence	Depth of Knowledge Consistency	Range of Knowledge	Balance of Representation (index from 0 to1)
Acceptable	Min. 6 items per strand	≥ 50% of items match standard DOK	≥ 50% of standards assessed by at least 1 item	≥ 0.70 (reasonably balanced item content emphasis across standards)
Weak	4-5 items per strand	40%-49% of items match standard DOK	40%-49% of standards assessed by at least 1 item	0.60-0.69 (some narrow or clustered content emphasis on assessment)
Unacceptable	< 4 items per strand	< 40% of items match standard DOK	< 40% of standards assessed by at least 1 item	< 60% (extensive narrow or clustered content emphasis on assessment)

Note: These criteria are adapted from Webb (2005).

Table 2.6 includes summative statistical outcomes for each alignment measure per strand for mathematics and indicates that the 2011 CAHSEE mathematics test form aligns well overall to the standards covered in the CAHSEE test blueprint. The one exception to the positive alignment trend is coverage of the standards targeting Mathematical Reasoning. Reviewers found only a small number of items (M=4.25 of 8 targeted) clearly tapping into mathematical reasoning skills in addition to primary content strands. Of items matched to mathematical reasoning, reviewers determined that approximately one to two items assessed students at the same DOK level as expected by the corresponding standards. Mathematical Reasoning is a process strand, and items targeting reasoning also assess other content strands.

Table 2.6. 2011 CAHSEE Mathematics Results on Webb Alignment Measures per Strand

Strand	Number of Standards per Strand	Target Number of Items per Strand	Webb Alignment Indicators			
			Categorical Concurrence	DOK Consistency	Range	Balance Index
Statistics, Data Analysis, and Probability	7	[a] 12	13.50	55%	79%	0.88
Number Sense	10	14	14.00	66%	90%	0.77
Algebra and Functions	10	17	18.75	63%	85%	0.79
Measurement and Geometry	10	17	16.25	64%	88%	0.82
Mathematical Reasoning	6	8	4.25	23%	50%	0.90
Algebra I	10	12	13.25	81%	77%	0.76
Total Alignment Outcomes Across Standards			5 of 6	5 of 6	6 of 6	6 of 6

Note: Shaded regions denote means falling below minimum criterion for that alignment measure.

[a] Combined item total from Statistics, Data Analysis, and Probability standards under grade 6 and grade 7.

Table 2.7 presents alignment results for ELA. Results for categorical concurrence indicate that the 2011 test form corresponds well with the CAHSEE test blueprint in terms of overall breadth of content coverage. Furthermore, the test assesses a broad range of standards in a relatively even manner within four (of six) strands.

Two aspects of ELA items fell short of sufficient breadth and depth of content coverage relative to the CAHSEE test blueprint. First, items targeting Reading Comprehension and Writing Applications seemed to assess this content rather narrowly, as noted by the shaded percentages under the Range column. For Reading Comprehension, reviewers found a small number of standards (two to three) assessed by approximately 17 items. Reviewers found the same issue for Writing Applications; the essay item seemed to target only a couple of standards clearly. Second, a substantial number of items across the test form assessed student knowledge at a different (mostly lower) level of complexity than expected in the corresponding content standards. In this case, only the set of items matched to the Word Analysis, Fluency, and Systematic Vocabulary Development strand and the Writing Strategies strand met the minimum alignment criterion.

Table 2.7. 2011 CAHSEE ELA Results on Webb Alignment Measures per Strand

Strand	Number of Standards per Strand	Target Number of Items per Strand	Webb Alignment Indicators			
			Categorical Concurrence	DOK Consistency	Range	Balance Index
Word Analysis, Fluency, Systematic Vocabulary Development	2	7	7.60	60%	70%	0.74
Reading Comprehension	6	18	16.40	37%	43%	0.86
Literary Response and Analysis	12	20	19.00	[a] 47%	68%	0.85
Writing Strategies	5	12	9.00	58%	72%	0.89
Writing Applications	6	1	1.00	20%	17%	[b] --
Written and Oral English Language Conventions	3	15	17.60	44%	100%	0.84
Total Alignment Outcomes Across Standards			5 of 6	2 of 6	4 of 6	5 of 6

Note: Shaded regions denote means falling below minimum criterion for that alignment measure.
[a] This mean increases to 59 percent if we add percentage of items assessing students above standard, which is consistent with Webb's method.
[b] No balance index was generated due to the single item match by reviewers.

Summary and Recommendations for Alignment

This review examined alignment of operational items assessed on the March 2011 version of the CAHSEE to the designated California content standards for mathematics and ELA. The results of these reviews provide evidence toward the content validity of the CAHSEE. In this section of the report, we present conclusions and recommendations based on the results of this review.

Table 2.8 summarizes outcomes on the test forms by each *content strand* based on statistical results. These judgments of alignment relate to criteria presented in Table 2.5. As shown in the table, the extent of CAHSEE test alignment to the California content standards varied some per content area with higher levels of alignment evidenced for the mathematics test form compared to the ELA test form.

Table 2.8. Alignment Conclusions for 2011 CAHSEE Test Form per Content Strand (Based on Minimum Criterion per Webb Alignment Measure)

	Content Strand	Summary Alignment Outcomes per Webb Criteria			
		Categorical Concurrence	DOK Consistency	Range	Balance
		Mathematics			
1	Statistics, Data Analysis, and Probability	Acceptable	Acceptable	Acceptable	Acceptable
2	Number Sense	Acceptable	Acceptable	Acceptable	Acceptable
3	Algebra and Functions	Acceptable	Acceptable	Acceptable	Acceptable
4	Measurement and Geometry	Acceptable	Acceptable	Acceptable	Acceptable
5	Mathematical Reasoning	Weak	Unacceptable	Acceptable	Acceptable
6	Algebra I	Acceptable	Acceptable	Acceptable	Acceptable
		ELA			
1	Word Analysis, Fluency, and Systematic Vocabulary Development	Acceptable	Acceptable	Acceptable	Acceptable
2	Reading Comprehension	Acceptable	Unacceptable	Weak	Acceptable
3	Literary Response and Analysis	Acceptable	Weak	Acceptable	Acceptable
4	Writing Strategies	Acceptable	Acceptable	Acceptable	Acceptable
5	[a] Writing Applications	Unacceptable	Unacceptable	Unacceptable	Unacceptable
6	Written and Oral English Language Conventions	Acceptable	Weak	Acceptable	Acceptable

[a] Writing Applications intentionally is assessed by a single constructed response item, although this item is weighted (4 points). Thus, results for this strand always will fall below a strict application of Webb's minimum decision criterion relative to categorical concurrence, range, and balance measures due to test blueprint design with a single assessment item.

Clearly, the mathematics operational items assessed most strands broadly and at an appropriate level of complexity, except for Mathematical Reasoning. During item ratings, we instructed reviewers to be mindful of the Mathematical Reasoning strand as an option in addition to other content strands. Of course, standards for mathematical reasoning skills do require a higher level of processing (i.e., DOK level 3 or 4), and the CAHSEE, like most standardized tests, includes only a handful of items assessing such higher-order thinking. Furthermore, the DOK expected in the standards represents a "ceiling" for the assessment, and some items can assess students at a lower level. However, the fact remains that the test form includes half the number of mathematical reasoning items, and at lower levels of complexity, than expected in the California standards. Knowledge of mathematical reasoning is crucial for students, as evidenced by research indicating that those students with higher reasoning skills tend to perform better on more difficult and complex mathematics. Thus, these skills become integrated into content knowledge, especially at higher grade levels. In its standards, California (and some other states) separates these skills as a process strand, as opposed to integrating across primary content strands. The test vendor handles this situation by developing items intended to meet a content strand as well as the mathematical reasoning process strand. However, the stand-alone process strand in the California state standards and CAHSEE blueprint may artificially tease out reasoning skills from math content because, in a sense, most items should assess mathematical reasoning at some level. This circumstance could impact how teachers provide instruction on this content as well as make it difficult for alignment reviewers to apply this strand when reviewing items. As a result, content alignment may appear diminished.

In comparison, ELA operational items showed lower alignment to some ELA standards, particularly on DOK assessed. In addition, items targeting Reading Comprehension and Writing Applications may have narrowly covered standards within these strands. In fact, while reviewers had few problems matching items to strands, they expressed considerable difficulty finding relevant standards under Reading Comprehension during the adjudication period. They wrestled extensively as a group with how to deal with these issues fairly. One particular problem raised by these reviewers concerned items targeting informational text compared to literary text. In some cases, they could not locate standards under informational text (e.g., items targeting "tone" or "imagery"), although standards that are more relevant could be identified under Narrative Analysis or Literary Criticism.

The Writing Applications strand warrants some discussion. The CAHSEE blueprint intentionally assesses this strand with a single item—a writing prompt. While this design does not meet the minimum criterion of six items, the single constructed response item is weighted more heavily than selected response items, and it does map to several standards within this strand. In responding to this item, students should need to demonstrate multiple writing skills. Furthermore, the blueprint indicates that assessed standards vary per administration cycle. Nevertheless, CDE and the test vendor may wish to consider whether any additional selected response items should be linked to these standards. For any given test administration, students are required to demonstrate knowledge around only one to two standards, although they are

responsible for six Writing Applications standards. Thus, the ELA portion of the CAHSEE may not adequately assess students on the full range of this content, as required by NCLB. Students' knowledge of writing standards may be assessed more comprehensively in class.

As a longitudinal comparison, we present alignment results for each year in which HumRRO has conducted studies for CAHSEE. Figure 2.1 displays results for mathematics on each Webb alignment measure from studies in 2005, 2008, and 2011. Figure 2.2 shows results for ELA studies conducted in 2005, 2008, 2009, and 2011.

Figures 2.1 and 2.2 show comparable patterns between studies for mathematics and for ELA, although some results have varied slightly between years. This picture is positive overall because most outcomes surpass the minimum criterion per alignment measure. Results on categorical concurrence, range of correspondence, and DOK consistency do consistently show some lower alignment outcomes for Mathematical Reasoning (Figure 2.1) and for Writing Applications (Figure 2.2) across years. Thus, CAHSEE test form alignment has been largely stable, irrespective of reviewers, over time.

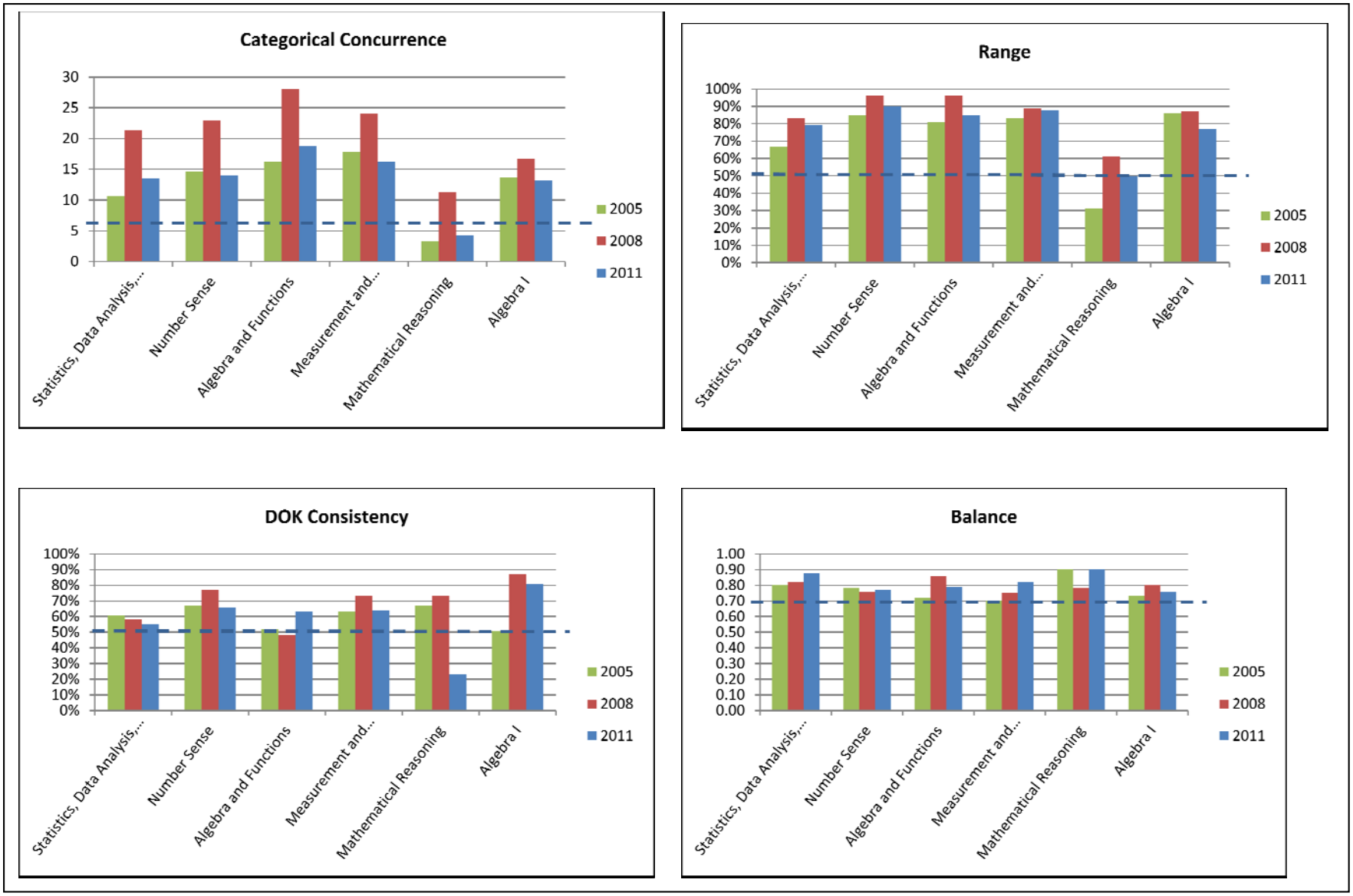


Figure 2.1. CAHSEE Alignment Results for Mathematics from 2005, 2008, and 2011.

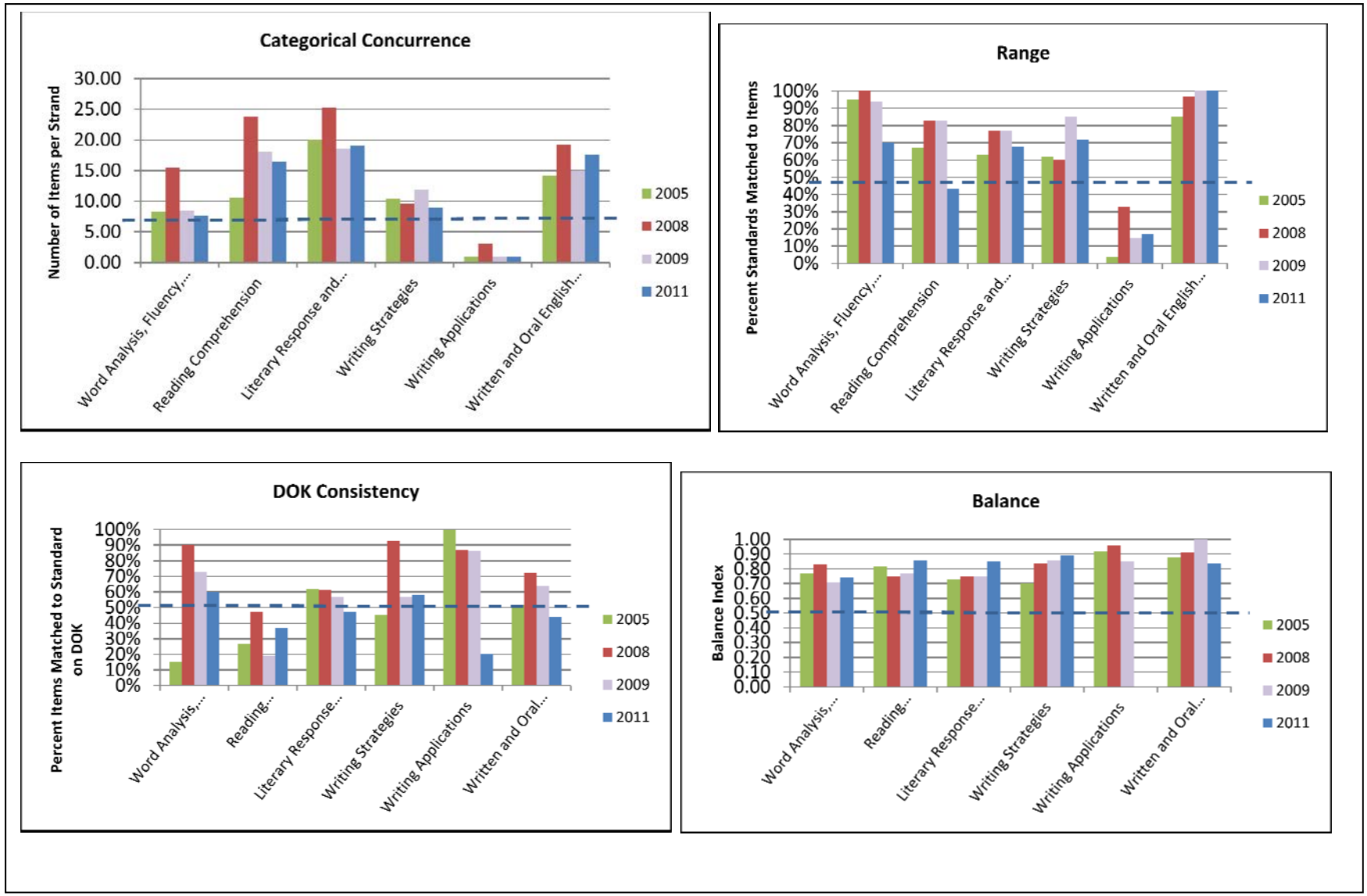


Figure 2.2. CAHSEE Alignment Results for English-language arts from 2005, 2008, 2009, and 2011.

Table 2.9 provides summary conclusions for mathematics and ELA *across* content strands. These conclusions specify the total percentages of content strands represented well by the assessment based on Webb's (2005) scale:

- Fully aligned – assessments align to all content strands (100 percent)
- Highly aligned – assessments align to the majority of strands (70–99 percent)
- Partially aligned – assessments align well to some strands (50–69 percent)
- Weakly aligned – assessments align to less than half the strands (below 50 percent)

Table 2.9. Summary Alignment Conclusions per Webb Measure for Operational Items on 2011 CAHSEE Test Form

	Alignment Conclusions per Webb Measure			
	Categorical Concurrence	DOK Consistency	Range	Balance
Mathematics	Highly aligned (83%)	Highly aligned (83%)	Fully aligned (100%)	Fully aligned (100%)
ELA	Highly aligned (83%)	Weakly aligned (33%)	Partially aligned (67%)	Highly aligned (83%)

Caveat. The 2011 alignment review incorporated a reviewer process different than the one used in previous alignment studies of the CAHSEE. Specifically, we included a smaller number of reviewers (four to five per panel). In addition, we developed panels of external, expert reviewers. This procedure was implemented to increase consistency in ratings due to their national experience (across states) with alignment and UDA research, as well as previous experience with CAHSEE for most. Thus, no California teachers were included in this study.

Recommendations. HumRRO makes the following recommendations on alignment per CAHSEE content area. These recommendations may increase the alignment of the CAHSEE test to the California content standards:

1. Expand panels to include current, highly qualified California teachers from across the state. While there is no evidence that the use of only external panelists impacted the type of ratings provided by reviewers, the inclusion of California educators would likely increase study validity and generalizability. The CAHSEE serves a diverse student population in terms of ethnicity and needs; thus, educators who participate in future studies should better reflect the diversity of these students.

2. Consider reviewing items assessing Mathematical Reasoning for clarity of item target. We offer three options to handle the persistent alignment issues with mathematical reasoning. The first option, which would present the easiest (although not guaranteed) solution, focuses on a potential methodological change to future alignment reviews. Specifically, reviewers could evaluate each item for degree of math reasoning skills in addition to identifying a primary

content strand. This strategy may lead reviewers to be more focused and intentional in their evaluations, which could produce increased alignment. A second option is to review items assessing Mathematical Reasoning for clarity of item target. Finally, CDE could consider integrating mathematical reasoning skills more explicitly for each content strand. We recognize that the latter option would require revision to the California content standards and approval by the State Board of Education; thus, CDE may choose to entertain this option as part of the next round of standards reviews, which likely would occur within the next few years.

3. Review depth-of-knowledge across ELA items. The 2011 test form appropriately assessed two (of six) ELA strands with 60 percent of Word Analysis and 58 percent of Writing Strategies items respectively, while items assessed the remaining four strands at a lower DOK level than specified in ELA standards. This outcome suggests that the CAHSEE may assess students on ELA content at a lower level of rigor than expected.

4. Review ELA items assessing Reading Comprehension and possibly Writing Applications. For Reading Comprehension, we recommend a review of the language of these standards for possible revision for two reasons. First, reviewers matched items to only two to three Reading Comprehension standards assessed, although a number of items are supposed to target this strand based on the test blueprints. Second, reviewers found that many items targeting Reading Comprehension did not clearly match the California content standards. Reviewers agreed that item structure and content was appropriate in most cases; thus, the source of difficulty seemed to stem from the lack of clarity and organization of the standards. Regarding Writing Applications, we suggest that the CDE consider reassigning a few selected response items to assess Writing Applications, thus more fully representing this strand on the assessment. However, we recognize that this strand may be assessed more comprehensively in the classroom, which can be communicated in various other documentation forms.

Universal Test Design Review

Background on Universal Test Design Review

Federal legislation requires states to include all students in statewide assessment. SWD, students who are English learners, and other students with learning challenges may not be excluded from examinations. States are required to report participation performance data on large-scale assessments for all students. Some states (21 at last count) also require that all students pass an exit examination before graduating from high school. Three additional states require that students without disabilities pass such exams (these states have alternative options for SWD) (Johnson, Thurlow, & Stout, 2007).

Because of the high-stakes nature of these measurements, states and test companies have begun to explore options for creating higher quality assessments that more accurately measure the learning of a wide variety of students, including SWD. One option for improving assessments that has gained the attention of policy makers is the concept of Universal Design for Assessment (UDA). According to Federal Regulations, Universally Designed Assessments are tests that are "designed to be valid and accessible for use by the widest range of students, including SWD" (Elementary and Secondary Education Act, 2002).

The term universal design was first used in the field of architecture by Ron Mace. Mace, a wheelchair user, became frustrated with watching his colleagues design structures that later had to be retrofitted to meet the needs of diverse users. In citing the need for creating structures from the beginning to be maximally accessible, Mace began advocating for structures that could meet the needs of wheelchair users, elderly people, children, and people with sensory disabilities that were, at the same time, easily accessible to non-disabled users. In structures using this design philosophy, ramps, elevators, expanded doorways, signs, bathrooms, and other features do not have to be added or modified at additional expense after the completion of a building.

In assessment, the goal of universal design is to provide the most valid assessment possible for the greatest number of students, including SWD. This means designing assessments from the beginning to ensure that intended constructs are measured, text is concise and readable and in a clear format, and that the assessment respects the diversity of the assessment population (Johnstone, Altman, & Thurlow, 2006). Such tests are not intended to make tests easier for some groups or replace accommodations and the use of an alternate assessment for students who are particularly difficult to assess.

Although UDA has great promise, it is also limited in that it can only provide broader access to students to a point. If access begins to interfere with test constructs, it can invalidate the test. Therefore, UDA typically refers to tests that are as accessible and remove as many barriers as possible while maintaining intended constructs (Johnstone, Thompson, Bottsford-Miller & Thurlow, 2008).

Despite this limitation, there are many ways to produce assessments that align with UDA policy. The Center for Accessible Special Technology, for example, has defined Universal Design of Assessments as presenting assessments with "multiple means of representation and multiple means of response" in order to help students access assessments (Dolan, Hall, Banerjee, Chun, & Strangman, 2005). Thompson, Johnstone, and Thurlow (2002), of the National Center on Educational Outcomes, synthesized literature from a variety of fields and concluded that Universally Designed Assessments had several *Elements* that could be examined to determine if a test is accessible. Universally designed assessments

- are designed for an inclusive population,
- have precisely defined constructs,
- have accessible, non-biased items,

- are amenable to accommodations,
- provide simple, clear, and intuitive instructions and procedures,
- use maximally readable and comprehensible language and print, and
- use maximally legible print and diagrams.

In an effort to operationalize the above *Elements*, Thompson, Johnstone, Anderson, and Miller (2005) surveyed experts in a variety of fields. Through a series of Delphi surveys, Thompson et al.'s (2002) *Elements* were transformed into a series of UDA *Considerations* which could be used for item review purposes. Expert reviews using UDA *Considerations* are one part of a larger item review process described by Johnstone et al. (2008). This process also includes statistical analysis of items, and cognitive lab exercises with students. For the purpose of this study, expert reviews were conducted and data were compared with field-based study evidence and standards alignment workshop data collected by HumRRO.

Universal Test Design Review Method

The process of reviewing items for UDA Considerations is a time-consuming activity. The UDA process is similar to the way in which states and vendors conduct sensitivity reviews of items to ensure that they align with content standards and are not biased against particular populations. In this section, we describe the review process applied by NCEO to evaluate the test forms on universal test design principles. The same reviewers and test forms incorporated into the alignment study were used for the accessibility review of universal test design. We include characteristics about these reviewers and test forms here as a reminder to the reader.

Reviewers. The participants in the UDA workshop were the same content and instructional experts in the fields of mathematics (n = 4) and ELA (n = 5) who conducted the alignment review. All reviewers included in the alignment process were highly familiar with large-scale assessment and standards, including CAHSEE. Two reviewers also served as facilitators to answer questions related to universal design principles.

Materials. Reviewers evaluated test form design based on NCEO's *Considerations for Universally Designed Assessments,* which take into account several features of assessment accessibility, including: items measuring their intended constructs, items that respect diversity, items that have clear formats for text, items that have clear pictures and graphics, and items that are both readable and comprehensible. Figure 2.3 provides details of these considerations.

Reviewers received printed rating forms on which to make their evaluations of each item. In addition to verbal instructions, the rating form provided detailed instruction for making ratings.

Measure what it intends to measure
- Reflect the intended content standards (reviewers have information about the content being measured).
- Minimize skills required beyond those being measured.

Respect the diversity of the assessment population
- Accessible to test takers (consider gender, age, ethnicity, socio-economic level)
- Avoid content that might unfairly advantage or disadvantage any student subgroup

Have clear format for text:
- Standard typeface
- Twelve (12) point minimum for all print, including captions, footnotes, and graphs (type size appropriate for age group)
- Wide spacing between letters, words, and lines
- High contrast between color of text and background
- Sufficient blank space (leading) between lines of text
- Staggered right margins (no right justification)

Have clear pictures and graphics (when essential to item)
- Pictures are needed to respond to item
- Pictures with clearly defined features
- Dark lines (minimum use of gray scale and shading)
- Sufficient contrast between colors
- Color is not relied on to convey important information or distinctions
- Pictures and graphs are labeled

Have concise and readable text
- Commonly used words
- Vocabulary appropriate for grade level
- Minimum use of unnecessary words
- Idioms avoided unless idiomatic speech is being measured
- Technical terms and abbreviations avoided (or defined) if not related to the content being measured
- Sentence complexity is appropriate for grade level
- Question to be answered is clearly identifiable

Allow changes to its format without changing its meaning or difficulty (including visual or memory load)
- Allows for the use of Braille or other tactile format
- Allows for signing to a student
- Allows for the use of oral presentation to a student
- Allows for the use of assistive technology
- Allows for translation into another language

Source: Thompson, S.J., Johnstone, C.J., Anderson, M. E., & Miller, N. A. (2005). *Considerations for the development and review of universally designed assessments* (Technical Report 42). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

Figure 2.3. Considerations for Universally Designed Assessments.

Each reviewer evaluated one full 2011 test form from the March administration. Table 2.10 describes item composition of these test forms alongside the number of assessment reporting categories. The ELA test form contained 73 operational items, including 25 linking items anchored across multiple year forms. The mathematics form consisted of 80 total operational items with 24 anchor items.

Table 2.10. Characteristics of the CAHSEE Test Forms

Subject	Number of Reporting Categories	Total Items per Form	Total Passages per Form	Operational Passages		Field-Test Passages	Operational Items		Field-Test Items	Selected Response Items	Constructed Response Items
				Non-anchor	Anchor		Non-anchor	Anchor			
ELA	6	80	12	6	5	1	48	25	7	79	1
Mathematics	6	92	0	0	0	0	56	24	12	92	0

Procedures. On the second day of the two-day review workshop, reviewers focused on evaluating universal design elements of the same test forms they had just reviewed for alignment. NCEO provided a brief presentation on tasks reviewers would perform and facilitated the UDA review.

The UDA review began by familiarizing participants with NCEO's Considerations. Next, panels reviewed items using a form designed to facilitate easy item rating by consideration. As part of the review, each participant was asked to individually rate items on their fidelity to universal design considerations. For each item, reviewers rated aspects of items with a "Y" (if the test item appeared to have fidelity to the universal design consideration), and an "N" (if the item did not meet the requirements of a universal design consideration). Reviewers were also given the option of choosing "DK" (if the rater did not have the knowledge or expertise to comment on a particular consideration) or "NA" (if the consideration was not applicable, e.g., if there was not a visual image in an item).

In order to ensure that all test items per form were rated, NCEO spiraled items on the test form rated for ELA and for mathematics. Thus, each reviewer began rating items at different points within the form (e.g., Rater 1 started at Item 1, while Rater 2 started at Item 30). However, all reviewers ultimately reviewed all items on a test form. In addition, NCEO assigned different categories of UDA considerations to reviewers at the beginning of the review process to guarantee that all categories were covered. As part of this process, reviewers proceeded sequentially through all items on the initial UDA categories assigned to them. Once reviewers completed this category, they moved to rate all items on additional categories, and they continued in this manner until the workshop end. As a result, some items were reviewed on a subset of UDA considerations instead of all six domains because several reviewers did not have time to complete ratings on all categories.

Results of Universal Test Design Review

In this section, we present the results of the UDA analyses. We include results on all items per form. We first describe the method for calculating results, followed by outcomes of these analyses.

For each item and each consideration of universally designed assessments, we summed the number of Ys and Ns. The review established descriptive patterns in an effort to "flag" particular items that may appear contrary to universal design principles. We used the following criteria to flag items with which reviewers found potential problems:

1. If four or more reviewers examined a consideration per item, at least two responses of "N" were needed to flag an item.

2. A rating of "N" ("No") indicated that a reviewer did not perceive the item to contain or display a particular consideration of universal design.

3. If fewer than four reviewers examined a consideration per item, only one response of "No" was necessary to flag the item.

By using these decision rules we attempted to strike a balance between consensus and qualitative data that reviewers with particular expertise brought to the task.

In addition, we aggregated narrative comments and yes and no responses across areas of consideration, as well as for particular items, to determine if there were cross-cutting patterns across forms. Typically, reviewers only commented when they saw an area of concern.

The combination of qualitative and descriptive statistical information provides insights into the overall perception of reviewers about CAHSEE's fidelity to UDA *Considerations*. We report key results below, and offer recommendations for the State of California in reference to UDA *Considerations* for the CAHSEE. Results are presented in further detail in the 2011 Evaluation Report, which may be found on the CDE Web page at http://www.cde.ca.gov/ta/tg/hs/evaluations.asp.

Mathematics Assessment. Table 2.11 shows each consideration of universal design flagged by reviewers, listing how many items (of 92 total items) represented areas of concern for reviewers regarding that consideration.

Table 2.11. Number of 2011 CAHSEE Mathematics Items Flagged, by UDA Consideration

Consideration	Items Flagged
Visuals are needed to answer the question.	54
Twelve- (12) point minimum size for all print	24
Visuals have clearly defined features.	20
Visuals are clearly labeled.	18
Minimum use of unnecessary words	14
High Contrast Between Visuals and Background	12
Avoids content that might unfairly advantage or disadvantage any student subgroup	12
Sufficient blank space	7
Question to be answered identifiable	5
Sensitive to test taker characteristics and experiences (gender, age, ethnicity, socio economic status, region, disability, language	3
Standard typeface	2
Vocabulary appropriate for grade level	1
Technical terms and abbreviations avoided unless tested	1
High contrast between text and background	1

For the mathematics assessment, the Universal Design (UD) category with the most flagged items (54) was "Visuals are needed to answer the question." For most items, three reviewers examined the items in this category. In this instance, the items flagged largely resulted from one reviewer, so the impact of flagged items should be examined carefully, with perhaps a follow-up review from a vision expert. No comments were provided as to why these items were problematic.

Twenty-four items in the category "Twelve- (12) point minimum size for all print" were flagged as problematic. In all cases, reviewers deemed the font size in question to be too small. Small text was present in exponents, answer choices, graph labels, and grid values.

Twenty items in the category, "Visuals have clearly defined features," were flagged. According to reviewer feedback, common problems included missing labels, excessive wordiness, small text, and other textual features that make distinguishing the visual difficult (i.e., negative sign is difficult to read, a multiplication "dot" that was too low, axis labels too similar to bar labels, etc.).

In the category, "Visuals are clearly labeled," reviewers flagged 18 items. According to reviewer feedback, problematic items for this UD category had missing labels, small text, wording problems, unclear labels, and missing information.

Fourteen items were flagged in the category "Minimum use of unnecessary words." As the UD category's title implies, all items flagged by reviewers were deemed

to have unnecessary words. In most cases, the reviewer provided a comment indicating which word or words could be deleted.

Twelve items were flagged in the category "High contrast between visuals and background." One reviewer, who found problems with grid lines competing with other lines for some items, commented that only one item is exemplary for this UDA category.

In the category, "Avoids content that might unfairly advantage or disadvantage any student subgroup," 12 items were flagged as problematic. Reviewers commented that these items may be biased towards or against certain students, such as students of high socioeconomic status (SES), students who travel, English learners, and students who have had previous experiences relevant to a specific item.

English-Language Arts Assessment. Table 2.12 represents each consideration of universal design flagged by reviewers. The number of items (out of 79 total) and passages (out of 17 total) listed represent areas of concern identified by reviewers.

Table 2.12. Number of ELA Items Flagged, by UDA Consideration

Consideration	Items Flagged	Passages Flagged
Standard typeface	79	all
High contrast between text and background	79	all
Twelve-point (12) minimum size for all print	17	8
Sensitive to test-taker characteristics	2	5
Avoids content that might unfairly advantage or disadvantage any student subgroup	2	3
Minimum use of unnecessary words	3	3
Visuals are needed to answer the question		4
Braille or other tactile format		2
Question to be answered identifiable	1	
Sufficient blank space	1	

All items were flagged in the category "Standard typeface." Reviewers indicated that there were problems such as bold stems, "M"-dashes at the end of stems, italics in stems, underlined text, capitalizations, and serifs. Reviewers commented that one passage used italics and variation in type, bold, italics, and capitalizations. One reviewer indicated italics in another passage; another reviewer commented on reference numbers that are less than twelve-point font.

Seventeen items were flagged in the category "Twelve- (12) point minimum size for all print." For these items, reviewers commented that the text in the item, and in particular, in the boxes, was too small.

Reviewers flagged a number of passages, and several associated items, in a variety of categories. Five passages were flagged in the category "Sensitive to test taker characteristics and experiences (gender, age, ethnicity, SES, region, disability,

language).” One reviewer indicated that one sentence was offensive, and another reviewer commented that another passage might unfairly advantage students of high SES. Five passages were flagged in the category “Visuals are clearly labeled,” and four passages were flagged in the category “Visuals are needed to answer the question.” In one case, reviewers commented that the visual was not necessary and in another case that the border surrounding the text was unnecessary.

Summary and Recommendations on Universal Test Design

The CAHSEE test form demonstrated many instances of fidelity to universal design considerations. For the mathematics portion, there were no flagged items in several categories and only a few flagged items in other categories. Across the test, however, reviewers found features that were worrisome in relation to universal design. A majority of the items flagged had issues related to visual components. On many items (54), reviewers questioned whether diagrams were necessary to complete the item or might pose a distraction. On fewer, but still a noteworthy number of items, reviewers found that items’ visual features were not clearly defined (20 items) or were not labeled (18 items). Such vagueness may present challenges for students without the cultural knowledge, visual capacity, or experiences to understand the context of a visual. Further, reviewers found that the type size was too small on 24 items, which may present further problems for students with visual or reading challenges.

The visual presentation of the test was similarly problematic for ELA reviewers. All 79 items of the ELA assessment were flagged for not having a standard typeface. Unusual or serif typefaces may present challenges to students who have difficulty reading print. Further, 17 items and 8 passages were flagged for having small text size. In four passages, reviewers questioned the necessity and value of visual aids, while in some other cases they questioned the lack of visual aids to help students comprehend text. Finally, five passages were flagged by reviewers because of possible insensitivities to test-taker characteristics. These passages were believed to present barriers to students by causing distraction or loss of motivation, or by eliciting other emotional or cognitive responses in students during assessments.

Limitations. This study was limited for three reasons. First, there were a limited number of reviewers. There were only four reviewers for the mathematics assessment and five reviewers for the ELA assessment. Therefore, decisions on flagged items were often made with very small sample sizes (sometimes as small as one). The second limitation to the study was the lack of diversity of participants. Although content and general disability experts were present, a full review would also contain experts in assistive technology, sign language, braille, underrepresented populations, and so forth. Even small review panels containing diverse expertise often have informative comments on items. While the CAHSEE panel was diverse, it was not as inclusive as other panels that have used this process.

Finally, when reporting, it was sometimes difficult to provide context to reviewers’ comments without seeing actual items (forms were collected for security reasons immediately following the UDA review). Therefore, reviewers’ comments are reported

directly as written. Reviewing comments with a test booklet should help to contextualize reviewer perspectives.

Recommendations. NCEO offers two primary recommendations to the CDE as it moves into its next versions of the CAHSEE.

1. ***CDE and its assessment provider should examine the visual presentation of the CAHSEE closely for print size, contrast, and value of visuals.*** The California publication specifications are an excellent starting point for this examination. Further, engaging the help of a vision expert may help in determining the validity and actual impact of small or unclear visuals flagged by reviewers. Another way to evaluate the visual components of the exam would be through a series of cognitive lab interviews with targeted students.

2. ***Standard sensitivity reviews should continue to examine whether small changes to passages (especially those not copyrighted) can reduce construct-irrelevant variance introduced by a passage that is insensitive to particular students.*** Following the concerns raised by reviewers, additional evaluations by content reviewers with a range of backgrounds, as well as interviews of targeted student groups, may be useful in understanding potential impacts on student engagement and achievement.

Of the two recommendations, the one urging a closer examination of the CAHSEE's visual presentation may be the easier one to implement. Small changes in the visual presentation of items should not impact the validity of the item's ability to measure certain California state standards. Realigning visual presentation, however, will likely have cost implications, so further study and data on presentation needs of particular populations may be helpful. As new versions of tests emerge, test designers should focus more closely on visual and sensitivity aspects of the assessment to help create assessments that closely align with universal design principles.

Review of CAHSEE Program Processes

HumRRO conducted in-person observations of three areas of the CAHSEE program in 2010 and 2011 for the purpose of evaluating these processes: test development, test administration, and essay scoring. Our goals for the observations were to evaluate (a) the CAHSEE contractor's (ETS's) item development process with respect to a content review session and a bias and sensitivity review session, (b) the CAHSEE test administrations conducted at two high school sites for conformance to established standardized procedures, and (c) ETS's process for scoring essays with respect to the range-finding session. In this section, we present key findings from our observations as well as recommendations for improving the standardization, quality, efficiency, and security of these program areas.

Observation of Test Development Processes

The quality of a test is substantially dependent on the quality of the content of its items. This review was a new aspect of HumRRO's independent evaluation of the CAHSEE, incorporated into the 2011 activities to help determine whether the training and monitoring of item reviewers is sufficient to identify and improve concerns with item content and potential bias as early as possible in the development process.

Observation of Content Review Session. One HumRRO staff person attended the first day of the March 2–4, 2011 CAHSEE Content Review meeting held at ETS offices in Sacramento. The purpose of the meeting was to collect suggestions from current California ELA and mathematics high school teachers (in their respective subject areas) for content revisions to items that had just been reviewed for bias; some members of the content review group had also participated in the bias review session.

ETS facilitated the meeting of approximately 40 subject matter experts who were recruited and screened by ETS to be representative of the state as a whole (geographically, demographically, and in terms of subject-area experience) and have diverse teaching experience (e.g., with English learners, students with diverse socioeconomic and cultural backgrounds, and SWD). The group reviewed approximately 750 items; items that survived the review would become operational in 2013.

ETS presented an overview of the entire CAHSEE test development process, general guidelines for content experts' review of items, the need for item alignment with the specified California content standard, and the central principles of universal design. After the orientation, reviewers worked in subject area subgroups for the remainder of the meeting. ETS emphasized the criticality of maintaining security of item content, both during and after the session.

Each item was presented with the content standard it was intended to measure (by number and brief description), its Depth-of-Knowledge (DOK) level, and its estimated difficulty. DOK levels, developed by Norman L. Webb,[4] are by definition distinct from *difficulty* and designate the type of cognitive processing required to answer items. ETS provided reviewers a handout with bulleted descriptions and examples of DOK Levels, ranging from a low of 1 (e.g., recall) to a high of 3 for mathematics (e.g., using concepts to solve problems) or 4 for the ELA writing task. DOK levels are discussed extensively later in this chapter with regard to HumRRO's independent content alignment review.

HumRRO observed the two subject-area groups during their review of items. ETS asked reviewers to consider eight questions in a Summary Checklist for each item (e.g., "Does the item measure the specified standard?" "Are the DOK and Difficulty Levels correct?"). ETS facilitators directed reviewers to independently read through and

[4] Adapted from Norman L. Webb, Wisconsin Center for Education Research, Depth-of-Knowledge Level Definitions http://facstaff.wcer.wisc.edu/normw/state%20alignment%20page%20one.htm

make notes on a subset of items, and then they led reviewers through those items. Reviewers discussed the ideas presented regarding possible item revisions; changes to the item were recorded by ETS.

In the ELA group, additional resources for the reviewers included ELA content standards, a Core Vocabulary booklet with grade level indicators, a thesaurus, and a dictionary. The vast majority of items to be reviewed were associated with passages.

In the mathematics group, item information also included the rationale for each answer choice, assisting reviewers in evaluating incorrect responses that capture typical mathematical errors related to the knowledge being assessed. The group discussed what criteria qualify items to be assigned to the Math Reasoning strand, and asked ETS staff to help clarify the distinction between the standards for grade seven Algebra and Algebra I.

Evaluation of Content Review Session. Overall, the portion of the Content Review Session we observed was very well facilitated and professionally conducted. Given the time available and tasks to be completed, the ETS facilitators used that time as efficiently as possible. ETS facilitated discussions in a manner that encouraged all content experts to participate, and we seldom observed that any comments or opinions were disregarded. Security of all test materials was tightly controlled. We observed ETS staff using techniques that were effective in guiding reviewers to provide substantive suggestions to improve item content.

Observation of Bias and Sensitivity Review Session. One HumRRO staff person attended the first day of the March 14–15, 2011 CAHSEE Bias and Sensitivity Review meeting held at the ETS offices in Sacramento. Five ETS staff provided meeting facilitation for approximately 20 subject-matter experts, recruited and screened by ETS in accordance with the procedures described earlier. The purpose of the meeting was to collect suggestions from California ELA and mathematics high school teachers for revisions to approximately 675 items to address issues of potential bias. Items that survived this review would go through a content review immediately after this session; some members of this group of reviewers would continue on to participate in that session.

ETS presented an overview of the entire CAHSEE test development process, the principles of universal design, and descriptions of common forms of bias and stereotyping. ETS directed reviewers to consider the following four “guiding questions” when evaluating each test item:

- “Is the language appropriate for the standards being tested?”
- “Is there anything controversial, inflammatory, or insensitive?”
- “Are there any apparent biases or stereotypes?”
- “Would students of a particular group, background, or region have a distinct advantage or disadvantage?”

ETS reviewed several sample items and used reviewer feedback to illustrate how fairness could be improved by identifying and removing stereotypes, potential sources of linguistic or content bias, and emotionally sensitive content. Facilitators pointed out the distinction between simplifying linguistic content where possible and adhering to the appropriate vocabulary called for by the standards being measured.

ETS allowed the content experts to self-select into the ELA or mathematics review subgroups and facilitated the item review process. Reviewers were directed to independently read through and make notes on a subset of items, and then ETS staff led the group in a review of those items. If item revisions were suggested, the reviewers discussed the ideas presented, and changes to the item were recorded by ETS staff.

During observation of the ELA group, we noted that revisions to some passages suggested by the reviewers were rejected by ETS. ETS staff informed reviewers that although commissioned passages (those written specifically for the CAHSEE) could be edited, "permissioned" passages – copyrighted passages for which ETS obtained permission to use in the CAHSEE – could not be revised. For commissioned passages, ETS provided strategies to help resolve concerns about vocabulary, such as footnoting and defining terms or changing them.

During observation of the mathematics group, ETS emphasized that reviewers should watch for and revise the use of passive voice in stems, topics that might not be universally accessible to all students, and terms that might be intended one way in an item but be interpreted another way as offensive. ETS encouraged reviewers to identify and replace text that might be an obstacle to English learners; they pointed out that accessible language was important for text used to determine the correct response, as well as for text not critical to choosing the answer.

Evaluation of Bias and Sensitivity Review Session. Overall, the portion of the Bias and Sensitivity Review Session we observed was very well managed and professionally conducted. ETS facilitators used the time allowed for the review of the items as efficiently as possible. On the whole, the reviewers' diverse ethnic, cultural, and educational backgrounds and their range of current teaching roles suited them well to the task of the session. We observed ETS staff using techniques that were effective in guiding reviewers to consider potential sources of bias, stereotyping, or lack of sensitivity and to suggest improvements if possible.

Observation of Test Administration

Under ETS's current contract with CDE, auditing of CAHSEE test sites (conducted by a subcontractor) was resumed, with a small percentage of high schools audited for compliance with criteria for pre-administration activities, administration plans, testing facilities, administration activities, and post-administration activities. HumRRO's test administration site visits were designed to complement ETS's audits and to include site personnel interviews in addition to observations. HumRRO consulted with CDE to select two Local Educational Agencies (LEAs) to visit. The CAHSEE coordinators of the selected LEAs facilitated HumRRO's site visit arrangements, informing school site

personnel several weeks prior to test administration about the purpose and procedures for HumRRO's visit.

HumRRO observed test administrations of ELA and mathematics on March 8–9, 2011 in two Southern California high schools. Our goals for the site visits were to use observation and interview outcomes (a) to evaluate the procedures followed at each test site relative to the procedures described in the administration manuals published by ETS and (b) to make quality control recommendations that could improve standardization or achieve greater efficiency or security.

As has been customary in the past, HumRRO conducted the site visits in such a way as to avoid interfering with the operational administration. Our data collection methods involved observing from a distance (e.g., remaining seated at the back of the testing classrooms for the duration of each session without interacting with students), "looking over the shoulder" (e.g., to see how test materials were handled), and inquiring about particular aspects of the administration (e.g., asking test examiners about accommodations provided). We also conducted a structured interview with each test site coordinator about security, test examiner training, test variations, and general site logistics.

In preparation for the site visits, HumRRO staff reviewed the *California High School Exit Examination District and Test Site Coordinator's Manual* and the *Directions for Administration* and *Directions for Administration – Special Test Versions* manuals. These are the documents provided to school site personnel by ETS as the means of communicating requirements for all aspects of test administration. Key findings from our observations of the test administrations and our interviews with test site coordinators are described below.

Observations During Testing

Testing Environment. Conditions at both sites were adequate with respect to lighting, ventilation, space and a writing surface for each student, and minimal noise, although at one site students were seated at round tables instead of the standard front-facing setup. Most testing rooms were classrooms, and examiners established a tone of seriousness, focus, and discipline appropriate for the assessment.

Test Materials Distribution/Collection. At both sites the test examiners distributed materials in accordance with standard procedures. Both sites used Pre-ID answer documents; examiners asked students to verify they were given the correct answer documents by checking their printed names. After testing, examiners completed the ten-digit field for each student's statewide student identifier (SSID).

Directions. Test examiners at both high schools read the *Directions for Administration* in accordance with standard procedures, for the most part. At both sites, test examiners either collected or reminded students to put away cell phones.

Testing Variations, Accommodations, and Modifications. At one school, we observed the administration of the ELA test to a group of 15 SWD, with the "test questions read aloud" modification. With this modification, every passage, test question, and answer choice is read aloud by the examiner to the students. Although two test examiners were assigned to this group, they were not both present throughout the testing, and when only one was in the room student monitoring declined. During testing, one examiner checked student test booklets and discovered they did not all have the same version of the test. At the same school, for mathematics testing, we observed a group of 20 SWD who were each provided calculators as a modification. At the other school, two students were seated at separate tables that provided extra space for their large print booklets.

Timing. As the CAHSEE is an untimed but not unlimited time test, the sessions were observed to be adequately conducted with respect to the approximate testing times listed in the manuals, with allowance for additional time as needed by individual students or early dismissal when all students were finished. With regard to additional time within a test, however, different examiners handled completion of Session 1 and Session 2 differently. At one site, several rooms either had no clock or had a clock that did not display the correct time.

Monitoring. For the most part, examiners monitored students to ensure that they were complying with the directions; however, there were occasions at both sites when students were not closely supervised. At both schools examiners responded quickly to students' questions.

Student Motivation. For the most part, students approached the tests seriously and appeared to be concentrating on their work and quietly responding to CAHSEE questions. However, several students at one site were dismissed from testing due to their disruptive behavior.

Incidents. Examiners complied with the *Directions for Administration* and invalidated tests of students found cheating or compromising test security.

Findings from Interviews with Test Site Coordinators

Materials. One test site coordinator indicated she submitted her order for special versions (e.g., large print) materials to her district, which took care of the ordering process with ETS. The other test site coordinator personally ordered materials from ETS, but he was unfamiliar with the special test versions available, such as the audio CD option for the "test questions read aloud" ELA modification. He was therefore unaware that conducting this type of session without using ELA booklet Version 001 for all students tested would be problematic, due to the multiple versions of the test a group of students would normally have. No testing materials were missing or defective at either site.

Maintaining Security. Both test site coordinators we interviewed provided controlled access to a secure locked storage area or room for testing materials at the

school; they ensured all examiners had signed the Test Security Agreements. At one site, the test materials were monitored in a secure manner throughout the two testing days HumRRO observed. At the other site, test booklets were merely counted when distributed and collected to test examiners, rather than controlled using test booklet ID numbers and the inventory form in the *Director and Test Site Coordinator's Manual*.

Training Test Examiners. One test site coordinator provided a one-hour training session two weeks prior to testing for all the school's examiners using the *Directions for Administration* manual and an answer document; she also met with the examiners four to five times to plan the optimal testing environment for each student (e.g., which teacher each student would feel most comfortable with as an examiner). The other test site coordinator provided no formal training, but met the day before testing for about an hour with all examiners, some of whom had proctored before, to review the procedures. Neither test site coordinator had heard of the ETS training video. One test site coordinator praised the support she received from her district coordinator, with whom she meets three to four times a year and from whom she receives training documents, such as reminders about the administrations and how to avoid common errors.

***Preparing for Administration*.** Both test site coordinators described the time-consuming tasks of coordinating rooms, test examiners, students, supervised breaks, and bell schedules for this census administration; approximately 500 students were tested at one site, and 200 at the other. Coordinators took care to help provide students with a testing environment that would best support their optimal performance on the test. Alternative room arrangements were made for students who might need extended time to complete the tests and for late arrivals.

Providing Testing Variations, Accommodations, and Modifications. Each test site coordinator met with his or her school's special education teacher to determine what variations, accommodations, or modifications were needed according to the students' IEPs or 504 plans so that the appropriate materials could be ordered, and the correct options provided. Neither site had a need for English learner variations. At one site, two students were provided the large-print test booklet accommodation. At the other site, all SWD taking the test were provided with the "test questions read aloud" ELA modification and the mathematics calculator modification.

Evaluation of Test Administration

Overall, the March 2011 CAHSEE test administrations we observed at two high schools in southern California were conducted in accordance with the required procedures and no significant security problems were observed. However, we did observe several areas in which the standardization and quality of the administration could be improved if specific recommendations were addressed.

Recommendations for LEAs and test sites:

- Engage the IEP decision-making team for SWD in the test preparation process to ensure that appropriate testing variations, accommodations, and

modifications (in terms of test materials, facilities, and proctoring) are offered to students.

Although achieving the equivalent of a passing score (350 or higher) on one or both parts of the CAHSEE with a modification means a student is eligible to request a waiver, it is not the same as passing the test. At one test site, it seemed that staff was unaware of the difference between modifications and accommodations, relative to CAHSEE passing status, as neither had heard of the waiver process. Perhaps this is due to the current exemption in place for SWD. If the exemption is eliminated in the future, it will be vital for test site coordinators and special education teachers to understand the implications of providing students with modifications.

- Ensure adequate training is provided to test site coordinators and examiners.

- Ensure that students requiring additional time in one session of a subject area (e.g., Session 1 of ELA) are given that time before they start the next session, though this may require moving them to a different testing room.

- Use ETS-provided forms for securely monitoring test materials distributed to and collected from test examiners.

- Ensure each testing room has a functioning clock or that the amount of time remaining is posted by the proctor periodically.

Recommendations for ETS:

- Provide clarification in the *Director and Test Site Coordinator's Manual* about how the "test questions read aloud" modification should be conducted, in terms of test materials, facilities, and proctoring required. Currently, the instructions do not seem to inform LEA and test site coordinators that they should order and use only the Version 001 test booklet if the *teacher* is doing the reading to more than one student (this point is clearly made for use of the audio CD special version).

- Add information to the *Director and Test Site Coordinator's Manual* and the *Directions for Administration* to recommend that two readers be assigned to share, perhaps in alternation, the task of reading aloud the passages (for ELA), questions, and answer choices during the administration of "test questions read aloud" sessions, since this task is critical to student performance.

Given the variety of anomalies observed during just two site visits, we recommend that CDE continue to provide for HumRRO's independent observations of test administration for purposes of monitoring quality control processes. Additionally, perhaps the number of future site visits could be increased to allow incorporation of

visits to special settings (e.g., alternative schools), observations of ETS's subcontractor audits, or fall test administrations for students in grades eleven or twelve.

Observation of Range Finding Session for Essay Scoring

Two HumRRO staff attended the CAHSEE Range-Finding Session facilitated by ETS staff at their Sacramento office on May 13, 2011. The purpose of this meeting was to review a sample of student responses to the CAHSEE ELA writing prompt from the fall 2009 field test and select a set of exemplar responses that represent the scoring guide points and also exemplify the range of possible student approaches. The papers chosen to train and qualify scorers of student responses to the July 2011 CAHSEE administration would serve a critical role in standardizing application of the generic CAHSEE essay scoring rubric to responses to this particular prompt. HumRRO's goals in observing the meeting were to understand the processes ETS uses to achieve scorer consistency and to recommend possible areas for improvement. HumRRO staff used a checklist of best practices for training and manual scoring to guide their observations.

Two ETS facilitators led the meeting. Participants included four experienced scoring leaders and one new scoring leader; all scoring leaders had former experience as readers (scorers of actual student responses). ETS established a collegial atmosphere with introductions, distributed training materials, and explained the goals of the meeting: (a) to designate as anchor papers the clearest and most straightforward of the reviewed responses and (b) to designate as range-finding papers the responses that represented unusual approaches to the prompt.

ETS guided the participants through the training materials, which included the writing prompt, the scoring guide, five sets of 15 student essays, and range-finding score sheets. After having the prompt read aloud and emphasizing that it functioned merely as a stimulus or gateway to the essay, the facilitator led the participants through an in-depth review of the four-point scoring guide handout. Discussion of what could be considered "responsive" to this particular prompt was an important step in calibrating the participants to apply the scoring guide. The facilitator explained that even if a response failed to meet one or two of the six bulleted criteria of the scoring guide at a particular score point, the response might still qualify for that holistic score. For example, a response that meets all of the criteria for a score level of 2 should not be lowered to a score level of 1 solely because the response contains errors in English language conventions. The ETS facilitator also explained that no one bulleted criterion takes precedence over the others for raising or lowering the score. After all participants indicated thorough understanding of the general content of the scoring guide, the facilitator proceeded to the next activity.

The facilitator explained the goal of the session was to identify a total of 12 anchor papers and 12 range-finding papers. The two types of papers served different purposes:

Anchor papers: As a set, the anchor papers would clearly demarcate acceptable types of papers within a single score point and would help readers differentiate between

adjacent score points. Therefore, the student responses selected as anchor papers needed to represent each of the four score points as well as scores at the high and low ends of the score points, as indicated by a plus sign (+) for high and a minus sign (-) for low.

Range finding papers: Range-finding responses were to be selected to illustrate a variety of unusual approaches and the appropriate score point for each; these would be recorded as whole number point scores.

Participants independently read and recorded scores for the first set of 15 papers in their packets of pre-screened (already scored by the facilitator and chosen for this session) student responses. Readers were told to add a plus sign (+) or a minus sign (-) to a score if a paper mostly exhibited a particular score point's standards but for one or two bulleted criteria was above or below that score point. The scores were recorded in a spreadsheet and projected on a screen for discussion.

ETS determined the order of papers to discuss, intentionally beginning with those for which there was disagreement at the score point, then proceeding to those for which there was agreement on the score point but disagreement as to whether it should include a plus or minus sign. ETS facilitated the following steps in the process for discussing each paper:

1. A volunteer read the entire student response aloud. This helped readers avoid unintentionally correcting or filling in blanks of a student's writing and highlighted solid writing skills of students whose poorer handwriting or misspellings could bias scoring decisions.

2. Readers on the high and low ends presented the rationale for their judgments.

3. Readers discussed the ideas presented regarding the appropriate score.

4. Readers were asked if they wanted to change their initial score as a result of listening to the discussion.

5. Changes to scores were recorded on the spreadsheet.

Based on the discussion, ETS staff recorded preliminary notes about why a paper received a particular score. These notes would be included in the annotations or scoring notes to be used during actual scoring of July responses. To help evaluate the readers' differing decisions and to determine the final score level, the ETS facilitator sometimes read aloud the score-point description of each bulleted criterion in the scoring guide. As the session progressed, he also occasionally invited readers to refer to papers that had already been discussed to help guide scoring decisions.

Once the group reached consensus on a paper's score, the facilitator suggested that the response be assigned as an anchor paper or a range-finding paper, or neither,

asking the readers if they had any objections. The facilitator chose several range-finding papers to help readers learn to avoid allowing personal bias to influence scoring, and he reviewed some responses in the packet for purposes of illustrating what should or should not be considered a "crisis" paper (i.e., a paper in which a student displays personal or emotional problems, such as evidence of physical or mental abuse). When there were several papers under consideration for a particular cell of the chart, the facilitator stressed that the chosen paper should be the one that best teaches future readers to apply the scoring guide to this prompt. This process was repeated until all anchor and range-finding papers had been selected; not all 75 papers in the training packet were reviewed.

A discussion arose during this meeting regarding ETS's ability to identify evidence of cheating. ETS staff explained that their system of "alerts," whereby scoring leaders and readers are alerted to watch for specific wording or patterns in student responses, helps to identify any suspect responses early on in the scoring process. For example, an alert would be issued if several responses include elephants when elephants have nothing to do with the writing prompt. Another "red flag" could be a response that includes several paragraphs that are extremely well-worded and well-organized, preceded or followed by a paragraph of markedly lesser-quality writing.

ETS staff offered assurances that their policy of fostering open communication between readers, lead scorers, master lead scorers, and supervisory ETS staff facilitates the flow of information and encourages questions if something unusual is encountered during scoring. In addition, due to low reader turnover, most of the readers are experienced and know to ask questions if something suspicious arises. Also, the number of people reading each response (every response is scored independently by two readers, and a percentage of responses are scored a third time by supervisory staff) increases the likelihood that evidence of potential cheating would be brought to the attention of senior staff.

Evaluation of Range-Finding Session

Overall, the May 2011 CAHSEE Range-Finding Session was excellently managed and professionally conducted. The time allowed for the tasks seemed adequate, and the ETS facilitators used that time efficiently. The discussions were always collegial and thorough—there was no indication that any comments or opinions were disregarded.

In HumRRO's quality assurance work with other assessments scored by human readers, for example constructed response items in the National Assessment of Educational Progress (NAEP), we have encountered differing definitions of "anchor" versus "range finding" papers than those used by ETS for CAHSEE essay scoring. For example, we are familiar with anchor papers used to represent unambiguous examples of a particular score point and range-finding papers used to represent the range or scope of possible types of papers with nuances that illustrate the high or low end of a score point.

We observed ETS staff using several techniques that were effective in ensuring selection of appropriate anchor and range-finding papers for future reader training. For example, ETS asked readers to explicitly describe the score point criteria that matched the paper under discussion and ensured that scoring decisions were consistently driven by the scoring guide. Additionally, cross-checking scores on papers to confirm or refine current and prior scoring decisions was an important step to achieving reliability.

Analyses of Test Scores

HumRRO conducted two activities to evaluate statistical characteristics of the test scores. As in prior years, we analyzed the consistency of essay scores generated by independent readers (scorers). As a final step in evaluating test administration and scoring procedures, we also conducted an independent replication of score equating for the March 2011 administration.

Consistency in Scoring the Essays

We analyzed data on essay scoring results to determine the degree of consistency in the scoring of the student essays used with the 2010–11 CAHSEE administrations and compared the results to indicators of scoring consistency from 2004–05 through 2009–10. Prior to the 2003–04 school year each student taking the ELA test was required to write two essays, the first involving analysis of an associated text and the second in response to a freestanding question that did not involve text processing. Beginning in 2004, the ELA test was shortened and students were required to write only one essay. In the 2004–05 test year the type of essay prompt (text-based versus stand-alone) varied across administrations. In the 2005–06 through 2010–11 testing years, stand-alone prompts were used in each administration.

As in prior years, each essay was graded by at least two different readers (scorers) using a four-point rubric that indicated the essay response characteristics required for each score level. Four was the highest score; a score of zero was assigned to responses that were off-topic, illegible, or left blank. Since the scoring rubrics vary from one essay topic to another and different topics were asked in different administrations, we monitored the level of agreement between independent readers for the question used with each administration. Table 2.13 and 2.14 show agreement rates by grade for each of the 2010–11 test forms and for test forms from prior years. Agreement is measured by: (a) how often (what percentage of the time) there was exact agreement versus (b) how often there was a difference of more than one score point. Whenever there was an initial difference of more than one score point, the essay was read again by a third, more experienced reader and, if necessary, a fourth so that all operational scores resulted from two readers who agreed to within a single score point.

As shown in Table 2.13, we again analyzed scoring consistency separately for students in grades ten, eleven, and twelve. While the questions and the scoring process were identical for these groups, the quality of the papers they produced was not. Grade ten students generated many more essays rated as 3 or 4 in comparison to grade eleven and twelve students, none of whom had passed the CAHSEE ELA when they

were in grade ten. The greater range of scores increases the possibility that readers may disagree by more than one point, leading to lower agreement rates for the grade ten essays. The Kappa statistic[5] shown in Table 2.13 takes differences in chance agreement rates into account. The statistic has a value of 1.0 when there is perfect agreement and a value of 0.0 when agreement is at chance levels. Kappa values were not computed in prior years and so are not included in Table 2.14.

Table 2.13. 2010–11 Scoring Consistency for CAHSEE ELA Student Essays by Administration and Grade

	Grade Ten			Grade Eleven			Grade Twelve		
Admin.	Percent Exact Agreement	Percent > 1 Score Point Different	Coefficient Kappa	Percent Exact Agreement	Percent > 1 Score Point Different	Coefficient Kappa	Percent Exact Agreement	Percent > 1 Score Point Different	Coefficient Kappa
July 2010	n/a	n/a	n/a	n/a	n/a	n/a	79.3	0.2	0.55
October 2010	n/a	n/a	n/a	77.0	0.4	0.59	78.6	0.4	0.58
November 2010	n/a	n/a	n/a	74.0	0.5	0.53	75.8	0.6	0.55
December 2010	n/a	n/a	n/a	75.6	0.7	0.53	80.5	0.2	0.51
February 2011	63.2	1.4	0.48	77.0	0.5	0.57	78.2	0.4	0.57
March 2011	67.6	0.9	0.49	82.1	0.2	0.60	82.6	0.2	0.62
May 2011	71.2	0.6	0.65	77.7	0.3	0.60	80.1	0.3	0.61
All 2010–11	66.7	1.0	0.49	76.7	0.4	0.57	78.6	0.4	0.58

Agreement rates were consistently high across grades and administrations/test forms, with Kappa values ranging from about .50 to .65. Agreement rates were somewhat lower for grade ten students in the two main census administrations, particularly for the February 2011 administration. The exact agreement rate was less than 65 percent, the rate of significant disagreement (more than one score point) was well above one percent, and the Kappa value was less than .50. It is likely that ETS had to bring in new scorers to handle the large volume of scoring of this administration. ETS may wish to review scorer training, qualifying, and monitoring procedures to see if agreement rates can be increased in future years.

Table 2.14 provides a comparison of agreement rates across years. Overall, the frequency of significant disagreements (more than one score point) was about the same in 2010–11 as it was in 2009–10 at each grade level. The exact agreement rate for grade ten for 2010–11 was 66.7 compared to 66.6 percent the previous year. The exact agreement rate for grade eleven dropped slightly from 77.1 to 76.7 percent, and the agreement rate for grade twelve also dropped a bit, from 80.0 to 78.6 percent. Previously, we suggested targets of at least 70 percent exact agreement with no more than 0.5 percent disagreement by more than one score point. ETS did not meet these targets in the 2010–11 testing year for the grade ten essays. While agreement rates are generally

[5] See Cohen, Jacob (1960). "A coefficient of agreement for nominal scales". *Educational and Psychological Measurement* **20** (1): 37–46.

acceptable, there is a slight trend toward less agreement and ETS may wish to review their scorer training and monitoring processes to see if further improvements are possible.

Table 2.14. Comparison of CAHSEE ELA Essay Scoring Agreement Rates from 2004–05 through 2010–11

	Grade Ten		Grade Eleven		Grade Twelve	
Admin.	Percent Exact Agreement	Percent > 1 Score Point Different	Percent Exact Agreement	Percent > 1 Score Point Different	Percent Exact Agreement	Percent > 1 Score Point Different
All 2004–05	66.5	0.9	70.3	0.9	-	-
All 2005–06	66.9	0.7	73.5	0.4	73.6	0.4
All 2006–07	69.9	0.4	77.4	0.2	77.7	0.3
All 2007–08	67.2	0.9	76.8	0.4	77.9	0.4
All 2008–09	66.9	0.8	77.4	0.3	79.5	0.3
All 2009–10	66.6	0.8	77.1	0.2	80.0	0.2
All 2010–11	66.7	1.0	76.7	0.4	78.6	0.4

Tables 2.15 and 2.16 provide more detailed information on scores assigned by each of the two independent readers for grade ten students in the February through May 2010 administrations and in the February through May 2011 administrations respectively. There was perfect agreement on the essays judged to be unscorable (score level 0). There was generally good agreement on essays assigned to score levels 1 through 3. If the first reader assigned a score at one of these levels, the second reader was most likely to assign the same score. Agreement at the highest level was lower than at other levels. If the first reader assigned a score of 4, the second reader was most likely to assign a score of 3. Nearly all of the serious (more than 1 point) disagreements involved one reader assigning a score of 2 and the other a score of 4. The average ratings were similar, 2.5 for 2009–10 and 2.4 for 2010–11, and the pattern of disagreement between independent readers was very similar.

Table 2.15. Percentage of Grade Ten Essays Assigned Each Score Level by Each Reader in the February Through May 2010 CAHSEE ELA Administrations

First	Second Reader				
Reader	0	1	2	3	4
0	**1.01**	0.00	0.00	0.00	0.00
1	0.00	**1.21**	0.77	0.01	0.00
2	0.00	0.75	**36.52**	12.19	0.38
3	0.00	0.01	12.13	**25.31**	3.43
4	0.00	0.00	0.39	3.35	**2.53**
Average score from first reader					2.5
Average score from second reader					2.5
Percent Exact Agreement (sum of diagonal elements)					66.6
Percent with differences greater than one point					0.8

Table 2.16. Percentage of Grade Ten Essays Assigned Each Score Level by Each Reader in the February Through May 2011 CAHSEE ELA Administrations

First Reader	Second Reader				
	0	1	2	3	4
0	**0.84**	0.00	0.00	0.00	0.00
1	0.00	**1.64**	1.05	0.02	0.00
2	0.00	1.03	**41.09**	11.94	0.49
3	0.00	0.02	12.02	**21.02**	3.06
4	0.00	0.01	0.50	3.20	**2.07**
Average score from first reader					2.4
Average score from second reader					2.4
Percent Exact Agreement (sum of diagonal elements)					66.7
Percent with differences greater than one point					1.0

Note. Bolded numbers indicate perfect agreement between the two readers.

In summary, scoring consistency was similar to consistency rates in prior years and was generally acceptable. Nonetheless, ETS should review the training, qualification, and monitoring procedures used when new scorers are brought in to handle the large volume of essays in the February administrations, so as to make scoring consistency more comparable across administrations.

A final point about the accuracy of the essay scores that will be addressed further in subsequent evaluation reports: There is no way of directly estimating how much a student's score would vary across different essay prompts, since each student only responds to a single prompt. Prior analyses of similar tests (Wise, 2011) suggest that differences in student scores for different essay prompts could be significant. Currently, this facet is not addressed in assessing the accuracy of the overall ELA scores and the consistency in classifying students as meeting or not meeting the CAHSEE ELA requirement.

Verification of Score Equating

After each test administration, ETS analyzes item response patterns to determine the exact difficulty of each test question and then equates scores from the new administration to scores from prior test administrations.[6] The result of this equating is a conversion table showing the scale score to be reported for each number-correct (raw) score. The equated scale scores for a given number-correct score vary slightly across test forms, reflecting slight differences in the difficulty of achieving the number-correct score on each of the test forms. In 2007, HumRRO independently replicated ETS' equating analyses for one administration (Wise & Rui, 2007) and found exact

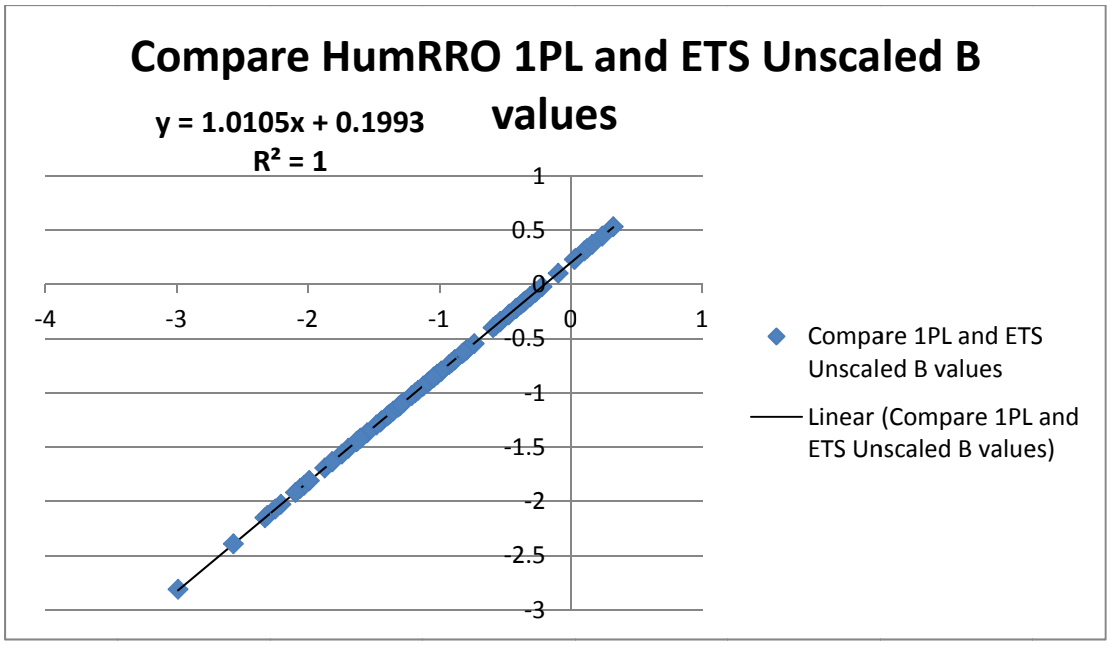
[6] Equating is necessary to compensate for minor differences in difficulty in the forms used in different CAHSEE administrations. More detailed information about operational equating procedures may be found in technical documentation provided by ETS (see www.ets.org/cahsee).

agreement. As part of the continuing CAHSEE evaluation, CDE requested that HumRRO conduct another replication of CAHSEE equating and scaling procedures.

The first step in the equating process is to review classical item statistics, including percent correct and item-total correlations, to identify any poor performing items. Classical statistics were found to be acceptable for all operational items. The second step is to estimate item response theory (IRT) difficulty values for each multiple choice item and graded response step values for the different essay score levels. HumRRO's replication differed from the operational procedures used by ETS in two significant ways. First, we used the MULTILOG program to estimate item difficulties, while ETS uses proprietary software that is slightly different. We wanted to see if the choice of IRT software made any noticeable difference. Second, ETS uses a number of steps to trim the samples used for calibration, eliminating incomplete data and cases with inconsistent essay and multiple choice item scores. We used all of the students who received scores in our analyses. These two differences led to small mean differences in the estimated item difficulties which were eliminated through equating. Figure 2.4 shows a plot of the item difficulty values that we estimated in comparison to the values estimated by ETS.

The next step in the equating process is to compare item difficulties estimated from the current administration with item difficulties estimated for each item in prior administrations. A subset of the current items is designated as linking items. To put item difficulty estimates on the prior scale, initial item difficulty estimates for these linking items are adjusted by adding a linear constant that makes them as similar as possible to the prior difficulties estimated for these items. The same adjustment is then applied to all operational items on the current form. As part of this step, it is important to check that all of the linking items are providing similar information about differences between the current and prior administrations. Figures 2.5 and 2.6 show how the new difficulty levels estimated by HumRRO compared to the prior difficulty estimates provided by ETS for mathematics and ELA respectively. For ELA, one linking item was found to have a different relationship to its prior difficulty than was found for all of the other linking items. HumRRO confirmed that ETS had also identified this same item as an outlier and dropped it from the equating analyses.

The final step in the equating analyses is to use the adjusted item difficulties to create a scoring table. The IRT model provides an expected number correct score for each value on the underlying reporting scale. This relationship is inverted to map the expected number correct score onto the underlying scale score. The scoring tables that we estimated differed slightly from the tables estimated by ETS due to round-off differences at a few points. Given slight differences in the calibration samples, these differences were to be expected. None of the differences affected the passing levels.



Note: HumRRO estimated item difficulties for a one-parameter logistic (1PL) model using Multilog and compared these to ETS difficulty estimates (b-values).

Figure 2.4 Comparison of IRT difficulties estimated by HumRRO and ETS.

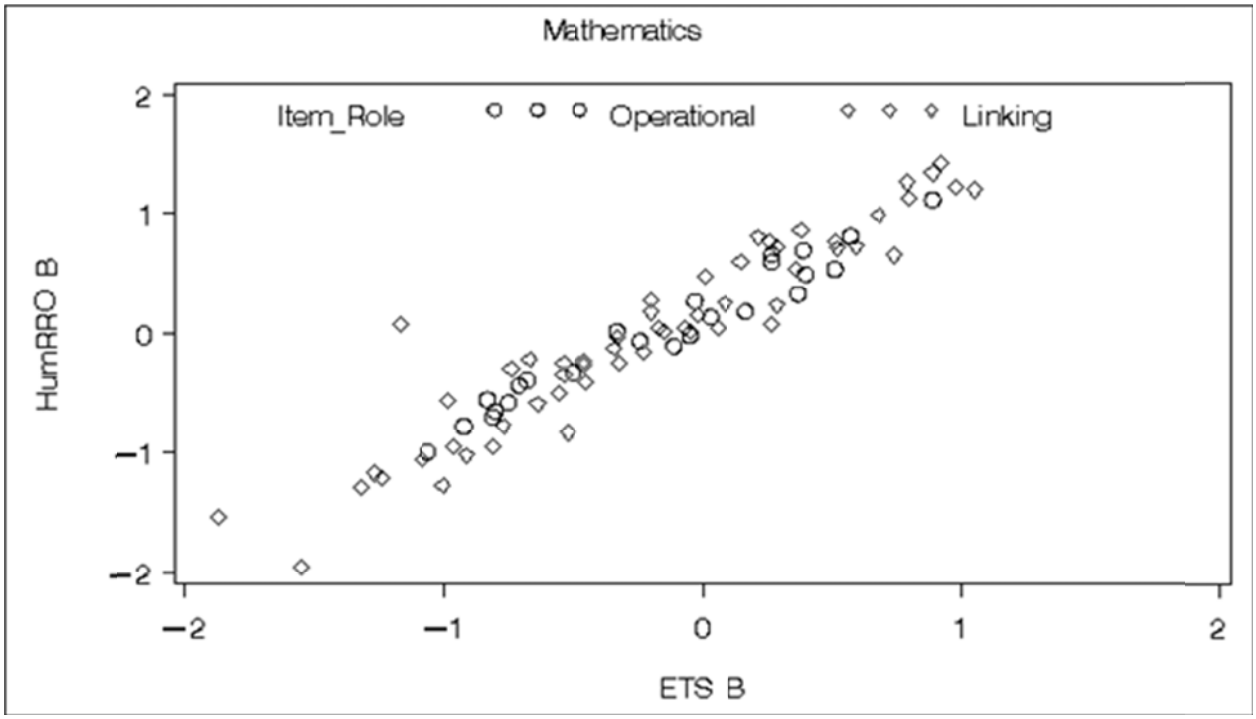


Figure 2.5 Comparison of Current and Prior IRT difficulty estimates for linking (L) and other operational items (O) on the March 2011 CAHSEE test form—Mathematics.

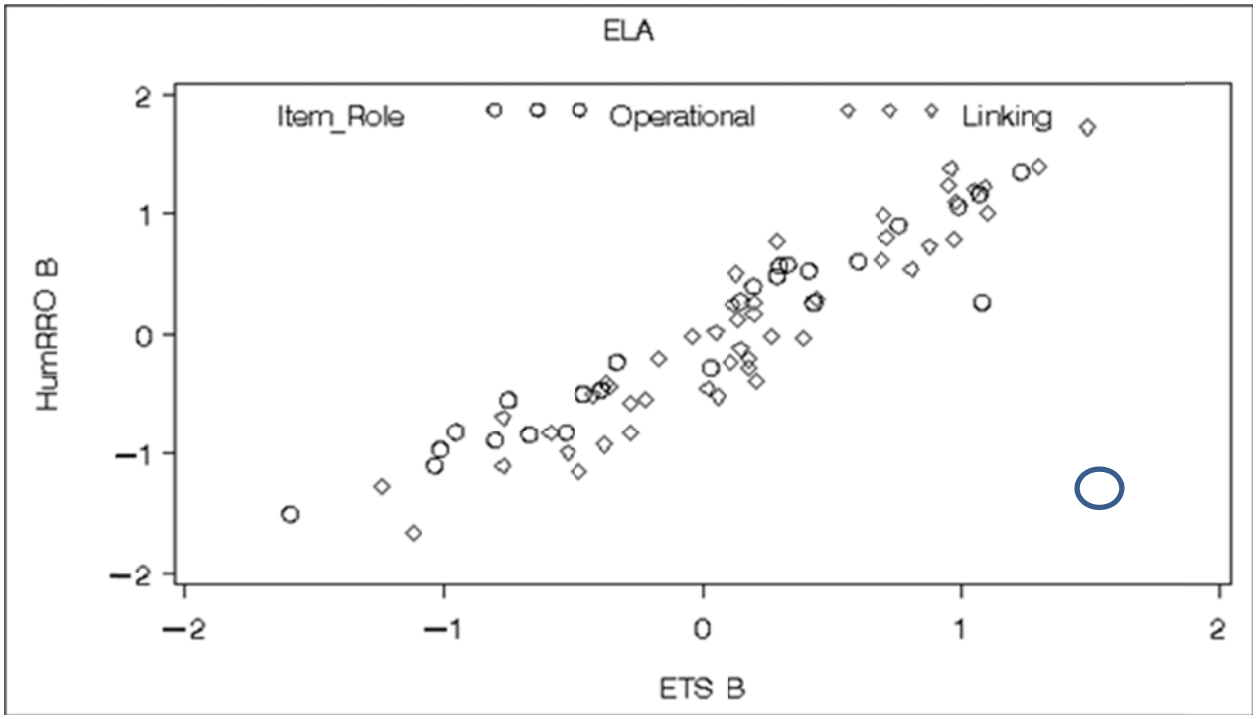


Figure 2.6 Comparison of Current and Prior IRT difficulty estimates for linking (L) and other operational items (O) on the March 2011 CAHSEE test form—ELA.

Tables 2.17 and 2.18 show the operational raw-to-scale score conversions used for each of the 2010–11 test forms. For mathematics, a student guessing at random will average 20 correct responses corresponding to scale scores ranging from 304 to 310. Guessing is less of an issue with the ELA test because of the substantial weight given to the essay. The number of correct items needed to reach a score of 350 and pass varies from 55 to 56 for ELA and 42 to 44 for mathematics. The number of correct answers needed to reach a score of 380 and be judged proficient for accountability purposes varies from 68 to 69 for ELA and 58 to 59 for mathematics.

In summary, HumRRO's replication of score equating procedures provided an independent verification of the procedures used by ETS. Importantly, neither the choice of IRT estimation software nor the procedures used to trim the calibration sample were found to have any significant effect on the resulting score tables.

Table 2.17. Raw-to-Scale Score Conversions for the 2010–11 CAHSEE ELA Tests

Raw Score	Scale Score Jul 10	Oct 10	Nov 10	Dec 10	Feb 11	Mar 11	May 11	Raw Score	Scale Score Jul 10	Oct 10	Nov 10	Dec 10	Feb 11	Mar 11	May 11
0-15	275	275	275	275	275	275	275	51	342	342	342	342	343	343	342
16	275	275	275	275	275	275	275	52	344	344	343	344	344	345	344
17	275	277	275	275	277	275	276	53	346	346	345	346	346	347	346
18	**276**	**279**	**277**	**275**	**279**	**275**	**278**	54	348	348	347	348	348	349	348
19	278	281	279	277	281	278	280	55	350	350	349	350	350	352	350
20	280	283	282	279	283	280	283	56	352	352	351	352	353	354	352
21	283	285	284	281	285	282	285	57	354	354	354	354	355	356	354
22	285	287	286	283	287	284	287	58	356	356	356	356	357	358	356
23	287	289	288	286	289	287	289	59	358	358	358	358	359	361	358
24	289	291	290	288	291	289	291	60	360	360	360	360	361	363	360
25	291	293	292	290	293	291	293	61	362	362	362	363	363	365	362
26	293	295	294	292	295	293	295	62	365	365	364	365	365	368	364
27	295	297	296	294	297	295	297	63	367	367	367	367	368	370	366
28	297	299	298	296	299	297	299	64	369	369	369	369	370	373	369
29	298	301	299	298	301	299	300	65	371	371	371	372	372	375	371
30	300	302	301	300	303	301	302	66	374	374	374	374	375	378	373
31	302	304	303	302	305	303	304	67	376	376	376	377	377	381	376
32	304	306	305	304	307	305	306	68	379	379	379	379	380	383	378
33	306	308	307	306	308	307	308	69	381	381	381	382	382	386	381
34	308	310	309	308	310	309	310	70	384	384	384	385	385	389	383
35	310	312	311	310	312	311	312	71	387	387	387	387	388	392	386
36	312	314	313	312	314	313	314	72	390	390	389	390	391	395	389
37	314	315	315	314	316	315	316	73	393	393	392	393	394	399	392
38	316	317	317	316	318	317	318	74	396	396	395	396	397	402	395
39	318	319	319	318	320	319	319	75	399	399	399	399	400	406	398
40	320	321	320	320	322	321	321	76	402	402	402	403	404	410	401
41	322	323	322	322	323	323	323	77	406	406	406	406	408	414	405
42	324	325	324	324	325	325	325	78	409	410	409	410	411	418	409
43	326	327	326	326	327	327	327	79	413	414	413	414	416	422	413
44	328	329	328	328	329	329	329	80	418	418	418	418	420	427	417
45	330	331	330	330	331	331	331	81	422	423	422	423	425	433	422
46	332	332	332	332	333	333	332	82	427	428	427	427	430	439	427
47	334	334	334	334	335	335	334	83	432	433	433	431	436	445	433
48	336	336	336	336	337	337	336	84	438	439	439	436	442	450	439
49	338	338	338	338	339	339	338	85	445	446	446	442	450	450	446
50	340	340	340	340	341	341	340	86-90	450	450	450	450	450	450	450

Note. Shaded numbers reflect minimum scores for passing the diploma requirement (the first [blue]) shaded number in each column) and for proficiency as used in school accountability (the second [yellow] shaded number); bold underlined scale scores indicate expected scores from guessing alone (chance).

Table 2.18. Raw-to-Scale Score Conversions for the 2010–11 CAHSEE Mathematics Tests

Raw Score	Scale Score Jul 10	Oct 10	Nov 10	Dec 10	Feb 11	Mar 11	May 11	Raw Score	Scale Score Jul 10	Oct 10	Nov 10	Dec 10	Feb 11	Mar 11	May 11
0-8	275	275	275	275	275	275	275	43	350	349	349	349	352	352	352
9	275	275	275	276	275	275	276	44	352	351	351	351	353	354	354
10	276	277	276	277	279	277	280	45	353	353	353	353	355	356	355
11	280	281	279	280	282	281	284	46	355	355	355	355	357	357	357
12	284	284	283	284	286	285	287	47	357	356	356	357	359	359	359
13	287	288	286	287	289	288	290	48	359	358	358	358	361	361	361
14	290	291	289	290	292	291	293	49	361	360	360	360	362	363	363
15	293	293	292	293	295	294	296	50	362	362	362	362	364	365	364
16	296	296	295	296	298	297	299	51	364	364	364	364	366	367	366
17	298	299	298	298	300	300	301	52	366	366	366	366	368	369	368
18	301	301	300	301	303	302	304	53	368	367	368	368	370	371	370
19	303	304	303	303	305	305	306	54	370	369	370	370	372	373	372
20	306	306	305	306	308	307	309	55	372	371	372	372	374	375	374
21	308	308	307	308	310	309	311	56	374	373	374	374	376	377	376
22	310	310	310	310	312	312	313	57	376	375	376	376	378	379	378
23	312	313	312	312	314	314	315	58	379	378	378	378	380	381	380
24	314	315	314	314	316	316	317	59	381	380	380	380	383	384	382
25	317	317	316	316	318	318	319	60	383	382	382	383	385	386	385
26	319	319	318	318	321	320	321	61	385	384	385	385	387	388	387
27	321	321	320	320	322	322	323	62	388	387	387	387	390	391	389
28	323	322	322	322	324	324	325	63	390	389	390	390	392	393	392
29	324	324	324	324	326	326	327	64	393	392	392	393	395	396	394
30	326	326	326	326	328	328	329	65	396	395	395	395	397	399	397
31	328	328	328	328	330	330	331	66	399	397	398	398	400	402	400
32	330	330	330	330	332	332	333	67	402	400	401	401	403	405	403
33	332	332	331	332	334	334	334	68	405	404	404	405	407	408	406
34	334	333	333	333	336	336	336	69	408	407	408	408	410	411	409
35	336	335	335	335	337	337	338	70	412	411	411	412	414	415	413
36	337	337	337	337	339	339	340	71	416	415	415	416	418	419	417
37	339	339	339	339	341	341	341	72	420	419	420	420	422	424	422
38	341	341	340	341	343	343	343	73	425	424	425	425	427	429	426
39	343	342	342	342	344	345	345	74	431	430	430	431	433	434	432
40	344	344	344	344	346	347	347	75	438	436	437	437	439	441	438
41	346	346	346	346	348	348	348	76	445	444	445	445	447	449	446
42	348	347	347	348	350	350	350	77-80	450	450	450	450	450	450	450

Note. Shaded numbers reflect minimum scores for passing the diploma requirement (the first [blue] shaded number in each column) and for proficiency as used in school accountability (the second [yellow] shaded number); underlined scale scores indicate expected scores from guessing alone (chance).

Chapter 3: Analyses of CAHSEE Test Results

Lauress L. Wise

Introduction

The legislation establishing the California High School Exit Examination (CAHSEE) called for the first operational forms of the examination to be administered in spring 2001 to grade nine students in the Class of 2004. At the first administration grade nine students could volunteer, but were not required, to take both portions of the examination. Students who did not pass the examination in that administration were required to take the examination as grade ten students in spring 2002. Preliminary results from the CAHSEE spring 2001 and 2002 administrations were reported in the 2001 and 2002 evaluation reports (Wise et al., June 2001; Wise et al., June 2002b). Results from the 2001 administration were reported more fully in the first of the biennial evaluation reports to the Legislature, the governor, the State Board of Education (SBE), and the California Department of Education (CDE) (Wise et al., Jan. 2002a).

The CAHSEE was administered six more times from July 2002 through May 2003 to students in the Class of 2004 who had not yet passed one or both parts. In addition, students from the Class of 2005 were required to take the CAHSEE for the first time as grade ten students in March or May of 2003. Analyses of results from these administrations were reported in the 2003 evaluation report (Wise, et al., Sep. 2003) and in the second biennial evaluation report (Wise et al., 2004).

Subsequent to the 2002–03 administrations, the requirement to pass the CAHSEE was deferred to the Class of 2006. In the 2003–04 school year, the CAHSEE was modified slightly and administered in spring 2004 to all grade ten students in the Class of 2006. Results from the 2004 administrations were reported in Chapter 2 of the 2004 evaluation report (Wise, et al., Sep. 2004).

The 2004–05 administrations included both grade ten students in the Class of 2007 taking the CAHSEE for the first time and grade eleven students in the Class of 2006 who had not passed the CAHSEE as grade ten students. The grade eleven students took the CAHSEE one or more times in September and November 2004, or February, March, and May 2005. The grade ten students participated in the February, March, or May 2005 administrations. In addition, a small number of adult education (AE) students took the CAHSEE during the 2004–05 school year. Analyses of results from the 2004–05 administrations were reported in Chapter 3 of the 2005 evaluation report (Wise, et al., Sep. 2005).

The 2005–06 CAHSEE administrations included grade ten students in the Class of 2008, grade eleven students in the Class of 2007, and grade twelve students in the Class of 2006. Except for students in special education programs who could meet the CAHSEE requirement in other ways, grade twelve students who

still had not passed the CAHSEE by the end of the 2005–06 test year were denied diplomas. Analyses of results from the 2005–06 administrations were reported in Chapter 2 of the 2006 evaluation report (Wise, et al., Sep. 2006).

The 2006–07 CAHSEE administrations were more complex still. Three separate classes of high school students, 2007 through 2009, as well as many students from the Class of 2006 who had not passed the CAHSEE by the end of their senior year, took the tests. Essentially, all grade ten students in the Class of 2009 were tested for the first time in February, March, or May of 2007. Grade eleven students in the Class of 2008 who had not yet passed the CAHSEE had multiple opportunities to take the CAHSEE in the July, October, November, or December 2006 administrations and in the February, March, or May 2007 administrations. Grade twelve students in the Class of 2007 who still needed to pass the CAHSEE had as many as three opportunities to take the CAHSEE during these same administrations. In addition, many students from the Class of 2006 continued to take the CAHSEE, either as students repeating grade twelve or as AE students. Analyses of results from the 2006–07 administrations were reported in the 2007 evaluation report (Becker and Watters, 2007).

In 2002, a lawsuit (Kidd et al. vs. O'Connell et al., formerly referred to as the Chapman case) was filed on behalf of students with disabilities (SWD). While the suit was pending, the parties agreed that SWD in the classes of 2006 and 2007 could receive a diploma even if they did not pass the CAHSEE, as long as they met all other local and state requirements, although many of these students continued to take the CAHSEE. A final settlement was reached in March 2008 reinstating the requirement that SWD pass the CAHSEE and requiring the CDE to conduct a study of SWD who are unable to pass. Analyses of results from the 2007–08 and 2008–09 CAHSEE administrations, including passing rates for SWD in the Classes of 2008 and 2009 were reported in our 2008 and 2009 annual reports (Becker and Watters, 2008; Becker and Watters, 2009). All of these reports are available on the CDE Web site at http://www.cde.ca.gov/ta/tg/hs/evaluations.asp.

Key Analysis Questions

This report covers cumulative CAHSEE results through the 2010–11 administrations. Analyses are organized around four main issues.

1. How many first-time grade twelve students in the Class of 2011 who had not passed the CAHSEE were able to pass in their senior year, and how many did not meet the CAHSEE requirement by June 2011? How did these numbers compare to the results for the classes of 2006 through 2010?

2. How did the performance of grade eleven students in the Class of 2012 who had not yet passed the CAHSEE change and what can we expect for those who have not yet passed by the end of grade eleven? Also, how did improved performance for grade eleven students in the Class of 2012

compare to improvements seen in our previous analyses for grade eleven students in the classes of 2006 through 2011?

3. How did 2011 results for grade ten students in the Class of 2013 compare to results for the classes of 2006 through 2012 when those students took the CAHSEE for the first time as grade ten students in 2004 through 2010 respectively?

4. How many students from the classes of 2008 through 2010 who had not met the CAHSEE requirement continued to try to pass the CAHSEE in 2011? How many of them passed?

Our analyses answer each of these questions for students in specific demographic categories defined by gender, race/ethnicity, economic disadvantage, and English-learner or special education status. Results for AE students are reported briefly, but are not the primary policy focus of these analyses except for AE students who were previously in the Classes of 2006 through 2009.

Test Result Data

The primary source of data used to analyze CAHSEE test results was detailed item-analysis files received from the testing contractor, Educational Testing Service (ETS), after each CAHSEE administration. These data were analyzed and documented in brief reports with cumulative results through each separate administration. The files contain test item and student questionnaire responses for each student who took the CAHSEE, but do not include corrections to demographic information and may exclude a small number of students whose test results were not processed in time to be included in these files. The 2009–10 files contained records for 1,029,300 answer documents and the 2010–11 files contained records for 1,000,786 answer documents.

A second source of data was a complete, end-of-year detail file, also supplied by ETS. This file contained preliminary, but not final, corrections to demographic information and included records for additional students not included on the item analysis files. The detail file does not, however, contain responses to individual test questions or to the student questionnaire.

Some students used more than one answer document in the same CAHSEE administration (usually one for the ELA test and one for the mathematics test), resulting in multiple test records on the ETS files for the same student. In addition, many grade eleven and grade twelve students participate in more than one administration during the year. We matched answer documents within and across the 2010–11 administrations to avoid counting the same student more than once.

We matched the 2009–10 and 2010–11 CAHSEE test data to test results from prior-year CAHSEE administrations. Many students moved from one high school

class to another over the years because they repeated or skipped a grade according to the CAHSEE test records. If students who changed to a different class had previously passed only one of the CAHSEE tests, they had to be removed from the prior counts of students passing that test for their original class and added to the corresponding counts for their new class. For this reason, counts of students in a given class who had passed either the ELA or mathematics test in previous years were subject to change. Counts of students who passed both tests did not change, so long as these students did not participate in further CAHSEE testing. Some of the students previously meeting the CAHSEE requirement might have changed to a different high school class, but we would have no way of verifying such a change. We also deleted a few records for students who appeared to be taking a CAHSEE test even though they had already been counted as meeting the CAHSEE requirement.

Table 3.1 shows the relationship of the high school class based on the grade reported last year during 2009–10 testing to the high school class and grade indicated in the 2010–11 test records for students with matching prior-year records. Of the grade twelve students testing in 2010-11 (Class of 2011), 77 percent were in grade eleven the year before (56,913 of the 74,154 current grade twelve students who had not yet passed the CAHSEE were matched to the previous year's records). A substantial number (11,388) of students shown as grade twelve last year were first-time grade twelve students in the preceding year (Class of 2010). Some others of the 2010-11 examinees were from even earlier high school classes. When adult education (AE) students were also included, data showed 107 students who were originally in the Class of 2006, 224 who were originally in the Class of 2007, 418 who were in the Class of 2008, 3,573 who were in the Class of 2009, and 13,050 who were previously in the Class of 2010.

More detailed descriptions of the processing of the CAHSEE 2009–10 and 2010–11 test records are provided in the 2010 and 2011 annual CAHSEE evaluation reports (Becker and Watters, 2010; Becker and Watters, 2011).

Table 3.1. Number of 2010–11 CAHSEE Examinees (Excluding Blank Answer Documents) Matched to Prior-Year Records by Current and Prior High School Class

Grade and High School Class in 2009–10	Grade and High School Class in 2010–11 School Year				
	Grade 10 (Class of 2013[1])	Grade 11 (Class of 2012)	Grade 12 (Class of 2011[2])	Adult Education	Total Matched
Grade 9 (Class of 2013[1])	474,757				474,757
Grade 10 (Class of 2012)	5,143	106,714	2,972	95	114,924
Grade 11 (Class of 2011)	809	4,211	56,913	510	62,443
Grade 12 (Class of 2010)	116	410	11,388	1,136	13,050
Grade 12 in 2008–09 (Class of 2009)	27	86	2,754	706	3,573
Grade 12 in 2007–08 (Class of 2008)	0	0	22	396	418
Grade 12 in 2006–07 (Class of 2007)	0	0	0	224	224
Grade 12 in 2005–06 (Class of 2006)	0	0	0	107	107
Adult Education	16	33	105	149	303
Total Matched	480,868	111,454	74,154	3,323	669,799

[1] 2010-11 grade ten students not matched to 2009–10 CAHSEE records were assumed to have been in the Class of 2013 in the prior year as well as last year.

[2] Grade twelve students include students previously in the Classes of 2006 through 2010 as well as the Class of 2011.

Note: Shaded cells indicate normal grade progression. Normal progression for grade twelve students who did not pass is either to repeat grade twelve or to enter AE.

Computing Passing Rates

A key issue in computing and reporting passing rates for the CAHSEE is what to use as the denominator. The two main choices are (a) the number of students who took each test and (b) the number of students subject to the CAHSEE requirement. In this report, as in our prior reports, we have opted for the latter, reporting the proportion of all students in the target populations who have passed. However, the number of students in the target populations fluctuates with daily enrollment changes. Table 3.2 compares fall enrollment counts (reported by DataQuest), enrollment counts from the Standardized Testing and Reporting (STAR) Program tests that occurred closer in time to the CAHSEE testing dates, and record counts from the CAHSEE. The CAHSEE is now also being used for grade ten accountability under the federal Elementary and Secondary Education Act (ESEA)

requirements. Essentially all students must be tested to meet ESEA participation requirements, so the CAHSEE counts appear to be reasonably complete. We used total CAHSEE record counts in computing grade ten passing rates for this report. STAR reports include the number of students tested in different demographic groups, but do not include separate enrollment counts for these groups.

Table 3.2. Grade Ten Enrollment Estimates from California Basic Education Data System (CBEDS), STAR, and CAHSEE[1]

Source	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11
Fall enrollment (CBEDS)	490,465	497,203	515,761	517,873	513,707	509,157	506,042	502,452
STAR reported enrollment	475,201	482,164	502,616	500,655	495,912	495,705	497,957	495,310
STAR students tested (Grade Ten ELA)	452,242	462,795	482,781	481,950	478,582	479,510	482,333	466,929
CAHSEE examinees[2]	459,199	470,891	505,045	502,106	493,559	496,688	498,187	480,868
Percentage of fall enrollment	93.7%	94.7%	97.9%	96.9%	96.0%	97.6%	98.4%	95.7%

1 CBEDS and STAR data were retrieved online through CDE's Dataquest facility at http://dq.cde.ca.gov/dataquest.

2 CAHSEE student counts, after merges to remove duplication, were used in computing passing rates. Students with blank answer documents are included in the grade ten counts.

The denominators used in computing passing rates for grade eleven and twelve students were adjusted to reflect students who moved between high school classes, transferred out of state, or dropped out. The denominator used was the number of students in the class who had passed the CAHSEE in prior years plus the number still taking the CAHSEE during 2009–10. Some of the students who passed in prior years may also have changed classes or dropped out, but were not in our data files because they did not take the CAHSEE again. In the future, the California Longitudinal Pupil Achievement Data System (CALPADS) will provide better data on students who do not participate in further CAHSEE testing, including both those who have passed the CAHSEE and those who have not.

We recognize that excluding students who dropped out before grade twelve from the computation of passing rates may overstate student success in meeting the CAHSEE requirement. There is no way of knowing, however, how many of the students who dropped out might have passed the CAHSEE had they kept trying. The high rate of high school dropouts is a serious and costly problem (Alliance for Excellence, 2007) that is somewhat beyond the scope of the present evaluation. While there is no evidence that the CAHSEE has led to increased dropout rates prior to grade twelve, there is some evidence (described in Chapter 6) that the CAHSEE requirement has prevented or delayed between one and four percent of seniors from graduating.

The denominators used in computing passing rates for the classes of 2006 through 2010 were unchanged from the numbers estimated during their original senior

year. For these classes, we report the number of students not continuing to take the CAHSEE separately, but retain them in the denominator.

Test Results

Class of 2011 — Last Year's Seniors Struggled to Meet Graduation Deadline

HumRRO worked with CDE to analyze test results for seniors after each of the 2010–11 administrations. Unlike students in the Classes of 2008 and 2009, SWD in the Classes of 2010 and 2011 may have received an exemption from the CAHSEE requirements while a panel of experts and the SBE considered alternative ways that they might demonstrate competency in the CAHSEE requirements. Because SWD received exemptions in some years (2006, 2007, 2010, and 2011) and not others (2008 and 2009), different tables are needed for comparison of each year's results to those of prior years. We provide tables that include and tables that exclude SWD from all demographic categories.

Tables 3.3 through 3.8 show cumulative passing rates for students in the Class of 2011, last year's first-time seniors. In the primary tables, SWD are excluded from all rows, due to the exemption currently reinstated for these students. To avoid duplication, students who had been seniors in 2006, 2007, 2008, 2009, or 2010 were excluded from the counts in Tables 3.3 through 3.8. We also provide an alternative to each table where SWD are included in all rows, allowing for direct comparison to prior-year results in some cases.

In the tables that follow, we believe that the most important values are the estimates of the numbers of students who have not yet passed either or both parts of the CAHSEE. The percentages shown are subject to some debate due to differences of opinion as to the appropriate denominator (the base for computing the percentages). For example, students who passed the CAHSEE but subsequently left the state or dropped out are included in the denominator, since we have no basis for estimating the number of these students.

Table 3.3. Estimated Number and Percentage of Students in the Class of 2011[1] Passing Both CAHSEE Tests Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[2]	Percent Pass
All Students	393,316	69,490	30,333	26,081	13,076	423,649	26,081	94.2%
Females	200,137	32,445	14,979	12,013	5,453	215,116	12,013	94.7%
Males	193,179	37,045	15,354	14,068	7,623	208,533	14,068	93.7%
American Indian or Alaska Native[3]	2,998	504	199	176	129	3,197	176	94.8%
Asian[3]	41,168	3,529	1,777	1,270	482	42,945	1,270	97.1%
Pacific Islander[3]	2,732	524	246	204	74	2,978	204	93.6%
Filipino[3]	13,437	891	486	298	107	13,923	298	97.9%
Hispanic or Latino	172,865	44,156	18,172	17,396	8,588	191,037	17,396	91.7%
African American or Black[3]	26,269	8,645	3,387	3,441	1,817	29,656	3,441	89.6%
White[3]	133,701	9,412	5,079	2,493	1,840	138,780	2,493	98.2%
Multiple Races[4]	134	1,820	986	800	34	--[4]	--[4]	--[4]
Economically Disadvantaged	172,948	44,951	18,560	17,943	8,448	191,508	17,943	91.4%
English Learner	38,622	28,043	10,778	12,122	5,143	49,400	12,122	80.3%
Reclassified Fluent English	84,249	4,853	2,964	1,195	694	87,213	1,195	98.6%

[1] Last year's grade twelve students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010) are ***excluded*** from this table. Last year's grade twelve students who tested as grade ten students in the preceding year have been moved into counts for the Class of 2011 and are included here along with students who tested as grade eleven students the year before. Students in special education programs are ***excluded*** from all rows.

[2] Students who had not passed and did not try to pass last year have been dropped from the cumulative totals.

[3] Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

[4] The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Explanation of table contents: Line 1 shows that through May of 2010, 393,316 students in the Class of 2011 who were not in special education classes had passed the CAHSEE and 69,490 had not. In 2010-11, 30,333 of the students who had not passed by May 2010 completed the CAHSEE requirement. Another 26,081 of these students took the CAHSEE, but have not yet passed both parts. An estimated 13,076 Class of 2011 students who had not passed by May 2010 did not participate in any administration in 2010-11 and have been dropped from the cumulative counts. Overall, we estimate that 423,649 students in the Class of 2011 have now passed the CAHSEE, which is 94.2 percent of the general education students in the Class of 2011 after adjusting for students moving into and out of this class and dropping students not continuing to try to pass the CAHSEE.

Table 3.4. Estimated Number and Percentage of Students in the Class of 2011[1] Passing Both CAHSEE Tests Through May 2011, Including Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[2]	Percent Pass
All Students	409,391	95,228	33,445	40,984	20,799	442,836	40,984	91.5%
Females	205,498	41,525	16,068	17,320	8,137	221,566	17,320	92.7%
Males	203,893	53,703	17,377	23,664	12,662	221,270	23,664	90.3%
American Indian or Alaska Native[3]	3,177	785	230	326	229	3,407	326	91.3%
Asian[3]	42,119	4,216	1,874	1,628	714	43,993	1,628	96.4%
Pacific Islander[3]	2,817	657	258	276	123	3,075	276	91.8%
Filipino[3]	13,662	1,112	522	427	163	14,184	427	97.1%
Hispanic or Latino	179,413	58,216	19,856	25,692	12,668	199,269	25,692	88.6%
African American or Black[3]	27,564	12,673	3,756	5,853	3,064	31,320	5,853	84.3%
White[3]	140,486	15,173	5,871	5,522	3,780	146,357	5,522	96.4%
Multiple Races[4]	140	2,382	1,077	1,256	49	--[4]	--[4]	--[4]
Economically Disadvantaged	180,099	61,332	20,426	27,764	13,142	200,525	27,764	87.8%
English Learner	42,052	36,599	11,724	17,186	7,689	53,776	17,186	75.8%
Reclassified Fluent English	85,647	5,820	3,193	1,676	951	88,840	1,676	98.1%
Special Education	16,075	25,738	3,112	14,903	7,723	19,187	14,903	56.3%

1 2010-11 grade twelve students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010) are ***excluded*** from this table. Last year's grade twelve students who tested as grade ten students in the preceding year have been moved into counts for the Class of 2011 and are included here along with students who tested as grade eleven students the year before. Students in special education programs are ***included*** in all rows.

2 Students who had not passed and did not yet try to pass in 2010-11 have been dropped from the cumulative totals.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

For the Class of 2011, more than 56,000 general education students and just over 18,000 special education students took the CAHSEE during the 2010–11 school year. Approximately 54 percent of the general education students who took the CAHSEE last year and 17 percent of the students in special education completed the CAHSEE requirement. As shown in Table 3.3, more than 26,000 general education students in the Class of 2011 are still trying to pass the CAHSEE but have not yet done so. Also, nearly 15,000 special education students did not pass the CAHSEE (Table 3.4). However, those special education students who completed all other graduation requirements may still have graduated due to the current exemption.

Tables 3.5 through 3.8 show the number of students passing each of the CAHSEE tests excluding and including special education students. Approximately 17,000 general education students and 11,000 special education students had not yet passed the ELA test. In addition, over 18,000 general education students and nearly 12,000 special education students had yet to pass the mathematics test.

Table 3.5. Estimated Number and Percentage of Students in the Class of 2011[1] Passing the CAHSEE ELA Test Through May 2011, Excluding Students with Disabilities

	By May 2010		July 2010–May 2011			Cumulative Total		
Group	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[2]	Percent Pass
All Students	407,991	54,815	24,841	16,898	13,076	432,832	16,898	96.2%
Females	209,156	23,426	11,066	6,907	5,453	220,222	6,907	97.0%
Males	198,835	31,389	13,775	9,991	7,623	212,610	9,991	95.5%
American Indian or Alaska Native[3]	3,108	394	171	94	129	3,279	94	97.2%
Asian[3]	41,392	3,305	1,691	1,132	482	43,083	1,132	97.4%
Pacific Islander[3]	2,820	436	216	146	74	3,036	146	95.4%
Filipino[3]	13,603	725	398	220	107	14,001	220	98.5%
Hispanic or Latino	182,387	34,634	14,467	11,579	8,588	196,854	11,579	94.4%
African American or Black	28,418	6,496	2,771	1,908	1,817	31,189	1,908	94.2%
White[3]	135,696	7,417	4,234	1,343	1,840	139,930	1,343	99.0%
Multiple Races[4]	555	1,399	891	474	34	--[4]	--[4]	--[4]
Economically Disadvantaged	182,540	35,359	14,849	12,062	8,448	197,389	12,062	94.2%
English Learner	42,484	24,181	9,565	9,473	5,143	52,049	9,473	84.6%
Reclassified Fluent English	86,399	2,703	1,562	447	694	87,961	447	99.5%

1 2010-11 grade twelve students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010) are ***excluded*** from this table. 2010-11 grade twelve students who tested as grade ten students the year before have been moved into counts for the Class of 2011 and are included here along with students who tested as grade eleven students the prior year. Students in special education programs are ***excluded*** from all rows.

2 Students who had not passed and did not try to pass last year have been dropped from the cumulative totals.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from last year's test records. Cumulative data are not shown because this category was not included in prior-year data.

Table 3.6. Estimated Number and Percentage of Students in the Class of 2011[1] Passing the CAHSEE ELA Test Through May 2011, Including Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[2]	Percent Pass
All Students	427,321	77,298	28,461	28,038	20,799	455,782	28,038	94.2%
Females	216,013	31,010	12,305	10,568	8,137	228,318	10,568	95.6%
Males	211,308	46,288	16,156	17,470	12,662	227,464	17,470	92.9%
American Indian or Alaska Native[3]	3,322	640	198	213	229	3,520	213	94.3%
Asian[3]	42,381	3,954	1,796	1,444	714	44,177	1,444	96.8%
Pacific Islander[3]	2,918	556	234	199	123	3,152	199	94.1%
Filipino[3]	13,862	912	434	315	163	14,296	315	97.8%
Hispanic or Latino	190,495	47,134	16,383	18,083	12,668	206,878	18,083	92.0%
African American or Black[3]	30,219	10,018	3,313	3,641	3,064	33,532	3,641	90.2%
White[3]	143,445	12,214	5,083	3,351	3,780	148,528	3,351	97.8%
Multiple Races[4]	666	1,856	1,018	789	49	--[4]	--[4]	--[4]
Economically Disadvantaged	191,437	49,994	17,121	19,731	13,142	208,558	19,731	91.4%
English Learner	46,544	32,107	10,676	13,742	7,689	57,220	13,742	80.6%
Reclassified Fluent English	88,028	3,439	1,748	740	951	89,776	740	99.2%
Special Education	19,330	22,483	3,620	11,140	7,723	22,950	11,140	67.3%

1 2010-11 grade twelve students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010) are ***excluded*** from this table. 2010-11 grade twelve students who tested as grade ten students the year before have been moved into counts for the Class of 2011 and are included here along with students who tested as grade eleven students the prior year. Students in special education programs are ***included*** in all rows.

2 Students who had not passed and had not yet tried to pass in 2010-11 have been dropped from the cumulative totals.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data..

Table 3.7. Estimated Number and Percentage of Students in the Class of 2011[1] Passing the CAHSEE Mathematics Test Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[2]	Percent Pass
All Students	407,447	55,359	24,148	18,135	13,076	431,595	18,135	96.0%
Females	205,428	27,154	12,781	8,920	5,453	218,209	8,920	96.1%
Males	202,019	28,205	11,367	9,215	7,623	213,386	9,215	95.9%
American Indian or Alaska Native[3]	3,062	440	168	143	129	3,230	143	95.8%
Asian[3]	42,480	2,217	1,332	403	482	43,812	403	99.1%
Pacific Islander[3]	2,826	430	212	144	74	3,038	144	95.5%
Filipino[3]	13,660	668	382	179	107	14,042	179	98.7%
Hispanic or Latino	182,611	34,410	13,941	11,881	8,588	196,552	11,881	94.3%
African American or Black[3]	27,270	7,644	2,941	2,886	1,817	30,211	2,886	91.3%
White[3]	135,120	7,993	4,274	1,879	1,840	139,394	1,879	98.7%
Multiple Races[4]	406	1,548	895	619	34	--[4]	--[4]	--[4]
Economically Disadvantaged	183,454	34,445	13,855	12,142	8,448	197,309	12,142	94.2%
English Learner	46,996	19,669	7,653	6,873	5,143	54,649	6,873	88.8%
Reclassified Fluent English	85,287	3,815	2,172	949	694	87,459	949	98.9%

1 2010-11 grade twelve students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010) are ***excluded*** from this table. Grade twelve students who tested as grade ten students in 2009-10 have been moved into counts for the Class of 2011 and are included here along with students who tested as grade eleven students the year before. Students in special education programs are ***excluded*** from all rows.

2 Students who had not passed and did not try to pass in 2010-11 have been dropped from the cumulative totals.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11 year. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data..

Table 3.8. Estimated Number and Percentage of Students in the Class of 2011[1] Passing the CAHSEE Mathematics Test Through May 2011, Including Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[2]	Percent Pass
All Students	426,642	77,977	27,302	29,876	20,799	453,944	29,876	93.8%
Females	211,626	35,397	13,940	13,320	8,137	225,566	13,320	94.4%
Males	215,016	42,580	13,362	16,556	12,662	228,378	16,556	93.2%
American Indian or Alaska Native[3]	3,275	687	197	261	229	3,472	261	93.0%
Asian[3]	43,598	2,737	1,422	601	714	45,020	601	98.7%
Pacific Islander[3]	2,923	551	227	201	123	3,150	201	94.0%
Filipino[3]	13,925	849	421	265	163	14,346	265	98.2%
Hispanic or Latino	190,966	46,663	15,684	18,311	12,668	206,650	18,311	91.9%
African American or Black[3]	28,865	11,372	3,343	4,965	3,064	32,208	4,965	86.6%
White[3]	142,588	13,071	5,005	4,286	3,780	147,593	4,286	97.2%
Multiple Races[4]	489	2,033	999	985	49	--[4]	--[4]	--[4]
Economically Disadvantaged	192,666	48,765	15,800	19,823	13,142	208,466	19,823	91.3%
English Learner	51,704	26,947	8,668	10,590	7,689	60,372	10,590	85.1%
Reclassified Fluent English	86,847	4,620	2,361	1,308	951	89,208	1,308	98.6%
Special Education	19,195	22,618	3,154	11,741	7,723	22,349	11,741	65.6%

1 2010-11 grade twelve students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010) are ***excluded*** from this table. Grade twelve students who tested as grade ten students in 2009-10 have been moved into counts for the Class of 2011 and are included here along with students who tested as grade eleven students the year before. Students in special education programs are ***included*** in all rows.

2 Students who had not passed and did not try to pass in 2010-11 year have been dropped from the cumulative totals.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Table 3.9 provides a comparison of CAHSEE passing rates for Class of 2011 seniors to passing rates for seniors in the high school classes of 2006 through 2010 as of May of their senior year. The overall passing rate last year is just slightly lower than the passing rate for 2009-10. Passing rates for different demographic groups changed by less than half a percentage point except for a decline in the passing rate for English learners from 81.0 to 80.3 percent. However, comparisons for different racial/ethnic groups may be distorted due to the addition of the "Multiple Races" category. SWD are excluded from all categories except the last. Note that CAHSEE passing rates for SWD were higher in the two years they were required to pass. Figure 3.1 shows trends for selected groups.

Table 3.9. Comparison of Estimated Percentage of Students Meeting the CAHSEE Requirement for the Classes of 2006 Through 2011, Through May of Their Senior Year, Excluding Students with Disabilities[1]

Group[1]	Passed Both Parts of the CAHSEE					
	Class of 2006	Class of 2007	Class of 2008	Class of 2009	Class of 2010	Class of 2011[5]
All Students	91.2%	93.3%	93.6%	93.4%	94.4%	94.2%
Females	91.6%	93.6%	94.1%	93.9%	94.8%	94.7%
Males	90.7%	92.9%	93.2%	92.9%	93.9%	93.7%
American Indian or Alaska Native[2]	--[2]	--[2]	93.6%	94.6%	95.4%	94.8%
Asian[2]	95.3%	96.3%	96.5%	96.2%	97.4%	97.1%
Pacific Islander[2]	--[3]	--[3]		93.1%	95.3%	93.6%
Filipino[2]	--[3]	--[3]		97.2%	98.1%	97.9%
Hispanic or Latino	85.5%	88.6%	89.9%	89.9%	91.4%	91.7%
African American or Black[2]	83.7%	88.4%	87.2%	87.5%	89.6%	89.6%
White[2]	97.3%	98.4%	98.2%	97.9%	98.1%	98.2%
Multiple Races[3]	--[3]	--[3]	--[3]	--[3]	--[3]	--[3]
Economically Disadvantaged	85.7%	88.3%	89.8%	89.5%	91.3%	91.4%
English Learner	76.0%	77.1%	78.6%	78.4%	81.0%	80.3%
Reclassified Fluent English	--[3]	--[3]	--[3]	98.1%	98.5%	98.6%
Special Education[4]	47.8%	48.8%	54.5%	56.6%	53.3%	56.3%

1 Note grade twelve students who also tested as grade twelve students in the previous year are ***excluded*** from this table for all classes except the Class of 2006.

2 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

3 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

4 Students in special education in the Classes of 2008 and 2009 were required to pass the CAHSEE to receive a diploma. An exemption was available to students in special education in 2006, 2007, and now again in 2010 and 2011. Students in special education programs are ***excluded*** from all rows of the table except for the last row.

5 Students who had not passed and did not try to pass in 2010-11 have been dropped from the cumulative totals.

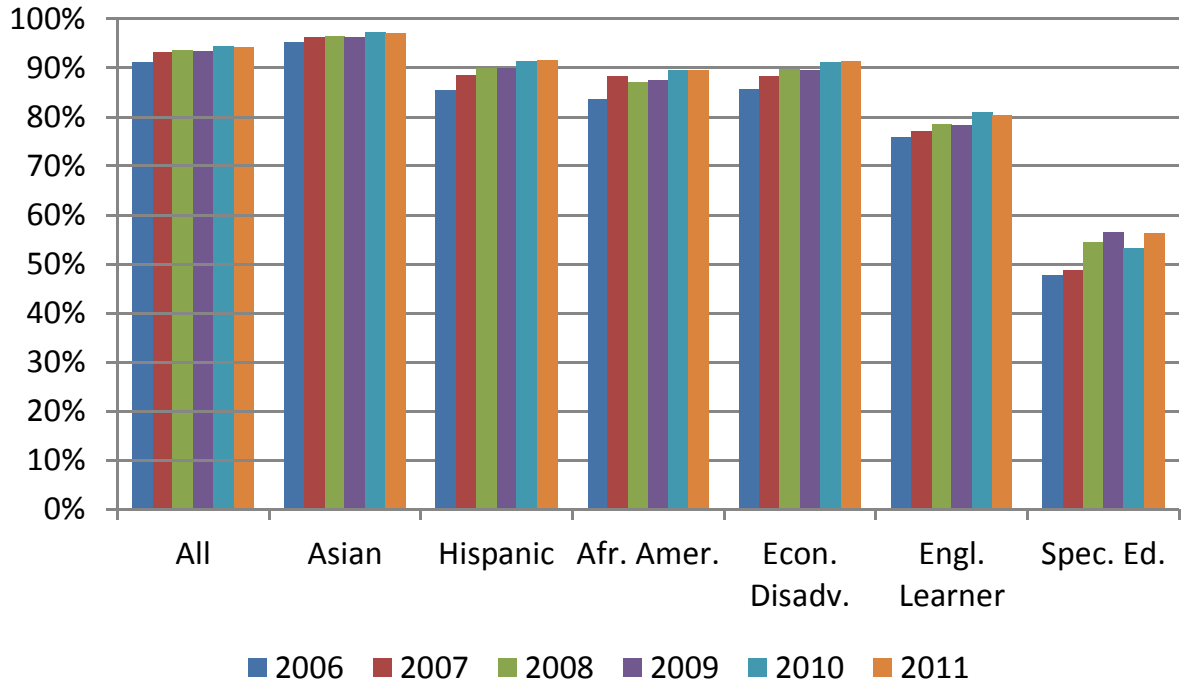


Figure 3.1. Trends in overall grade twelve passing rates for selected groups.

Analysis of Students Who Do Not Continue to Try to Pass the CAHSEE

As noted in Table 3.3 above, more than 13,000 Class of 2011 students who had not passed the CAHSEE by May 2010 did not participate in any of the 2010–11 CAHSEE administrations. Some of these students may have transferred to a private school or out of state. Others dropped out of school altogether. A few others may actually have tested, but coding errors in their data records prevented matching their new records to their records from prior years. Further analyses were conducted of the characteristics of students who did not continue to try to pass the CAHSEE.

Table 3.10 shows a comparison of students in key demographic categories who did and did not continue to try to pass the CAHSEE. Grade eleven students in May 2010 who had not passed both parts of the CAHSEE were divided into three groups: (a) those who had passed the ELA test, (b) those who had passed the mathematics test, and (c) those who had passed neither test. For each of these three groups, the percentage not continuing to take the CAHSEE is shown along with a comparison of the prior year means for students who did not and students who did continue to take the CAHSEE in 2010–11.

The percentage of students not continuing was higher for those who had not passed either test through grade 11 (35.5%) than for those who had passed one of the two tests (21.5% and 18.6%). Within each category, the prior mean on tests yet to be passed was slightly higher for students who continued compared to students who did

not, but both groups had mean scores well below the score of 350 required to pass each test. The one exception was for SWD, where the mean for those not continuing was higher than the mean for those who did.

Table 3.10. Comparison of Grade Twelve Students Not Passing by May 2010 Who Did and Did Not Continue to Take the CAHSEE

	Passed ELA			Passed Math			Passed Neither				
		Prior Year Math Mean			Prior Year ELA Mean			Prior Year ELA Mean		Prior Year Math Mean	
	% not Cont.	Not Cont.	Cont.	% not Cont.	Not Cont.	Cont.	% not Cont.	Not Cont.	Cont.	Not Cont.	Cont.
All Students	21.5%	333.6	335.3	18.6%	327.7	331.9	35.5%	317.4	322.9	324.1	327.0
Females	19.6%	333.6	335.6	16.4%	329.6	333.7	32.2%	321.4	326.0	325.2	327.4
Males	24.3%	333.6	334.7	19.8%	326.8	330.9	38.0%	314.9	320.3	323.4	326.7
Asian	22.1%	334.8	336.5	17.0%	326.0	329.7	35.5%	313.3	318.6	326.6	328.8
Hispanic	19.7%	333.7	335.3	17.6%	327.6	332.2	33.8%	317.3	322.8	324.2	327.2
Afr. Am.	26.1%	333.5	335.0	24.0%	328.8	332.7	35.5%	318.4	324.5	322.1	325.1
White	27.4%	333.3	335.6	25.8%	327.7	331.5	46.7%	317.9	322.9	324.6	327.3
E.D.	19.5%	333.4	335.2	16.5%	327.9	331.9	32.2%	317.2	322.8	324.0	327.0
EL	17.1%	333.7	335.0	15.3%	326.6	331.1	30.5%	315.7	321.6	324.7	327.3
RFEP	14.2%	334.6	336.9	14.5%	333.6	336.4	33.7%	322.3	329.4	325.7	330.4
SWD	37.5%	349.8	333.2	29.5%	342.2	329.0	30.9%	316.6	317.1	324.7	323.0

***Explanation of table contents**:* In May 2010, there were 16,761 grade eleven students who had passed the ELA test, but not the mathematics test. Line 1 indicates that 21.5% of these students did not take the CAHSEE in 2010-11. The prior mathematics mean (the test yet to be passed) for the students who did not continue was 333.6 compared to a mean of 335.3 for students in this category who did take the CAHSEE in 2010-11. Similarly 18.6% of the students who had passed the mathematics test, but not the ELA test, did not continue to try to pass the CAHSEE last year. The prior ELA mean for these students was 327.7 compared to students in this category who did continue to try to pass. Finally, 35.5% of students who had not passed either test did not continue to take the CAHSEE last year. These students had prior ELA and mathematics means of 317.4 and 324.1 respectively, compared to prior means of 322.9 and 327.0 for students who did continue to try to pass*. Note that, for each test, a score of 350 or higher is required to pass.*

Class of 2012 — Improvement for Students Who Retested in Grade Eleven

Tables 3.11 through 3.16 show cumulative passing rates for students in the Class of 2012 (grade eleven students in 2010–11). In the 2010–11 school year, more than 109,000 grade eleven students in general education and more than 28,000 in special education participated in CAHSEE testing. In the primary tables, SWD are excluded from all rows. To avoid duplication, students who had been seniors in 2006, 2007, 2008, 2009, or 2010 were excluded from the counts in Tables 3.11 through 3.16. For each table, we also provide an alternative table where SWD are included in all rows, allowing for direct comparison to prior-year results in some cases.

Table 3.11. Estimated Number and Percentage of Students in the Class of 2012[1] Passing Both CAHSEE Tests Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[4]	Percent Pass
All Students	339,882	126,224	55,751	53,600	16,873	395,633	53,600	88.1%
Females	174,290	59,438	27,196	24,847	7,395	201,486	24,847	89.0%
Males	165,592	66,786	28,555	28,753	9,478	194,147	28,753	87.1%
American Indian or Alaska Native[2]	3,356	1,086	412	444	230	3,768	444	89.5%
Asian[2]	39,203	5,764	2,800	2,384	580	42,003	2,384	94.6%
Pacific Islander[2]	2,384	955	413	391	151	2,797	391	87.7%
Filipino[2]	12,222	1,836	1,042	637	157	13,264	637	95.4%
Hispanic or Latino	146,656	80,503	33,461	36,567	10,475	180,117	36,567	83.1%
African American or Black[2]	20,803	13,356	4,875	6,039	2,442	25,678	6,039	81.0%
White[2]	115,080	19,657	11,084	5,815	2,758	126,164	5,815	95.6%
Multiple Races[3]	172	3,055	1,664	1,320	71	--[3]	--[3]	--[3]
Economically Disadvantaged	152,632	81,751	33,299	37,662	10,790	185,931	37,662	83.2%
English Learner	21,411	44,810	14,645	24,745	5,420	36,056	24,745	59.3%
Reclassified Fluent English	81,250	14,620	9,469	3,961	1,190	90,719	3,961	95.8%

1 Current grade eleven students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010), are ***excluded*** from this table. 2010-11 grade eleven students who tested as grade eleven students in 2009-10 have been moved into counts for the Class of 2012 and are included here along with students who tested as grade ten students the year before. Students in special education programs are ***excluded*** from all rows.

2 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

3 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

4 Students who had not passed and did not try to pass last year have been dropped from the cumulative totals.

Table 3.12. Estimated Number and Percentage of Students in the Class of 2012[1] Passing Both CAHSEE Tests Through May 2011, Including Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[4]	Percent Pass
All Students	352,622	164,237	60,719	76,935	26,583	413,341	76,935	84.3%
Females	178,602	72,466	28,772	33,038	10,656	207,374	33,038	86.3%
Males	174,020	91,771	31,947	43,897	15,927	205,967	43,897	82.4%
American Indian or Alaska Native[2]	3,543	1,508	452	665	391	3,995	665	85.7%
Asian[2]	40,107	6,948	2,969	2,931	1,048	43,076	2,931	93.6%
Pacific Islander[2]	2,448	1,164	445	504	215	2,893	504	85.2%
Filipino[2]	12,454	2,256	1,098	848	310	13,552	848	94.1%
Hispanic or Latino	151,771	101,101	35,913	49,885	15,303	187,684	49,885	79.0%
African American or Black[2]	21,610	18,576	5,332	9,441	3,803	26,942	9,441	74.1%
White[2]	120,501	28,831	12,702	10,725	5,404	133,203	10,725	92.5%
Multiple Races[3]	182	3,839	1,808	1,933	98	--[3]	--[3]	--[3]
Economically Disadvantaged	158,361	105,815	35,951	53,027	16,837	194,312	53,027	78.6%
English Learner	24,030	57,244	15,840	32,956	8,448	39,870	32,956	54.7%
Reclassified Fluent English	82,557	16,206	9,885	4,784	1,537	92,442	4,784	95.1%
Special Education	12,740	38,013	4,968	23,335	9,710	17,708	23,335	43.1%

1 2010-11 grade eleven students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010), are ***excluded*** from this table. 2010-11 grade eleven students who also tested as grade eleven students in 2009-10 have been moved into counts for the Class of 2012 and are included here along with students who tested as grade ten students the prior year. Students in special education programs are ***included*** in all rows.

2 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

3 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

4 Students who had not passed and did not try to pass last year have been dropped from the cumulative totals.

Table 3.13. Estimated Number and Percentage of Students in the Class of 2012[1] Passing the CAHSEE ELA Test Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[4]	Percent Pass
All Students	364,537	101,569	49,431	35,265	16,873	413,968	35,265	92.1%
Females	189,374	44,354	22,565	14,394	7,395	211,939	14,394	93.6%
Males	175,163	57,215	26,866	20,871	9,478	202,029	20,871	90.6%
American Indian or Alaska Native[2]	3,568	874	393	251	230	3,961	251	94.0%
Asian[2]	39,681	5,286	2,616	2,090	580	42,297	2,090	95.3%
Pacific Islander[2]	2,538	801	386	264	151	2,924	264	91.7%
Filipino[2]	12,594	1,464	875	432	157	13,469	432	96.9%
Hispanic or Latino	162,424	64,735	29,716	24,544	10,475	192,140	24,544	88.7%
African American or Black[2]	23,682	10,477	4,487	3,548	2,442	28,169	3,548	88.8%
White[2]	119,263	15,474	9,421	3,295	2,758	128,684	3,295	97.5%
Multiple Races[3]	781	2,446	1,537	838	71	--[3]	--[3]	--[3]
Economically Disadvantaged	168,237	66,146	29,673	25,683	10,790	197,910	25,683	88.5%
English Learner	26,267	39,954	14,922	19,612	5,420	41,189	19,612	67.7%
Reclassified Fluent English	86,417	9,453	6,682	1,581	1,190	93,099	1,581	98.3%

1 2010-11 grade eleven students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010), are ***excluded*** from this table. 2010-11 grade eleven students who tested as grade eleven in 2009-10 have been moved into counts for the Class of 2012 and are included here along with students who tested as grade ten students the prior year. Students in special education programs are *excluded* from all rows.

2 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

3 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

4 Students who had not passed in prior years and did not try to pass last year have been dropped from the cumulative totals.

Table 3.14. Estimated Number and Percentage of Students in the Class of 2012[1] Passing the CAHSEE ELA Test Through May 2011, Including Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[4]	Percent Pass
All Students	380,996	135,863	55,741	53,539	26,583	436,737	53,539	89.1%
Females	195,407	55,661	24,649	20,356	10,656	220,056	20,356	91.5%
Males	185,589	80,202	31,092	33,183	15,927	216,681	33,183	86.7%
American Indian or Alaska Native[2]	3,795	1,256	442	423	391	4,237	423	90.9%
Asian[2]	40,646	6,409	2,813	2,548	1,048	43,459	2,548	94.5%
Pacific Islander[2]	2,629	983	417	351	215	3,046	351	89.7%
Filipino[2]	12,865	1,845	933	602	310	13,798	602	95.8%
Hispanic or Latino	169,207	83,665	32,913	35,449	15,303	202,120	35,449	85.1%
African American or Black[2]	24,943	15,243	5,198	6,242	3,803	30,141	6,242	82.8%
White[2]	126,002	23,330	11,298	6,628	5,404	137,300	6,628	95.4%
Multiple Races[3]	903	3,118	1,727	1,293	98	--[3]	--[3]	--[3]
Economically Disadvantaged	175,859	88,317	33,189	38,291	16,837	209,048	38,291	84.5%
English Learner	29,448	51,826	16,555	26,823	8,448	46,003	26,823	63.2%
Reclassified Fluent English	88,047	10,716	7,094	2,085	1,537	95,141	2,085	97.9%
Special Education	16,459	34,294	6,310	18,274	9,710	22,769	18,274	55.5%

1 2010-11 grade eleven students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010), are ***excluded*** from this table. 2010-11 grade eleven students who tested as grade eleven students in 2009-10 have been moved into counts for the Class of 2012 and are included here along with students who tested as grade ten students the prior year. Students in special education programs are ***included*** in all rows.

2 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

3 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

4 Students who had not passed in prior years and did not try to pass last year have been dropped from the cumulative totals.

Table 3.15. Estimated Number and Percentage of Students in the Class of 2012[1] Passing the CAHSEE Mathematics Test Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[4]	Percent Pass
All Students	364,617	101,489	46,523	38,093	16,873	411,140	38,093	91.5%
Females	183,648	50,080	23,766	18,919	7,395	207,414	18,919	91.6%
Males	180,969	51,409	22,757	19,174	9,478	203,726	19,174	91.4%
American Indian or Alaska Native[2]	3,517	925	362	333	230	3,879	333	92.1%
Asian[2]	41,052	3,915	2,487	848	580	43,539	848	98.1%
Pacific Islander[2]	2,573	766	331	284	151	2,904	284	91.1%
Filipino[2]	12,586	1,472	876	439	157	13,462	439	96.8%
Hispanic or Latino	163,273	63,886	27,455	25,956	10,475	190,728	25,956	88.0%
African American or Black[2]	22,352	11,807	4,352	5,013	2,442	26,704	5,013	84.2%
White[2]	118,539	16,198	9,221	4,219	2,758	127,760	4,219	96.8%
Multiple Races[3]	719	2,508	1,438	999	71	--[3]	--[3]	--[3]
Economically Disadvantaged	170,212	64,171	27,035	26,346	10,790	197,247	26,346	88.2%
English Learner	32,337	33,884	13,076	15,388	5,420	45,413	15,388	74.7%
Reclassified Fluent English	85,033	10,837	6,611	3,036	1,190	91,644	3,036	96.8%

1 2010-11 grade eleven students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010), are ***excluded*** from this table. 2010-11 grade eleven students who tested as grade eleven students in 2009--10 have been moved into counts for the Class of 2012 and are included here along with students who tested as grade ten students the prior year. Students in special education programs are ***excluded*** from all rows.

2 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

3 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

4 Students who had not passed in prior years and did not try to pass last year have been dropped from the cumulative totals.

Table 3.16. Estimated Number and Percentage of Students in the Class of 2012[1] Passing the CAHSEE Mathematics Test Through May 2011, Including Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed[4]	Percent Pass
All Students	381,023	135,836	51,893	57,360	26,583	432,916	57,360	88.3%
Females	188,853	62,215	25,557	26,002	10,656	214,410	26,002	89.2%
Males	192,170	73,621	26,336	31,358	15,927	218,506	31,358	87.4%
American Indian or Alaska Native[2]	3,731	1,320	411	518	391	4,142	518	88.9%
Asian[2]	42,137	4,918	2,649	1,221	1,048	44,786	1,221	97.3%
Pacific Islander[2]	2,650	962	363	384	215	3,013	384	88.7%
Filipino[2]	12,870	1,840	932	598	310	13,802	598	95.8%
Hispanic or Latino	170,423	82,449	30,331	36,815	15,303	200,754	36,815	84.5%
African American or Black[2]	23,457	16,729	4,898	8,028	3,803	28,355	8,028	77.9%
White[2]	124,939	24,393	10,717	8,272	5,404	135,656	8,272	94.3%
Multiple Races[3]	810	3,211	1,591	1,522	98	--[3]	--[3]	--[3]
Economically Disadvantaged	178,177	85,999	30,162	39,000	16,837	208,339	39,000	84.2%
English Learner	36,222	45,052	14,681	21,923	8,448	50,903	21,923	69.9%
Reclassified Fluent English	86,614	12,149	6,937	3,675	1,537	93,551	3,675	96.2%
Special Education	16,406	34,347	5,370	19,267	9,710	21,776	19,267	53.1%

1 2010-11 grade eleven students who also tested as grade twelve students in 2005–06 (Class of 2006), 2006–07 (Class of 2007), 2007–08 (Class of 2008), 2008–09 (Class of 2009), or 2009–10 (Class of 2010), are ***excluded*** from this table. 2010-11 grade eleven students who tested as grade eleven in 2009-10 have been moved into counts for the Class of 2012 and are included here along with students who tested as grade ten students the prior year. Students in special education programs are ***included*** in all rows.

2 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

3 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

4 Students who had not passed in prior years and did not try to pass last year have been dropped from the cumulative totals.

Table 3.17 provides a comparison of passing rates for Class of 2012 grade eleven students with grade eleven students in the Classes of 2010 and 2011 at this same point in the year. Overall passing rates are slightly higher for 2010-11 compared to the corresponding rates for grade eleven students in 2009-10 and considerably higher than the corresponding rates in 2008-09. The results compared to 2009-10 show the greatest increases were for American Indian or Alaska Native (2.1%), Special Education (5.1%) and African American or Black students (2.0%). Other demographic groups had modest gains, except for a slight drop for Pacific Islanders and a more noticeable drop for English learners (a decrease of 1.0%).

Table 3.17. Comparison of Estimated Passing Rates for the Classes of 2010 Through 2012 Through May of Grade Eleven, Including Students with Disabilities[1]

Group	Passed ELA			Passed Mathematics			Passed Both		
	Class of 2010	Class of 2011	Class of 2012	Class of 2010	Class of 2011	Class of 2012	Class of 2010	Class of 2011	Class of 2012
All Students	88.2%	88.6%	89.1%	87.2%	88.2%	88.3%	82.9%	83.9%	84.3%
Females	90.7%	91.2%	91.5%	87.9%	88.8%	89.2%	84.7%	85.8%	86.3%
Males	85.8%	86.0%	86.7%	86.6%	87.6%	87.4%	81.2%	82.1%	82.4%
American Indian or Alaska Native[2]	89.1%	89.2%	90.9%	85.9%	87.3%	88.9%	82.7%	83.6%	85.7%
Asian[2]	93.4%	93.9%	94.5%	97.0%	97.2%	97.3%	92.5%	93.1%	93.6%
Pacific Islander[2]	89.2%	89.4%	89.7%	89.2%	89.2%	88.7%	85.0%	85.3%	85.2%
Filipino[2]	94.7%	95.8%	95.8%	95.0%	96.2%	95.8%	92.6%	94.1%	94.1%
Hispanic or Latino	82.8%	83.9%	85.1%	82.2%	84.0%	84.5%	76.1%	77.9%	79.0%
African American or Black[2]	81.6%	81.5%	82.8%	75.4%	76.6%	77.9%	71.0%	72.1%	74.1%
White[2]	95.1%	95.0%	95.4%	93.6%	94.1%	94.3%	91.9%	92.2%	92.5%
Multiple Races[3]	--[3]	--[3]	--[3]	--[3]	--[3]	--[3]	--[3]	--[3]	--[3]
Economically Disadvantaged	81.9%	83.0%	84.5%	81.7%	83.5%	84.2%	75.1%	77.1%	78.6%
English Learner	61.5%	63.5%	63.2%	68.7%	71.0%	69.9%	53.1%	55.7%	54.7%
Reclassified Fluent English	97.2%	97.5%	97.9%	95.4%	96.1%	96.2%	94.0%	94.7%	95.1%
Special Education	52.2%	50.6%	55.5%	48.2%	50.8%	53.1%	37.9%	38.0%	43.1%

1 Students who also tested as grade twelve in previous years are ***excluded*** from this table. Students in special education programs are included in each demographic category as appropriate and in results for all students. Students who had not passed in prior years and did not try to pass last year have been dropped from the cumulative totals.

2 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

3 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Initial Results for the Class of 2013

A major charge for the independent evaluation was to analyze and report performance on the CAHSEE for all students and for specific demographic groups, including economically disadvantaged students, English learners (EL), and SWD (characterized as "exceptional needs students" in the legislation). Tables 3.18 through 3.20 show cumulative passing rates for students in the Class of 2013 — last year's grade ten students. Grade ten SWD are required to take the CAHSEE and are included in all rows. As shown in Table 3.1, a small number (just over 5,000) of students who tested as grade ten students last year were repeating grade ten. Nearly 4,000 of these students met the CAHSEE requirement in 2010.

Table 3.18. Estimated Number and Percentage of Students in the Class of 2013 Passing Both CAHSEE Tests Through May 2011, Including Students with Disabilities

Group	By May 2010[1]		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students	3,900	491,563	361,977	118,786	10,800	365,877	129,586	73.8%
Females	1,706	240,307	183,639	52,190	4,478	185,345	56,668	76.6%
Males	2,194	251,256	178,338	66,596	6,322	180,532	72,918	71.2%
American Indian or Alaska Native[2]	23	3,965	2,663	1,170	132	2,686	1,302	67.4%
Asian[2]	67	43,525	38,497	4,561	467	38,564	5,028	88.5%
Pacific Islander[2]	16	3,127	2,284	776	67	2,300	843	73.2%
Filipino[2]	34	14,249	12,478	1,609	162	12,512	1,771	87.6%
Hispanic or Latino	2,726	242,507	160,624	76,249	5,634	163,350	81,883	66.6%
African American or Black[2]	312	34,676	20,092	13,321	1,263	20,404	14,584	58.3%
White[2]	569	139,396	117,908	18,731	2,757	118,477	21,488	84.6%
Multiple Races[3]	153	10,118	7,431	2,369	318	7,584	2,687	73.8%
Economically Disadvantaged	2,849	260,488	168,433	85,335	6,720	171,282	92,055	65.0%
English Learner	395	71,834	24,165	44,987	2,682	24,560	47,669	34.0%
Reclassified Fluent English	1,109	99,243	86,701	11,742	800	87,810	12,542	87.5%
Special Education	118	45,874	10,497	30,651	4,726	10,615	35,377	23.1%

[1] Students who repeated grade ten may have passed one or both CAHSEE tests in prior years. First time grade ten students are counted as having not yet passed as of May 2010.

[2] Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

[3] The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. ETS codes for race/ethnicity were used here but may be revised subsequently using different rules to identify missing data.

Table 3.19. Estimated Number and Percentage of Students in the Class of 2013 Passing the CAHSEE ELA Test Through May 2011, Including Students with Disabilities

Group	By May 2010[1]		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students	5,522	489,941	391,794	87,402	10,745	397,316	98,147	80.2%
Females	2,583	239,430	200,579	34,398	4,453	203,162	38,851	83.9%
Males	2,939	250,511	191,215	53,004	6,292	194,154	59,296	76.6%
American Indian or Alaska Native[2]	34	3,954	3,011	812	131	3,045	943	76.4%
Asian[2]	78	43,514	39,059	3,988	467	39,137	4,455	89.8%
Pacific Islander[2]	27	3,116	2,456	594	66	2,483	660	79.0%
Filipino[2]	52	14,231	12,913	1,156	162	12,965	1,318	90.8%
Hispanic or Latino	3,885	241,348	178,574	57,179	5,595	182,459	62,774	74.4%
African American or Black[2]	527	34,461	23,647	9,559	1,255	24,174	10,814	69.1%
White[2]	729	139,236	123,974	12,511	2,751	124,703	15,262	89.1%
Multiple Races[3]	190	10,081	8,160	1,603	318	8,350	1,921	81.3%
Economically Disadvantaged	4,020	259,317	187,766	64,867	6,684	191,786	71,551	72.8%
English Learner	676	71,553	30,141	38,738	2,674	30,817	41,412	42.7%
Reclassified Fluent English	1,497	98,855	91,509	6,561	785	93,006	7,346	92.7%
Special Education	226	45,766	15,365	25,676	4,725	15,591	30,401	33.9%

[1] Students who repeated grade ten may have passed one or both CAHSEE tests in prior years. First time grade ten students are counted as having not yet passed as of May 2010.

[2] Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

[3] The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. ETS codes for race/ethnicity were used here but may be revised subsequently using different rules to identify missing data.

Table 3.20. Estimated Number and Percentage of Students in the Class of 2013 Passing the CAHSEE Mathematics Tests Through May 2011, Including Students with Disabilities

Group	By May 2010[1]		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students	4,994	490,469	391,205	88,493	10,771	396,199	99,264	80.0%
Females	2,046	239,967	194,367	41,131	4,469	196,413	45,600	81.2%
Males	2,948	250,502	196,838	47,362	6,302	199,786	53,664	78.8%
American Indian or Alaska Native[2]	25	3,963	2,906	925	132	2,931	1,057	73.5%
Asian[2]	97	43,495	41,003	2,025	467	41,100	2,492	94.3%
Pacific Islander[2]	22	3,121	2,491	563	67	2,513	630	80.0%
Filipino[2]	45	14,238	12,980	1,096	162	13,025	1,258	91.2%
Hispanic or Latino	3,544	241,689	179,316	56,756	5,617	182,860	62,373	74.6%
African American or Black[2]	411	34,577	22,269	11,055	1,253	22,680	12,308	64.8%
White[2]	682	139,283	122,319	14,209	2,755	123,001	16,964	87.9%
Multiple Races[3]	168	10,103	7,921	1,864	318	8,089	2,182	78.8%
Economically Disadvantaged	3,716	259,621	189,840	63,084	6,697	193,556	69,781	73.5%
English Learner	778	71,451	37,494	31,280	2,677	38,272	33,957	53.0%
Reclassified Fluent English	1,309	99,043	90,117	8,132	794	91,426	8,926	91.1%
Special Education	203	45,789	14,702	26,364	4,723	14,905	31,087	32.4%

[1] Students who repeated grade ten may have passed one or both CAHSEE tests in prior years. First time grade ten students are counted as having not yet passed as of May 2010.

[2] Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

[3] The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. ETS codes for race/ethnicity were used here but may be revised subsequently using different rules to identify missing data.

Table 3.21 shows how current passing rates for students in the Class of 2013 compare to passing rates for students in prior high school classes. SWD are required to participate for school accountability, even though they may be exempt from the CAHSEE requirement for graduation. They are included in all rows. Results indicate that significant progress was made in increasing initial CAHSEE grade ten passing rates. Gains of more than three percentage points were seen for Pacific Islanders, Hispanic or Latino students, and economically disadvantaged students. However first-time passing rates declined for students classified as American Indian or Alaska Native. Figure 3.2 shows trends in grade ten passing rates for selected groups.

Table 3.21. Class of 2013 Grade Ten Passing Rates Compared to Passing Rates for Prior Classes,[1] Including Students with Disabilities

Group	Class of 2006	Class of 2007	Class of 2008	Class of 2009	Class of 2010	Class of 2011	Class of 2012	Class of 2013
All Students	64.3%	65.4%	65.1%	65.2%	69.2%	69.9%	71.5%	73.8%
Females	67.1%	68.1%	67.9%	68.0%	71.8%	72.4%	74.2%	76.6%
Males	61.7%	62.8%	62.4%	62.5%	66.8%	67.4%	68.9%	71.2%
American Indian or Alaska Native[2]	59.9%	59.6%	61.0%	61.6%	66.0%	64.8%	68.6%	67.4%
Asian[2]	81.5%	82.5%	82.5%	83.2%	85.8%	86.1%	88.0%	88.5%
Pacific Islander[2]	60.4%	63.4%	62.9%	63.3%	69.7%	68.9%	70.0%	73.2%
Filipino[2]	80.8%	81.3%	81.3%	82.4%	84.5%	85.1%	86.7%	87.6%
Hispanic or Latino	49.0%	51.1%	52.4%	52.9%	58.5%	60.1%	62.9%	66.6%
African American or Black[2]	45.3%	46.4%	46.3%	47.8%	52.5%	53.3%	56.6%	58.3%
White[2]	80.7%	81.4%	80.5%	80.5%	83.4%	83.2%	83.5%	84.6%
Multiple Races[3]	---	---	---	---	---	---	---	73.8%
Economically Disadvantaged	47.7%	50.1%	50.8%	51.4%	57.2%	58.8%	61.8%	65.0%
English Learner	29.6%	30.8%	27.0%	25.6%	29.5%	30.6%	31.5%	34.0%
Reclassified Fluent English	76.3%	78.6%	78.1%	77.9%	83.3%	84.1%	85.5%	87.5%
Special Education	18.8%	20.2%	20.9%	21.1%	20.2%	21.1%	23.9%	23.1%

1 End-of-year passing rates are shown for all classes.

2 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

3 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. ETS codes for race/ethnicity were used here but may be revised subsequently using different rules to identify missing data.

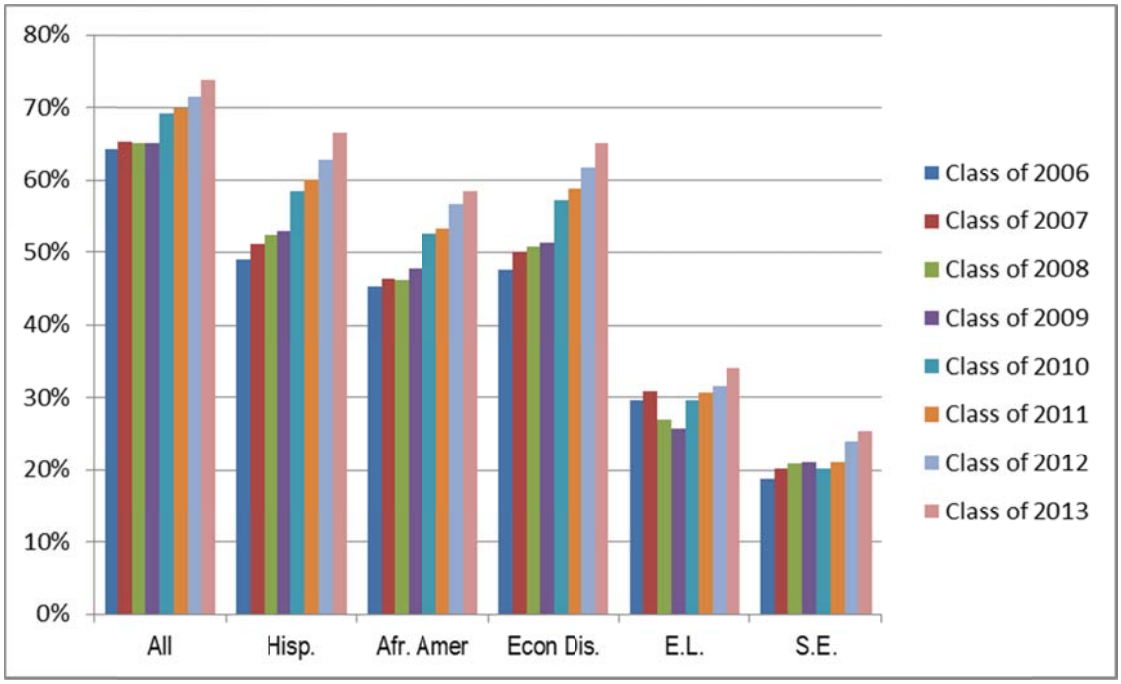


Figure 3.2. Trends in overall grade ten passing rates for selected groups.

Note: ED = Economically disadvantaged, EL = English Learner, SE = students in special education.

Analysis of Results by Mathematics Courses Taken

From the outset, the level of mathematics achievement required for high school graduation has been a key policy issue. When the CAHSEE requirement was established in 1999, students were not required to take Algebra I to earn a diploma, so including Algebra questions on the CAHSEE mathematics test reflected recognition of the importance of mathematics for success after high school. Shortly thereafter, a state-wide requirement that students take Algebra was enacted in further recognition of the importance of mathematics skills.

As in prior years, we analyzed passing rates on the mathematics part of the CAHSEE for students who had completed different high school mathematics courses. Table 3.22 shows the distribution of the highest level of mathematics course completed by the end of grade ten for students in the Class of 2013 compared to students in the classes of 2006 through 2012. Over the past eight years, the proportion of students taking higher levels of mathematics courses by grade ten has increased. The most significant change in 2011 was that the percentage of students already taking Algebra II or Advanced Mathematics rose from 30.1 percent to 31.7 percent. In 2004, only 20.6 percent of the grade ten students in the Class of 2006 had taken mathematics courses beyond Geometry.

Table 3.23 shows the percentage of students in key demographic groups who have taken courses beyond Algebra I (meets expectation at grade ten) when students with missing information are excluded. Students following the expected curriculum would be taking at least geometry by grade ten. Students who took Algebra I in grade eight could be taking Algebra II in grade ten. More than two-thirds of the grade ten students had taken or were taking mathematics courses beyond Algebra I. Nearly 90 percent of Asian students were taking courses beyond Algebra I. The percentage of students in special education taking courses beyond Algebra I has increased very significantly from 19 percent for the Class of 2006 to 42 percent for the Class of 2013, but their rate is still very low compared to students in other demographic groups.

Table 3.22. Distribution of Grade Ten Students by Highest Mathematics Course Taken

	Class of 2006	Class of 2007	Class of 2008	Class of 2009	Class of 2010	Class of 2011	Class of 2012	Class of 2013
General Math	2.6%	2.0%	1.9%	0.9%	0.0%	1.2%	1.1%	1.0%
Pre-Algebra	11.1%	9.9%	11.7%	3.1%	2.2%	8.7%	8.3%	8.2%
Algebra I/Int. Math I	27.5%	24.9%	18.9%	28.3%	27.7%	18.3%	17.2%	16.8%
Geometry/Int. Math II	31.0%	31.7%	34.3%	33.6%	36.9%	38.5%	38.6%	37.4%
Algebra II/Int. Math III	18.4%	17.9%	20.4%	21.3%	23.4%	25.4%	26.3%	27.6%
Advanced Math	2.2%	2.5%	2.7%	2.8%	3.1%	3.4%	3.8%	4.1%
None/Missing	7.2%	10.1%	10.3%	10.0%	6.6%	4.6%	4.6%	4.6%
No. of Students	450,928	470,891	502,874	502,501	474,351	458,777	461,663	461,716

* Note: Column percentages may not add to 100 percent due to rounding.

Table 3.23. Trends in Mathematics Courses Taken by Demographic Group

	Percentage of Grade Ten Students Taking Mathematics Courses Beyond Algebra **I**							
Group[1]	Class of 2006	Class of 2007	Class of 2008	Class of 2009	Class of 2010	Class of 2011	Class of 2012	Class of 2013
All Students	55.6%	59.6%	64.0%	64.2%	68.0%	70.4%	72.0%	72.6%
Females	59.1%	62.9%	67.1%	67.6%	71.1%	73.3%	74.8%	75.4%
Males	52.2%	56.5%	61.0%	60.9%	65.0%	67.6%	69.2%	69.9%
Native American	--[2]	--[2]	--[2]	50.1%	55.6%	57.0%	61.4%	60.9%
Asian	80.6%	83.8%	85.1%	85.0%	87.9%	88.9%	89.4%	89.7%
Pacific Islander	--[2]	--[2]	--[2]	62.0%	67.5%	70.7%	70.2%	72.8%
Filipino	--[2]	--[2]	--[2]	79.7%	82.1%	84.4%	85.1%	85.9%
Hispanic	43.4%	49.2%	56.3%	56.3%	60.8%	64.1%	66.4%	67.4%
African American	48.6%	53.4%	58.4%	59.2%	63.4%	64.9%	66.6%	66.8%
White (not Hispanic)	63.1%	65.8%	68.8%	69.3%	72.5%	74.6%	76.0%	76.7%
Econ. Disadvantaged	44.9%	51.1%	57.2%	57.3%	61.7%	64.6%	66.6%	67.1%
English Learners	36.8%	42.8%	46.1%	43.3%	48.3%	52.3%	53.5%	53.5%
Reclassified Fluent	--[2]	--[2]	--[2]	76.7%	78.7%	80.5%	81.7%	81.6%
Special Education	19.0%	24.3%	33.3%	31.7%	33.9%	36.8%	41.7%	41.9%

[1] Students whose highest mathematics course was unknown were excluded from this table.

[2] Students in a few specific demographic groups were not analyzed separately prior to 2009.

For all groups except English learners, the percentage taking courses beyond Algebra I continued to increase last year. However, the percentage of economically disadvantaged, Hispanic, and African American students taking courses beyond Algebra I continued to lag behind that of white, Asian, and Filipino students. For example, the percentage of Black or African-American students taking courses beyond Algebra I in 2010-11 (67 percent) was about the same as the percentage of white students taking courses beyond Algebra I five or six years ago.

Table 3.24 shows the CAHSEE mathematics passing rates for students at each course level. Passing rates increased at all levels. Not only are more students taking higher level mathematics courses, but the courses at each level are also increasingly effective in preparing students to pass the CAHSEE.

Table 3.24. Grade Ten Mathematics Passing Rates by Class and Highest Mathematics Course Taken

Highest Math Course Taken	Class of 2006	Class of 2007	Class of 2008	Class of 2009	Class of 2010	Class of 2011	Class of 2012	Class of 2013
Algebra I/Int. Math I	58.1%	57.5%	53.5%	59.0%	61.1%	58.3%	59.0%	61.1%
Geometry/Int. Math II	87.2%	85.2%	81.3%	84.2%	85.3%	84.9%	85.0%	86.7%
Algebra II/Int. Math III	95.3%	96.0%	91.9%	95.4%	96.0%	98.8%	96.0%	96.2%
Advanced Math	99.4%	99.5%	96.4%	98.9%	99.2%	99.7%	98.6%	99.1%
None/Missing	50.0%	41.2%	49.0%	35.4%	48.9%	64.6%	64.9%	67.4%
No. of Students	414,903	450,928	470,891	502,501	474,351	458,777	461,663	461,716

Results for Students from Prior High School Classes

In prior years, we tracked continued efforts by students from all prior high school classes subject to the CAHSEE requirement, from 2006 through 2009. Beginning in 2011, we tracked students for the first three years after their initial graduation date. The reason is that the number of students still trying to pass after more than three years is very low (about 250 students who may have been in the Class of 2007 and 100 who may have been in the Class of 2006) and the difficulty in matching student records across long periods of time is great, particularly for earlier high school classes where common student identifiers were not used consistently on CAHSEE answer documents. Consequently, the rate of error in estimates of the numbers of students still testing may be greater than the number itself.

Results for students who were first-time seniors in 2008 through 2010 are shown here. A significant number of students from these high school classes continued to take the CAHSEE, either as repeat grade twelve students or through an AE program.

Class of 2008. Tables 3.25 through 3.27 show the number of students originally in the Class of 2008 (first-time seniors in spring 2008) who continued to take the CAHSEE last year and the number now estimated to have passed the CAHSEE through

May 2011. We are continuing to report students in special education programs separately but exclude them from the other student groups, including the counts for all students, since these students may have been granted a waiver or been given a diploma when the exemption for SWD was reinstated. Note that it is possible that a few more students who were originally in the Class of 2008 tested again in 2010-11 but could not be matched to earlier records because of differences in coding identifying information.

Last year, as shown in Table 3.25, nearly 900 general education students and more than 130 special education students from the Class of 2008 took the CAHSEE, with 216 of the general education students and nine of the special education students completing the CAHSEE requirement.

Table 3.25. Estimated Number and Percentage of Students in the Class of 2008[1] Passing Both Portions of the CAHSEE Through May 2011, Excluding Students with Disabilities

	By May 2010		July 2010–May 2011			Cumulative Total		
Group	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students[2]	415,962	26,649	216	658	25,775	416,178	26,433	94.0%
Females	212,546	12,176	110	382	11,684	212,656	12,066	94.6%
Males	203,416	14,472	106	276	14,090	203,522	14,366	93.4%
American Indian or Alaska Native[3]	3,468	192	1	0	191	3,469	191	94.8%
Asian[3]	42,069	1,251	9	21	1,221	42,078	1,242	97.1%
Pacific Islander[3]	2,903	199	1	5	193	2,904	198	93.6%
Filipino[3]	13,738	320	0	6	314	13,738	320	97.7%
Hispanic or Latino	167,687	17,417	137	434	16,846	167,824	17,280	90.7%
African American or Black[3]	30,462	3,998	19	88	3,891	30,481	3,979	88.5%
White[3]	155,447	3,031	21	33	2,977	155,468	3,010	98.1%
Multiple Races[4]	--[4]	--[4]	28	71	1	--[4]	--[4]	--[4]
Economically Disadvantaged	158,394	14,506	92	270	14,144	158,486	14,414	91.7%
English Learner	50,015	11,850	70	287	11,493	50,085	11,780	81.0%
Reclassified Fluent English	68,108	1,240	20	23	1,197	68,128	1,220	98.2%
Special Education	21,880	15,064	9	127	14,928	21,889	15,055	59.2%

1 Many students in special education programs who had not passed the CAHSEE by the end of grade twelve were allowed an exemption from the CAHSEE requirement and so were ***excluded*** from all rows of the table except for the last row.

2 Gender codes were missing for a small number of students. If these students did not participate in 2010–11 testing, gender codes remained missing. Thus the total number of students may exceed the sum of the number of male and female students.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Table 3.26. Estimated Number and Percentage of Students in the Class of 2008[1] Passing the CAHSEE ELA Test Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students[2]	425,283	17,328	145	326	16,857	425,428	17,183	96.1%
Females	217,904	6,818	60	169	6,589	217,964	6,758	97.0%
Males	207,379	10,509	85	157	10,267	207,464	10,424	95.2%
American Indian or Alaska Native[3]	3,572	88	0	0	88	3,572	88	97.6%
Asian[3]	42,219	1,101	7	20	1,074	42,226	1,094	97.5%
Pacific Islander[3]	2,969	133	1	1	131	2,970	132	95.7%
Filipino[3]	13,837	221	0	5	216	13,837	221	98.4%
Hispanic or Latino	173,296	11,808	96	214	11,498	173,392	11,712	93.7%
African American or Black[3]	32,228	2,232	18	36	2,178	32,246	2,214	93.6%
White[3]	156,862	1,616	8	14	1,594	156,870	1,608	99.0%
Multiple Races[4]	--[4]	--[4]	15	36	1	--[4]	--[4]	--[4]
Economically Disadvantaged	162,879	10,021	60	147	9,814	162,939	9,961	94.2%
English Learner	52,457	9,408	57	179	9,172	52,514	9,351	84.9%
Reclassified Fluent English	68,845	503	8	7	488	68,853	495	99.3%
Special Education	26,179	10,765	10	86	10,669	26,189	10,755	70.9%

1 Many students in special education programs who had not passed the CAHSEE by the end of grade twelve were allowed an exemption from the CAHSEE requirement and so were ***excluded*** from all rows of the table except for the last row.

2 Gender codes were missing for a small number of students. If these students did not participate in 2010–11 testing, gender codes remained missing. Thus the total number of students may exceed the sum of the number of male and female students.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Table 3.27. Estimated Number and Percentage of Students in the Class of 2008[1] Passing the CAHSEE Mathematics Test Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students[2]	423,359	19,252	151	466	18,635	423,510	19,101	95.7%
Females	215,315	9,407	88	283	9,036	215,403	9,319	95.9%
Males	208,044	9,844	63	183	9,598	208,107	9,781	95.5%
American Indian or Alaska Native[3]	3,491	169	1	0	168	3,492	168	95.4%
Asian[3]	42,868	452	5	7	440	42,873	447	99.0%
Pacific Islander[3]	2,959	143	1	4	138	2,960	142	95.4%
Filipino[3]	13,844	214	0	2	212	13,844	214	98.5%
Hispanic or Latino	172,800	12,304	92	299	11,913	172,892	12,212	93.4%
African American or Black[3]	31,068	3,392	15	74	3,303	31,083	3,377	90.2%
White[3]	156,086	2,392	16	25	2,351	156,102	2,376	98.5%
Multiple Races[4]	--[4]	--[4]	21	55	1	--[4]	--[4]	--[4]
Economically Disadvantaged	162,743	10,157	71	186	9,900	162,814	10,086	94.2%
English Learner	54,818	7,047	37	162	6,848	54,855	7,010	88.7%
Reclassified Fluent English	68,369	979	13	18	948	68,382	966	98.6%
Special Education	24,876	12,068	10	100	11,958	24,886	12,058	67.4%

[1] Many students in special education programs who had not passed the CAHSEE by the end of grade twelve were allowed an exemption from the CAHSEE requirement and so were ***excluded*** from all rows of the table except for the last row.

[2] Gender codes were missing for a small number of students. If these students did not participate in 2010–11 testing, gender codes remained missing. Thus the total number of students may exceed the sum of the number of male and female students.

[3] Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

[4] The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Class of 2009. Tables 3.28 through 3.30 show estimated cumulative passing rates for the Class of 2009 after including results from the May 2011 CAHSEE administration. To avoid duplication, we have excluded students who were counted previously as being in the classes of 2006 through 2008, even though some of those students were also in grade twelve in 2009. Thus, the definition of the Class of 2009 used here is students who were in grade twelve for the first time in spring 2009. As with the Class of 2008, we have excluded students in special education programs from the counts, except for the last row in each table, since these students may have been granted a waiver or been given a diploma when the exemption for students with disability was reinstated.

Table 3.28. Estimated Number and Percentage of Students in the Class of 2009[1] Passing Both CAHSEE Tests Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students[2]	421,422	25,706	630	1,827	23,249	422,052	25,076	94.4%
Females	214,945	11,934	329	1,012	10,593	215,274	11,605	94.9%
Males	206,474	13,769	301	815	12,653	206,775	13,468	93.9%
American Indian or Alaska Native[3]	3,381	152	5	3	144	3,386	147	95.8%
Asian[3]	42,676	1,273	30	101	1,142	42,706	1,243	97.2%
Pacific Islander[3]	2,957	176	1	5	170	2,958	175	94.4%
Filipino[3]	13,966	298	3	18	277	13,969	295	97.9%
Hispanic or Latino	178,242	17,173	436	1,247	15,490	178,678	16,737	91.4%
African American or Black[3]	30,296	3,645	58	185	3,402	30,354	3,587	89.4%
White[3]	149,694	2,777	46	121	2,610	149,740	2,731	98.2%
Multiple Races[4]	--[4]	--[4]	51	147	6	--[4]	--[4]	--[4]
Economically Disadvantaged	169,103	15,295	323	927	14,045	169,426	14,972	91.9%
English Learner	51,971	11,734	255	906	10,573	52,226	11,479	82.0%
Reclassified Fluent English	76,171	1,286	43	80	1,163	76,214	1,243	98.4%
Special Education	21,832	15,362	33	443	14,886	21,865	15,329	58.8%

[1] Many students in special education programs who had not passed the CAHSEE by the end of grade twelve were allowed an exemption from the CAHSEE requirement and so were ***excluded*** from all rows of the table except for the last row.

[2] Gender codes were missing for a small number of students. If these students did not participate in 2010–11 testing, gender codes remained missing. Thus the total number of students may exceed the sum of the number of male and female students.

[3] Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

[4] The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Last year, nearly 2,500 general education students and nearly 500 special education students in the Class of 2009 who had not passed the CAHSEE by May of 2010 continued to try to meet the CAHSEE requirement—more than a year after their scheduled graduation. Table 3.28 shows 94.4 percent of the general education students counted as being in the Class of 2009 have now passed the CAHSEE.

Table 3.29. Estimated Number and Percentage of Students in the Class of 2009[1] Passing the CAHSEE ELA Test Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students[2]	430,560	16,568	386	1,076	15,106	430,946	16,182	96.4%
Females	220,212	6,667	177	520	5,970	220,389	6,490	97.1%
Males	210,345	9,898	209	556	9,133	210,554	9,689	95.6%
American Indian or Alaska Native[3]	3,449	84	5	1	78	3,454	79	97.8%
Asian[3]	42,844	1,105	24	96	985	42,868	1,081	97.5%
Pacific Islander[3]	3,024	109	1	2	106	3,025	108	96.6%
Filipino[3]	14,051	213	3	13	197	14,054	210	98.5%
Hispanic or Latino	183,873	11,542	274	750	10,518	184,147	11,268	94.2%
African American or Black[3]	31,952	1,989	28	77	1,884	31,980	1,961	94.2%
White[3]	151,072	1,399	22	51	1,326	151,094	1,377	99.1%
Multiple Races[4]	--[4]	--[4]	29	86	5	--[4]	--[4]	--[4]
Economically Disadvantaged	173,955	10,443	204	554	9,685	174,159	10,239	94.4%
English Learner	54,372	9,333	192	685	8,456	54,564	9,141	85.7%
Reclassified Fluent English	76,959	498	15	18	465	76,974	483	99.4%
Special Education	26,327	10,867	35	334	10,498	26,362	10,832	70.9%

1 Many students in special education programs who had not passed the CAHSEE by the end of grade twelve were allowed an exemption from the CAHSEE requirement and so were ***excluded*** from all rows of the table except for the last row.

2 Gender codes were missing for a small number of students. If these students did not participate in 2010–11 testing, gender codes remained missing. Thus the total number of students may exceed the sum of the number of male and female students.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Table 3.30. Estimated Number and Percentage of Students in the Class of 2009[1] Passing the CAHSEE Mathematics Test Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students[2]	428,943	18,185	428	1,109	16,648	429,371	17,757	96.0%
Females	217,897	8,982	227	669	8,086	218,124	8,755	96.1%
Males	211,042	9,201	201	440	8,560	211,243	9,000	95.9%
American Indian or Alaska Native[3]	3,409	124	2	3	119	3,411	122	96.5%
Asian[3]	43,493	456	10	22	424	43,503	446	99.0%
Pacific Islander[3]	3,008	125	0	4	121	3,008	125	96.0%
Filipino[3]	14,074	190	1	10	179	14,075	189	98.7%
Hispanic or Latino	183,515	11,900	298	739	10,863	183,813	11,602	94.1%
African American or Black[3]	30,850	3,091	48	155	2,888	30,898	3,043	91.0%
White[3]	150,307	2,164	36	88	2,040	150,343	2,128	98.6%
Multiple Races[4]	--[4]	--[4]	33	88	6	--[4]	--[4]	--[4]
Economically Disadvantaged	173,903	10,495	212	549	9,734	174,115	10,283	94.4%
English Learner	56,908	6,797	135	391	6,271	57,043	6,662	89.5%
Reclassified Fluent English	76,432	1,025	37	68	920	76,469	988	98.7%
Special Education	25,266	11,928	27	332	11,569	25,293	11,901	68.0%

[1] Many students in special education programs who had not passed the CAHSEE by the end of grade twelve were allowed an exemption from the CAHSEE requirement and so were ***excluded*** from all rows of the table except for the last row.

[2] Gender codes were missing for a small number of students. If these students did not participate in 2010–11 testing, gender codes remained missing. Thus the total number of students may exceed the sum of the number of male and female students.

[3] Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

[4] The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Class of 2010. Tables 3.31 through 3.33 show estimated cumulative passing rates for the Class of 2010 after including results from the 2010–11 CAHSEE administrations through May 2011. To avoid duplication, we have excluded students who were counted above as being in prior high school classes, even though many of those students were also in grade twelve again in 2010. As with the Class of 2009, the definition of the Class of 2010 used here is students who were in grade twelve for the first time in spring 2010. Unlike results for the Classes of 2008 and 2009, students in special education were once again exempted from the CAHSEE requirement in 2010. For consistency with other classes, we continue to report results separately for students in special education and exclude these students from counts for other categories.

Table 3.31. Estimated Number and Percentage of Students in the Class of 2010[1] Passing Both CAHSEE Tests Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students[2]	419,796	25,572	2,603	6,778	16,191	422,399	22,969	94.8%
Females	213,389	11,915	1,248	3,514	7,153	214,637	10,667	95.3%
Males	206,389	13,648	1,355	3,264	9,029	207,744	12,293	94.4%
American Indian or Alaska Native[3]	3,368	148	9	28	111	3,377	139	96.0%
Asian[3]	43,138	1,107	119	320	668	43,257	988	97.8%
Pacific Islander[3]	2,971	137	13	17	107	2,984	124	96.0%
Filipino[3]	13,669	260	31	77	152	13,700	229	98.4%
Hispanic or Latino	183,651	17,387	1,757	4,748	10,882	185,408	15,630	92.2%
African American or Black[3]	29,452	3,252	241	676	2,335	29,693	3,011	90.8%
White[3]	143,319	2,691	260	537	1,894	143,579	2,431	98.3%
Multiple Races[4]	--[4]	--[4]	173	375	14	--[4]	--[4]	--[4]
Economically Disadvantaged	178,198	16,718	1,684	4,546	10,488	179,882	15,034	92.3%
English Learner	49,879	11,893	1,183	3,602	7,108	51,062	10,710	82.7%
Reclassified Fluent English	82,685	1,327	227	396	704	82,912	1,100	98.7%
Special Education	18,467	16,016	240	2,127	13,649	18,707	15,776	54.2%

1 Many students in special education programs who had not passed the CAHSEE by the end of grade twelve were allowed an exemption from the CAHSEE requirement and so were ***excluded*** from all rows of the table except for the last row.

2 Gender codes were missing for a small number of students. If these students did not participate in 2010–11 testing, gender codes remained missing. Thus the total number of students may exceed the sum of the number of male and female students.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Nearly 9,400 general education students and about 2,400 special education students in the Class of 2010 who had not passed the CAHSEE by May 2010 continued to try to pass the CAHSEE last year. A estimated total of 2,603 of these general education students and 240 of the special education students have now passed, bringing the total passing rates to 94.8 percent for general education students and 54.2 percent for students in special education programs. The cumulative passing rate of 94.8 percent for general education students in the Class of 2010 is already higher than the current passing rate of 94.4 percent for the Class of 2009.

Table 3.32. Estimated Number and Percentage of Students in the Class of 2010[1] Passing the CAHSEE ELA Test Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students[2]	428,965	16,403	1,752	3,982	10,669	430,717	14,651	96.7%
Females	218,722	6,582	703	1,797	4,082	219,425	5,879	97.4%
Males	210,219	9,818	1,049	2,185	6,584	211,268	8,769	96.0%
American Indian or Alaska Native[3]	3,436	80	6	12	62	3,442	74	97.9%
Asian[3]	43,285	960	98	289	573	43,383	862	98.1%
Pacific Islander[3]	3,009	99	11	8	80	3,020	88	97.2%
Filipino[3]	13,749	180	22	56	102	13,771	158	98.9%
Hispanic or Latino	189,615	11,423	1,174	2,829	7,420	190,789	10,249	94.9%
African American or Black[3]	30,905	1,799	177	285	1,337	31,082	1,622	95.0%
White[3]	144,517	1,493	152	276	1,065	144,669	1,341	99.1%
Multiple Races[4]	--[4]	--[4]	112	227	11	--[4]	--[4]	--[4]
Economically Disadvantaged	183,799	11,117	1,152	2,775	7,190	184,951	9,965	94.9%
English Learner	52,551	9,221	954	2,683	5,584	53,505	8,267	86.6%
Reclassified Fluent English	83,502	510	83	119	308	83,585	427	99.5%
Special Education	22,395	12,088	277	1,588	10,223	22,672	11,811	65.7%

1 Many students in special education programs who had not passed the CAHSEE by the end of grade twelve were allowed an exemption from the CAHSEE requirement and so were ***excluded*** from all rows of the table except for the last row.

2 Gender codes were missing for a small number of students. If these students did not participate in 2010–11 testing, gender codes remained missing. Thus the total number of students may exceed the sum of the number of male and female students.

3 Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

4 The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Table 3.33. Estimated Number and Percentage of Students in the Class of 2010[1] Passing the CAHSEE Mathematics Test Through May 2011, Excluding Students with Disabilities

Group	By May 2010		July 2010–May 2011			Cumulative Total		
	Passed	Not Yet Passed	Passed	Not Passed	Not Tested	Passed	Not Yet Passed	Percent Pass
All Students[2]	427,508	17,860	1,736	4,294	11,830	429,244	16,124	96.4%
Females	216,267	9,037	934	2,456	5,647	217,201	8,103	96.4%
Males	211,223	8,814	802	1,838	6,174	212,025	8,012	96.4%
American Indian or Alaska Native[3]	3,397	119	6	22	91	3,403	113	96.8%
Asian[3]	43,891	354	38	70	246	43,929	316	99.3%
Pacific Islander[3]	3,018	90	7	12	71	3,025	83	97.3%
Filipino[3]	13,774	155	20	35	100	13,794	135	99.0%
Hispanic or Latino	188,990	12,048	1,193	2,986	7,869	190,183	10,855	94.6%
African American or Black[3]	30,008	2,696	175	556	1,965	30,183	2,521	92.3%
White[3]	144,011	1,999	179	365	1,455	144,190	1,820	98.8%
Multiple Races[4]	--[4]	--[4]	118	248	13	--[4]	--[4]	--[4]
Economically Disadvantaged	183,500	11,416	1,106	2,810	7,500	184,606	10,310	94.7%
English Learner	54,915	6,857	661	1,734	4,462	55,576	6,196	90.0%
Reclassified Fluent English	82,974	1,038	170	321	547	83,144	868	99.0%
Special Education	21,935	12,548	210	1,651	10,687	22,145	12,338	64.2%

[1] Many students in special education programs who had not passed the CAHSEE by the end of grade twelve were allowed an exemption from the CAHSEE requirement and so were *excluded* from all rows of the table except for the last row.

[2] Gender codes were missing for a small number of students. If these students did not participate in 2010–11 testing, gender codes remained missing. Thus the total number of students may exceed the sum of the number of male and female students.

[3] Students who indicated that they were Hispanic or Latino are excluded from this row even though they may have indicated the corresponding racial category as well.

[4] The "Multiple Races" category was added in 2010-11. Students are shown in the "Multiple Races" category above only if they could be identified as such from current-year test records. Cumulative data are not shown because this category was not included in prior-year data.

Additional Analyses of Results for Students with Disabilities

One of the most persistent problems for the CAHSEE has been the low passing rate for SWD. Our prior evaluation reports have highlighted particular difficulties in meeting the CAHSEE requirement faced by students in special education programs. We have several times recommended consideration of alternatives for these students. In 2004, the California Legislature passed Senate Bill (SB) 964, calling for a panel to identify options or alternatives for students in special education programs and requiring a contractor to support the work of this panel and report on options that are identified.

Pursuant to requirements of SB 964, a report was submitted to the California Legislature in spring 2005 recommending alternative graduation assessments and requirements for students receiving special education services (Rabinowitz, Crane, Ananda,

Vasudeva, Youtsey, Schimozato, & Schwager, April 2005). The SB 964 report identified three types of options for students receiving special education services. First, there are options for *alternate forms of testing* to be sure students receiving special education services have adequate opportunities to demonstrate what they know and can do. Second, there are options for *modifying the CAHSEE requirement*. The main recommendation in this area, to defer the requirement for students receiving special education services, was based on the premise that instructional content was not yet adequate to provide sufficient opportunity for students receiving special education services to learn the required material. The deferral was also recommended to allow time to develop alternative requirements, such as coursework, that students in special education programs might pass to receive a diploma. Finally, there are options concerning *alternative types of diplomas* for students who are not able to demonstrate competency in the CAHSEE standards.

Our 2005 and 2006 CAHSEE evaluation reports described analyses of characteristics of students in this population and the types of services that they received in relation to success in passing the CAHSEE (Wise, et al., 2005b, Chapter 7; Wise, et al. 2006b). Key results from that investigation included:

1. Nearly half of the students in special education programs receive relatively non-intensive services (e.g., in-class accommodations, resources specialists) and participate in the regular curriculum 80 percent of the time or more. About half of these students pass the CAHSEE on the first try and, perhaps with additional time and resources, the others would be capable of passing and should be held to the CAHSEE requirement.

2. About one-quarter of the students in special education programs require more intensive assistance (e.g., special day programs) and spend less than 50 percent of their time in regular instruction. Very few of these students pass the CAHSEE. Other goals may be more appropriate for these students. It is worth noting, however, that 10 percent of the students in this category do pass the CAHSEE, so expectations for meeting the CAHSEE requirement should not lightly be abandoned.

Last year, SWD were once again exempt from the CAHSEE requirement while the SBE and CDE study alternative ways that these students might meet the CAHSEE requirement as called for by Assembly Bill (AB) 2040.

Supplemental Data on Students Receiving Special Education Services

In 2006 and 2009, we merged additional data on students in special education programs from the California Special Education Management Information System (CASEMIS) with CAHSEE results. Our 2006 annual report included analyses providing descriptive information on students in this population and also analyses of differences by curriculum, services, and disability in the rates at which these students passed the CAHSEE. We conducted similar analyses in 2009 to assess the extent of changes over the past three years in the nature of this population of students and their success in meeting the CAHSEE requirement. In 2011, we once again merged CASEMIS data with CAHSEE

records and conducted additional analyses for SWD. Last year's analyses are limited to grade ten students, all of whom are required to take the CAHSEE. Consistent comparisons across time are not possible for grade eleven and grade twelve students in special education because of the potential for special education students to satisfy CAHSEE using either a waiver or the exemption over the past several years.

Passing Rates by Participation in Regular Classroom Instruction

We examined a number of variables describing the nature and extent of special education services and some characteristics of the students receiving these services. The variable most closely related to CAHSEE success was the percentage of time the student participated in regular general education class instruction. Table 3.34 shows that grade ten students who were in the general education class more than 80 percent of the time continue to be much more likely to pass the CAHSEE as grade ten students than students who spent less than half of their time in regular instruction. ELA passing rates increased slightly in 2011 for students spending more than 80 percent of class time in regular instruction and decreased slightly for students spending 80 percent or less time in regular instruction.

Table 3.34. Number of Grade Ten Special Education Students and Percentage Passing by Percentage of Time in Regular Instruction

Percent of Time In Regular Instruction	ELA					
	Number of Students[1]			Percent Passing CAHSEE ELA		
	2006	2009	2011	2006	2009	2011
100%	3,113	5,144	5,276	44.2%	43.6%	46.2%
81 – 99%	11,600	11,893	13,705	50.5%	51.7%	52.5%
67 –80%	6,053	4,962	4,887	34.5%	40.2%	37.9%
51 –66%	5,742	3,939	3,835	25.3%	28.3%	27.6%
11 – 50%	9,763	9,945	10,187	10.5%	16.0%	14.8%
01 –10%	293	317	252	28.3%	33.1%	23.8%
None	1,679	1,894	1,918	30.1%	34.7%	31.1%
All SWD	38,243	38,094	40,060	32.4%	36.5%	36.7%

Percent of Time In Regular Instruction	Mathematics					
	Number of Students[1]			Percent Passing CAHSEE Mathematics		
	2006	2009	2011	2006	2009	2011
100%	3,116	5,137	5,263	36.5%	47.9%	46.1%
81 – 99%	11,572	11,846	13,673	46.7%	53.5%	51.6%
67 –80%	6,037	4,945	4,894	30.8%	40.8%	36.0%
51 –66%	5,747	3,930	3,829	21.3%	27.7%	25.0%
11 – 50%	9,708	9,898	10,139	9.0%	15.0%	13.0%
01 –10%	295	312	245	24.8%	26.6%	21.6%
None	1,667	1,876	1,878	22.4%	29.3%	24.2%
All SWD	38,142	37,944	39,921	28.7%	36.9%	35.1%

[1] Number of students with matching CASEMIS data. Numbers differ for ELA and mathematics because some students took only one of the two tests.

As shown in Table 3.34, nearly half of students receiving special education services are able to spend more than 80 percent of their day in regular instruction (first two rows). Over half of these students passed the CAHSEE ELA requirement in grade ten and very nearly half passed the mathematics requirement. Except at the extreme low end, CAHSEE passing rates declined as students spent more time outside of regular instruction.

Table 3.35 shows the number and percentage of matched grade ten students in each primary disability category and the ELA and mathematics passing rates for students in each of these categories. The vast majority of SWD in the matched sample had *specific learning disability* as their primary disability code. These students passed the CAHSEE at relatively low rates, slightly below the average for all students in the 2006, 2009, and 2011 matched samples. Passing rates for students with learning disabilities improved from 2006 to 2009; stayed the same for ELA in 2011 and declined from 2009 to 2011 for mathematics. Students with vision, hearing, speech, or other health impairments passed the CAHSEE at relatively higher rates. Almost none of the students coded as having mental retardation passed the CAHSEE. (Although the current terminology used is "mental retardation/intellectual disability," our tables use the term that DATAQUEST reports.) These students are underrepresented in this matched sample, because many students coded in this category on the CASEMIS file did not take the CAHSEE at all.

Table 3.35. Primary Disability Codes for Grade Ten Students Receiving Special Education Services with CAHSEE Success Information

Primary Disability Category	Percent of Students with Disabilities in Category			Percent Passing CAHSEE ELA			Percent Passing CAHSEE Math		
	2006	2009	2011	2006	2009	2011	2006	2009	2011
010 = Mental Retardation	1.7%	1.7%	1.3%	3.3%	3.4%	2.4%	2.2%	3.0%	1.9%
020 = Hard of Hearing	0.9%	1.2%	1.1%	47.6%	42.8%	52.6%	47.3%	50.4%	56.8%
030 = Deaf	0.6%	0.7%	0.6%	17.9%	19.6%	19.4%	27.6%	30.6%	28.5%
040 = Speech/Lang. Impairment	6.5%	5.5%	4.8%	50.1%	39.6%	39.4%	51.6%	44.8%	43.2%
050 = Visual Impairment	0.5%	0.6%	0.5%	55.8%	56.7%	64.2%	55.1%	50.0%	59.6%
060 = Emotional Disturbance	7.6%	7.3%	6.3%	42.1%	46.7%	45.9%	33.1%	39.6%	35.6%
070 = Orthopedic Impairment	0.8%	1.0%	1.0%	54.6%	52.3%	47.8%	49.0%	45.8%	41.4%
080 = Other Health Impairment	6.3%	9.5%	10.1%	55.0%	55.8%	52.0%	49.3%	50.2%	43.6%
090 = Specific Learning Disability	73.1%	68.6%	63.6%	30.6%	31.6%	31.6%	29.1%	33.4%	31.6%
100 = Deaf-Blindness	0.0%	0.0%	0.0%						57.1%
110 = Multiple Disabilities	0.3%	0.2%	0.1%	36.5%	25.9%	12.8%	36.6%	27.1%	13.9%
120 = Autism	1.5%	3.4%	4.4%	56.5%	58.2%	58.5%	56.4%	58.6%	55.1%
130 = Traumatic Brain Injury	0.2%	0.4%	0.3%	28.6%	32.0%	23.8%	28.7%	35.9%	33.3%
Number of Matched Students	40,395	38,094	40,057	34.6%	38.5%	36.7%	32.6%	39.0%	35.1%

The distribution of students across primary disability categories was similar in 2006, 2009, and 2011. Slightly more students were classified as having autism and other health impairments and slightly fewer were classed as having specific learning disabilities in 2011 compared to prior years. Passing rates were predictably somewhat variable across years in categories with relatively few students. Passing rates for students with specific learning disabilities, the category accounting for about two-thirds of the students in special education, were slightly lower than passing rates for all students in special education.

Accommodations and Modifications

The CAHSEE allows a number of testing accommodations for students who need them. In addition, some students take the CAHSEE with test modifications[7] specified in their individual education plans (IEPs), even though these modifications invalidate their scores. Students who test with modifications and score above the passing level are allowed to petition for a waiver from the CAHSEE requirement. Tables 3.36 and 3.37 show the various accommodations and modifications recorded for the CAHSEE ELA and mathematics tests. Each table shows the percentage of grade ten and twelve SWD who received each type of accommodation or modification. In 2006, SWD were exempt from the CAHSEE requirement. In 2009, they were not. As shown in these tables, the use of accommodations and modifications increased dramatically between 2006 and 2009, particularly for students taking the CAHSEE in grade twelve. In 2011, SWD were once again exempted from the CAHSEE requirement. The use of accommodations and modifications decreased, but usage rates were still generally higher than in 2006.

Table 3.36. Percentage of Students with Disabilities Receiving Specific ELA Accommodations and Modifications in 2006, 2009, and 2011 by Grade

Description of Accommodation or Modification	Grade Ten			Grade Twelve		
	2006	2009	2011	2006	2009	2011
Number of Administrations to SWD	55,985	39,804	49,968	54,919	48,669	62,221
Accommodations						
Transfer of Responses to Answer Document	0.3%	0.2%	0.2%	0.2%	0.5%	0.2%
Oral Responses Dictated to a Scribe	0.1%	0.5%	0.1%	0.2%	0.4%	0.3%
Spell Checker or Grammar Checker Off	0.3%	0.5%	0.6%	0.4%	1.0%	0.6%
Essay Reponses	0.1%	0.3%	0.4%	0.2%	0.6%	0.3%
Assistive Device	0.1%	0.3%	0.2%	0.1%	0.4%	0.2%
Braille Version	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%
Large Print Version	0.2%	0.3%	0.2%	0.1%	0.2%	0.1%
Test Over Multiple Days	0.4%	3.2%	2.8%	0.6%	4.4%	1.8%
Supervised Breaks	3.7%	9.2%	9.1%	4.1%	11.0%	8.2%
Beneficial Time	0.5%	1.4%	1.6%	0.8%	1.8%	1.4%
Tested Home or Hospital	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%

[7] Test modifications are changes to test administration procedures thought to change the construct being measured, such as allowing calculators on test questions measuring computational skill. When test modifications are used, scores are not considered valid for meeting the CAHSEE requirement due to the impact on what is being measured.

Table 3.36. (Continued)

Description of Accommodation or Modification	Grade Ten			Grade Twelve		
	2006	2009	2011	2006	2009	2011
Modifications						
Dictionary	1.0%	1.6%	1.3%	2.5%	10.4%	5.2%
Sign Language	0.1%	0.1%	0.1%	0.1%	0.7%	0.4%
Oral Presentation	2.8%	3.0%	2.5%	7.4%	27.6%	13.1%
Spell Checker or Grammar Checker	0.3%	0.3%	0.2%	1.1%	3.6%	1.4%
Essay Reponses	0.1%	0.1%	0.1%	0.2%	0.9%	0.4%
Assistive Device	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%
Unlisted Modification	0.2%	0.0%	0.1%	0.7%	0.3%	0.1%

Table 3.37. Percentage of Students with Disabilities Receiving Specific Mathematics Accommodations and Modifications in 2006, 2009, and 2011 by Grade

Description of Accommodation or Modification	Grade Ten			Grade Twelve		
	2006	2009	2011	2006	2009	2011
Number of Administrations to SWD	55,985	61,787	54,919	39,654	40,735	50,732
Accommodations						
Transfer of Responses to Answer Document	0.2%	0.4%	0.4%	0.2%	0.3%	0.2%
Oral Responses Dictated to a Scribe	0.1%	0.2%	0.2%	0.1%	0.2%	0.1%
Braille Version	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%
Large Print Version	0.2%	0.3%	0.2%	0.1%	0.2%	0.1%
Test Over More Than 1 Day	0.2%	2.2%	2.2%	0.4%	2.7%	1.1%
Supervised Breaks	3.0%	8.3%	8.1%	3.5%	8.9%	7.0%
Beneficial Time	0.4%	1.3%	1.5%	0.6%	1.4%	1.3%
Tested At Home or Hospital	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%
Dictionary	0.1%	0.1%	0.2%	0.4%	1.5%	0.9%
Sign Language	0.1%	0.2%	0.2%	0.2%	0.4%	0.3%
Oral Presentation	2.4%	4.0%	2.7%	5.1%	16.0%	7.0%
Modifications						
Calculator	8.0%	10.2%	8.3%	18.4%	42.8%	23.4%
Arithmetic Table	0.3%	0.3%	0.3%	0.9%	3.9%	2.2%
Math Manipulatives	0.0%	0.1%	0.1%	0.1%	0.3%	0.3%
Assistive Device	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Unlisted Modification	0.2%	0.1%	0.0%	0.6%	0.2%	0.2%

Summary of Test Results

CAHSEE test results show significant increases in students' competency in targeted skills since the implementation of the CAHSEE requirement. As shown in Table 3.9, overall grade twelve passing rates for seniors have increased steadily from 91 percent for the Class of 2006 to 94 percent for this year's Class of 2011. Similarly, as shown in Table 3.21, overall passing rates for grade ten students taking the CAHSEE

have increased steadily from 64 percent for the Class of 2006 (tested in 2004) to 74 percent for the Class of 2013 tested last year. As shown in Table 3.21, initial passing rates have increased significantly for all demographic groups. That said, it should also be noted that passing rates for SWD are still unacceptably low and that passing rates for English learners are also low and have increased only modestly since the CAHSEE requirement went into effect. Passing rates for economically disadvantaged, Hispanic, and African American students also continue to be significantly lower than passing rates for white and Asian students at all grade levels.

Another encouraging finding is the large number of students who continue to try to pass the CAHSEE after their originally scheduled graduation date. Of the approximately 25,000 general education students in the Class of 2010 who did not complete the CAHSEE requirement by the end of grade twelve, more than one-third took the CAHSEE one or more times last year. More than 2,500 completed the CAHSEE requirement. Also nearly 2,500 general education students in the Class of 2009 who had not yet passed the CAHSEE continued to try to pass it last year and more than 600 did pass.

One other significant trend since the implementation of the CAHSEE requirement has been the proportion of students taking more advanced mathematics courses in high school. As shown in Table 3.23, the percentage of students taking mathematics courses beyond Algebra I by grade ten has increased from 56 percent for the Class of 2006 to 73 percent for this year's grade ten students in the Class of 2013. All demographic groups showed significant increases in the percentage of students taking more advanced courses over this period, including very significant gains—from 19 percent to 42 percent—for students in special education. Here too, however, significant gaps exist. Analyses show that fewer SWD (41%), English learners (54%), economically disadvantaged students (67%), Native American (61%), African American (67%), and Hispanic (67%) students are taking advanced mathematics courses by grade ten compared to white (77%) and Asian (90%) grade ten students.

Finally, the CAHSEE continues to be a significant barrier to a diploma for SWD. Special education students who receive regular instruction more than 80 percent of the time have about a fifty-fifty chance of passing the CAHSEE in grade ten. The number of students in this category has increased slightly as has the passing rate for the ELA test, but not for the mathematics test. More than half of special education students spend 20 percent or more of their time outside of regular instruction. CAHSEE passing rates for these students declined slightly.

Chapter 4: Analysis of Student Questionnaire Responses

Rebecca L. Norman Dvorak

HumRRO designed a student questionnaire to investigate multiple CAHSEE topics, including how students (a) prepared for the CAHSEE, (b) made graduation and post-high school plans, (c) felt about course content and instruction coverage, and (d) put effort into the CAHSEE. Since 2001, the questionnaire has been administered to all students at the end of the CAHSEE ELA and mathematics tests. Students who took both tests had two opportunities to answer the questionnaire. We made significant changes to the questionnaire in 2005 and minor changes in more recent years. The 2011 questionnaire included 12 items. The analyses reported here are based on student response data from 2005 through 2011.

Grade Ten Student Questionnaire Respondents

Table 4.1 displays passing rates and demographic characteristics of the grade ten students who completed the questionnaire after CAHSEE ELA and mathematics tests in 2011. Note that a slightly different number of students took each test, resulting in some differences in percentages for some subgroups. The majority of grade ten students (82.3 percent of those taking the ELA and 82.4 percent of those taking mathematics) passed the CAHSEE. Hispanics made up the largest ethnic group (49.2 percent), followed by whites (28.4 percent), Asian (8.2 percent), African Americans (6.8 and 6.9 percent), Filipino (2.9 percent), American Indian or Alaskan Native (0.8 percent), and Pacific Islander (0.6 percent). Just over 8 percent of the students were identified as students with disabilities (SWD) and 14.5 percent were English learners (EL). Approximately half (48.2 percent) of the students were labeled economically disadvantaged (ED) based on two indicators: either the student is included in the National School Lunch Program or the student does not have a parent or guardian with at least a high school diploma.

Table 4.2 summarizes the percentage of grade ten students who were classified as SWD, EL, or both EL and SWD (students who are not classified as either are not included). Most of these students were identified as EL only or SWD only; however, 11.8 percent were classified as both.

To provide context for interpreting other tables and figures in this chapter, Table 4.3 shows the number of grade ten students who passed both the ELA and mathematics tests, passed only ELA, passed only mathematics, or passed neither test.

Table 4.1. Demographic Characteristics by Percentage of 2011 Grade Ten Student Questionnaire Respondents

Variable	ELA (n = 476,317)	Math (n = 476,421)
Pass		
No	17.7	17.6
Yes	82.3	82.4
Gender		
Female	49.1	49.2
Male	50.9	50.8
Ethnicity		
American Indian or Alaskan Native	0.8	0.8
Asian	8.2	8.2
Pacific Islander	0.6	0.6
Filipino	2.9	2.9
Hispanic	49.2	49.2
African American	6.8	6.9
White	28.4	28.4
Multiple Races	3.0	3.0
Disability (SWD)		
No	91.5	91.6
Yes	8.5	8.5
English Learner (EL)		
No	85.5	85.6
Yes	14.5	14.4
Economically Disadvantaged (ED)		
No	49.9	49.9
Yes	48.2	48.2

Table 4.2. Percentage of 2011 Grade Ten Students Who Are Classified as SWD, EL, or Both

SWD and EL Classification	ELA (n = 95,879)	Math (n = 95,561)
Both EL and SWD	11.8	11.8
SWD Only	29.5	29.5
EL Only	58.7	58.7

Table 4.3. Number of 2011 Grade Ten Students by Tests Passed

Tests Passed	Number	Percent
Both	361,222	76.8
Only ELA	28,087	6.0
Only Mathematics	28,573	6.1
Neither	52,574	11.2

Comparisons on Student Perspective

We analyzed the trends and changes in students' perceptions after they took the CAHSEE mathematics and ELA tests by comparing

- grade ten student responses from 2005 to 2011;
- grade ten student responses in 2011 by passing categories (whether they passed both tests, only ELA, only mathematics, or neither test);
- 2011 grade ten responses by key demographic characteristics (gender, ethnicity, disability status, English learner status, economic disadvantage status); and
- 2011 grade twelve responses in 2009 and 2011 by those who passed in 2011 and those who did not.

The first part of this chapter presents the results of the first two sets of analyses—comparing student responses across years and by passing category. The results are organized by topic and question. In the discussion we highlight changes made to certain survey questions in 2011, as these may affect the comparability of responses over time.

The second part of this chapter presents the results comparing student responses by key demographic characteristics. We also present a summary of findings by topic.

Lastly, we present and discuss a selection of responses of 2011 grade twelve students who are still attempting to pass the CAHSEE.

Findings from 2011 Grade Ten Student Responses

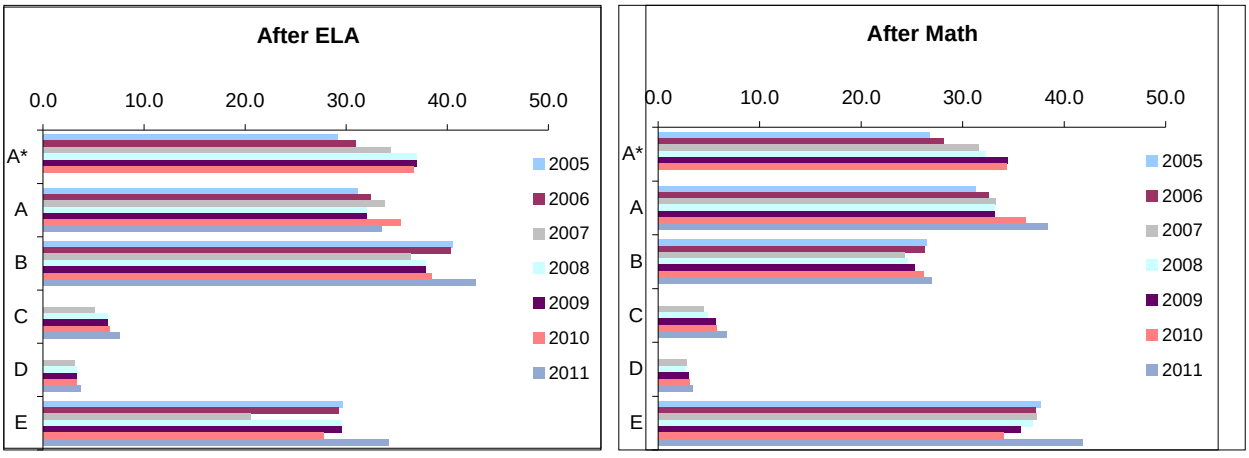
Test Preparation

Question 1: How did you prepare for this test?

After taking the ELA and mathematics tests in 2011, more students than in previous years reported that a teacher spent time in class helping them prepare for the CAHSEE. Also, increased numbers of students reported having taken a special course during the regular school day or after school to prepare. The percentage of students who claimed they did not do anything in addition to coursework to prepare also increased from previous years (see Table 4.4). Note that one option (marked A.*) was not included on the 2011 questionnaire, but had been during previous years. This may have affected the student response patterns.

Table 4.4. Question 1: How Did You Prepare for This Test? (Mark All That Apply) (Grade Ten Students' Responses 2005–11)

After ELA	Percentage						
	2005	2006	2007	2008	2009	2010	2011
A.* A teacher or counselor told me about the purpose and importance of the test.	29.1	30.9	34.4	35.6	37.0	36.6	n/a
A. I practiced on questions similar to those on the test.	31.1	32.4	33.8	33.6	32.0	35.3	33.5
B. A teacher spent time in class helping me to get ready to take the test.	40.5	40.3	36.4	37.1	37.9	38.5	42.8
C. I took a special class during the regular school day that covered the topics on the CAHSEE.	n/a	n/a	5.1	5.7	6.4	6.6	7.5
D. I took a special class after school or during the summer that covered the topics on the CAHSEE.	n/a	n/a	3.1	3.0	3.3	3.3	3.7
E. I did not do anything in addition to regular course work to prepare for this test.	29.6	29.3	20.6	29.9	29.5	27.7	34.1
After Mathematics	**Percentage**						
	2005	2006	2007	2008	2009	2010	2011
A.* A teacher or counselor told me about the purpose and importance of the test.	26.7	28.2	31.6	32.3	34.5	34.4	n/a
A. I practiced on questions similar to those on the test.	31.3	32.6	33.3	33.2	33.2	36.2	38.4
B. A teacher spent time in class helping me to get ready to take the test.	26.5	26.3	24.3	24.6	25.3	26.2	27.0
C. I took a special class during the regular school day that covered the topics on the CAHSEE.	n/a	n/a	4.5	4.9	5.7	5.7	6.8
D. I took a special class after school or during the summer that covered the topics on the CAHSEE.	n/a	n/a	2.8	2.7	3.0	3.1	3.4
E. I did not do anything in addition to regular course work to prepare for this test.	37.7	37.2	37.3	36.9	35.7	34.1	41.9



*This response option was not included on the 2011 student questionnaires.

Figure 4.1. Test preparation by grade ten students over the years as reported after CAHSEE ELA and mathematics tests, in percentages.

As shown in Table 4.5, students who passed both tests were most likely to report having received test preparation help from teachers during class time after taking the ELA than after taking the mathematics CAHSEE. Students who passed both tests were also the most likely to report that they did not do anything in addition to regular coursework to prepare for the CAHSEE.

Table 4.5. Question 1: How Did You Prepare for This Test? (Mark All That Apply) (Percentages of 2011 Grade Ten Student Responses by Tests Passed)

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. I practiced on questions similar to those on the test.	33.4	34.0	35.0	33.6	37.6	39.3	45.7	40.0
B. A teacher spent time in class helping me to get ready to take the test.	44.6	38.8	40.3	33.9	26.5	27.2	32.3	28.0
C. I took a special class during the regular school day that covered the topics on the CAHSEE.	6.4	11.0	11.8	11.8	5.8	9.2	9.9	10.1
D. I took a special class after school or during the summer that covered the topics on the CAHSEE.	3.3	4.4	5.8	5.3	3.1	3.8	4.9	4.5
E. I did not do anything in addition to regular course work to prepare for this test.	36.4	28.2	23.9	24.8	45.9	34.4	24.1	26.4

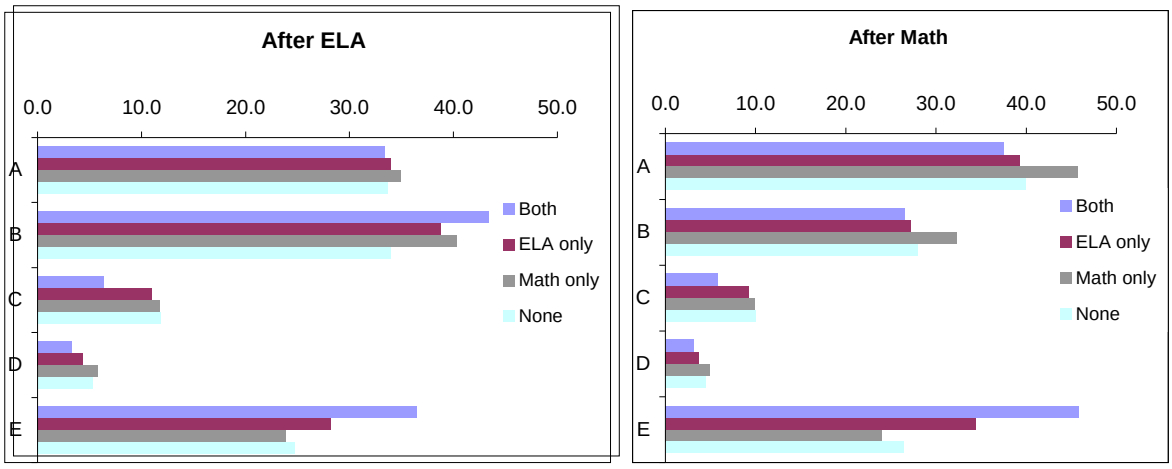


Figure 4.2. Test preparation of students as reported after taking CAHSEE ELA and mathematics tests, by tests passed in 2011, in percentages.

Question 2: What materials did you use to prepare for this test?

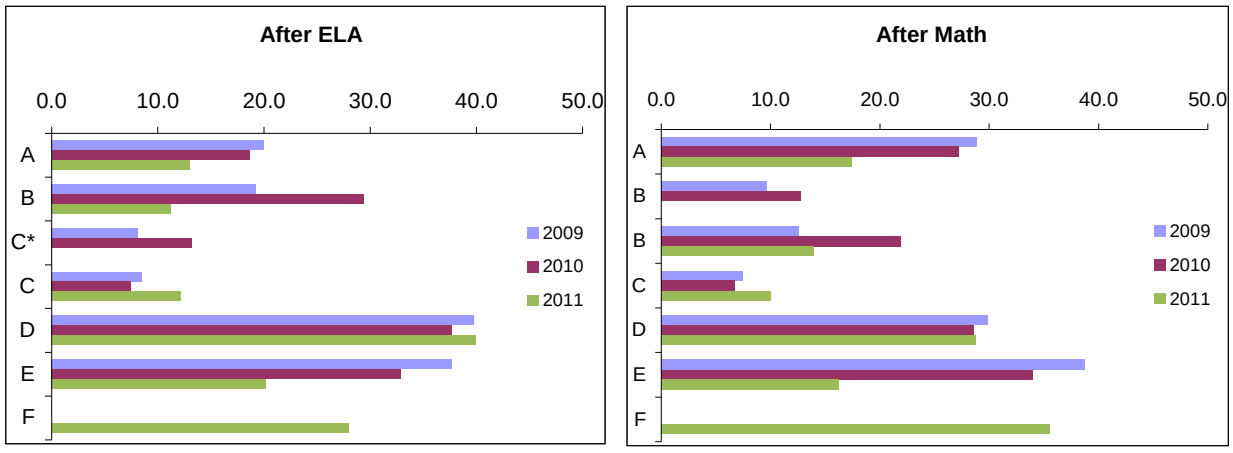
Question 2 was a new addition to the student questionnaire in 2009. Response options were modified in 2011 to provide a new choice which may affect the comparability of student responses over time. In 2011, more students indicated that they used the CAHSEE online prep to prepare for the test, and fewer students responded that they used textbooks. Approximately one-third of students (more after mathematics; less after ELA) reported that they did not use any materials to prepare (see Table 4.6).

Table 4.6. Question 2: What Materials Did You Use to Prepare for This Test? (Mark All That Apply) (Grade Ten Student Responses, 2009–11)

After ELA	Percentage		
	2009	2010	2011
A. Textbooks	20.0	18.7	13.0
B. ELA Student Guide	19.2	29.4	11.2
C.* Mathematics Student Guide	8.1	13.3	n/a
C. CAHSEE Online Prep**	8.5	7.5	12.2
D. Released (sample) test questions	39.8	37.7	39.9
E. Other Resources	37.7	32.9	20.2
F. I did not use any materials to prepare.	n/a	n/a	27.9

After Math	Percentage		
	2009	2010	2011
A. Textbooks	28.9	27.2	17.5
B.* ELA Student Guide	9.6	12.8	n/a
B. Mathematics Student Guide	12.6	21.9	14.0
C. CAHSEE Online Prep**	7.5	6.8	10.0
D. Released (sample) test questions	29.8	28.6	28.8
E. Other resources	38.7	34.0	16.3
F. I did not use any materials to prepare.	n/a	n/a	35.6

*Response option not included in 2011.
**Wording slightly modified in 2011.



*Response option not included in 2011.
**Wording slightly modified in 2011.

Figure 4.3. Students' report of materials used to prepare for CAHSEE ELA and mathematics tests, 2009–11, in percentages.

Students who passed both tests were most likely to have used released (sample) test questions to prepare for the CAHSEE, while those who did not pass either test were least likely to have used them. As shown in Table 4.7, students who passed both tests were the most likely to report that they did not use any materials to prepare.

Table 4.7. Question 2: What Materials Did You Use to Prepare for This Test? (Mark All That Apply) (Percentages of Grade Ten Student Responses in 2011 by Tests Passed)

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. Textbooks	11.6	16.0	18.3	19.1	15.9	20.9	24.7	22.8
B. ELA/Math Student Guide	10.5	11.9	15.0	14.1	12.3	16.9	22.7	20.4
C. CAHSEE Online Prep	10.9	14.3	18.4	17.1	9.0	11.7	14.9	13.9
D. Released (sample) test questions	44.2	33.4	27.7	19.7	31.4	25.1	22.7	15.9
E. Other resources	19.4	24.1	23.8	22.1	15.2	20.7	20.3	19.1
F. I did not use any materials to prepare	29.9	21.1	18.5	21.2	39.5	25.4	19.0	21.6

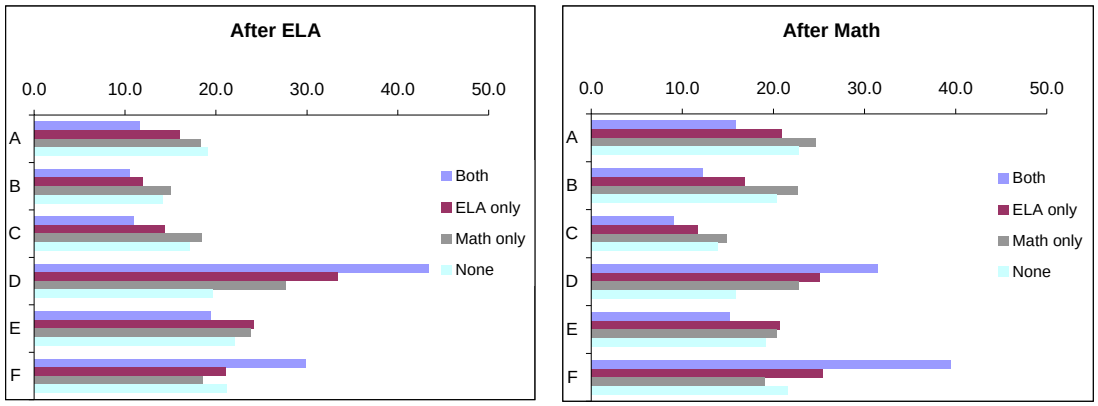


Figure 4.4. Materials used by grade ten students, by percentage, as reported after taking ELA and mathematics tests in 2011

Graduation Expectations and Post-High School Plans

Question 3: Do you think you will receive a high school diploma?

Question 3 was revised for the 2009 CAHSEE administration, providing three years of comparison data. Option F was modified in 2011. Table 4.8 illustrates that there has been little to no change in grade ten student expectations toward receiving a high school diploma between 2009 and 2011. The majority of grade ten students expect to earn their diploma with the rest of their class or earlier and approximately 10 percent

intend to graduate but expect that it will require taking classes after their original graduation date.

Table 4.8. Question 3: Do You Think You Will Receive a High School Diploma? (Grade Ten Student Responses, 2009–11)

After ELA	Percentage		
	2009	2010	2011
A. Yes, with the rest of my class (or earlier).	84.4	84.3	83.8
B. Yes, but I will likely have to take classes after my original graduation date.	9.9	10.2	10.4
C. Yes, but I will pursue a diploma in Adult Education.	2.5	2.4	2.5
D. No, I probably will not receive a high school diploma.	2.1	2.0	2.0
E. No, I plan to take the GED.	0.7	0.7	0.7
F. No, but I plan to go to community college.	n/a	n/a	0.7
F.* No, I plan to take the CHSPE.	0.4	0.4	n/a
After Math	**Percentage**		
	2009	2010	2011
A. Yes, with the rest of my class (or earlier).	84.0	83.9	82.9
B. Yes, but I will likely have to take classes after my original graduation date.	10.1	10.3	10.7
C. Yes, but I will pursue a diploma in Adult Education.	2.3	2.3	2.4
D. No, I probably will not receive a high school diploma.	2.4	2.4	2.4
E. No, I plan to take the GED.	0.8	0.8	0.8
F. No, but I plan to go to community college.	n/a	n/a	0.9
F.* No, I plan to take the CHSPE.	0.5	0.5	n/a

*Option F was revised in 2011.

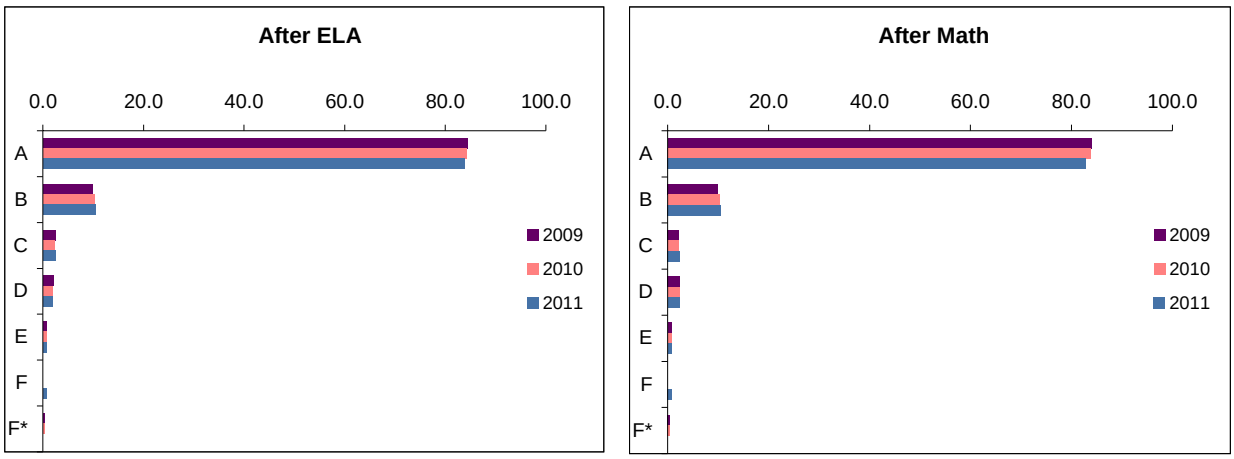


Figure 4.5. Comparison of grade ten students' expectations of receiving a high school diploma, by percentage, after taking ELA and mathematics tests, 2009–11.

As shown in Table 4.9, the majority of students in each group (passed both tests, passed ELA only, passed math only, or passed none) responded that they were most likely to receive a high school diploma with the rest of their class or earlier. However, while 90 percent of students who passed both tests believed that they would receive

their diplomas with their class, only about one half of those who passed neither test believed that they would graduate with their class or earlier. Students who did not pass either test were the most likely to respond that they would probably not receive a high school diploma (8.8 percent after ELA; 9.5 percent after mathematics).

Table 4.9. Question 3: Do You Think You Will Receive a High School Diploma? (Percentages of Grade Ten Students' Responses in 2011 by Tests Passed)

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. Yes, with the rest of my class (or earlier).	90.9	68.9	64.3	50.3	90.1	65.9	66.4	50.1
B. Yes, but I will likely have to take classes after my original graduation date.	6.4	22.3	22.5	26.5	6.6	23.4	20.9	26.3
C. Yes, but I will pursue a diploma in Adult Education.	1.4	3.5	5.3	8.6	1.4	3.6	5.0	7.9
D. No, I probably will not receive a high school diploma.	0.7	3.4	4.9	8.8	1.0	4.4	4.8	9.5
E. No, I plan to take the GED.	0.3	0.9	1.1	2.7	0.4	1.3	1.2	2.8
F. No, but I plan to go to community college.	0.3	1.1	1.9	3.1	0.4	1.5	1.7	3.4

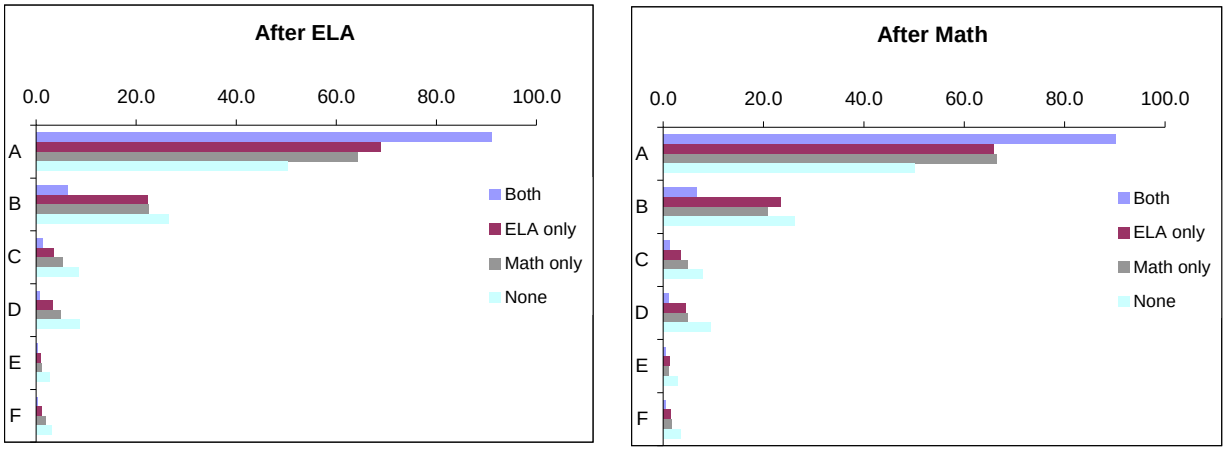


Figure 4.6. Comparison of grade ten students' expectations of receiving a diploma, by tests passed in 2011, in percentages.

Question 4: What might prevent you from obtaining a high school diploma?

In 2006 there was a peak in the percentage of students who believed that not passing the CAHSEE might prevent them from obtaining a high school diploma. As mentioned previously, this was the first year that the CAHSEE was a graduation requirement. In 2011 the percentage of students who believed that not passing the

CAHSEE might prevent them from graduating decreased (see Table 4.10). After both ELA and mathematics, not passing required courses is the most common reason cited, followed closely by not passing the CAHSEE. A slight wording change, noted below, was made beginning with the 2009 questionnaires.

Table 4.10. Question 4: What Might Prevent You From Receiving a High School Diploma? (Mark All That Apply) (Grade Ten Responses, 2005–11)*

After ELA	Percentage						
	2005	2006	2007	2008	2009	2010	2011
A. I may not pass all the required courses.	n/a	25.1	19.7	18.8	21.8	21.7	19.6
B. I may not pass the CAHSEE exam.	n/a	38.4	20.6	18.9	20.6	18.7	15.9
C. I may drop out before the end of 12th grade.	n/a	13.3	2.5	2.3	2.6	2.5	2.3
D. I may not meet some other graduation requirement.	n/a	23.2	13.4	12.6	12.2	12.2	11.8
E. I am confident I will receive a high school diploma.	n/a	n/a	63.3	65.6	63.1	63.9	65.5
After Math	**Percentage**						
	2005	2006	2007	2008	2009	2010	2011
A. I may not pass all the required courses.	n/a	26.7	21.4	20.3	23.8	23.6	21.0
B. I may not pass the CAHSEE exam.	n/a	41.1	23.3	21.4	22.8	21.1	19.0
C. I may drop out before the end of 12th grade.	n/a	11.8	2.8	2.6	2.9	2.8	2.5
D. I may not meet some other graduation requirement.	n/a	20.4	12.6	11.8	10.3	10.2	9.8
E. I am confident I will receive a high school diploma.	n/a	n/a	59.8	62.2	59.4	60.3	62.0

*In 2009 the wording of question 4 was changed from 'what might prevent you from graduating high school' to 'what might prevent you from receiving a high school diploma.'

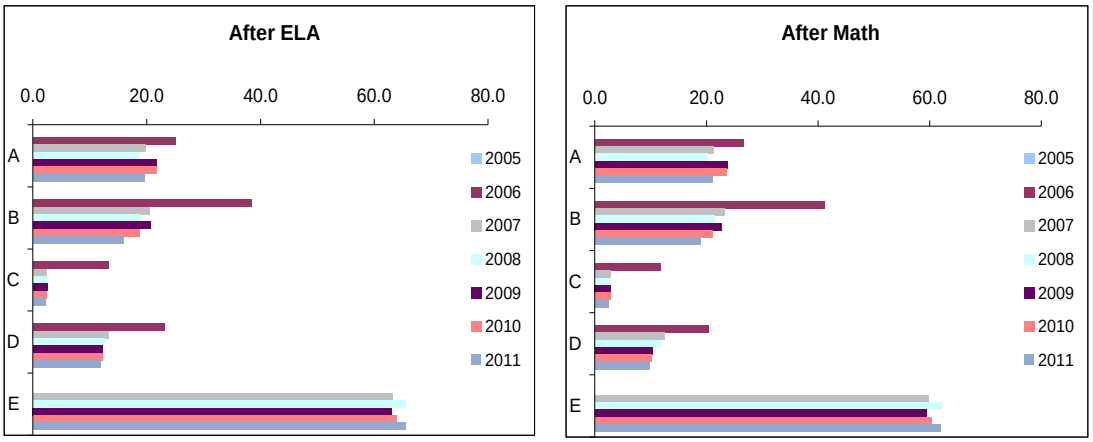


Figure 4.7. Grade ten respondents' reasons why they might not graduate with their class, as reported from 2005 through 2011, in percentages.

The majority of grade ten students (over 70 percent) who passed both tests reported they were confident they would earn a diploma, and they therefore did not identify anything that might prevent them from graduating. Table 4.11 illustrates that those who did not pass at least one test were more likely to believe that they might drop out of high school by the end of grade twelve than those who passed both tests.

Table 4.11. Question 4: What Might Prevent You From Receiving a High School Diploma? (Mark All That Apply) (Percentages of Grade Ten Students' Responses in 2011 by Tests Passed)

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. I may not pass all the required courses.	16.9	33.5	27.6	26.8	18.2	34.9	30.4	28.3
B. I may not pass the CAHSEE exam.	10.8	29.0	33.6	36.8	13.6	38.7	33.6	39.4
C. I may drop out before the end of 12th grade.	1.4	2.8	5.0	6.7	1.7	3.2	4.8	6.5
D. I may not meet some other graduation requirement.	10.5	19.1	15.7	14.7	8.7	14.9	13.2	12.5
E. I am confident I will receive a high school diploma.	74.2	40.1	38.9	30.6	70.8	32.9	37.4	28.2

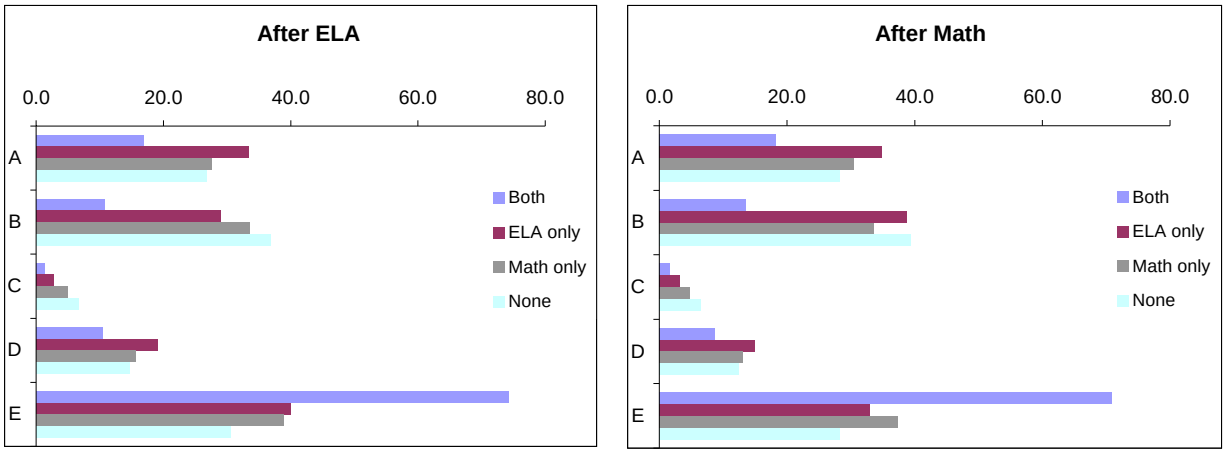


Figure 4.8. Reasons reported by grade ten students for possibly not receiving a diploma on time, by tests passed in 2011, in percentages.

In addition to examining the responses to Question 4 by trend and by tests passed, we also examined students' responses to all options in the question based on their response to option 'B. I may not pass the CAHSEE exam' – we separated students who believed that passing the CAHSEE might prevent them from receiving a high school diploma (selected option B) from those who did not feel this way (did not select option B). Table 4.12 presents these results. Disaggregating data in this way reveals that those who were concerned that they might not pass the CAHSEE were also most likely to be concerned that they might not pass their required courses or that they might not meet some other graduation requirement. Those who did not feel that the requirement to pass the CAHSEE would prevent them from receiving a high school diploma were far more likely to be confident that they would receive a high school

diploma than those who feared the CAHSEE requirement would prevent them from getting a diploma.

Table 4.12. Question 4: What Might Prevent You From Receiving a High School Diploma? (Mark All That Apply) (Percentages of Grade Ten Students' Responses in 2011 by Response to Option B - 'I may not pass the CAHSEE exam')

Response	Selected Option 'B'		Did Not Select Option 'B'	
	After ELA Questionnaire	After Math Questionnaire	After ELA Questionnaire	After Math Questionnaire
A. I may not pass all the required courses.	29.0	28.5	17.8	19.3
B. I may not pass the CAHSEE exam.	100.0	100.0	0.0	0.0
C. I may drop out before the end of 12th grade.	3.2	2.8	2.1	2.4
D. I may not meet some other graduation requirement.	18.5	14.4	10.5	8.7
E. I am confident I will receive a high school diploma.	12.7	9.4	75.5	74.3

Question 5: What do you think you will do after high school?

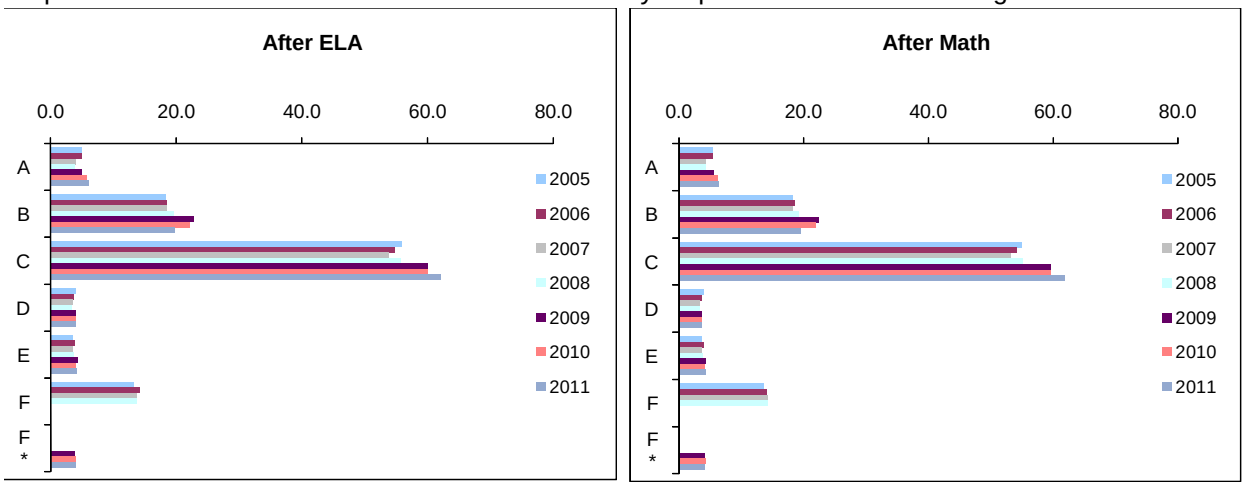
The response option "F" for Question 5 was modified in 2009 as shown in Table 4.13; therefore, data prior to 2009 is not directly comparable. In 2011, the number of students indicating that they planned to attend a four-year college or university increased compared to prior years. There was little to no change in the percentage of students who expected to attend a vocational, technical, or trade school; work full time; or who did not know what they would do.

Table 4.13. Question 5: What Do You Think You Will Do After High School? (Responses from Grade Ten Students, 2005–11)

After ELA	Percentage**						
	2005	2006	2007	2008	2009	2010	2011
A. I will join the military.	5.0	4.9	4.1	3.9	5.0	5.8	6.1
B. I will go to a community college.	18.4	18.5	18.5	19.6	22.8	22.1	19.8
C. I will go to a 4-year college or university.	55.9	54.8	53.8	55.7	60.0	60.1	62.0
D. I will go to a vocational, technical, or trade school.	4.0	3.7	3.5	3.4	4.0	3.9	4.0
E. I will work full-time.	3.5	3.9	3.6	3.7	4.3	4.1	4.1
F. I really don't know what I will do after high school.	13.2	14.2	13.8	13.8	n/a	n/a	n/a
F.* Do something else (besides school, work, or the military)	n/a	n/a	n/a	n/a	3.9	4.0	3.9

After Math	Percentage**						
	2005	2006	2007	2008	2009	2010	2011
A. I will join the military.	5.4	5.5	4.4	4.3	5.6	6.3	6.5
B. I will go to a community college.	18.3	18.6	18.2	19.3	22.5	21.9	19.5
C. I will go to a 4-year college or university.	55.0	54.1	53.2	55.1	59.6	59.7	61.8
D. I will go to a vocational, technical, or trade school.	4.0	3.6	3.4	3.3	3.8	3.7	3.8
E. I will work full-time.	3.7	4.0	3.8	3.8	4.4	4.2	4.4
F. I really don't know what I will do after high school.	13.6	14.1	14.2	14.2	n/a	n/a	n/a
F.* Do something else (besides school, work, or the military)	n/a	n/a	n/a	n/a	4.1	4.2	4.2

* Option 'F' was revised in 2009. ** Totals do not always equal 100% due to rounding.



* Option 'F' was revised in 2009.

Figure 4.9. Grade ten students' estimate of what they will do after high school, by percentage, 2005–11, after taking ELA and mathematics tests.

Students who passed both tests were most likely to report they would attend a four-year college or university after high school. Students who passed both were also the least likely to report that they planned to join the military, while those who passed neither test were the most likely to do so. Those who did not pass either test were also more likely than others to report they would work full-time or do something other than go to school, work, or join the military after high school (see Table 4.14).

Table 4.14. Question 5: What Do You Think You Will Do After High School? (Percentages* of Grade Ten Students' Responses in 2011 by Tests Passed)

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. Join the military	4.9	8.7	9.4	11.4	5.3	9.2	9.8	11.4
B. Go to a community college	17.7	31.0	25.7	26.1	17.2	30.2	25.7	26.1
C. Go to a 4-year college or university	68.8	41.1	44.6	34.6	68.6	41.2	44.7	34.6
D. Go to a vocational, technical, or trade school	3.5	5.4	5.1	5.9	3.3	5.1	4.6	5.4
E. Work full time	2.4	7.0	8.8	12.7	2.6	7.5	8.9	13.3
F. Do something else (besides school, work, or the military)	2.8	6.9	6.4	9.4	3.0	6.9	6.3	9.2

* Totals do not always equal 100% due to rounding.

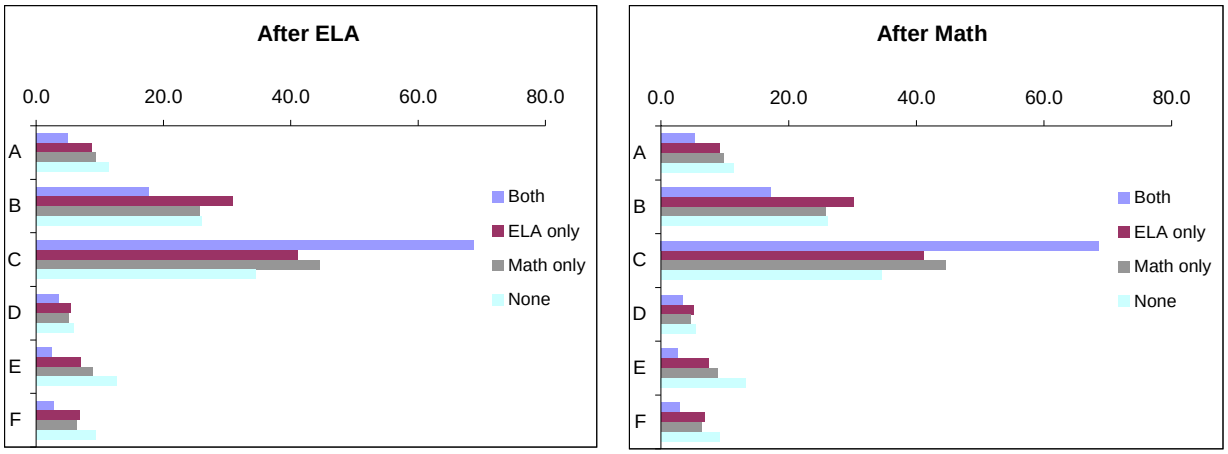


Figure 4.10. Grade ten students' estimate of what they will do after high school by tests passed in 2011, in percentages.

Test Performance and Influencing Factors

Question 6: How well did you do on this test:

In 2011 Question 6 was modified from "The main reasons I did not do as well as I could have on this test" to "How well did you do on this test." This change should be considered when examining the response data. Table 4.15 reveals that fewer students in 2011 (than in 2009 or 2010) responded that they "did as well as they could." This was especially true for responses after taking the ELA. Being nervous was the most common reason that students gave for not doing as well as they could.

Table 4.15. Question 6: How Well Did You Do on This Test? (Mark All That Apply) (Grade Ten Students' Responses, 2009–11)

After ELA	Percentage		
	2009	2010	2011
A. I did as well as I could.	86.7	87.3	79.8
B. I was too nervous to do as well as I could.	9.0	8.6	6.8
C. I was not motivated to do well.	4.2	4.1	3.5
D. I did not have time to do as well as I could.	1.5	1.3	1.2
E. Conditions in the testing room made it difficult to concentrate.	4.7	4.3	3.7
F. There were other reasons why I did not do as well as I could.	4.6	4.1	3.4
After Math	**Percentage**		
	2009	2010	2011
A. I did as well as I could.	86.4	86.3	84.8
B. I was too nervous to do as well as I could.	9.3	9.3	9.0
C. I was not motivated to do well.	3.9	3.9	4.3
D. I did not have time to do as well as I could.	1.3	1.2	1.2
E. Conditions in the testing room made it difficult to concentrate.	3.6	3.4	3.4
F. There were other reasons why I did not do as well as I could.	5.3	5.0	5.8

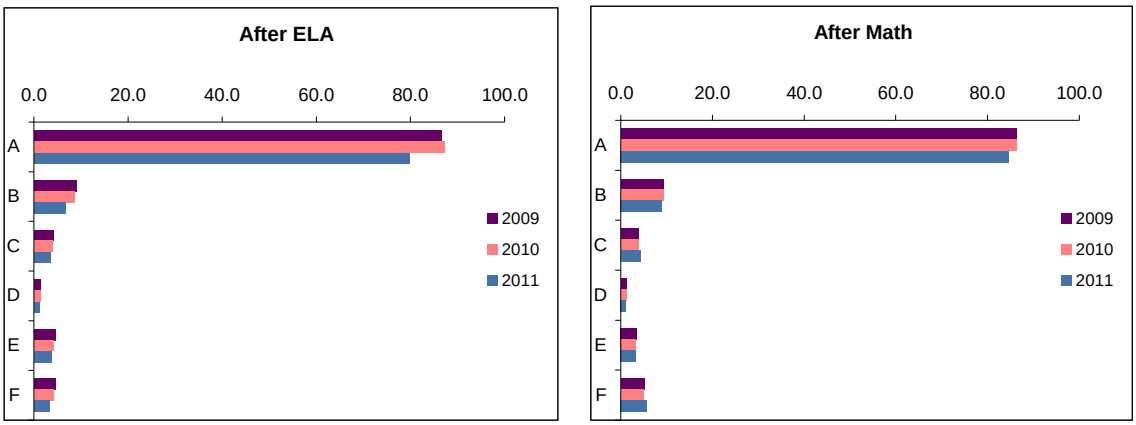


Figure 4.11. Reasons given by grade ten students for why they did or did not do as well as they could on ELA and mathematics tests in 2009–11, in percentages.

Table 4.16 reveals that those who passed both tests were more likely than all other students to report that they did as well as they could on the CAHSEE; those who passed neither test were the least likely to do so. Among students who failed to pass both tests, approximately 14 percent of students after ELA and 18 percent of students after mathematics said that nervousness affected how well they did on the CAHSEE. Very few students reported that time or testing conditions prevented them from doing as well as they could.

Table 4.16. Question 6: How Well Did You Do on This Test? (Mark All That Apply) (Percentages of Grade Ten Students' Responses in 2011 by Tests Passed)

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. I did as well as I could.	85.0	78.4	63.9	56.0	88.7	72.3	79.2	66.3
B. I was too nervous to do as well as I could.	5.1	7.2	15.0	14.1	6.8	16.1	14.6	18.1
C. I was not motivated to do well.	2.9	3.3	6.1	5.9	3.4	7.4	5.5	8.1
D. I did not have time to do as well as I could.	0.8	1.0	2.4	3.0	0.8	1.6	2.2	3.5
E. Conditions in the testing room made it difficult to concentrate.	3.8	3.0	3.5	3.7	3.3	3.8	3.2	4.4
F. There were other reasons why I did not do as well as I could.	3.0	2.9	5.2	5.1	5.1	11.6	4.8	7.9

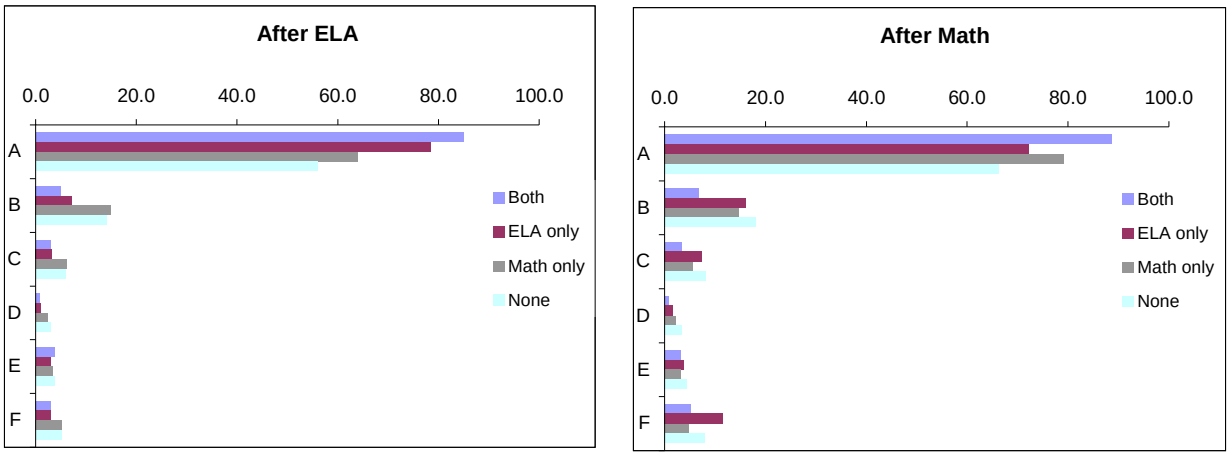


Figure 4.12. Reasons given by grade ten students for not doing as well as they could on the CAHSEE, by tests passed in 2011, in percentages.

Content and Instruction Coverage

Question 7: Were the topics on the test covered in courses you have taken?

Table 4.17 shows that the percentage of students who believe that most or all of the topics on the CAHSEE were covered in their courses has remained fairly constant between 2005 and 2011, with a slightly higher percentage of ELA test takers than mathematics test takers reporting that topics were similar. As in previous years, we display the combined responses for options A and B.

Table 4.17. Question 7: Were the Topics on the Test Covered in Courses You Have Taken? (Grade Ten Students' Responses, 2005–11)

After ELA	Percentage*						
	2005	2006	2007	2008	2009	2010	2011
A. Yes, all of them. B. Most, but not all of them (two-thirds or more were covered).	92.2	93.3	93.7	93.9	94.2	95.1	94.7
C. Many topics on the test were not covered in my courses (less than two-thirds were covered).	7.7	6.7	6.25	6.1	5.8	4.9	5.4
After Math	**Percentage***						
	2005	2006	2007	2008	2009	2010	2011
A. Yes, all of them. B. Most, but not all of them (two-thirds or more were covered).	88.9	90.6	91.53	92.3	92.4	92.7	91.3
C. Many topics on the test were not covered in my courses (less than two-thirds were covered).	11.1	9.4	8.36	7.7	7.6	7.4	8.8

* Totals do not always equal 100% due to rounding.

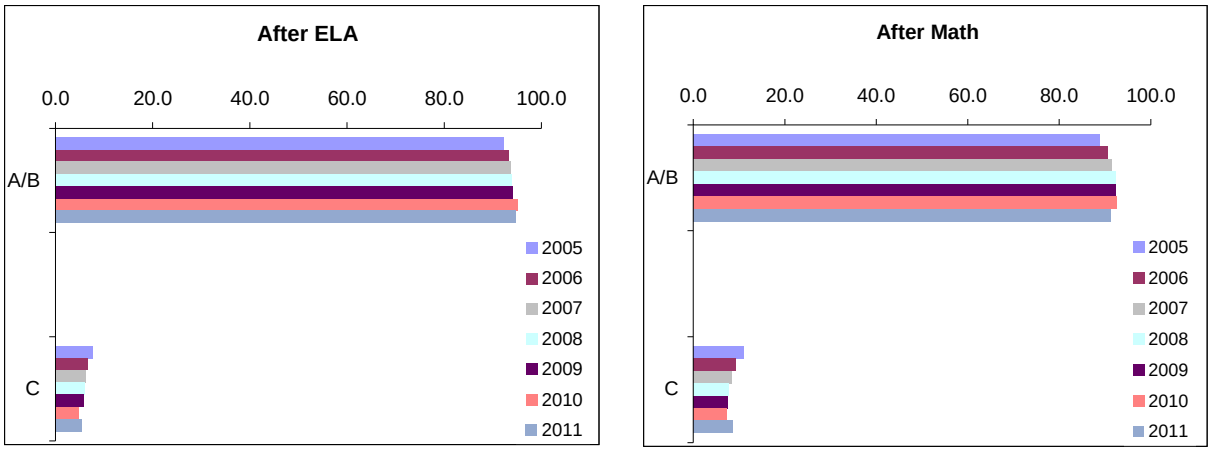


Figure 4.13. Opinions reported by grade ten students, 2005–11, of whether all materials tested were covered in the courses they took, in percentages.

Table 4.18 reveals that students who did not pass either test were the most likely to report that topics on the CAHSEE were not covered in their courses. Also, students who passed only one test were more likely to report that the topics were not covered than those who passed both. However, the majority of all categories of passing students said that at least most of the topics were covered during their courses.

Table 4.18. Question 7: Were the Topics on the Test Covered in Courses You Have Taken? (Percentages* of Grade Ten Students' Responses in 2011 by Tests Passed)

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. Yes, all of them.	65.3	48.4	36.0	33.4	56.9	26.5	33.7	26.4
B. Most, but not all of them (two-thirds or more were covered).	31.5	44.7	51.4	50.3	36.7	55.1	54.8	54.2
C. Many topics on the test were not covered in my courses (less than two-thirds were covered).	3.2	6.9	12.6	16.3	6.4	18.4	11.6	19.4

* Totals do not always equal 100% due to rounding.

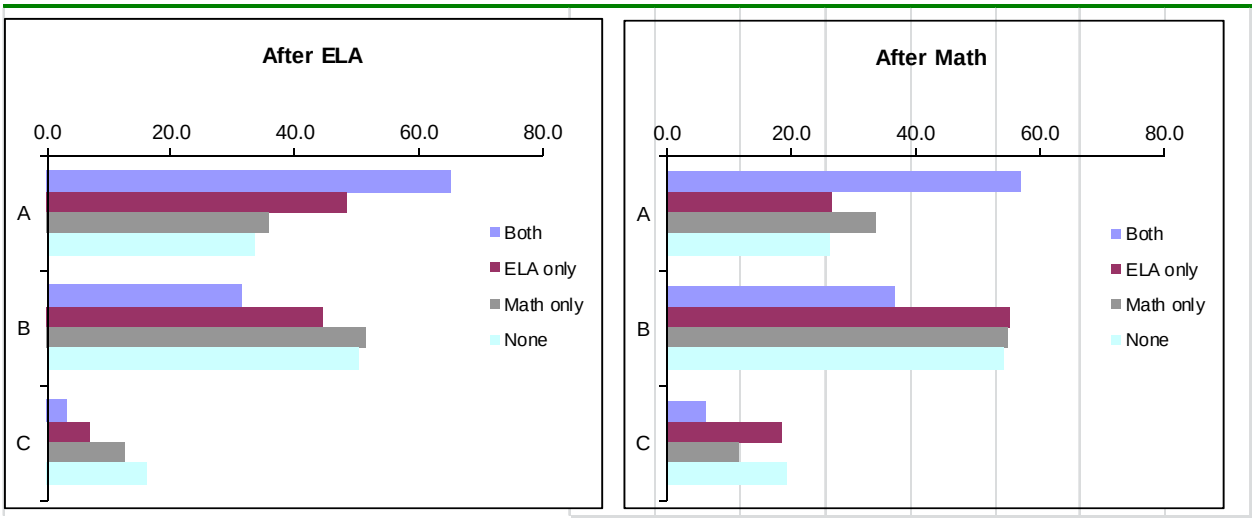


Figure 4.14. Responses of grade ten students as to whether topics tested on CAHSEE ELA and mathematics tests were covered in the courses they took, by tests passed in 2011, in percentages.

Question 8: Were any of the questions on the test different from the types of questions or answer options you have encountered in your homework assignments or classroom tests?

In 2011 there was a slight increase in the number of students who responded that all of the items on the CAHSEE were similar to those encountered in class.

Students were more likely to select this response after completing the ELA test than after the mathematics test (see Table 4.19).

Table 4.19. Question 8: Were Any of the Questions on the Test Different From the Types of Questions or Answer Options You Have Encountered in Your Homework Assignments or Classroom Tests? (Grade Ten Students' Responses, 2005–11)

After ELA	Percentage*						
	2005	2006	2007	2008	2009	2010	2011
A. Yes, many were different from anything I had seen before.	9.3	11.9	11.37	11.3	11.1	10.1	9.7
B. Yes, a few were different from anything I had seen before.	49.5	48.9	47.84	49.0	45.1	43.5	41.3
C. No, all were similar to ones used in my classes	41.2	39.1	40.73	39.7	43.8	46.4	48.9

After Math	Percentage*						
	2005	2006	2007	2008	2009	2010	2011
A. Yes, many were different from anything I had seen before.	14.4	13.5	12.62	11.7	12.4	11.9	12.3
B. Yes, a few were different from anything I had seen before.	51.0	49.2	47.22	45.7	44.9	44.4	43.8
C. No, all were similar to ones used in my classes	34.7	37.3	40.07	42.7	42.7	43.6	43.9

* Totals do not always equal 100% due to rounding.

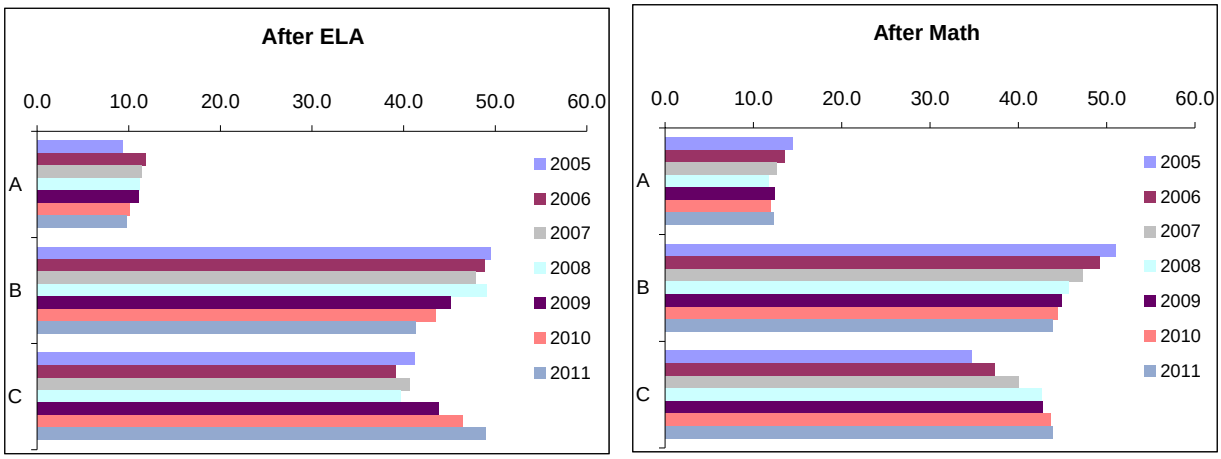


Figure 4.15. Percentage of grade ten students, 2005–11, who said questions were the same or different from those encountered in class tests, in percentages.

Table 4.20 shows that slightly more than half of the students who passed both tests reported that all of the questions on the CAHSEE tests were similar to ones used in their classes. The percentage was much lower for those who did not pass either test

or who passed only one. Most of the students who did not pass at least one test reported that a few questions were different than they had seen before.

Table 4.20. Question 8: Were Any of the Questions on the Test Different From the Types of Questions or Answer Options You Have Encountered in Your Homework Assignments or Classroom Tests? (Percentages of Grade Ten Students' Responses in 2011 by Tests Passed)

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. Yes, many were different from anything I had seen before.	6.9	11.2	20.5	24.0	9.3	20.4	18.9	26.6
B. Yes, a few were different from anything I had seen before.	38.5	48.7	54.1	51.6	40.7	56.0	56.2	52.6
C. No, all were similar to ones used in my classes	54.6	40.1	25.4	24.5	50.1	23.6	24.9	20.8

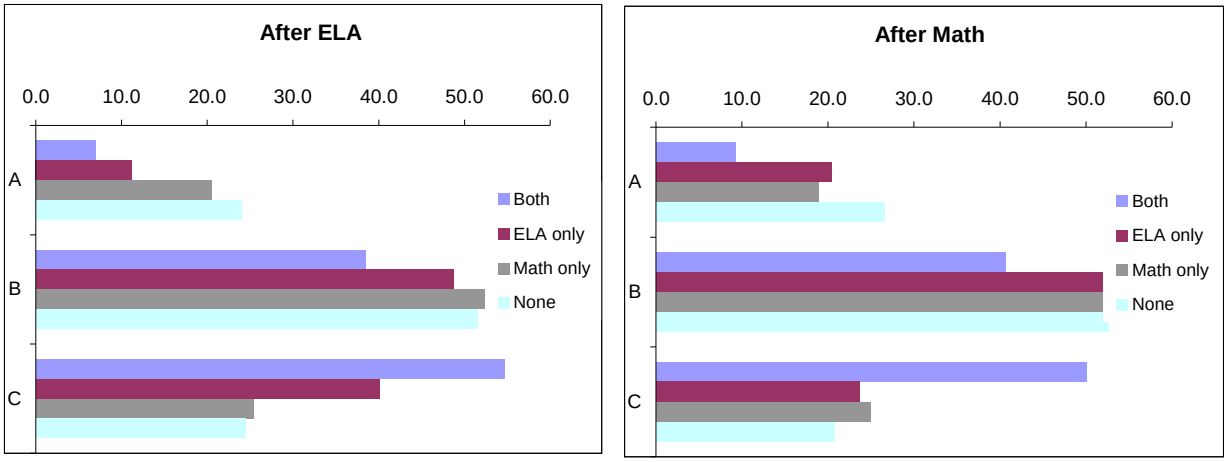


Figure 4.16. Grade ten students' responses regarding difference or similarity of CAHSEE tests to classroom tests, by CAHSEE tests passed in 2011, in percentages.

Question 9: Were the questions on this test more difficult than questions you were given in classroom tests or homework assignments?

Table 4.21 provides a summary of the percentage of students who felt test items were more difficult, the same, or easier than those they had encountered in class. Percentages for options B and C are combined because questions on the CAHSEE are intended to be either equally difficult to or less difficult than those encountered in class. After ELA, there has been a positive trend in the percentage of students who felt that CAHSEE test questions were the same or easier than those they had seen in their classes; in mathematics, there was a slight drop in the percentage of students responding in this way compared to the previous three years.

Table 4.21. Question 9: Were the Questions on This Test More Difficult Than Questions You Were Given in Classroom Tests or Homework Assignments? (Grade Ten Students' Responses, 2005–11)

After ELA	Percentage						
	2005	2006	2007	2008	2009	2010	2011
A. Yes, the test questions were generally more difficult than the questions I encountered in my course work.	17.5	16.3	16.5	16.6	14.1	12.3	12.1
B. The test questions were generally about as difficult as the questions I encountered in my course work. C. The test questions were generally easier than the questions I encountered in my course work.	82.5	83.7	83.5	83.4	85.9	87.7	87.9

After Math	Percentage						
	2005	2006	2007	2008	2009	2010	2011
A. Yes, the test questions were generally more difficult than the questions I encountered in my course work.	22.3	20.8	19.2	17.8	17.6	16.9	19.0
B. The test questions were generally about as difficult as the questions I encountered in my course work. C. The test questions were generally easier than the questions I encountered in my course work.	77.7	79.2	80.7	82.2	82.4	83.1	81.0

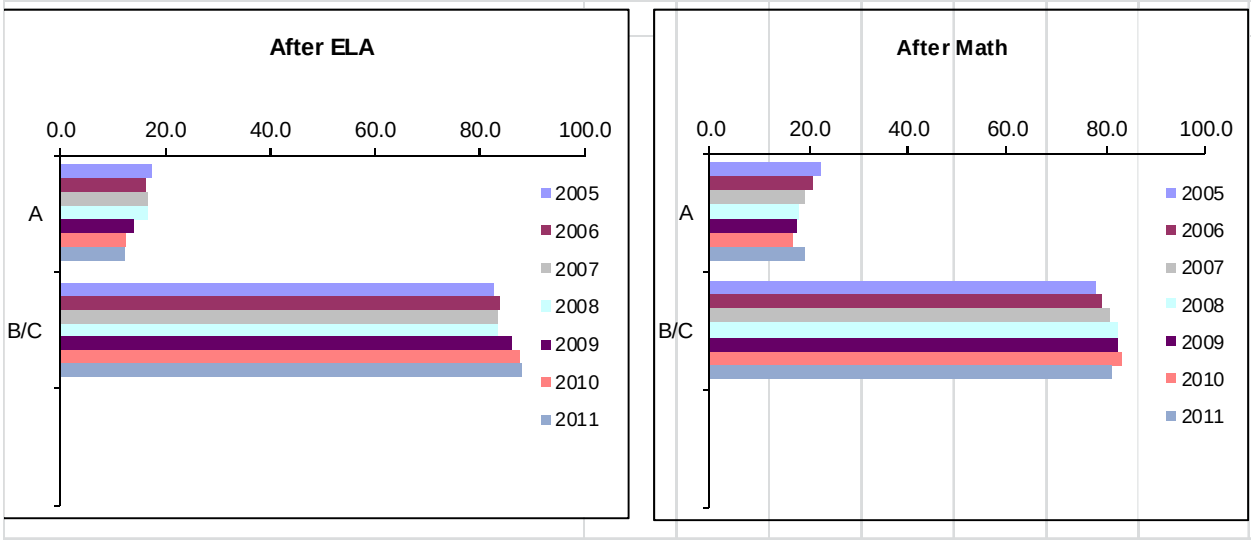


Figure 4.17. Percentage of grade ten students taking the CAHSEE, 2005–11, who found the CAHSEE test questions more difficult, the same as, or less difficult than those encountered in course work (B and C combined in chart).

A greater percentage of students who passed both tests than of those who passed only one or none felt that the questions on the CAHSEE were easier than those they encountered in classroom tests or homework. Students were more likely to

respond that the CAHSEE test questions were generally more difficult after taking the mathematics test (see Table 4.22).

Table 4.22. Question 9: Were the Questions on This Test More Difficult Than Questions You Were Given in Classroom Tests or Homework Assignments? (Percentages of Grade Ten Students' Responses in 2011 by Tests Passed)

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. Yes, the test questions were generally more difficult than the questions I encountered in my course work.	8.1	15.3	28.8	31.6	14.3	36.4	28.8	38.5
B. The test questions were generally about as difficult as the questions I encountered in my course work.	48.9	55.2	52.9	46.5	47.3	52.0	53.1	45.2
C. The test questions were generally easier than the questions I encountered in my course work.	43.1	29.5	18.3	21.9	38.4	11.6	18.1	16.3

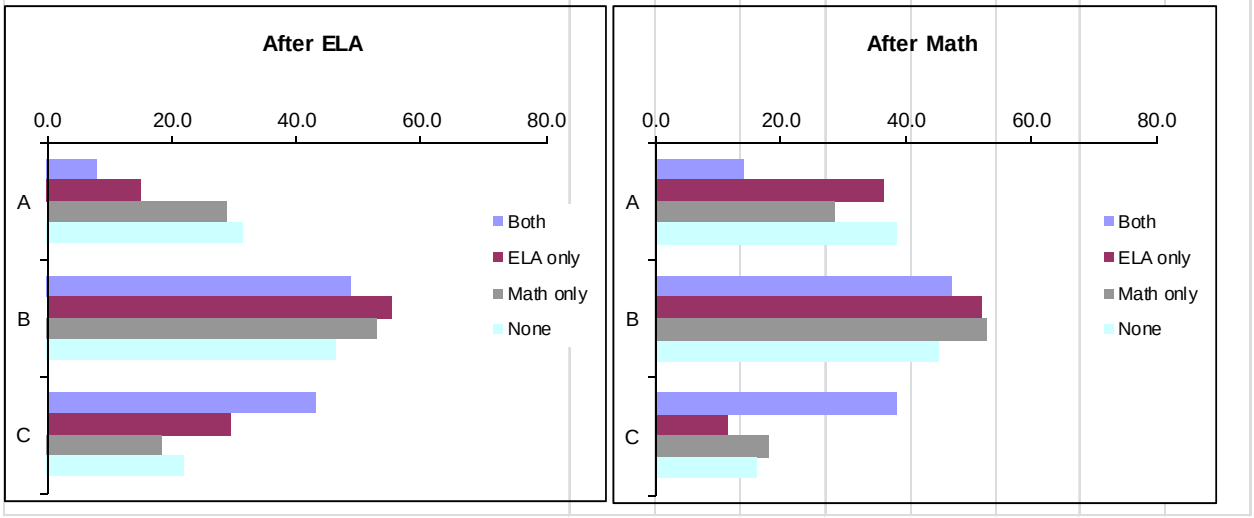


Figure 4.18. Percentages of grade ten students who thought the CAHSEE test questions were more difficult, the same, or less difficult than those encountered in the classroom or homework assignments, by tests passed in 2011.

Question 10: If some topics on the test were difficult for you, was it because:

The most common reason that students reported for having difficulty with the CAHSEE was forgetting things that they were taught. More students reported that none of the topics were difficult for them after taking the ELA test than did so after the

mathematics test. The reasons reported for difficulty have been fairly stable over the seven years of this survey question (see Table 4.23).

Table 4.23. Question 10: If Some Topics on the Test Were Difficult for You, Was It Because: (Grade Ten Students' Responses, 2005–11)

After ELA	Percentage*						
	2005	2006	2007	2008	2009	2010	2011
A. I did not take courses that covered these topics.	8.2	7.6	7.2	7.2	7.3	6.6	6.4
B. I had trouble with these topics when they were covered in courses I took.	18.1	17.5	17.2	17.3	17.7	17.6	16.0
C. I have forgotten things I was taught about these topics.	37.9	37.8	41.6	42.5	39.0	40.2	40.1
D. None of the topics was difficult for me.	35.8	37.1	33.3	33.0	35.9	35.6	37.5
After Math	**Percentage***						
	2005	2006	2007	2008	2009	2010	2011
A. I did not take courses that covered these topics.	13.5	12.6	10.8	9.5	10.6	9.9	9.7
B. I had trouble with these topics when they were covered in courses I took.	22.6	23.8	21.9	22.8	24.1	23.9	23.5
C. I have forgotten things I was taught about these topics.	44.7	43.8	45.0	46.1	44.2	44.2	46.0
D. None of the topics was difficult for me.	19.2	19.8	20.8	21.7	21.2	21.9	20.8

* Totals do not always equal 100% due to rounding.

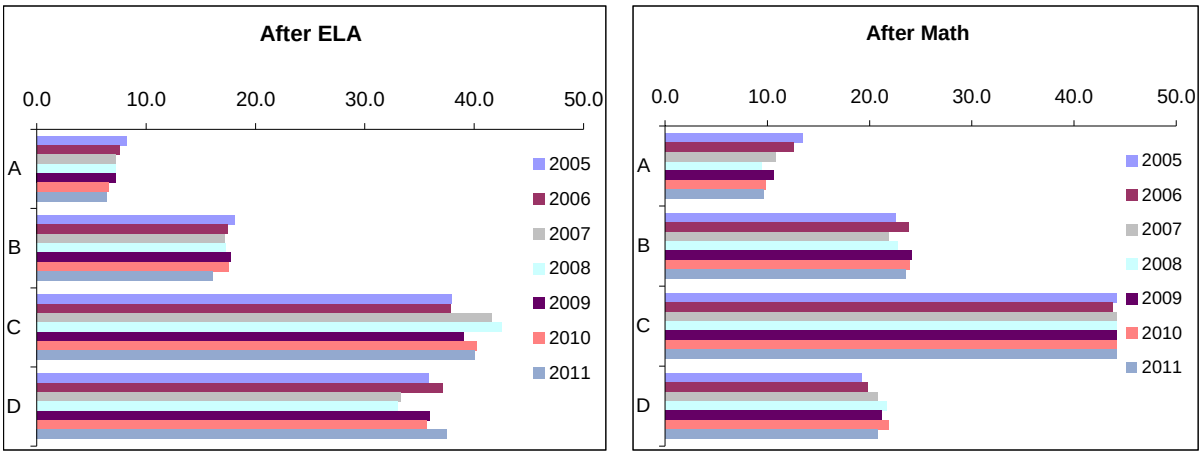


Figure 4.19. Reasons given by grade ten students, 2005–11, as to whether and why they found the CAHSEE test questions difficult, in percentages.

In 2011 students who passed neither test or only passed one were more likely to report that they did not take courses that covered the topics on the CAHSEE. The most common response for why they found the test difficult, regardless of tests passed, was having forgotten things that they had been taught (see Table 4.24).

Table 4.24. Question 10: If Some Topics on the Test Were Difficult for You, Was It Because: (Percentages of Grade Ten Students' Responses in 2011 by Tests Passed)*

Response Choice	Tests Passed, After ELA Questionnaire				Tests Passed, After Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. I did not take courses that covered these topics.	4.5	8.2	13.6	15.7	7.4	16.2	15.6	18.7
B. I had trouble with these topics when they were covered in courses I took.	13.2	21.6	28.2	27.7	20.1	40.7	31.1	34.6
C. I have forgotten things I was taught about these topics.	40.1	42.7	41.8	37.7	48.4	37.4	41.6	35.6
D. None of the topics was difficult for me.	42.3	27.6	16.5	18.8	24.1	5.6	11.7	11.1

* Totals do not always equal 100% due to rounding.

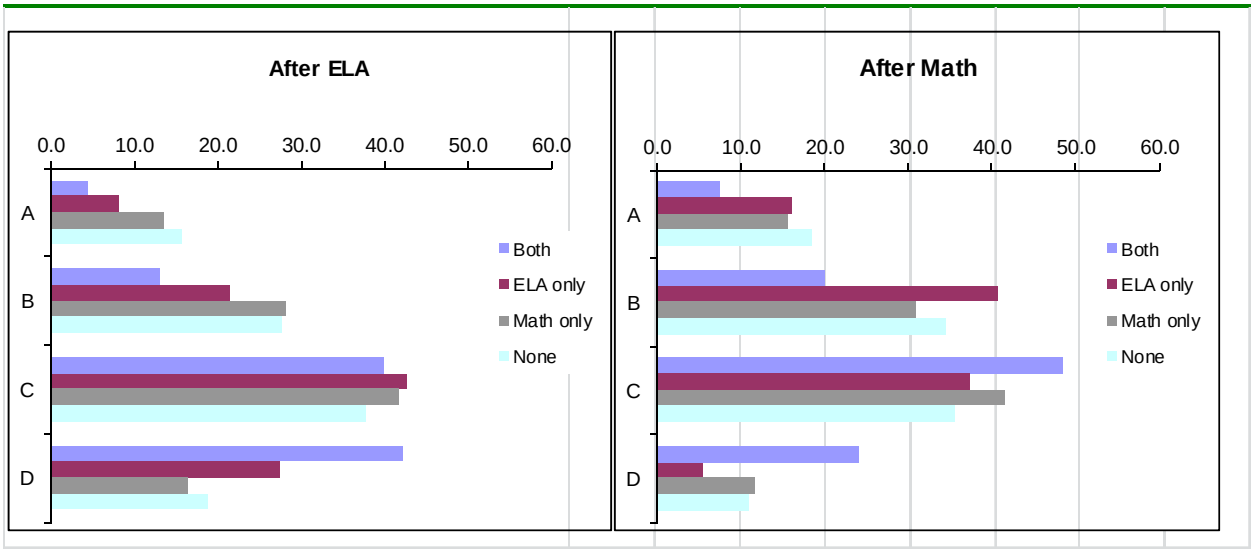


Figure 4.20. Reasons given by grade ten students, 2005–11, for whether and why they found test questions difficult, in percentages, by tests passed in 2011.

Effort Put into the CAHSEE

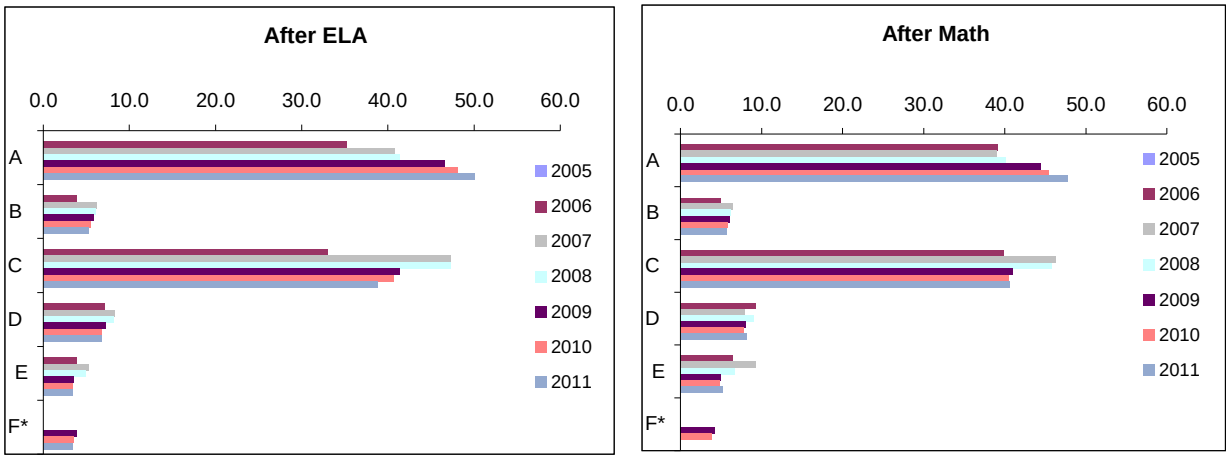
Question 11: Have you worked or will you work harder to learn the English-language arts or mathematics skills tested by the CAHSEE?

Over the years the percentage of students who have indicated that they do not have to work harder to learn the skills to pass the CAHSEE has gradually increased, beginning in 2005. Option 'F' (Table 4.25) was an addition to the questionnaire in 2009; therefore comparisons to years prior to this may not be valid.

Table 4.25. Question 11: Have You Worked or Will You Work Harder to Learn the English-Language Arts or Mathematics Skills Tested by the CAHSEE? (Mark All That Apply) (Grade Ten Students' Responses, 2005–11)

After ELA	Percentage						
	2005	2006	2007	2008	2009	2010	2011
A. I do not have to work any harder to meet the CAHSEE requirement.	n/a	35.3	40.8	41.4	46.6	48.1	50.1
B. I am taking additional courses.	n/a	3.9	6.2	6.1	5.9	5.5	5.2
C. I am working harder in the courses I am taking.	n/a	33.0	47.3	47.3	41.4	40.7	38.8
D. I am getting help outside of the classroom.	n/a	7.2	8.3	8.2	7.3	6.8	6.8
E. I am repeating a course to learn the material better.	n/a	3.9	5.3	4.9	3.6	3.4	3.4
F. I will stay in school an additional year to learn the required material.	n/a	n/a	n/a	n/a	3.9	3.5	3.4
After Math	**Percentage**						
	2005	2006	2007	2008	2009	2010	2011
A. I do not have to work any harder to meet the CAHSEE requirement.	n/a	39.1	39.0	40.2	44.5	45.5	46.4
B. I am taking additional courses.	n/a	5.0	6.5	6.2	6.2	5.9	5.6
C. I am working harder in the courses I am taking.	n/a	39.9	46.3	45.8	41.0	40.5	39.4
D. I am getting help outside of the classroom.	n/a	9.4	8.0	9.0	8.1	7.9	8.0
E. I am repeating a course to learn the material better.	n/a	6.5	9.3	6.8	5.0	4.8	5.2
F. I will stay in school an additional year to learn the required material.	n/a	n/a	n/a	n/a	4.2	3.9	3.9

* Option F added in 2009.



* Option F added in 2009.

Figure 4.21. Percentage of grade ten students, 2005–11, who said they have worked or will work harder, and in what ways, to meet the CAHSEE requirement.

As shown in Table 4.26, students who passed only one test were more likely than other students, including those who passed neither test, to report that they were working harder in the courses they were taking to learn the skills required by the CAHSEE. The majority of students who passed both tests reported not having to work any harder to meet the CAHSEE requirement.

Table 4.26. Question 11: Have You Worked or Will You Work Harder to Learn the English-Language Arts or Mathematics Skills Tested by the CAHSEE? (Mark All That Apply) (Percentages of Grade Ten Students' Responses in 2011 by Tests Passed)

Response Choice	Tests passed, after ELA Questionnaire				Tests passed, after Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. I do not have to work any harder to meet the CAHSEE requirement.	58.7	26.4	20.0	16.4	55.1	15.5	21.9	14.6
B. I am taking additional courses.	3.6	8.4	11.5	12.2	3.9	9.6	10.8	12.1
C. I am working harder in the courses I am taking.	36.3	52.6	49.9	43.8	36.8	55.2	49.1	44.1
D. I am getting help outside of the classroom.	5.2	11.2	12.6	13.6	6.4	13.7	12.2	13.6
E. I am repeating a course to learn the material better.	2.0	5.6	8.2	9.7	3.5	11.4	8.2	11.9
F. I will stay in school an additional year to learn the required material.	1.6	5.0	9.1	12.5	2.2	6.6	8.5	12.7

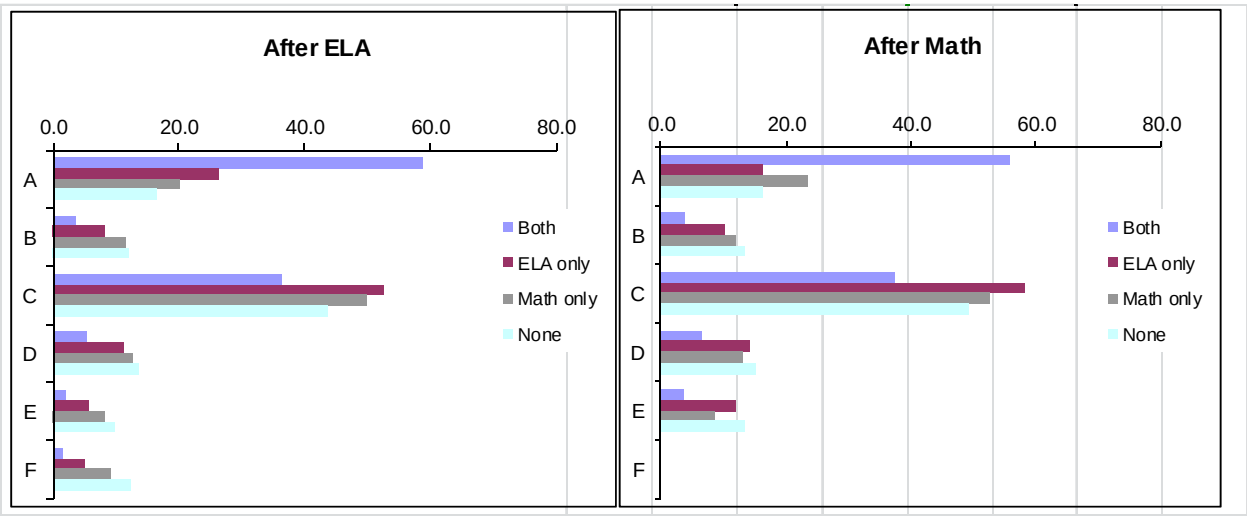


Figure 4.22. Percentage of grade ten students, by tests passed in 2011, who said they had or had not worked harder or will work harder in the future to pass the CAHSEE skills test(s).

Question 12: If you do not pass the CAHSEE in this administration, what are you most likely to do?

Table 4.27 shows that the majority of students (77.8 percent of ELA test takers and 78.2 percent of mathematics test takers) intend to stay in school and try to pass the CAHSEE again if they did not pass during this administration. Only a very small percentage of students responded that they would try to get a GED certificate or give up trying to earn a diploma.

Table 4.27. Question 12: If You Do Not Pass the CAHSEE in This Administration, What Are You Most Likely to Do? (Mark the Most Likely Option) (Grade Ten Students' Responses, 2005–11)

After ELA	Percentage*						
	2005	2006	2007	2008	2009	2010	2011
A. I will stay in school and try again to pass the CAHSEE.	n/a	n/a	68.2	75.8	77.3	77.4	77.8
B. I will take courses at a community college and try again to pass CAHSEE.	n/a	n/a	5.0	5.3	5.2	5.2	4.4
C. I will participate in some other type of program that will help me to pass the CAHSEE.	n/a	n/a	9.4	10.4	9.3	9.4	8.8
D. I will try to get a GED certificate.	n/a	n/a	1.8	1.9	1.7	1.6	1.6
E. I will give up trying to get a diploma altogether.	n/a	n/a	1.1	1.2	1.1	1.1	1.2
F. I really do not know what I will do.	n/a	n/a	5.4	5.4	5.4	5.4	6.2
After Math	Percentage*						
	2005	2006	2007	2008	2009	2010	2011
A. I will stay in school and try again to pass the CAHSEE.	n/a	n/a	70.7	77.2	78.6	78.5	78.2
B. I will take courses at a community college and try again to pass CAHSEE.	n/a	n/a	4.9	5.2	5.3	5.3	4.5
C. I will participate in some other type of program that will help me to pass the CAHSEE.	n/a	n/a	8.2	8.7	7.4	7.5	6.9
D. I will try to get a GED certificate.	n/a	n/a	1.8	1.9	1.7	1.6	1.7
E. I will give up trying to get a diploma altogether.	n/a	n/a	1.3	1.4	1.3	1.3	1.6
F. I really do not know what I will do.	n/a	n/a	5.8	5.7	5.8	5.8	7.2

* Totals do not always equal 100% due to rounding.

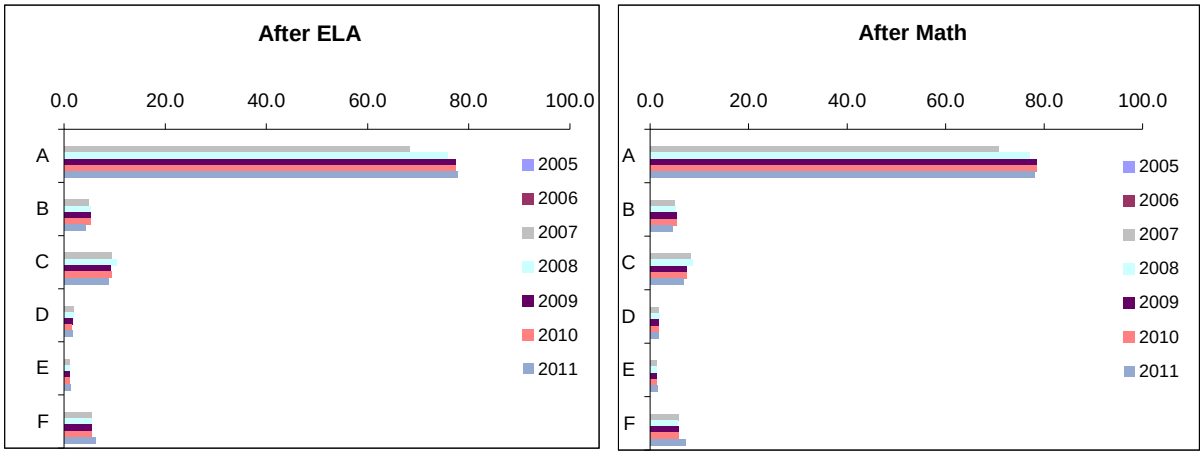


Figure 4.23. Most likely planned courses of action for grade ten students if they do not pass the CAHSEE by the time they complete high school, by year, in percentages.

Table 4.28 shows that the majority of grade ten students responding in 2011, regardless of how many tests they passed, reported they would stay in school and try again to pass the CAHSEE if they did not do so in this administration. However, this percentage was larger for those who passed both tests than for those who did not pass at least one test. Only a very small percentage of students reported that they will give up trying to get a diploma altogether; those who passed both tests were the least likely to state this.

Table 4.28. Question 12: If You Do Not Pass the CAHSEE in This Administration, What Are You Most Likely to Do? (Mark the Most Likely Option) (Percentages* of Grade Ten Students' Responses in 2011 by Tests Passed)

Response Choice	Tests passed, after ELA Questionnaire				Tests passed, after Math Questionnaire			
	Both Tests	ELA Only	Math Only	None	Both Tests	ELA Only	Math Only	None
A. I will stay in school and try again to pass the CAHSEE.	82.1	70.9	66.2	57.1	82.2	71.1	69.1	58.0
B. I will take courses at a community college and try again to pass CAHSEE.	3.3	6.2	7.0	9.4	3.4	7.1	7.0	9.7
C. I will participate in some other type of program that will help me to pass the CAHSEE.	7.6	11.8	13.6	13.7	5.6	9.8	11.2	12.0
D. I will try to get a GED certificate.	0.9	2.6	3.3	6.7	1.0	2.6	2.9	5.5
E. I will give up trying to get a diploma altogether.	0.9	0.9	2.2	3.5	1.3	1.5	1.9	3.4
F. I really do not know what I will do.	5.4	7.6	7.8	10.6	6.5	8.1	8.0	11.4

* Totals do not always equal 100% due to rounding.

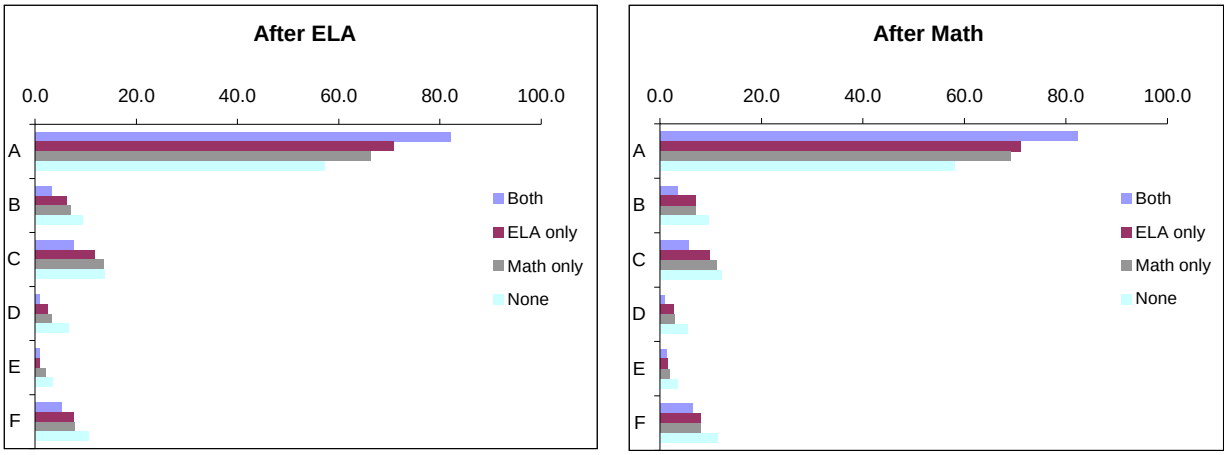


Figure 4.24. Most likely planned courses of action for grade ten students if they do not pass the CAHSEE by the time they complete high school, by tests passed in 2011, in percentages.

Comparisons of Grade Ten Student Responses in 2011 by Demographic Characteristics

We compared student questionnaire responses on five demographic variables: gender, ethnicity, students with disability (SWD), English learner (EL) status, and economic disadvantage (ED) status (based on participation in National School Lunch Program or lack of a parent or guardian with at least a high school diploma). Overall, the response differences by these five variables were very similar for ELA and mathematics questionnaires; therefore they will be discussed together. The questionnaire results from students who took the ELA test are presented in Table 4.29 and the questionnaire results from those who took the mathematics test are presented in Table 4.30.

Test Preparation (Table 4.29 and Table 4.30, Questions 1–2)

- Females were more likely than males to report that they practiced on similar test items to prepare, or that a teacher helped them prepare in class.

- Less than one-third of SWD and EL (fewer students than those in the general population) reported that they used released (sample) items to prepare for the CAHSEE. Those who were identified as both SWD and EL were the least likely to report that they used released items.

Graduation from High School and Post-High School Plans (Table 4.29 and Table 4.30, Questions 3–5)

- Asian, White, and Filipino students were more likely than other races/ethnicities to respond that they would graduate with their class or earlier. Also, more students who are not ED believed that they would graduate on time than those who are classified as ED.

- Approximately 30 percent of students who are identified as SWD and EL reported that they were confident that they would receive a high school diploma; approximately 40 percent of those who were identified as SWD only or EL only felt confident that they would.

- Females were more likely than males to report that they would attend a four-year college or university after high school; those who were not ED were more likely to do so than those who are ED.

Test Performance and Influencing Factors (Table 4.29 and Table 4.30, Question 6)

- Hispanic students were more likely than students of other races to report that nervousness prevented them from doing as well as they could on the CAHSEE; EL students reported higher levels of nervousness than other demographic groups.

Content and Instruction Coverage (Table 4.29 and Table 4.30, Questions 7–9)

- More males than females responded that topics on the CAHSEE were not covered in their courses.

- Approximately 25 percent of students who are both SWD and EL responded that many of the CAHSEE test items were different from anything they had ever seen before.

- EL and SWD students, compared to the general population of students, were also more likely to report that the CAHSEE test questions were more difficult than the items that they encountered in class.

Effort Put into the CAHSEE (Table 4.29 and Table 4.30, Questions 10–12)

- Students who are not classified ED more frequently responded that none of the test topics were difficult for them, compared to students who are ED.

- SWD and EL students were more likely than the general population to report that they would either repeat courses or stay in school longer to learn the material to pass the CAHSEE.

- Although the majority of students, regardless of race or ethnicity, reported that they would stay in school and attempt to pass the CAHSEE again if they did not pass during this administration, Hispanic and African American students were less likely than other racial/ethnic groups to select this response.

Table 4.29. Distribution of Grade Ten Students' Responses to Questionnaire After Taking CAHSEE ELA Examination in 2011, by Gender, Ethnicity, Disability, English Learner Status, and Economic Disadvantage

After Taking CAHSEE ELA Exam (Student Responses in grade 10)	Gender		Ethnicity												
	F	M	Am Indian/ AK Native	Asian	Pacific	Filipino	Hispanic	African Am	White	Multiple	SWD only	EL only	SWD and EL	ED	Not ED
1. How did you prepare for this test? (Mark all that apply.)															
A. I practiced on questions similar to those on the test.	36.5	30.6	33.3	27.1	35.0	34.9	37.8	35.8	27.8	29.4	33.1	37.5	33.7	38.1	29.3
B. A teacher spent time in class helping me to get ready to take the test.	45.9	39.7	41.6	35.3	46.1	46.9	45.6	44.4	39.5	39.2	38.3	42.0	39.3	45.7	40.1
C I took a special class during the regular school day that covered the topics on the CAHSEE.	7.5	7.5	8.3	3.2	7.7	4.3	10.2	10.4	4.1	6.3	10.1	12.4	12.7	10.6	4.6
D. I took a special class after school or during the summer that covered the topics on the CAHSEE.	3.8	3.7	3.0	2.3	2.8	2.5	5.3	4.6	1.7	1.9	4.4	6.6	6.4	5.3	2.2
E. I did not do anything in addition to regular course work to prepare for this test.	31.0	37.2	35.4	48.2	31.5	34.3	25.8	26.3	45.4	41.8	30.8	20.1	19.7	25.5	42.1
2. What materials did you use to prepare for this test: (Mark all that apply.)															
A. Textbooks	12.6	13.4	13.9	7.8	14.1	11.6	15.2	15.3	10.8	10.5	15.8	18.9	17.3	15.6	10.7
B. ELA Student Guide	11.5	10.9	10.5	8.0	13.1	11.1	12.7	14.4	8.9	10.1	13.0	15.0	14.4	13.2	9.4
C. CAHSEE Online Prep	12.7	11.7	10.8	9.1	13.4	11.8	14.6	16.6	8.2	9.4	14.7	19.6	19.2	15.3	9.4
D. Released (sample) test questions	44.9	35.0	37.9	33.4	38.6	43.6	43.2	36.9	37.0	36.4	27.3	31.2	21.7	42.6	37.4
E. Other resources	20.3	20.1	21.9	15.1	24.7	21.6	22.9	21.9	16.6	18.4	23.0	22.7	22.9	23.0	17.5
F. I did not use any materials to prepare.	25.0	30.7	29.6	43.5	24.3	27.9	19.3	20.6	39.0	35.7	26.8	15.6	18.9	19.2	35.9
3. Do you think you will receive a high school diploma?															
A. Yes, with the rest of my class (or earlier).	86.6	80.9	80.3	90.1	84.5	89.2	79.2	81.1	89.6	85.0	68.5	64.6	56.2	79.2	88.2
B. Yes, but I will likely have to take classes after my original graduation date.	9.0	11.8	12.2	5.7	10.2	7.6	13.6	12.3	6.3	9.2	17.6	21.9	22.9	13.5	7.4
C. Yes, but I will pursue a diploma in Adult Education.	1.8	3.1	2.9	1.8	2.5	1.6	2.9	2.9	1.9	2.7	5.4	5.2	7.6	2.9	2.0
D. No, I probably will not receive a high school diploma.	1.6	2.3	2.5	1.2	1.8	1.0	2.7	2.1	1.0	1.5	4.6	5.6	8.6	2.7	1.3
E. No, I plan to take the GED.	0.4	0.9	1.0	0.3	0.6	0.3	0.7	0.8	0.6	0.8	1.7	1.0	2.1	0.8	0.5
F. No, but I plan to go to community college.	0.5	0.9	1.0	0.9	0.5	0.4	0.8	0.8	0.5	0.8	2.2	1.7	2.7	0.9	0.6

Table 4.29. (Continued)

After Taking CAHSEE ELA Exam (Student Responses in grade 10)	Gender		Ethnicity												
	F	M	Am Indian/ AK Native	Asian	Pacific	Filipino	Hispanic	African Am	White	Multiple	SWD only	EL only	SWD and EL	ED	Not ED
4. What might prevent you from receiving a high school diploma? (Mark all that apply.)															
A. I may not pass all the required courses.	18.1	21.0	23.8	11.3	20.7	17.5	23.9	18.8	15.3	17.3	24.5	26.8	22.2	23.4	16.0
B. I may not pass the CAHSEE exam.	16.8	15.0	16.5	10.7	15.0	12.9	20.7	17.6	9.2	13.1	30.1	32.6	39.1	20.9	11.0
C. I may drop out before the end of 12th grade.	1.6	3.0	2.9	1.6	2.7	1.2	2.6	2.7	1.9	2.5	4.5	4.6	5.5	2.7	1.8
D. I may not meet some other graduation requirement.	10.3	13.3	13.6	8.9	14.0	14.1	13.8	11.6	8.9	11.5	16.0	14.6	12.7	14.1	9.6
E. I am confident I will receive a high school diploma.	69.2	61.9	59.7	78.2	64.3	71.5	57.1	62.6	76.0	69.6	44.8	40.8	34.7	57.3	73.4
5. What do you think you will do after high school?															
A. Join the military.	2.6	9.6	9.4	2.4	8.4	6.0	6.5	5.3	6.6	5.6	10.9	7.6	9.4	6.8	5.5
B. Go to a community college.	20.7	19.0	23.5	9.2	19.3	16.1	22.8	15.9	19.7	18.4	27.9	25.2	26.8	21.9	17.9
C. Go to a 4-year college or university.	68.4	55.6	49.9	83.6	62.0	71.6	56.2	67.2	62.8	64.7	39.5	48.3	39.0	56.9	66.8
D. Go to a vocational, technical, or trade school.	3.1	4.9	5.5	1.9	3.1	2.4	4.3	4.1	4.2	4.0	6.3	4.3	5.6	4.4	3.6
E. Work full-time.	2.7	5.5	5.2	1.2	3.5	1.6	5.6	3.7	3.0	3.4	7.3	8.7	11.3	5.5	2.8
F. Do something else (besides school, work, or the military).	2.5	5.4	6.4	1.7	3.8	2.3	4.6	3.8	3.8	3.8	8.3	5.9	7.9	4.6	3.4
6. How well did you do on this test? (Mark all that apply):															
A. I did as well as I could.	83.3	76.5	77.9	80.9	81.4	85.9	77.7	76.3	83.3	79.7	64.9	67.4	55.8	77.3	82.3
B. I was too nervous to do as well as I could.	6.9	6.7	5.7	6.0	6.7	6.4	8.8	6.2	4.0	5.7	8.8	15.0	15.0	8.5	5.2
C. I was not motivated to do well.	2.4	4.5	4.2	4.6	3.1	3.1	3.5	3.6	3.1	3.8	4.5	4.6	5.4	3.6	3.3
D. I did not have time to do as well as I could.	0.8	1.5	1.4	1.3	1.3	1.0	1.3	1.4	0.9	1.1	2.1	2.0	2.9	1.4	1.0
E. Conditions in the testing room made it difficult to concentrate.	3.8	3.6	3.7	4.5	3.4	4.3	3.4	3.0	4.0	5.0	3.7	3.5	3.2	3.6	3.7
F. There were other reasons why I did not do as well as I could.	3.1	3.8	3.8	4.7	3.2	3.5	3.4	2.9	3.2	4.1	4.4	4.0	4.3	3.6	3.3

Table 4.29. (Continued)

After Taking CAHSEE ELA Exam (Student Responses in 10th grade)	Gender		Ethnicity												
	F	M	Am Indian/ AK Native	Asian	Pacific	Filipino	Hispanic	African Am	White	Multiple	SWD only	EL only	SWD and EL	ED	Not ED
7. Were the topics on the test covered in courses you have taken?															
A. Yes, all of them.	63.2	55.4	58.4	63.1	57.8	65.2	54.9	53.1	66.4	60.9	43.9	38.7	34.3	53.7	64.7
B. Most, but not all of them (two-thirds or more were covered).	32.9	37.8	34.7	31.3	37.3	31.8	39.1	39.7	29.7	33.1	43.9	49.9	50.8	39.9	31.0
C. Many topics on the test were not covered in my courses (less than two-thirds were covered).	3.9	6.8	6.9	5.6	4.9	3.0	6.0	7.1	4.0	6.0	12.3	11.4	14.9	6.4	4.3
8. Were any of the questions on the test different from the types of questions or answer options you have encountered in your homework assignments or classroom tests?															
A. Yes, many were different from anything I had seen before.	6.8	12.6	9.6	10.2	10.2	7.7	10.6	12.1	7.8	9.5	19.1	18.6	24.9	11.2	8.3
B. Yes, a few were different from anything I had seen before.	37.4	45.2	39.8	39.7	42.8	41.6	45.1	42.3	35.3	39.1	48.7	54.1	52.8	45.5	37.4
C. No, all were similar to ones used in my classes.	55.8	42.1	50.6	50.1	47.0	50.7	44.2	45.6	57.0	51.4	32.2	27.3	22.2	43.3	54.3
9. Were the questions on this test more difficult than questions you were given in classroom tests or homework assignments?															
A. Yes, the test questions were generally more difficult than the questions I encountered in my course work.	9.3	15.0	12.8	9.8	11.7	8.2	14.5	14.7	8.8	11.0	24.1	26.5	33.0	15.1	9.3
B. The test questions were generally about as difficult as the questions I encountered in my course work.	49.7	48.9	49.5	36.0	51.0	46.8	55.5	48.0	43.3	45.6	49.3	53.8	47.4	54.6	44.2
C. The test questions were generally easier than the questions I encountered in my course work.	41.1	36.2	37.7	54.2	37.3	45.0	30.0	37.4	47.9	43.4	26.7	19.7	19.6	30.3	46.5

Table 4.29. (Continued)

After Taking CAHSEE ELA Exam (Student Responses in 10th grade)	Gender		Ethnicity												
	F	M	Am Indian/ AK Native	Asian	Pacific	Filipino	Hispanic	African Am	White	Multiple	SWD only	EL only	SWD and EL	ED	Not ED
10. If some topics on the test were difficult for you, was it because:															
A. I did not take courses that covered these topics.	4.9	7.9	6.1	6.9	6.9	4.4	7.2	8.0	4.7	6.6	11.5	13.6	13.9	7.6	5.2
B. I had trouble with these topics when they were covered in courses I took.	15.0	17.1	15.6	11.4	17.0	13.0	19.4	16.9	12.0	14.3	23.9	25.5	28.9	19.3	13.0
C. I have forgotten things I was taught about these topics.	42.9	37.3	37.9	37.9	40.8	43.6	44.4	37.7	34.0	35.8	35.9	44.1	38.9	43.3	37.1
D. None of the topics was difficult for me.	37.2	37.8	40.5	43.8	35.4	39.1	29.1	37.4	49.3	43.4	28.8	16.8	18.2	29.8	44.7
11. Have you worked or will you work harder to learn the ELA skills tested by the CAHSEE? (Mark all that apply.)															
A. I do not have to work any harder to meet the CAHSEE requirement.	48.9	51.3	49.2	61.8	43.2	52.0	39.6	42.9	65.7	55.9	31.3	20.1	16.6	39.8	59.9
B I am taking additional courses.	4.3	6.2	6.7	3.3	5.3	3.8	6.5	7.2	3.3	4.7	9.4	10.6	12.0	6.7	3.8
C. I am working harder in the courses I am taking.	41.9	35.8	36.4	33.4	44.9	44.5	44.8	41.6	29.2	34.5	43.6	51.1	45.9	44.7	33.3
D. I am getting help outside of the classroom.	7.0	6.7	7.9	5.8	9.8	5.9	8.0	9.7	4.6	6.7	12.7	11.6	12.1	8.3	5.5
E. I am repeating a course to learn the material better.	3.2	3.6	4.1	1.8	4.0	2.0	4.5	3.7	2.1	2.8	6.1	7.4	9.1	4.5	2.4
F. I will stay in school an additional year to learn the required material.	3.4	3.4	4.1	2.0	3.4	1.5	4.8	3.7	1.6	2.7	6.9	9.4	13.0	4.8	2.1
12. If you do not pass the CAHSEE in this administration, what are you most likely to do? (Mark the most likely option.)															
A. I will stay in school and try again to pass the CAHSEE.	77.8	77.9	76.8	80.6	76.8	81.7	75.3	73.8	81.6	78.3	66.2	67.1	59.5	75.1	80.4
B. I will take courses at a community college and try again to pass CAHSEE.	4.5	4.2	4.1	3.8	5.0	4.4	4.7	6.2	3.6	4.4	7.1	6.6	8.8	4.7	4.0
C. I will participate in some other type of program that will help me to pass the CAHSEE.	10.6	7.0	7.1	6.5	9.3	7.3	11.2	10.4	5.6	7.0	9.7	15.0	13.6	11.0	6.8
D. I will try to get a GED certificate.	1.1	2.1	2.9	0.8	1.7	0.8	1.8	2.3	1.4	1.9	3.8	2.8	4.6	1.9	1.3
E. I will give up trying to get a diploma altogether.	0.6	1.8	1.4	1.2	1.2	0.7	1.2	1.4	1.3	1.3	2.5	1.7	3.3	1.2	1.2
F. I really do not know what I will do.	5.4	7.0	7.8	7.2	5.9	5.0	5.9	5.9	6.5	7.2	10.7	6.9	10.3	6.1	6.3

Table 4.30. Distribution of Grade Ten Students' Responses, in Percentages, After Taking CAHSEE Mathematics Examination in 2011, by Gender, Ethnicity, Disability, English Learner Status, and Economic Disadvantage

After Taking CAHSEE Mathematics Exam (Student Responses in 10th grade)	Gender		Ethnicity												
	F	M	Am Indian/ AK Native	Asian	Pacific	Filipino	Hispanic	African Am	White	Multiple	SWD only	EL only	SWD and EL	ED	Not ED
1. How did you prepare for this test? (Mark all that apply.)															
A. I practiced on questions similar to those on the test.	41.1	35.7	36.3	28.2	41.0	38.6	44.6	41.8	30.2	33.3	38.8	46.0	42.0	44.7	32.4
B. A teacher spent time in class helping me to get ready to take the test.	28.9	25.2	26.0	16.6	30.3	28.1	31.8	30.7	21.3	22.7	29.4	32.0	33.1	31.8	22.5
C I took a special class during the regular school day that covered the topics on the CAHSEE.	6.9	6.7	8.0	2.7	5.8	3.5	9.0	9.5	4.0	5.0	9.2	10.1	10.8	9.4	4.4
D. I took a special class after school or during the summer that covered the topics on the CAHSEE.	3.5	3.0	2.4	1.9	2.6	2.5	4.7	4.4	1.7	1.9	4.2	5.3	5.4	4.8	2.2
E. I did not do anything in addition to regular course work to prepare for this test.	39.6	3.3	44.3	60.6	38.8	44.9	31.1	31.7	55.8	51.1	33.6	23.8	20.8	31.1	52.0
2. What materials did you use to prepare for this test: (Mark all that apply.)															
A. Textbooks	17.0	17.9	18.7	10.8	20.2	16.4	20.1	19.5	14.7	15.2	20.9	23.9	21.9	20.6	14.6
B. Mathematics Student Guide	14.9	13.1	12.6	8.2	15.9	11.6	17.5	17.6	9.4	11.4	17.7	22.2	21.1	17.6	10.7
C. CAHSEE Online Prep	10.5	9.6	9.0	6.9	11.5	9.7	12.0	14.2	6.7	7.8	12.7	15.3	16.0	12.5	7.7
D. Released (sample) test questions	32.8	24.9	26.8	20.6	28.3	31.1	33.3	28.0	24.1	23.9	21.3	24.6	17.7	32.8	25.1
E. Other resources	16.5	16.0	18.4	10.9	18.2	17.3	19.0	18.4	12.7	14.7	20.2	19.1	19.8	19.1	13.7
F. I did not use any materials to prepare.	33.3	37.7	36.5	56.0	31.3	38.1	24.6	25.7	49.4	44.9	28.4	18.3	19.1	24.8	45.7
3. Do you think you will receive a high school diploma?															
A. Yes, with the rest of my class (or earlier).	85.8	80.0	78.5	90.0	83.5	88.4	78.5	80.1	88.5	83.9	68.1	64.8	56.9	78.4	87.3
B. Yes, but I will likely have to take classes after my original graduation date.	9.4	11.9	13.4	5.6	10.0	7.9	13.8	12.7	6.7	9.0	17.5	21.4	22.4	13.7	7.7
C. Yes, but I will pursue a diploma in Adult Education.	1.7	3.2	2.8	1.7	2.8	1.7	2.8	2.9	1.9	2.7	5.1	4.8	7.0	2.9	2.0
D. No, I probably will not receive a high school diploma.	2.0	2.7	3.0	1.4	2.3	1.2	3.2	2.4	1.4	1.9	5.0	6.2	8.4	3.1	1.6
E. No, I plan to take the GED.	0.5	1.1	1.0	0.4	0.6	0.4	0.8	1.1	0.8	1.1	1.9	1.2	2.0	0.9	0.7
F. No, but I plan to go to community college.	0.6	1.2	1.3	1.0	0.8	0.5	1.0	0.9	0.8	1.4	2.5	1.7	3.3	1.0	0.8

Table 4.30. (Continued)

After Taking CAHSEE Mathematics Exam (Student Responses in 10th grade)	Gender		Ethnicity												
	F	M	Am Indian/ AK Native	Asian	Pacific	Filipino	Hispanic	African Am	White	Multiple	SWD only	EL only	SWD and EL	ED	Not ED
4. What might prevent you from receiving a high school diploma? (Mark all that apply.)															
A. I may not pass all the required courses.	19.5	22.6	25.2	12.2	21.9	19.1	25.7	20.0	16.3	18.3	26.3	29.0	23.8	25.1	17.2
B. I may not pass the CAHSEE exam.	21.1	16.9	20.6	11.3	19.0	15.8	24.5	21.2	11.8	16.2	33.5	35.1	42.0	24.4	13.8
C. I may drop out before the end of 12th grade.	1.7	3.3	3.3	1.9	2.7	1.3	2.7	2.8	2.3	2.7	4.9	4.6	5.1	2.9	2.1
D. I may not meet some other graduation requirement.	8.5	11.1	12.2	7.8	11.0	11.7	11.4	9.6	7.4	9.5	13.1	12.3	10.3	11.6	8.0
E. I am confident I will receive a high school diploma.	65.0	59.0	56.1	76.7	61.9	68.7	53.0	58.5	72.9	66.3	41.0	37.7	32.0	53.4	70.2
5. What do you think you will do after high school?			9.2	2.9	7.6	6.4	6.9	5.8	7.0	6.1					
A. Join the military.	2.8	10.1									11.6	7.8	9.6	7.1	5.9
B. Go to a community college.	20.5	18.6	22.0	9.1	18.4	15.7	22.4	15.9	19.2	18.0	27.5	25.1	26.7	21.5	17.6
C. Go to a 4-year college or university.	68.4	55.3	50.9	83.1	63.2	71.9	56.2	66.5	62.5	64.2	39.4	48.4	39.1	56.9	66.5
D. Go to a vocational, technical, or trade school.	2.9	4.7	5.0	1.6	3.4	2.2	4.1	3.9	4.0	3.9	5.9	4.0	4.8	4.1	3.4
E. Work full-time.	2.9	5.9	5.6	1.3	3.3	1.5	5.9	4.1	3.3	3.8	7.6	9.0	12.2	5.8	3.1
F. Do something else (besides school, work, or the military).	2.6	5.5	7.3	2.0	4.2	2.4	4.6	3.8	4.0	4.0	8.1	5.8	7.5	4.6	3.5
6. How well did you do on this test? (Mark all that apply):															
A. I did as well as I could.	86.2	83.3	83.1	88.3	85.2	88.9	82.6	83.0	87.5	84.4	75.6	75.8	69.2	82.8	86.7
B. I was too nervous to do as well as I could.	10.0	8.1	8.9	5.5	9.1	7.9	11.6	9.1	5.9	7.6	13.2	16.8	18.4	11.0	7.1
C. I was not motivated to do well.	3.2	5.3	5.5	4.3	4.6	3.8	4.3	4.9	3.9	4.8	6.5	5.4	7.0	4.4	4.0
D. I did not have time to do as well as I could.	0.8	1.7	1.6	1.1	1.1	0.8	1.3	1.5	1.1	1.3	2.6	2.1	3.6	1.4	1.1
E. Conditions in the testing room made it difficult to concentrate.	3.4	3.4	3.7	3.4	3.4	3.5	3.1	3.0	3.9	4.4	4.5	3.4	3.7	3.3	3.5
F. There were other reasons why I did not do as well as I could.	6.0	5.6	7.3	4.6	5.9	5.6	6.0	5.7	5.8	6.7	8.2	5.8	6.2	6.0	5.5

Table 4.30. (Continued)

After Taking CAHSEE Mathematics Exam (Student Responses in 10th grade)	Gender		Ethnicity												
	F	M	Am Indian/ AK Native	Asian	Pacific	Filipino	Hispanic	African Am	White	Multiple	SWD only	EL only	SWD and EL	ED	Not ED
7. Were the topics on the test covered in courses you have taken?															
A. Yes, all of them.	51.6	49.3	46.4	68.1	48.8	59.8	44.1	41.1	57.1	53.1	31.4	33.0	26.8	43.9	56.8
B. Most, but not all of them (two-thirds or more were covered).	41.3	40.3	42.5	26.5	43.2	35.0	46.4	47.0	34.7	37.4	50.1	54.3	56.7	46.3	35.5
C. Many topics on the test were not covered in my courses (less than two-thirds were covered).	7.1	10.4	11.1	5.4	8.0	5.2	9.5	12.0	8.1	9.5	18.5	12.7	16.5	9.3	7.7
8. Were any of the questions on the test different from the types of questions or answer options you have encountered in your homework assignments or classroom tests?															
A. Yes, many were different from anything I had seen before.	9.7	14.9	13.5	9.1	13.2	10.1	13.5	16.0	10.6	11.9	24.6	19.1	26.8	13.9	10.8
B. Yes, a few were different from anything I had seen before.	43.0	44.7	44.1	32.2	45.4	39.7	49.1	47.7	38.0	41.0	50.8	55.7	55.2	48.9	39.0
C. No, all were similar to ones used in my classes.	47.3	40.4	42.5	58.7	41.4	50.2	37.4	36.2	51.4	47.1	24.6	25.2	18.0	37.2	50.3
9. Were the questions on this test more difficult than questions you were given in classroom tests or homework assignments?															
A. Yes, the test questions were generally more difficult than the questions I encountered in my course work.	17.5	20.4	21.9	9.7	19.1	12.9	22.3	25.0	15.6	18.5	35.6	30.5	39.0	22.5	15.7
B. The test questions were generally about as difficult as the questions I encountered in my course work.	50.5	45.1	49.9	32.0	49.9	45.8	54.1	48.8	42.0	43.3	45.4	52.7	45.4	53.0	42.9
C. The test questions were generally easier than the questions I encountered in my course work.	31.9	34.6	28.2	58.3	31.0	41.3	23.7	26.3	42.5	38.2	19.0	16.9	15.6	24.5	41.5

Table 4.30. (Continued)

After Taking CAHSEE Mathematics Exam (Student Responses in 10th grade)	Gender		Ethnicity												
	F	M	Am Indian/ AK Native	Asian	Pacific	Filipino	Hispanic	African Am	White	Multiple	SWD only	EL only	SWD and EL	ED	Not ED
10. If some topics on the test were difficult for you, was it because:															
A. I did not take courses that covered these topics.	7.6	11.7	11.9	6.2	10.1	6.2	10.5	12.3	8.9	10.5	19.4	15.1	18.0	10.8	8.5
B. I had trouble with these topics when they were covered in courses I took.	25.4	21.6	26.3	11.8	24.8	17.8	28.1	28.1	18.9	21.1	29.3	32.0	32.1	27.6	19.7
C. I have forgotten things I was taught about these topics.	50.6	41.6	42.7	43.3	46.0	53.0	47.7	43.4	44.1	43.1	37.3	43.4	38.7	46.9	45.4
D. None of the topics was difficult for me.	16.4	25.1	19.1	38.8	19.1	23.1	13.6	16.3	28.0	25.3	14.0	9.5	11.3	14.7	26.5
11. Have you worked or will you work harder to learn the mathematics skills tested by the CAHSEE? (Mark all that apply.)															
A. I do not have to work any harder to meet the CAHSEE requirement.	42.7	50.1	43.1	65.2	41.2	51.6	35.6	36.9	60.9	52.0	27.2	19.6	15.8	36.2	56.1
B. I am taking additional courses.	4.7	6.5	7.3	3.3	6.1	3.9	6.8	7.5	3.8	4.8	9.9	9.9	11.7	6.9	4.3
C. I am working harder in the courses I am taking.	44.1	34.7	39.9	28.0	44.0	41.9	46.1	43.8	30.2	35.5	44.8	50.7	45.9	45.6	33.5
D. I am getting help outside of the classroom.	8.9	7.1	9.1	5.3	11.3	7.1	9.0	11.3	6.3	7.7	13.0	11.8	12.0	9.2	6.8
E. I am repeating a course to learn the material better.	5.5	4.8	6.5	2.4	5.3	3.0	6.5	5.9	3.7	4.7	7.8	9.1	10.0	6.3	4.0
F. I will stay in school an additional year to learn the required material.	3.9	4.0	4.3	2.5	4.4	2.2	5.3	4.0	2.2	3.4	7.7	9.4	13.2	5.3	2.6
12. If you do not pass the CAHSEE in this administration, what are you most likely to do? (Mark the most likely option.)															
A. I will stay in school and try again to pass the CAHSEE.	79.1	77.3	76.0	78.5	78.5	81.2	77.1	74.6	80.6	77.2	66.0	69.3	61.1	76.6	79.7
B. I will take courses at a community college and try again to pass CAHSEE.	4.7	4.4	5.0	4.1	5.2	4.7	4.8	6.8	3.7	4.5	7.8	6.6	9.0	4.9	4.1
C. I will participate in some other type of program that will help me to pass the CAHSEE.	8.1	5.8	5.8	5.0	6.8	6.2	8.6	8.6	4.4	5.7	8.1	12.2	11.2	8.6	5.3
D. I will try to get a GED certificate.	1.1	2.2	2.9	0.9	1.5	0.8	1.8	2.3	1.6	2.1	4.0	2.8	4.5	1.9	1.5
E. I will give up trying to get a diploma altogether.	0.8	2.3	1.6	1.8	1.3	0.9	1.4	1.6	1.8	1.9	2.6	1.8	3.1	1.4	1.7
F. I really do not know what I will do.	6.3	8.0	8.8	9.7	6.6	6.3	6.3	6.3	8.0	8.7	11.5	7.3	11.1	6.5	7.7

Summary of Grade Ten Findings

Comparisons of Grade Ten Students' Responses 2005–11

Over the past seven years student perceptions about the CAHSEE have changed in several positive ways, including changes in test preparation, perception of test importance, coverage of CAHSEE topics in class, and future plans. Specifically, in 2011 an increased percentage of students reported:

- A teacher spent time in class helping them to prepare for the CAHSEE.
- They used the CAHSEE online prep to prepare for the CAHSEE.
- They will attend a four-year college or university after high school.
- Test items were similar to those that they had seen in class.
- None of the test topics were difficult for them (only after ELA).
- They did not have to work any harder to pass the CAHSEE requirement.

A decreased percentage of students reported that

- The CAHSEE might prevent them from earning a high school diploma.

Comparisons of Grade Ten Students' Responses in 2011 by Whether They Passed the Tests

We compared student responses for those who passed both tests, passed only ELA, passed only mathematics, and passed neither. Overall, students who passed both tests reported the most positive perceptions about the CAHSEE, and those who passed neither test reported the most negative perceptions.

A higher percentage of students who passed both tests were likely to report that:

- They used released (sample) items to prepare for the CAHSEE.
- They would graduate with the rest of their class or earlier.
- They were confident that they would receive a high school diploma.
- The topics and test questions were familiar and easy.

Differences in Grade Ten Students' Responses in 2011 by Key Demographic Characteristics

By Gender. In general, females reported more positive responses than males regarding their perception of the CAHSEE. Females were more likely than males to report that they spent time preparing for the CAHSEE and they did as well as they could. They were also more likely to report that they would graduate with their class on time or earlier, and that they planned to attend a four-year college or university after high school. Males were more likely to report that they did not have to work harder to pass the CAHSEE, and that they did not use any materials to prepare.

By Ethnicity. A larger percentage of Asian students reported that they did not have to work harder to pass the CAHSEE, that the test items were easier than what they had seen in class, and that they would attend a four-year college or university than other races. African American and Hispanic students were more likely than other races to report that test items were more difficult than those they had seen in class, and they were the least likely to report that they did not have to work harder to meet the CAHSEE requirement.

By Disability and English Learner Status. The patterns of student responses for SWD and EL students were similar. SWD and EL students were less likely to be familiar with the CAHSEE topics and test items than the general population. They also reported higher levels of nervousness while taking the CAHSEE than any other group. A lower percentage of SWD and EL students than among the general population reported that they would stay in school and try again if they did not pass the CAHSEE, and fewer of these students planned to attend a four-year college after high school.

By Economically Disadvantaged Status. In general, more students who were not classified as ED tended to give positive responses to the student questionnaire than those who were ED. ED Students were more likely than the general student population to respond that test items and topics were different and more difficult than those they had seen in class. They were also more likely to report nervousness as preventing them from doing as well as they could. Fewer ED students planned to attend a four-year college or university than those who were not ED, and they were less confident that they would receive a high school diploma.

Overall Summary of Grade Ten Responses

The 2011 student questionnaire results were generally positive and were fairly consistent with previous years. The responses indicated that most students were familiar with the CAHSEE topics and item types. The majority responded that they believed they would be able to graduate with their class or sooner. However, similar to previous years, SWD and EL students reported at higher levels than other students that test items and topics differed from what they had seen in class, and that the items were more difficult than those they were exposed to on tests and in homework. Schools may need to pay special attention to ensure that all students have the opportunity to learn the content included in the test. Hispanic, African American, and American Indian/Native Alaskan groups also reported higher levels of difficulty with the test content than did the general population.

Findings from 2011 Grade Twelve Students

HumRRO examined a selection of responses to the student questionnaires of 2011 grade twelve students in 2009 when they first took the examination and again in 2011. The questions selected were those pertaining to post-graduation plans and content and instruction coverage. We were interested in how grade twelve students who are still taking the CAHSEE responded to these topics towards the end of their education compared to when they were grade ten students. We compared the responses of those who passed the CAHSEE in 2011 and those who did not.

Grade Twelve Demographic Information

Table 4.31 provides the numbers of grade twelve students who had taken the CAHSEE in 2009 and were still attempting to pass the ELA and/or mathematics CAHSEE in 2011 by whether they passed or did not pass in 2011. More grade twelve students who took the ELA passed in 2011 than did not; however, the opposite was true of students taking the mathematics test.

Table 4.31. Number of 2011 Grade Twelve Students Who Took the CAHSEE in 2009 and 2011 Who Passed and Who Did Not Pass the Tests in 2011

Grade 12 Passing Category	ELA	Mathematics
Passed in 2011	19,403	13,274
Did not pass in 2011	17,161	23,297

Graduation Expectations and Post-High School Plans

In 2011 grade twelve students who had yet to pass the CAHSEE were most likely to respond that the CAHSEE may prevent them from receiving a high school diploma. Most students who had not yet passed were not confident that they would receive a diploma (see Table 4.32).

Table 4.32. Grade Twelve Students' Responses in 2009 and 2011 After CAHSEE Tests as to What Might Prevent Them from Receiving A Diploma, by Those Who Passed in 2011 and Those Who Did Not (in Percentages)

Question 4. What might prevent you from receiving a high school diploma? (Mark all that apply.)	ELA Questionnaire Responses				Math Questionnaire Responses			
	Students Passing		Students Not Passing		Students Passing		Students Not Passing	
	2009	2011	2009	2011	2009	2011	2009	2011
A. I may not pass all the required courses.	30.9	16.8	25.6	18.7	34.0	14.9	31.1	19.0
B. I may not pass the CAHSEE exam.	41.9	53.6	41.5	51.1	43.7	58.5	43.7	52.7
C. I may drop out before the end of 12th grade.	5.4	3.1	7.3	6.3	4.8	3.1	5.6	5.6
D. I may not meet some other graduation requirement.	14.2	10.1	11.5	9.7	12.1	8.1	11.1	10.0
E. I am confident I will receive a high school diploma.	32.3	31.0	30.9	25.1	30.0	27.9	26.8	23.3

Students who were still taking the CAHSEE as grade twelve students were about half as likely to report that they would attend a four-year university in 2011 as they were two years previously. Those who did not pass in 2011 were more likely than those who did pass in 2011 to respond that they would work full-time after high school (see Table 4.33).

Table 4.33. Grade Twelve Students' Responses in 2009 and 2011 After CAHSEE Tests as to What They Would Do After High School, by Those Who Passed in 2011 and Those Who Did Not (in Percentages)*

Question 5. What do you think you will do after high school?*	ELA Questionnaire Responses				Math Questionnaire Responses			
	Students Passing		Students Not Passing		Students Passing		Students Not Passing	
	2009	2011	2009	2011	2009	2011	2009	2011
A. Join the military	8.4	8.7	8.7	10.5	8.1	8.3	9.2	10.2
B. Go to a community college	27.8	49.2	26.4	42.0	30.3	52.0	28.8	45.0
C. Go to a 4-year college or university	42.3	23.0	37.0	20.5	41.3	21.3	36.0	18.6
D. Go to a vocational, technical, or trade school	4.8	6.5	5.5	6.5	4.4	6.9	5.1	7.2
E. Work full-time	9.4	8.9	13.6	14.7	9.1	8.1	12.2	13.2
F. Do something else (besides school, work, or the military	7.4	3.7	8.8	5.7	6.7	3.5	8.8	5.7

* Totals do not always equal 100% due to rounding.

Content and Instruction Coverage

Students who did not pass the CAHSEE in 2011 were less likely to respond this year that topics on the test were covered in courses they had taken than they were in 2009; the opposite was true for those who did pass in 2011 (see Table 4.34).

Table 4.34. Responses of Grade Twelve Students in 2009 and 2011 After CAHSEE Tests as to Whether the Tested Topics Had Been Covered in Courses Taken, by Those Who Passed in 2011 and Those Who Did Not (in Percentages)*

Question 7. Were the topics on the test covered in courses you have taken?	ELA Questionnaire Responses				Math Questionnaire Responses			
	Students Passing		Students Not passing		Students Passing		Students Not passing	
	2009	2011	2009	2011	2009	2011	2009	2011
A. Yes, all of them.	32.6	36.7	33.1	29.7	28.5	28.9	27.7	26.5
B. Most, but not all of them (two-thirds or more were covered).	54.4	51.0	50.7	50.8	56.4	58.4	55.3	54.3
C. Many topics on the test were not covered in my courses (less than two-thirds were covered).	13.1	12.4	16.2	19.5	15.1	12.7	17.0	19.2

* Totals do not always equal 100% due to rounding.

Table 4.35 shows that while in both years students reported gaining classroom exposure to the types of questions seen on the CAHSEE, in 2011 an increased percentage of students reported that the questions on the CAHSEE were similar to what they had encountered in class. The largest increase from 2009 occurred in post-ELA test responses for grade twelve students who did pass in 2011.

Table 4.35. Grade Twelve Students' Responses in 2009 and 2011 After CAHSEE Tests as to Whether Test Questions Differed From Those Encountered in Homework or Classroom Tests, by Those Who Passed in 2011 and Those Who Did Not (in Percentages)*

Question 8. Were any of the questions on the test different from the types of questions or answer options you have encountered in your homework assignments or classroom tests?	ELA Questionnaire Responses				Math Questionnaire Responses			
	Students Passing		Students Not passing		Students Passing		Students Not passing	
	2009	2011	2009	2011	2009	2011	2009	2011
A. Yes, many were different from anything I had seen before.	23.3	17.1	29.6	26.0	22.0	17.6	27.8	25.7
B. Yes, a few were different from anything I had seen before.	55.3	54.3	51.2	50.4	56.7	58.2	52.8	51.9
C. No, all were similar to ones used in my classes.	21.3	28.6	19.2	23.6	21.4	24.2	19.5	22.5

* Totals do not always equal 100% due to rounding.

The grade twelve students were less likely to report in 2011 that questions on the CAHSEE were generally more difficult than those they had seen in class than they had been in 2009. After the mathematics test, grade twelve students were slightly less likely to report that the questions were easier than coursework questions in 2011 than they had been in 2009 for students that did pass In 2011 (see Table 4.36).

Table 4.36. Grade Twelve Students' Responses in 2009 and 2011 After CAHSEE Tests Regarding the Comparative Difficulty of the Test Questions, by Those Who Passed in 2011 and Those Who Did Not (in Percentages)*

Question 9. Were the questions on this test more difficult than questions you were given in classroom tests or homework assignments?	ELA Questionnaire Responses				Math Questionnaire Responses			
	Students Passing		Students Not passing		Students Passing		Students Not passing	
	2009	2011	2009	2011	2009	2011	2009	2011
A. Yes, the test questions were generally more difficult that the questions I encountered in my course work.	31.2	24.2	36.2	32.1	34.8	31.1	39.5	35.5
B. The test questions were generally about as difficult as the questions I encountered in my course work.	52.0	58.8	45.5	49.6	52.0	58.4	45.8	50.0
C. The questions were generally easier than the questions I encountered in my course work.	16.8	17.0	18.3	18.3	13.2	10.6	14.7	14.5

* Totals do not always equal 100% due to rounding.

A slightly increased percentage of students reported that they had trouble with topics when they were covered in class in 2011 compared to 2009; a decreased percentage of students reported that they had forgotten things that they were taught about the topics over these two years (see Table 4.37).

Table 4.37. Grade Twelve Students' Responses in 2009 and 2011 After CAHSEE Tests as to Why Some Topics Were Difficult for Them, by Those Who Passed in 2011 and Those Who Did Not (in Percentages)*

Question 10. If some topics on the test were difficult for you, was it because:	ELA Questionnaire Responses				Math Questionnaire Responses			
	Students Passing		Students Not Passing		Students Passing		Students Not Passing	
	2009	2011	2009	2011	2009	2011	2009	2011
A. I did not take courses that covered these topics.	15.8	16.0	18.0	21.5	18.2	17.5	20.1	21.6
B. I had trouble with these topics when they were covered in courses I took.	30.5	31.1	30.9	33.3	38.8	43.6	37.2	40.5
C. I have forgotten things I was taught about these topics.	37.9	34.6	34.8	30.1	35.0	32.4	32.2	28.7
D. None of the topics was difficult for me.	15.8	18.4	16.3	15.2	8.1	6.5	10.4	9.2

* Totals do not always equal 100% due to rounding.

Efforts Put Into the CAHSEE

Less than half of the students who did not pass in 2011 reported that they would stay in school and try again to pass the CAHSEE if they did not pass. Over 20 percent of students who did not pass in 2011 stated that they would take courses at a community college and try again to pass, and about 7 percent of them said they would try to get a GED certificate. Approximately 14 percent of the grade twelve students who did not pass in 2011 stated that they did not know what they would do if they did not pass (see Table 4.38).

Table 4.38. Grade Twelve Students' Responses in 2009 and 2011 After CAHSEE Tests as to What They Are Most Likely To Do If They Do Not Pass, by Those Who Passed in 2011 and Those Who Did Not (in Percentages)*

Question 12. If you do <u>not</u> pass the CAHSEE in this administration, what are you most likely to do? (Mark the most likely option.)	ELA Questionnaire Responses				Math Questionnaire Responses			
	Students Passing		Students Not passing		Students Passing		Students Not passing	
	2009	2011	2009	2011	2009	2011	2009	2011
A. I will stay in school and try again to pass the CAHSEE.	63.9	57.4	57.2	42.9	67.9	53.4	60.7	42.2
B. I will take courses at a community college and try again to pass CAHSEE.	9.7	16.5	11.3	21.2	9.4	18.9	11.4	21.8
C. I will participate in some other type of program that will help me to pass the CAHSEE.	14.1	10.1	14.9	11.0	11.9	10.6	12.2	10.7
D. I will try to get a GED certificate.	3.6	4.2	5.2	7.2	2.8	4.4	4.5	7.5
E. I will give up trying to get a diploma all together.	1.8	2.1	3.4	4.2	1.8	2.1	2.7	3.6
F. I really do not know what I will do.	7.0	9.8	8.0	13.5	6.3	10.6	8.5	14.3

* Totals do not always equal 100% due to rounding.

Summary of Grade Twelve Student Responses

Of the students who did not pass the CAHSEE as grade twelve students in 2011, slightly more than half believed that not passing the CAHSEE may prevent them from earning a high school diploma. Approximately 20 percent also responded that not passing required courses may prevent them from graduating. More than 70 percent of those not passing indicated that they would continue to try to pass the CAHSEE—either by staying in school, taking a community college course, or participating in some other type of program to help them pass the CAHSEE.

Only a small percentage more of students who had not yet passed the CAHSEE in 2011 responded that test items and topics were similar to those they had encountered in class in 2011 than in 2009. This indicates that some students may not be passing due to a lack of exposure to CAHSEE topics and test items throughout their entire high school career.

Chapter 5: Exploration of Alternative Means for Students with Disabilities to Meet the CAHSEE Requirement

Michele M. Hardoin, Lauress L. Wise, and Wade W. Buckland

Background

In reporting test administration results in Chapter 3, we described the persistent difficulty students with disabilities (SWD) have had passing the CAHSEE, indicating that approximately one-half of grade twelve SWD in the Class of 2011 have not yet satisfied the requirement. We also described briefly the history of California's efforts to address this low passing rate for SWD by considering options for (a) alternate forms of testing, (b) modifying or deferring the CAHSEE requirement, and (c) alternative types of diplomas.

With respect to alternate forms of testing, in 2009 California's *Education Code (EC)* Section 60852.3 was enacted, stating that SWD are exempted from the CAHSEE requirement until the State Board of Education (SBE) makes a determination about whether alternative means for SWD to demonstrate competency in the content standards assessed by the CAHSEE are feasible. In 2009 the Assembly Bill (AB) 2040 Panel, an advisory panel of educators and others with assessment expertise or experience working with SWD, developed recommendations for alternative means of meeting the CAHSEE requirement for eligible SWD. As part of our independent evaluation of the CAHSEE in 2010, HumRRO, at CDE's request, conducted an analysis of the Panel's recommended two-tier alternative means process. We presented general findings from that analysis to the SBE in July 2010 and provided detailed outcomes of this special study in our 2010 Evaluation Report, in which we recommended that CDE conduct a pilot study of the alternative means approach.

The SBE determined in July of 2010 that alternative means to the CAHSEE are feasible, and in February 2011 the SBE adopted regulations extending the date of implementation of alternative means to the CAHSEE for eligible SWD to July 2012. These actions continue the CAHSEE exemption for SWD until the implementation of alternative means occurs. In 2011 CDE contracted with ETS to further develop and to conduct a pilot study of the two-tiered alternative means approach. The summary report of the alternative means pilot study has been submitted to the SBE and is available to the public on the CDE website.[8]

Although the content of this chapter, which reports on the alternative means study HumRRO conducted in 2010, has become somewhat outdated due to more recent events, we include it to provide complete documentation of our independent CAHSEE evaluation efforts and to provide context for what became the alternative means pilot study.

[8] http://www.cde.ca.gov/ta/tg/hs/documents/cahseepilotstudy.pdf

Introduction

The goal of HumRRO's special study was to collect information about (a) the feasibility of the proposed alternative means and (b) how the level of academic achievement demonstrated by those alternative means compares to the level of academic achievement in the content standards required for passage of the CAHSEE. HumRRO based its independent study on the AB 2040 Panel's documented recommendations[9] for alternative means.

The Panel proposed a two-tier system for students who met eligibility criteria. The first tier consisted of looking at scores on other tests, most taken under lower-stakes conditions, measuring similar skills. These include the Standardized Testing and Reporting (STAR) Program California Standards Tests (CST) and California Modified Assessments (CMA), and possibly community college placement tests. Students who did not demonstrate competency through other test scores would enter a second tier, involving the collection and evaluation of student work samples.

HumRRO developed a detailed overview of the Panel's recommendations to communicate to our study participants the alternative means approach, explaining the components of eligibility, the process, administration, scoring, and uniformity. The Panel's flow chart of the proposed alternative means process is shown in Figure 5.1, and HumRRO's detailed overview of the Panel's recommendations is presented in Figure 5.2. The reader is advised to review and become oriented to the Panel's recommendations so as to have the necessary context for the results presented in this chapter.

[9] *California High School Exit Examination Assembly Bill 2040 Panel Findings and Recommendations Regarding Options for Alternative Means for Eligible Students with Disabilities*, October 9, 2009

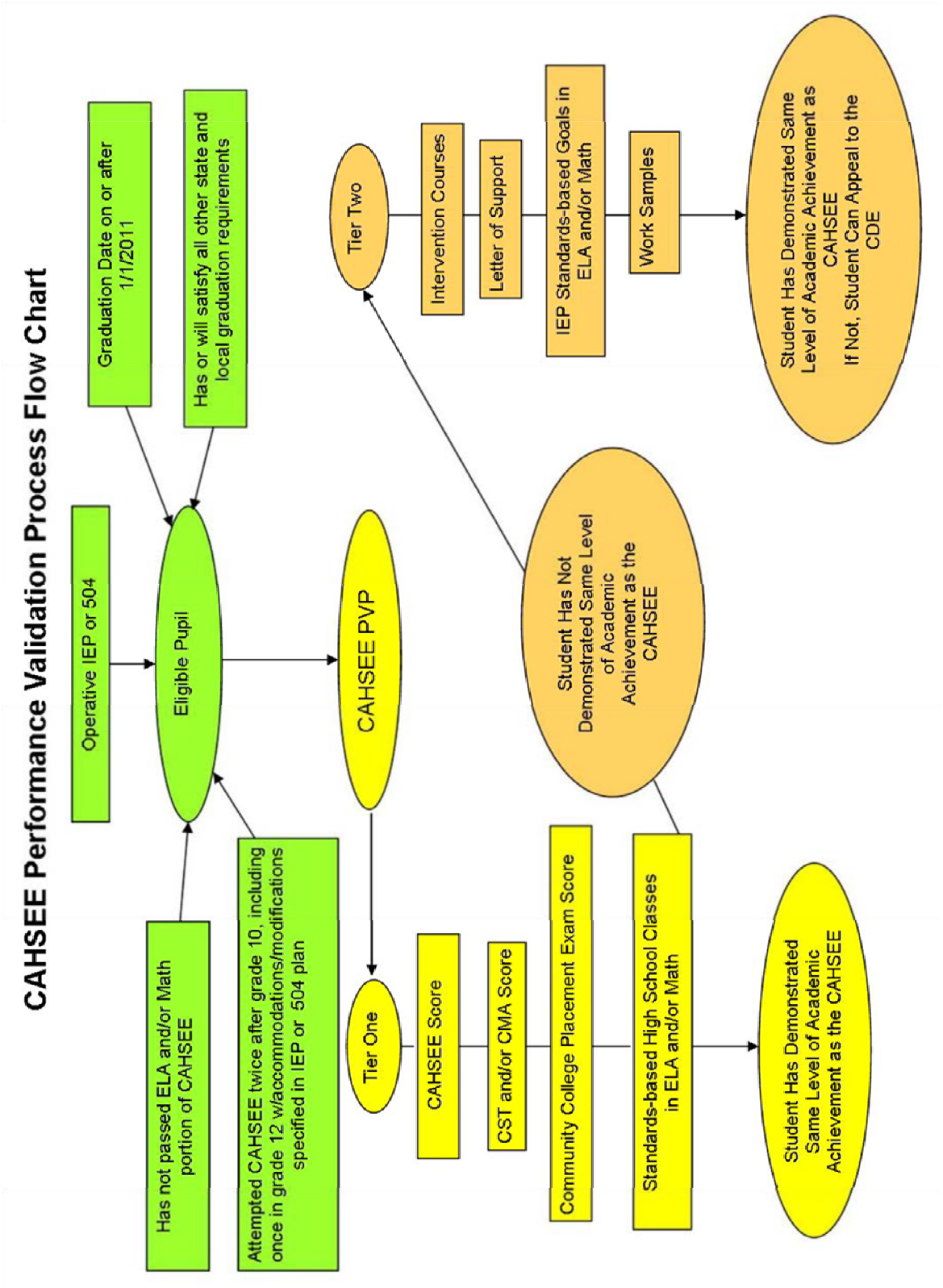


Figure 5.1. Process flow chart of AB 2040 Panel Recommendations for Alternative Means.

Overview of Proposed California High School Exit Examination Performance Validation Process

This overview is aligned with the Assembly Bill (AB) 2040 Panel's recommendation of alternative means to the California High School Exit Examination (CAHSEE) for eligible students with disabilities, referred to as the CAHSEE Performance Validation Process (PVP), and is intended to provide participants in HumRRO's online feedback opportunity with a conceptual level of understanding of the recommendation. If the recommended CAHSEE PVP or other alternative means are deemed feasible and comparable by the State Board of Education (SBE), the California Department of Education (CDE) may work with a test development contractor to fully develop the process and all supporting materials.

1. **Identification of Eligible Students:** The district testing coordinator, in collaboration with the special education director and teachers, will make the initial identification of students with disabilities with an Individualized Education Program (IEP) or Section 504 plan who might be eligible for the proposed CAHSEE PVP. Eligible students, and their parents or guardians, are informed of the student's eligibility for the CAHSEE PVP by the IEP or Section 504 plan coordinator (e.g., special education director). Eligibility for the CAHSEE PVP is determined by the following:
   a. Student must have an operative IEP or Section 504 plan;
   b. Student has not passed either or both the English-language arts (ELA) or mathematics portions of the CAHSEE;
   c. Student must have attempted the CAHSEE twice after grade ten, including once in grade 12, with the accommodations and/or modifications specified in the student's IEP or Section 504 plan;
   d. Student must be in grade 12, and have a graduation date on or after January 1, 2011;
   e. Student has satisfied, or will have satisfied, all other state and local graduation requirements.

2. **Process:** The proposed CAHSEE PVP is a two-tiered process for eligible students to demonstrate that they have achieved the same level of academic achievement required by the CAHSEE in the content standards for ELA and/or mathematics.
   a. Tier 1. Students meeting the eligibility requirements specified above will be entered into consideration under Tier 1. Tier 1 is proposed to consist of a compilation of points garnered from a variety of measures, including the following:
      - CAHSEE score
      - California Standards Test (CST) and/or California Modified Assessment (CMA) score(s)
      - Community College placement examination score(s)
      - Standards-based high school classes in ELA and/or mathematics

      Students who satisfy the Tier 1 requirements may be awarded a high school diploma by the local school board.

   b. Tier 2. Students not satisfying the Tier 1 evidence requirements move to Tier 2. Tier 2 is proposed to consist of an evaluation of evidence, including the following:
      - Intervention courses
      - Letter(s) of support
      - IEP standards-based goals in ELA and/or mathematics
      - Work samples

      Students who satisfy Tier 2 requirements may be awarded a high school diploma by the local school board.

Figure 5.2. Detailed overview of AB 2040 Panel Recommendations for Alternative Means.

3. **Administration of the proposed CAHSEE PVP**: The **school site** is responsible for initiating, completing, and reviewing each student's CAHSEE PVP and for submitting the checklist, work samples, and other evidence to the district.

   a. **Tier 1 evidence** of the student's level of academic achievement includes data such as student scores on CST or CMA or community college placement exams, and grades in standards-based ELA and/or mathematics high school classes.

   b. **Tier 2 evidence** of the student's level of academic achievement may include the following:
      - Work samples from student participation in CAHSEE intervention or remediation courses
      - Work samples based on standards assessed on the CAHSEE, in accordance with standardized criteria from test development contractor
      - IEPs or Section 504 plans with standards-based goals (based on the CAHSEE blueprints in ELA and/or mathematics)
      - Letter of support (e.g., from teacher or employer) addressing achievement of specific grade-level standards

      Work sample evidence: The **school site** (e.g., teacher, special education director, test coordinator, etc.) collects and screens the evidence, maintains the evidence, and reviews the evidence for completeness along with the completed checklist.
      - Teacher ensures evidence is independently completed by the student under the teacher's supervision and allows students to produce evidence using the accommodations and modifications permitted the student by his/her IEP or Section 504 plan.
      - The school site (e.g., the IEP and/or Section 504 plan coordinator, etc.) reviews the evidence and checklist to ensure completeness and submits them to the district.

4. **Administration of the proposed CAHSEE PVP**: The **school district** is responsible for ensuring all necessary evidence from the student is included, and for evaluating the evidence. The district defines the timeframe in which the steps in the CAHSEE PVP submittal and scoring process must occur.

   a. District reviews the submitted evidence to ensure completeness. Incomplete evidence is returned to the student for completion.
   b. District determines members of and convenes a panel to score the PVP evidence.
   c. On the checklist, district indicates the final determination as to whether or not the student has achieved the same level of academic achievement in the content standards required for passage of the CAHSEE. For denials, district panel will document reasons why the evidence was judged to demonstrate an unsatisfactory level of academic achievement and offer the student the option to appeal.
   d. District submits PVP checklist to the state electronically.

5. **Administration of the proposed CAHSEE PVP: The student, and his/her parent or guardian**, is responsible for initiating the appeal process, if the student has been determined to not have met the same level of achievement as required by the CAHSEE.

6. **Administration of the proposed CAHSEE PVP:** The **state** is responsible for outlining the rules and timelines of the alternative means, handling appeals, issuing score reports, conducting audits to ensure compliance, and producing PVP training for schools and districts.

Figure 5.2. (Continued)

7. **Scoring**: Procedures would be developed to ensure that the time and cost of evaluating the proposed CAHSEE PVP is minimized. Also, the scoring would be designed to minimize subjectivity and ensure the student achieves the same level of competence in the content standards required for passage of the CAHSEE.
    a. A test development contractor would likely develop the scoring guides/rubrics and checklist criteria used by the local (district) scoring panel.
    b. An appeal process would allow students to have their evidence submitted to and reviewed by a panel of scorers designated by the state.
    c. A small percentage of school districts (5%) should be audited for the purpose of monitoring standardization of PVP implementation across the state.

8. **Uniformity**: The form, content, and scoring of the alternative means should be applied uniformly across the state.
    a. To minimize variations in evidence, the test development contractor would determine the specific, standardized requirements for the work sample submissions, such as the number of samples, type of evidence, and the minimum number of strands/standards to represent.
    b. The test development contractor would provide scoring guides/rubrics and checklist evaluation criteria and would develop training for districts in the administration of the PVP.

Figure 5.2. (Continued)

HumRRO's study of the feasibility and comparability of the Panel's recommendations dealt mainly with the following questions:

- How might the Tier I eligibility and passing criteria be operationally defined, and what estimated numbers of students might be identified as eligible and passing?

- How might the Tier II evidence criteria and scoring procedures be more operationally defined, and what do school- and district-based educators in the special education arena think about the feasibility and comparability of various components of PVP?

- What might be the costs, in terms of time, to implement the Tier II recommendations for the estimated number of eligible students?

To analyze the Panel's Tier I recommendation for validating student performance through scores on assessments and grades for English-language arts (ELA) and mathematics courses using a weighted system, HumRRO analyzed data from the high school classes of 2008 and 2009. To analyze the Panel's Tier II recommendation that student performance be validated through work samples and the collection of other evidence, HumRRO facilitated two focus groups and conducted an online feedback opportunity to gather input from special education experts. The special education experts represented districts and high schools with significant populations of students likely to utilize the proposed CAHSEE alternative means.

This chapter presents the results of the Tier I analysis and the results of the online feedback opportunity, which included questions regarding both Tier I and Tier II.

A copy of HumRRO's Web-based presentations of the proposed Performance Validation Process and the online feedback opportunity questions can be found in HumRRO's 2011 annual evaluation report (Becker, Wise, Hardoin & Watters, 2011).

Tier I

Students Who Might Be Eligible for the Performance Validation Process

Our analyses of Tier I options were based on SWD in the high school classes of 2008 and 2009. The requirement that California students pass a high school exit examination in order to receive a diploma went into effect with the Class of 2006. SWD, however, received an exemption from this requirement for two years while issues relating to a pending lawsuit were resolved and while there was further study of alternatives for these students (Senate Bill [SB] 964). After two years of exemptions, SWD in the Class of 2008 and the Class of 2009 were also required to pass both parts of the CAHSEE to receive a diploma. In 2010, SWD were once again exempt from the CAHSEE requirement, pending further study of alternative ways of demonstrating competency in the content standards assessed by the CAHSEE, as specified in AB 2040. Thus 2008 and 2009 were the only two years so far in which SWD were required to pass the CAHSEE.

Figure 5.3 provides information about SWD in the classes of 2008 and 2009 who passed the CAHSEE in grades ten, eleven, or twelve and those who continued to take the CAHSEE in grade twelve but did not pass by the end of their senior year. The box labeled "10th Graders" in the upper center of the figure indicates that 48,140 grade ten SWD took the CAHSEE in 2006 (Class of 2008) and 47,508 grade ten SWD took the CAHSEE in 2007 (Class of 2009). Each year, about 36,000 of these students took the CAHSEE with no accommodations or modifications, another 2,000 took the CAHSEE with one or more allowable accommodations, and over 4,000 took the CAHSEE with a modification. Approximately 5,000 students each year had an answer document that did not yield CAHSEE scores. In most cases, the student was absent or otherwise left the answer document blank. These students are labeled as "Not Tested" in the chart.

The box at the upper right of Figure 5.3 shows the number of grade ten SWD achieving a passing score on both parts of the CAHSEE in 2006 and 2007. About 10,000 of the grade ten SWD who took the CAHSEE without accommodations or modifications achieved a passing score. Approximately 400 of the students receiving accommodations and 800 of the students with modifications achieved a passing score each year. In 2007, we noted a small number of answer documents for repeat grade ten students who appeared to have already passed the CAHSEE.

The number of grade eleven SWD taking the test and the number passing in 2007 and 2008 are shown in the next row of boxes in Figure 5.3. Similar numbers for grade twelve students in 2008 and 2009 are shown below that.

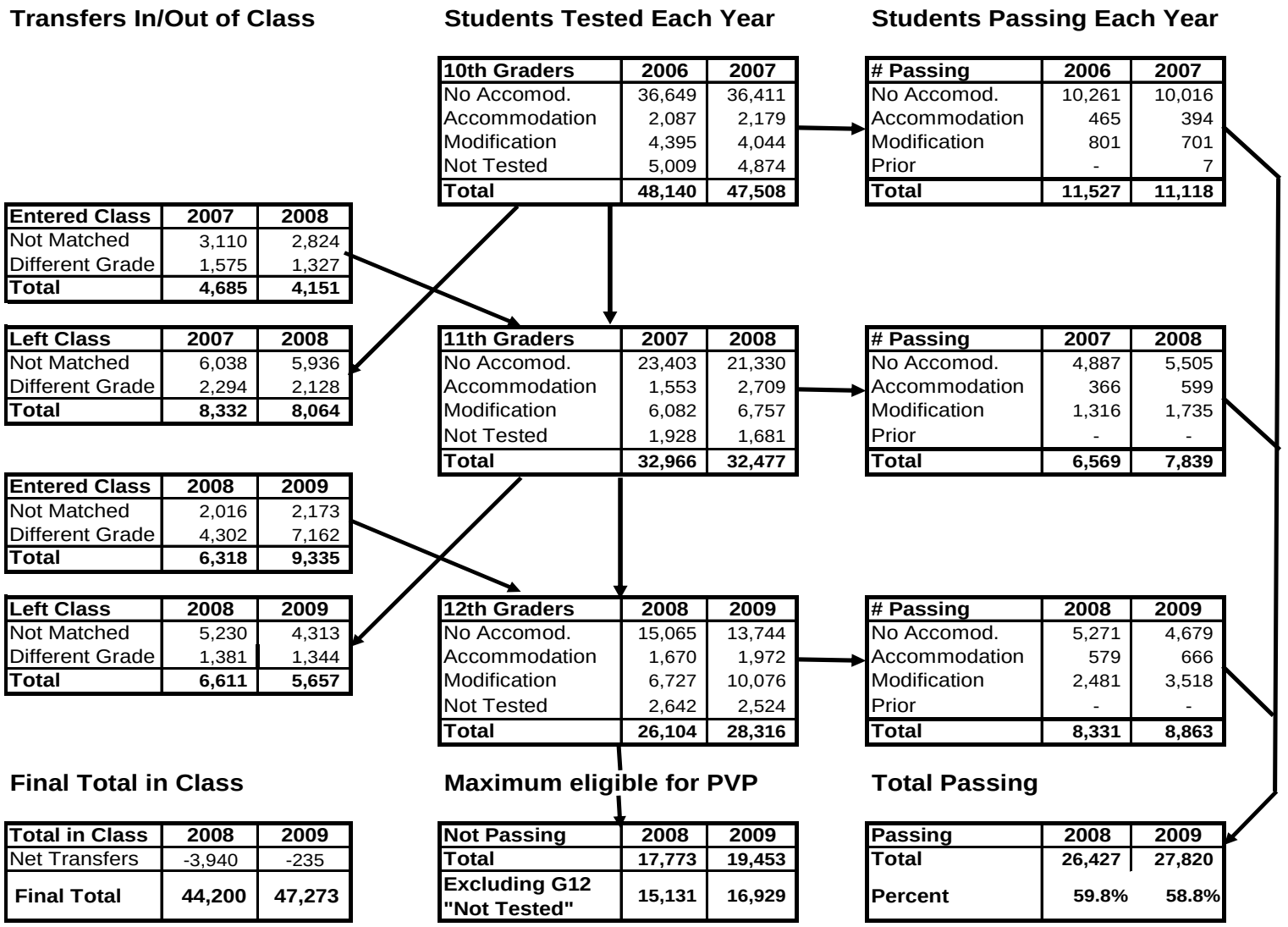


Figure 5.3 CAHSEE results for students with disabilities in the high school classes of 2008 and 2009.

Not all of the grade eleven students tested in 2007 and 2008 had been tested as grade ten students the year before. As shown in the box at the upper left of Figure 5.3, about 3,000 of the grade eleven SWD tested each year were not matched to any prior CAHSEE records. Many likely transferred from out of state or from private schools and some could not be found due to erroneous identifying information. Another 1,500 students tested as grade eleven students each year had been tested in the previous years, but not as grade ten students. Most were repeat grade eleven students who now entered the target high school class. In all, 4,781 of the grade eleven SWD tested in 2007 and 4,202 of those tested in 2008 were new to their respective high school classes.

As shown by the second box on the left side of Figure 5.3, about 6,000 students each year who did not pass the CAHSEE in grade ten were not matched to CAHSEE records for the next year. These would include students who left the state or transferred to a private school as well as students who dropped out. Another 2,000 of the grade ten students not passing were matched to test records the next year, indicating that they were repeating grade ten or, in a very few cases, had skipped to grade twelve, thus leaving the target class.

The box at the bottom left of Figure 5.3 indicates that, after counting SWD leaving the Class of 2008 and those entering, the final count was about 4,000 students less than the count of grade ten students in 2006. For the Class of 2009, the final count of 47,273 was very close to the initial count of 47,508. For the Class of 2009, there were about 3,000 more repeat grade twelve students than for the Class of 2008. These were SWD who did not meet the CAHSEE requirement as seniors in 2008, the first year that the requirement applied to these students, and were continuing as grade twelve students in 2009.

Of the approximately 48,000 SWD in each high school class, about 18,000 or 19,000 continued to try to pass the CAHSEE as grade twelve students but failed. The eligibility criteria for the CAHSEE PVP recommended by the AB 2040 panel included (a) having taken the CAHSEE at least twice after grade ten, including at least once in grade twelve; (b) having an individualized education program (IEP) or Section 504 plan that included coverage of the knowledge and skills covered by the CAHSEE; and (c) meeting or being expected to meet all other state and local graduation requirements. We did not have information on the last two requirements for individual students. We included all of them in our analyses of possible Tier I screening under the proposed CAHSEE PVP. The fact that they were still taking the CAHSEE as seniors suggested that this was appropriate given their IEPs and that someone thought there was a chance they would meet other graduation requirements.

Table 5.1 shows the demographic distribution of students who might be eligible for the proposed CAHSEE PVP screening. Compared to all SWD, students eligible for Tier I screening were somewhat more likely to be Hispanic or African American and considerably more likely to be English learners or students from economically disadvantaged households.

Table 5.2 compares students who might be eligible for Tier I screening with all SWD in terms of their primary disability code. Nearly 70 percent of the eligible students are classified as having a specific learning disability. The differences between all SWD and CAHSEE PVP-eligible students are minor.

Table 5.1. Demographic Distributions for All Students, All Students with Disabilities, and Students with Disabilities Eligible for Tier I Screening

Group		All Grade 10 Students	Grade 10 Students with Disabilities	Eligible for Tier I in Grade 12
Total Number of Students[1]		*1,008,645*	*95,748*	*37,226*
Gender	Female	48.9%	34.3%	34.5%
	Male	51.1%	65.7%	65.5%
Race	Native American	0.8%	1.1%	0.8%
	Asian	8.7%	3.7%	3.3%
	Pacific Islander	0.7%	0.5%	0.5%
	Filipino	2.8%	1.2%	0.9%
	Hispanic	44.8%	45.1%	54.3%
	African American	8.3%	13.5%	19.2%
	White (not Hispanic)	33.8%	34.7%	20.7%
	Other	0.1%	0.2%	0.2%
Other	English Learner	16.1%	23.4%	32.4%
	Economically Disadvantaged	42.8%	49.8%	59.3%

[1] Counts and percentages are based CAHSEE test records for all students in the high school classes of 2008 and 2009 combined.

Table 5.2. Primary Disability Code Distributions for All Students with Disabilities and Students with Disabilities Eligible for Tier I Screening

Primary Disability	All Students with Disabilities	Eligible for Tier One
Number of Students[1]	*95,748*	*37,226*
210 Mental Retardation	5.5%	7.7%
220 Hard of Hearing	1.0%	0.9%
230 Deaf	0.6%	0.9%
240 Speech Impairment	5.2%	3.0%
250 Visual Impairment	0.6%	0.3%
260 Emotional Disturbance	7.7%	8.6%
270 Orthopedic Impairment	1.6%	1.2%
280 Other Health Impairment	6.8%	4.4%
290 Specific Learning Disability	67.1%	69.7%
300 Deaf-Blindness	0.0%	0.0%
310 Multiple Disability	0.7%	0.7%
320 Autism	2.7%	2.1%
330 Traumatic Brain Injury	0.5%	0.5%

[1] Counts and percentages are based on all students in the high school classes of 2008 and 2009 combined.

Estimates of Possible Tier I Passing Rates

The first step in the CAHSEE PVP recommended by the AB 2040 panel is a Tier I screen based on other test scores and possibly grades. Figure 5.4 illustrates the recommended Tier I worksheet. As shown, many details remain to be worked out. For example, which STAR Program test scores—CMA or CST— should be included? What community college tests should be used and how should points be assigned to scores from these tests? How much weight should be given to grades and for which classes?

Performance Validation Process *An eligible student with a CAHSEE score of less than 350 enters this process at Tier One. Students entering Tier One but not earning enough points must continue on to Tier Two.*			
TIER ONE – Test Scores (Student may earn a maximum of XX points)			
☐	CMA – ELA:	CMA – Math:	Basic – 1 point Proficient – 2 points Advanced – 3 points
☐	CST – ELA:	CST – Math:	
☐	ELA community college test:	Math community college test:	XX score – 1 point XX score – 2 points XX score – 3 points
☐	ELA High School Classes:	Math High School Classes:	A – XX points B – XX points C – XX points D – XX points

Figure 5.4 Tier I worksheet recommended by the AB 2040 Panel.

The first question we addressed concerning the proposed Tier I screen was which CST and CMA score(s) should be included in the worksheet. The California content standards covered by the CAHSEE are drawn from grade nine and ten standards (with two standards from grade eight) for ELA and from grades six and seven and Algebra I standards for mathematics. There is no one CST or CMA that, by itself, covers content exactly *comparable* to the content covered by the CAHSEE. For our exploratory analyses, we decided to examine an average of scores from several CSTs that, taken together, did cover all of the content included in the CAHSEE assessments. For ELA, we looked at CST scores or comparable CMA scores from grades seven through ten where they were available. For mathematics, we included the grade seven CST (since most of the CAHSEE standards taken from grade six were also covered in the grade seven assessment), the Algebra I CST, and the General Mathematics CST, if taken. Figure 5.5 illustrates the Tier I worksheet used in our exploratory analyses.

English-Language Arts			Mathematics		
	Points*			Points*	
Course	CST/CMA	Grades	Course	CST/CMA	Grades
7th Grade ELA 8th Grade ELA 9th Grade ELA 10th Grade ELA			7th Grade Math General Math Algebra I		
Total Points Number of Courses			Total Points Number of Courses		
Average per Course			Average per Course		

* Points

CST/CMA Scores	Course Grades
4 - Advanced	4 - A
3 - Proficient	3 - B
2 - Basic	2 - C
1 - Below Basic	1 - D
0 - Far Below Basic	0 - F

Figure 5.5 Tier I worksheet used in exploratory analyses.

We matched Tier I eligible students from the classes of 2008 and 2009 to CST and CMA scores from 2003 through 2009. Table 5.3 shows the distribution of average points per CST for each of the two high school classes. We found no relevant CST or CMA scores for nearly 20 percent of the eligible students. Nearly all students who were matched had average scores in the Far Below Basic range (under 1.0 points). Note that for the classes of 2008 and 2009, nearly all of the CSTs for the subjects included here were taken in the 2005–06 school year or earlier. Very few students in these cohorts had CMA scores for the tests included in our analyses. In cases where CMA scores were available, we used performance level information from students' results from the CMA in lieu of the CST.

Table 5.3 Average Worksheet Points from CST and CMA Scores

Average Worksheet Points	ELA		Math	
	2008	2009	2008	2009
Missing[1]	19.2%	14.9%	21.4%	18.0%
0 - < 1	71.7%	76.1%	65.0%	68.5%
1 - < 2	8.8%	8.7%	13.2%	13.1%
2 - <3	0.3%	0.3%	0.4%	0.3%
3 - < 4	0.1%	0.0%	0.0%	0.0%
4	0.0%	0.0%	0.0%	0.0%
Total[2]	100.1%	100.0%	100.0%	99.9%
Percent 2 or better	0.4%	0.4%	0.4%	0.3%

[1] No relevant CST or CMA scores were found.

[2] Totals may not add to 100.0% due to rounding.

The next issue to be clarified was the minimum number of points needed to meet the CAHSEE requirement for each subject. Because of differences in the content covered, it was not possible to identify a worksheet score that was **exactly** equivalent to a CAHSEE passing score. However, the CAHSEE passing scores were set at the Basic performance level so we set Basic performance levels for each of the CSTs or CMAs through a similar judgmental process. Hence, for the exploratory analyses, we set a minimum worksheet score of 2.0, an average of just barely Basic, as the requirement for passing. For each class and subject, less than .5 percent of the eligible students met this requirement. Note that the vast majority of eligible students were far below this minimum so that minor changes in the minimum score levels from a more precise equivalency study would not change the estimated passing rates appreciably.

Grade information is not yet included in the CALPADS system, so we did not have access to transcripts for individual students. Nor do we know what policy judgment would be made about the weight given to course grades, if any. We explored a second option for the Tier I worksheet, in which grades would be considered, but given substantially less weight than CST and CMA scores. Specifically, we assumed that a grade-point average of C or better would add a half point to the average CST score, allowing students with a CST point average as low as 1.5 to reach the 2.0 minimum.

Feedback received from school and district personnel, described below, suggested that roughly half of the eligible students had grade point averages of C or better. To approximate the difference in results if grades were considered, we estimated that half of the students with CST point scores of 1.5 to 2.0 would have sufficiently good grades to reach the passing level. Again, because most students have CST point averages in the far-below-basic range, minor differences in the course grades considered or the weight given to different grade point levels would be unlikely to lead to major changes in the percentages of students meeting the CAHSEE requirements.

One final consideration is the need to estimate how many of the eligible students still need to pass both parts of the CAHSEE and how many of those students would be likely to do so. Table 5.4 separates the estimated percentage of eligible students who might meet the CAHSEE requirement through a Tier I screen by those needing only to meet the ELA requirement, those needing only to meet the mathematics requirement, and those needing to meet both requirements. Table 5.4 also shows results separately for those who were very close to passing the CAHSEE (scores of 340 to 349) and for three tiers of students with lower levels of CAHSEE scores (330 to 339, 320 to 329, and below 320).

As shown in Table 5.4, roughly two-thirds (24,277 of 37,283) of students eligible for screening need to pass both parts of the CAHSEE. Approximately 5,900 students in these two years needed only to pass the ELA portion and about 7,000 needed to pass only the mathematics portion. Two-thirds of these students needing to pass both parts (16,075 of 24,277) did not earn a CAHSEE score of 320 or better on at least one of the two parts. Because of the large numbers of students needing to pass both parts, the overall passing rate using CSTs alone, 0.2 percent, is only half that of the estimated rate when each part is examined separately. The bottom line is that only 162 students in our two cohorts, or fewer

than 100 per year, are estimated to pass the CAHSEE even when grades are taken into account. If grades are not considered, the number of students estimated to meet the CAHSEE through the Tier I screen is only 40 per year.

Table 5.4 Estimated Tier I Passing Rates, Overall and by CAHSEE Score Level

Need to Pass ELA Only		Highest CAHSEE ELA Score				
Basis	Statistic[1]	< 320	320-329	330-339	340-349	All
	Number of Students	1,132	1,068	1,694	2,023	5,917
CST/CMA	Number Passing Tier 1	7	4	7	13	31
Only	Percent Passing Tier 1	0.6%	0.4%	0.4%	0.6%	0.5%
With	Number Passing Tier 1	11	6.5	19	33	69.5
Grades	Percent Passing Tier 1	1.0%	0.6%	1.1%	1.6%	1.2%
Need to Pass Math Only		Highest CAHSEE Math Score				
Basis	Statistic[1]	< 320	320-329	330-339	340-349	All
	Number of Students	159	174	346	6410	7,089
CST/CMA	Number Passing Tier 1	0	2	2	31	35
Only	Percent Passing Tier 1	0.0%	1.1%	0.6%	0.5%	0.5%
With	Number Passing Tier 1	0	2	4.5	62.5	69
Grades	Percent Passing Tier 1	0.0%	1.1%	1.3%	1.0%	1.0%
Need to Pass Both		Lower of the Highest CAHSEE ELA and Math Scores				
Basis	Statistic[1]	< 320	320-329	330-339	340-349	All
	Number of Students	16,075	4,494	2,634	1,074	24,277
CST/CMA	Number Passing Tier 1	14	0	0	0	14
Only	Percent Passing Tier 1	0.1%	0.0%	0.0%	0.0%	0.1%
With	Number Passing Tier 1	20	1.5	2	0	23.5
Grades	Percent Passing Tier 1	0.1%	0.0%	0.1%	0.0%	0.1%
Summary: All Tier One Students		Lower of the Highest CAHSEE ELA and Math Scores				
Basis	Statistic[1]	< 320	320-329	330-339	340-349	All
	Number of Students	17,366	5,736	4,674	9,507	37,283
CST/CMA	Number Passing Tier 1	21	6	9	44	80
Only	Percent Passing Tier 1	0.1%	0.1%	0.2%	0.5%	0.2%
With	Number Passing Tier 1	31	10	25.5	95.5	162
Grades	Percent Passing Tier 1	0.2%	0.2%	0.5%	1.0%	0.4%

[1] Number passing figures are estimates rather than counts and thus not always whole numbers.

One final note is that the percentage of students who might pass a Tier I screen was higher for students who were closer to having passed the CAHSEE. Only 0.2 percent of students with CAHSEE scores under 330 (20 points below the passing level) were estimated to pass the Tier I screen, while approximately 1.0 percent of students with scores of 340 or better (within 10 points of passing) were estimated to pass the Tier I screen when high school grades were included.

Tier II

HumRRO developed and administered an online feedback opportunity in April–May 2010 to collect the opinions of special education experts about the feasibility of the proposed alternative means and how the level of academic achievement demonstrated by those alternative means compares to the level of academic achievement in the content standards required for passage of the CAHSEE.

The AB 2040 Panel recommended that students who did not satisfy the CAHSEE PVP Tier I screen move to Tier II, where student performance would be validated through work samples and the collection of other evidence. The Panel described the CAHSEE PVP Tier II processes aligned with the components of the AB 2040 statute requirements and drafted a Tier II portion of the CAHSEE PVP Checklist, shown in Figure 5.6. The checklist includes four types of evidence that could be used to validate academic performance. For example, evidence that a student has IEP goals that are based on the CAHSEE mathematics blueprint could help a student earn points toward passing the CAHSEE requirement through alternative means.

	TIER TWO – Work Samples *Student may earn a maximum of XX points. Student's score will be an average of the score from Tier One and the score from Tier Two. The average score must be in the range of "adequate evidence" to pass.*	
☐	Participation in CAHSEE intervention/remediation. List/describe and include dates (to/from). Provide evidence such as end of year exams, unit tests, and classroom tests.	
	English-language arts	Mathematics
☐	Certification/letter of support (from teacher, employer) addressing student's achievement of specific grade-level standards	Letter of support should include CMA, CST, community college test scores
☐	IEP standards-based goals	Provide evidence that students with IEPs have standards-based goals, based on the CAHSEE blueprints in ELA and/or Math
☐	Work samples demonstrating the same level of achievement as required for passage of the CAHSEE (evaluated by CAHSEE Panel) (e.g., projects, demonstrations, video, that meet specific parameters)	Work samples that have been previously completed by the student in ELA and/or Math Work samples are scored by a rubric (The state of Virginia uses a good rubric model). Score will be determined by a panel review. A test development contractor will determine score values.

Figure 5.6. AB 2040 Panel-recommended Tier II checklist, used in the online feedback opportunity.

The online feedback opportunity presented respondents with information about each component of the proposed CAHSEE PVP (Eligible Students, Specific Options, Scoring, Uniformity, Level of Administration), then asked forced-choice and open-ended questions targeted to those components. In some cases the Panel's descriptions of a component (e.g., Scoring) were quite specific, such as giving school districts rather than schools responsibility for scoring the work samples. In other cases the descriptions of a component (e.g., Evidence) were quite general, such as indicating that a test development contractor would develop the criteria for the number of work samples and the types of acceptable evidence. So as to provide a possible frame of reference for considering aspects of collecting and scoring Tier II work samples, HumRRO developed and presented within the online feedback opportunity supplemental information about possible alternatives for work samples, scoring rubrics, and passing scores.

Recruitment of Participants

To locate and recruit California educators of students most likely to be "PVP eligible," HumRRO used Class of 2008 CAHSEE data to identify 33 districts with the highest numbers of special education students who continued to attempt the CAHSEE in their senior year. Within each of the identified districts, HumRRO further identified 1–19 schools with at least 25 special education students who continued to attempt the CAHSEE in their senior year. HumRRO contacted the CAHSEE district coordinators at these districts and asked them for nominations to represent their district in the online feedback opportunity. For each district, HumRRO requested at least one district staff nominee knowledgeable about special education programs and one special education teacher nominee from each identified school. District coordinators provided HumRRO with names and contact information for 193 nominees, 52 at the district level and 141 at the school level. Three of the targeted districts did not submit nominees.

Focus Groups

HumRRO convened two Web-based focus groups to test the materials and questions to be used in the online feedback opportunity. Participants for the focus groups were recruited for HumRRO by Special Education Local Program Area (SELPA) Directors and included special education teachers and district level special education coordinators and program specialists. HumRRO sent two read-ahead documents in advance of the focus group sessions to familiarize participants with the proposed CAHSEE PVP:

- A graphic flow chart of the proposed CAHSEE PVP (Figure 5.1 of this report)
- An overview of the proposed CAHSEE PVP (Figure 5.2 of report)

Focus group participants offered a number of suggestions for clarifying information about the proposed CAHSEE PVP and improving the wording of questions and answer choices, but overall had a positive response to the approach for this aspect of the study. HumRRO revised the online feedback questionnaire and presentation

materials in response to suggested changes from the focus group participants, and later invited them to participate further in the online feedback opportunity.

Instrument

HumRRO designed the Web-based program for this study to provide participants with context about the proposed alternative means before posing the feedback questions for each component (e.g., Evidence). Figure 5.7 is a screen shot of the first page of the Evidence section of the online feedback opportunity.

As a respondent began each PVP topic, he or she was prompted to open and read a presentation of material related to the topic before answering the topic's questions. Some presentations included HumRRO's descriptions of possible options and considerations for that topic that were created to glean the educator's opinions of the methods and processes involved with the Panel's recommendations.

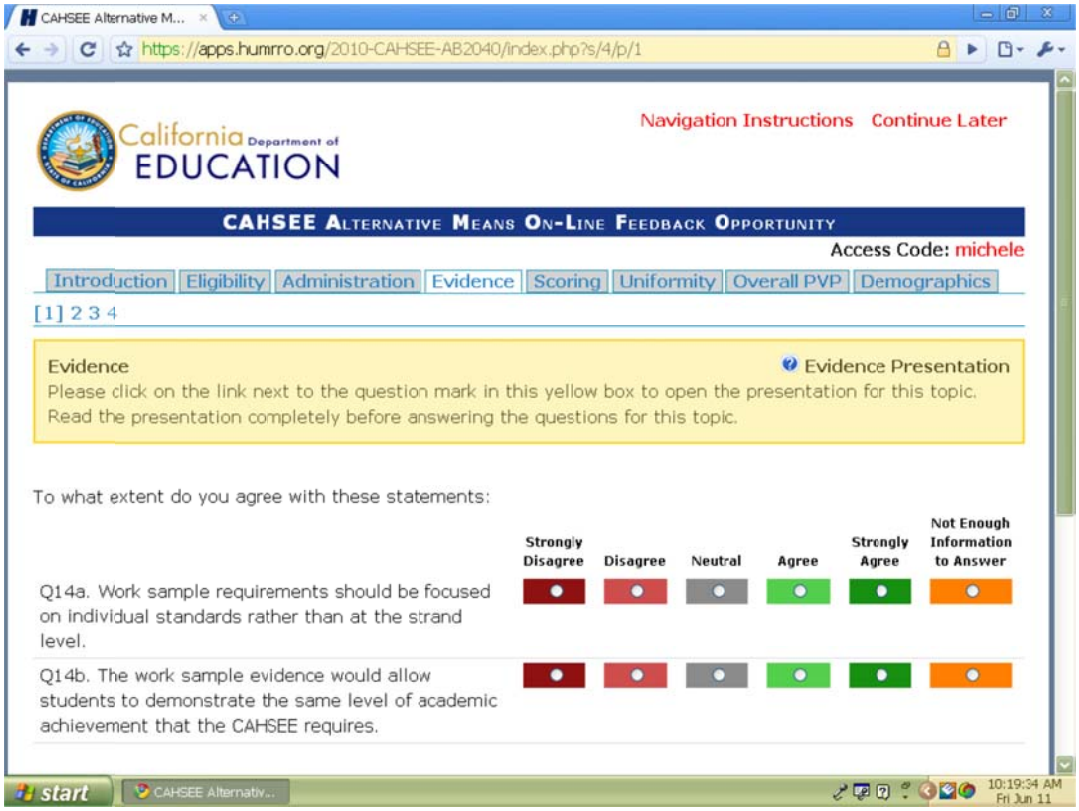


Figure 5.7. Screen shot of online feedback opportunity.

Administration

HumRRO e-mailed to nominees for the online feedback opportunity the link to the Web site along with the same two read-ahead documents that we provided to the focus group participants (overview of AB 2040 recommendations and proposed CAHSEE PVP Flow Chart). We made the site available online to facilitate feedback by

participants at a time and location convenient to them, leaving it open for approximately two weeks. Given the need to understand both the recommendations and the other material associated with the AB 2040 Panel's recommendations, completing the 37-item questionnaire required participants to spend a considerable amount of time (approximately 1 hour). The following four types of questions were included.

- "To what extent do you agree with this statement"
- Multiple choice
- Fill in the blank
- Open-ended with a prompt that began, "Do you have any other comments regarding ___."

Summary of Respondent Feedback

Readers interested in a comprehensive list of the responses, organized by respondent group, may refer to the appendices volume of HumRRO's 2010 Annual Report (Becker et al., 2011). Note that the parentheses after table titles refer to the question number in the online feedback opportunity.

Respondent sample and demographics. Our sample included 113 people, 79 of whom responded in regard to a specific school; the other 34 answered with regard to a specific district. Nominees from all but two of the districts that provided HumRRO with nominee information participated as respondents either at the school or district level. Table 5.5 provides the response rate based on the number of nominated participants and the number of submitted responses. A list of the school districts and offices of education represented by participants in the focus groups and the online feedback opportunity is included in the appendices volume of HumRRO's 2010 Annual Report.

Table 5.5. Response Rate of Nominees to Online Feedback Opportunity

	Number of Respondents		
	School	District	All
Nominated	141	52	193
Submitted response	79	34	113
Answered at least one open-ended question	54	27	81
Did not access Web-based system	47	14	61
Started but did not complete response	*20*	*6*	*26*
Response Rate	56%	65%	59%

Table 5.6 shows that respondents had varying levels of experience. The majority of respondents in our sample (83.8 percent of school-based educators; 65.6 percent of district-based educators) had "more than four years' experience" in their position.

Table 5.6. Years of Experience in Position (Q35)

Q35. Years Experience in Position	School	District	All
Less than 2 years	5.4%	18.8%	9.4%
2–4 years	10.8%	15.6%	12.3%
More than 4 years	83.8%	65.6%	78.3%
Total[1]	100%	100%	100%
N	74	32	106
Skipped question	5	2	7

[1] Totals may not add to 100 percent due to rounding.

Table 5.7 shows the gender breakdown of respondents. As can be seen, over three quarters of both school-based (77.0 percent) and district-based educators (78.1 percent) were female.

Table 5.7. Gender (Q36)

Q36. Gender	School	District	All
Male	23.0%	21.9%	22.6%
Female	77.0%	78.1%	77.4%
Total	100%	100%	100%
N	74	32	106
Skipped question	5	2	7

As seen in Table 5.8, the majority of all respondents (69.9 percent of school-based educators; 74.2 percent of district-based educators) were Caucasian. Of the school-based educator sample, 13.7 percent were Hispanic and 8.2 percent African-American; in the district-based educator sample, 9.7 percent were Hispanic and none were African-American. Native American, Asian/Pacific Islander, and "Other" subgroups accounted for 10.5 percent of all participants. The proportion of educators by ethnicity in our sample is similar to the most recent CDE reports of the proportion of teachers by ethnicity across the state[10].

Table 5.8. Ethnicity (Q37)

Q37. Ethnicity	School	District	All	2004-05 CBEDS Data
Caucasian	69.9%	74.2%	71.2%	72.1%
African American	8.2%	0.0%	5.8%	4.5%
Hispanic	13.7%	9.7%	12.5%	14.5%
Native American	0.0%	6.5%	1.9%	0.6%
Asian/Pacific Islander	4.1%	6.5%	4.8%	4.8%
Other	4.1%	3.2%	3.8%	2.3%
Total[1]	100%	100%	100%	99%
N	73	31	104	306,548
Skipped question	6	3	9	

[1] Totals may not add to 100.0% due to rounding.

[10] Educational Demographics Office, California Department of Education. (n.d.). California Basic Educational Data System (CBEDS). In *Number of Teachers by Ethnicity 1981 to 2004*. Retrieved August 10, 2010, from http://www.cde.ca.gov/ds/sd/dr/ethteach/asp.

Respondents' familiarity with CAHSEE standards. Respondents were asked about their familiarity with California's ELA and mathematics content standards; Table 5.9 depicts the responses. For mathematics, about half of all respondents (52.4 percent) indicated they strongly agreed that they were familiar with the CAHSEE standards, while another one-third of all respondents (30.5 percent) indicated they "agree" with the statement. For ELA, slightly less than half of all respondents (46.2 percent) indicated they strongly agreed with the statement that they were familiar with the CAHSEE content standards, while 35.8 percent indicated they agreed with the statement. A small percentage of all respondents indicated that they either disagreed or strongly disagreed with the statement (mathematics: 6.7 percent, ELA: 8.5 percent). The rest of the sample indicated that they were neutral (mathematics: 9.5 percent, ELA: 8.5 percent). There was no major difference between school and district level responses.

Table 5.9. Extent of Agreement with Statements About Respondent's Familiarity with the Mathematics CAHSEE and ELA CAHSEE Content Standards (Q33)

Q33. To what degree do you agree with this statement: I am familiar with the CAHSEE content standards:	Mathematics			ELA		
	Sch.	Dist.	All	Sch.	Dist.	All
A. Strongly Agree	55.4%	45.2%	52.4%	51.4%	34.4%	46.2%
B. Agree	29.7%	32.3%	30.5%	32.4%	43.8%	35.8%
C. Neutral	8.1%	12.9%	9.5%	6.8%	12.5%	8.5%
D. Disagree	5.4%	3.2%	4.8%	8.1%	3.1%	6.6%
E. Strongly Disagree	1.4%	3.2%	1.9%	1.4%	3.1%	1.9%
F. Not Enough Information to Answer	0.0%	3.2%	1.0%	0.0%	3.1%	0.9%
Total[1]	100%	100%	100%	100%	100%	100%
N	74	31	105	74	32	106
Skipped question	5	3	8	5	2	7

[1] Totals may not add to 100.0% due to rounding.

Eligibility

To help the respondents begin to conceptualize the students addressed by the questionnaire, we asked them to estimate the number of students they thought might be eligible for the proposed CAHSEE PVP (Q3) out of the total number of senior year students in their school or district (Q2), and we calculated the percentages corresponding to their replies. While 22 percent of all respondents indicated that the percentage of students eligible would be less than 4 percent, 15 percent of all respondents indicated that the percentage of students eligible would be over 25 percent. The most commonly estimated range was 4–8 percent. It is important to remember when interpreting these results that the respondents in the sample were included because they have a high rate of SWD, and, as a result, rates of eligibility of a larger sample would likely be lower (see Tier I eligibility for HumRRO's more precise estimates of numbers of students eligible).

We asked the school and district faculty about the feasibility of identifying students eligible for the proposed CAHSEE PVP by the start of the second semester of their senior year. Results, as seen in Table 5.10, show that over 75 percent of all respondents agreed that it was feasible to identify students eligible for PVP by the start of the second semester of their senior year (Q4) and less than one-fifth (18.8 percent) disagreed or strongly disagreed with the notion.

Table 5.10. Extent of Agreement with Statement About Feasibility of Identifying Students Eligible for PVP by the Start of the Second Semester of Their Senior Year (Q4)

Q4. To what extent do you agree with this statement: It would be feasible to identify students eligible for PVP by the start of the second semester of their senior year?	School	District	All
A. Strongly Agree	39.7%	35.3%	38.4%
B. Agree	35.9%	44.1%	38.4%
C. Neutral	3.8%	0.0%	2.7%
D. Disagree	15.4%	14.7%	15.2%
E. Strongly Disagree	3.8%	2.9%	3.6%
F. Not Enough Information to Answer	1.3%	2.9%	1.8%
Total[1]	100%	100%	100%
N	78	34	112
Skipped question	1	0	1

[1] Totals may not add to 100.0% due to rounding.

Characteristics of students who may be eligible for PVP. The questionnaire asked about the grades, time spent in regular education, attendance, and English learner (EL) classification of the students expected to be eligible for the proposed CAHSEE PVP. There was little difference between respondents at the school and district level, and therefore responses are reported here in terms of all respondents. The following four points summarize the data gleaned from the questionnaire regarding characteristics of students who may be eligible for CAHSEE PVP.

- Respondents described students they expected to be eligible for PVP as having lower grades in mathematics and ELA classes than the typical student, but did not describe all of these students as failing or close to failing those classes (Q5). The PVP-eligible students are best described as average students (earning mostly C grades) in regard to their coursework.

- Respondents expected a large proportion of PVP-eligible students to spend much of their day (more than half their time) outside of regular education classes (Q6).

- While not a problem for most, respondents reported that poor attendance can be a problem for many of the students expected to be eligible for PVP (Q7).

- In line with the diversity of the state, respondents provided a very wide range of estimates of the percentage of students expected to be eligible for PVP who would be classified as EL (Q8), with the most frequent estimate being 30 percent. (See Table 5.1 for HumRRO's more precise estimate of what percentage of students expected to be eligible for PVP who would be classified as EL.)

Administration

The questionnaire asked the school and district faculty about the ease of their respective administrative roles collecting and reviewing the proposed CAHSEE PVP evidence. Results, as shown in Table 5.11, show that about one-half of school-level respondents agreed (44 percent) or strongly agreed (5.3 percent) that "School responsibilities for collecting and reviewing PVP evidence could be implemented fairly easily." About one-third of the respondents disagreed (24 percent) or strongly disagreed (9.3 percent) with the statement and 17 percent were neutral.

Regarding district level implementation, the questionnaire results, also shown in Table 5.11, indicate that about 49 percent disagreed or strongly disagreed that "District responsibilities for collecting and reviewing PVP evidence could be implemented "fairly easily." About 39 percent of district-level respondents agreed or strongly agreed with the statement and 12 percent either were neutral or did not have enough information to answer the question.

Table 5.11. Extent of Agreement with Statements About Ease of Implementing School and District Responsibilities for PVP (Q10a, Q10b)

Q10. To what extent do you agree with these statements:	a. School responsibilities for collecting and reviewing PVP evidence could be implemented fairly easily.			b. District responsibilities for scoring PVP evidence could be implemented fairly easily.		
	School	District	All	School	District	All
A. Strongly Agree	5.3%	6.1%	5.6%	5.5%	6.1%	5.7%
B. Agree	44.0%	36.4%	41.7%	28.8%	33.3%	30.2%
C. Neutral	17.3%	3.0%	13.0%	23.3%	9.1%	18.9%
D. Disagree	24.0%	39.4%	28.7%	30.1%	36.4%	32.1%
E. Strongly Disagree	9.3%	12.1%	10.2%	8.2%	12.1%	9.4%
F. Not Enough Information to Answer	0.0%	3.0%	0.9%	4.1%	3.0%	3.8%
Total[1]	100%	100%	100%	100%	100%	100%
N	75	33	108	73	33	106
Skipped question	4	1	5	6	1	7

[1] Totals may not add to 100.0% due to rounding.

School- and district-level respondents were asked to estimate the number of hours of professional development per year each faculty member would need for PVP training. Many of the respondents, as can be seen in Table 5.12, estimated that the training would take six hours (44.9 percent).

Table 5.12. Estimated Number of Hours of Professional Development per Year per School Faculty Member Needed for PVP Training (Q11)

Q.11 Training time	Q11. About how many hours of professional development per year per school faculty member would be needed for PVP training?		
	School	District	All
A. 2 hours	6.8%	15.2%	9.3%
B. 4 hours	25.7%	21.2%	24.3%
C. 6 hours	50.0%	33.3%	44.9%
D. More than 6 hours	17.6%	30.3%	21.5%
Total[1]	100%	100%	100%
N	75	33	108
Skipped question	4	1	5

[1] Totals may not add to 100.0% due to rounding.

The survey asked school- and district-level respondents to estimate the number of professional development hours per year per **district** faculty member needed for PVP training. The range of estimates is shown in Table 5.13. The most common response at the district level was an estimate that the training would take eight hours (37.0 percent).

Table 5.13. Estimated Number of Hours of Professional Development per Year per District Faculty Member Needed for PVP Training (Q12)

Q12. Training time	Q12. About how many hours of professional development per year per district faculty member would be needed for PVP training?		
	School	District	All
A. 4 hours	26.0%	27.3%	26.4%
B. 6 hours	19.2%	27.3%	21.7%
C. 8 hours	37.0%	30.3%	34.9%
D. More than 8 hours	17.8%	15.2%	17.0%
Total[1]	100%	100%	100%
N	73	33	106
Skipped question	6	1	7

[1] Totals may not add to 100.0% due to rounding.

Evidence

One aspect of the AB 2040 recommendation that was not fully developed or defined was the nature of work samples and other types of evidence that would be used to validate student performance in Tier II. The AB 2040 recommendation indicated that a test development contractor would determine specific requirements for work sample submissions, such as the number and type of pieces of acceptable evidence and the minimum number of strands or standards that must be addressed. The questionnaire asked questions to probe the feasibility of Tier II evidence collection and to investigate

the possible comparability of the proposed work sample evidence to the level of academic achievement required to pass the CAHSEE.

Respondents were asked whether the work sample evidence should be focused on individual content standards rather than at the strand level. Table 5.14 shows that more than half the respondents (59.4 percent) agreed or strongly agreed that work samples should be focused on individual standards rather than at the strand level; however, 28.3 percent of respondents disagreed or strongly disagreed. More of the district respondents (39.4 percent) than of the school respondents (23.3 percent) disagreed or strongly disagreed.

About two-thirds of the respondents (65.5 percent) agreed or strongly agreed that work samples would allow students to demonstrate the same level of academic achievement that the CAHSEE requires. About one-fifth (19.7 percent) of respondents disagreed or strongly disagreed. More of the school respondents (24.4 percent) than of the district respondents (9.1 percent) disagreed or strongly disagreed.

To achieve comparability to the CAHSEE, work samples would need to be targeted at the level of individual standards. Though targeting work samples at the level of strands instead of individual standards would require fewer work samples to be reviewed and was preferred by some respondents, it would also reduce comparability between the alternative means and the CAHSEE.

Table 5.14. Extent of Agreement with Statements About Work Samples (Q14a, b)

Q14. To what extent do you agree with these statements:	a. Work sample requirements should be focused on individual standards rather than at the strand level.			b. The work sample evidence would allow students to demonstrate the same level of academic achievement that the CAHSEE requires.		
	% of Respondents			% of Respondents		
	School	District	All	School	District	All
A. Strongly Agree	23.3%	6.1%	17.9%	14.9%	15.2%	15.0%
B. Agree	41.1%	42.4%	41.5%	50.0%	51.5%	50.5%
C. Neutral	9.6%	3.0%	7.5%	10.8%	18.0%	13.1%
D. Disagree	21.9%	30.3%	24.5%	20.3%	3.0%	15.0%
E. Strongly Disagree	1.4%	9.1%	3.8%	4.1%	6.1%	4.7%
F. Not Enough Information to Answer	2.7%	9.1%	4.7%	0.0%	6.1%	1.9%
Total[1]	100%	100%	100%	100%	100%	100%
N	73	33	106	74	33	107
Skipped question	6	1	7	5	1	6

[1] Totals may not add to 100 percent due to rounding.

Table 5.15 shows the extent of respondents' agreement with statements about the three types of supporting evidence included in the Tier II worksheet: evidence from CAHSEE intervention/remediation courses; evidence from a letter of support; and

evidence of IEPs with standards-based goals, based on the CAHSEE blueprints. Respondents were asked if each type of supporting evidence is important to include along with work samples to enable students to demonstrate the same level of academic achievement that the CAHSEE requires.

Table 5.15. Extent of Agreement with Statement Regarding Importance of Each Type of PVP Supporting Evidence (Q15a, b, c)

Q15. This type of supporting evidence is an important requirement to include along with the work samples to enable students to demonstrate the same level of academic achievement that the CAHSEE requires.	a. Evidence from CAHSEE intervention/remediation course			b. Evidence from letter of support			c. Evidence from IEPs with standards-based goals, based on the CAHSEE blueprints		
	Sch.	Dist.	All	Sch.	Dist.	All	Sch.	Dist.	All
A. Strongly Agree	37.8%	39.4%	38.3%	16.2%	15.2%	15.9%	23.0%	33.3%	26.2%
B. Agree	48.6%	51.5%	49.5%	47.3%	45.5%	46.7%	45.9%	51.5%	47.7%
C. Neutral	5.4%	9.1%	6.5%	18.9%	18.2%	18.7%	17.6%	9.1%	15%
D. Disagree	6.8%	0.0%	4.7%	14.9%	12.1%	14.0%	10.8%	6.1%	9.3%
E. Strongly Disagree	1.4%	0.0%	0.9%	2.7%	3%	2.8%	1.4%	0.0%	0.9%
F. Not Enough Information to Answer	0.0%	0.0%	0%	0%	6.1%	1.9%	1.4%	0.0%	0.9%
Total[1]	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	74	33	107	74	33	107	74	33	107
Skipped question	5	1	6	5	1	6	5	1	6

[1] Totals may not add to 100.0% due to rounding.

CAHSEE intervention/remediation course. Most of the respondents (87.8 percent) agreed or strongly agreed that evidence from CAHSEE intervention/remediation courses is important. About the same proportion of school respondents (37.8 percent) and of district respondents (39.4 percent) strongly agreed. A small portion of respondents (5.6 percent) disagreed or strongly disagreed.

Letter of support. Almost two-thirds of the respondents (62.6 percent) agreed or strongly agreed that it would be important to include a letter of support along with work samples. About the same proportion of school respondents (16.2 percent) and of district respondents (15.2 percent) strongly agreed. Very similar percentages of respondents disagreed or strongly disagreed (16.8 percent). About the same proportion of school respondents (17.6 percent) and district respondents (15.1 percent) disagreed or strongly disagreed. For this item, about 19 percent of all respondents were neutral.

IEPs with standards-based goals based on the CAHSEE blueprints. Almost three-fourths of the respondents (73.9 percent) agreed or strongly agreed that evidence from IEPs with standards-based goals would be important to include along with work samples. More of the district respondents (33.3 percent) than of school respondents (23.0 percent) strongly agreed. Some respondents disagreed or strongly disagreed

(10.2 percent); however, none (0 percent) of the district respondents strongly disagreed. About 15 percent of all respondents were neutral.

In the Evidence presentation, to quantify the possible volume of work samples needed to cover all CAHSEE standards for each subject area, HumRRO proposed a "streamlined" option for work samples that would include 50–75 percent as many work samples as CAHSEE multiple-choice items (58 for mathematics, 37 for ELA), and a "full" option that would include the same number of work samples as CAHSEE multiple-choice items (80 for mathematics, 72 for ELA). These options were created by HumRRO to provide some basis for respondents' estimates and were not developed or approved by the AB 2040 Panel. HumRRO asked respondents what quantity of work samples should be required for each subject area and presented them with two forced-choice options (full or streamlined) and an "other (please specify)" option.

Table 5.16 shows the proportion of respondents who selected the streamlined vs. full option quantity of work samples. More than three-fourths of the respondents (77.1 percent) chose streamlined and only 6.7 percent of respondents chose full. Of respondents who chose the "other" option (16.2 percent), the median number of work samples suggested per subject area was 20.

Table 5.16. Suggested Quantity of Work Samples to Be Required by Subject Area (Q16)

Q16. About what quantity of work samples should be required for each subject area?	School	District	All
A. 50–75% as many as the number of CAHSEE items (streamlined option)	79.5%	71.9%	77.1%
B. Same as number of CAHSEE items (full option)	5.5%	9.4%	6.7%
C. Other ___ (specify)	15.1%	18.8%	16.2%
Total[1]	100%	100%	100%
N	73	32	105
Skipped question	6	2	8

(Q16.) Number of work samples specified by those who responded "other"

	School	District	All
Average number of work samples	18.9	18.3	18.69
Median number of work samples	20.0	20.0	20.0
Standard Deviation	15.6	14.7	14.75
N	10	6.0	16

[1] Totals may not add to 100.0% due to rounding.

Scoring

To provide a possible frame of reference for considering the task of scoring the Tier II work samples for the content standards assessed by the CAHSEE, HumRRO presented two possible scoring rubrics in the Scoring presentation of the questionnaire.

Both of these rubrics were presented with a zero- to four-point scale ranging from No Evidence to Ample Evidence. The first was a generic rubric like that used in Virginia to score work samples as an alternative means (see Table 5.17). The AB 2040 Panel recommended considering such a rubric.

Table 5.17. Generic Rubric Example

Score	Descriptor	Detailed Score Definition
0	No Evidence	The evidence submitted *does not show any level of individual achievement* for the content standard(s).
1	Little Evidence	The evidence submitted provides a *minimally sufficient demonstration* of the student's knowledge and understanding of the standard(s). The evidence is incomplete and mostly inaccurate, exhibiting only a very basic level of understanding. Overall, the quality of the evidence presented is weak and does not satisfy most of the requirements of the content standard(s).
2	Some Evidence	The evidence submitted provides *only a partially sufficient demonstration* of the student's knowledge and understanding of the standard(s). The evidence may be incomplete or may exhibit major lapses in accuracy. Overall, the quality of the evidence presented does not satisfy many of the requirements of the content standard(s).
3	Adequate Evidence	The evidence submitted provides a *reasonably sufficient demonstration* of the student's knowledge and understanding of the standard(s). Most of the student's work is accurate and correct, but the performance is not consistent and may be incomplete. Overall, the quality of the evidence presented is appropriate and satisfies many of the requirements of the content standard(s).
4	Ample Evidence	The evidence submitted provides a *fully sufficient demonstration* of the student's knowledge and understanding of the standard(s). Minor lapses in accuracy and completeness may occur, but overall the quality of the evidence presented consistently and appropriately satisfies most of the requirements of the content standard(s).

The second was an example of a standard-specific rubric with specific benchmarks. Table 5.18 displays this rubric, which was based on the Hawaii program.[11]

[11] Although the term used in the questionnaire was "analytic scoring rubric," we use the term "standard-specific rubric" in this report because it is more descriptive of the type of rubric displayed in the questionnaire.

Table 5.18. Standard-Specific Rubric Example

SUBJECT **Strand** Standard	**Standard Text**	**Task or Prompt**	**Ample Evidence** OR X points	**Adequate Evidence** OR X points	**Some Evidence** OR X points	**Little Evidence** OR X points	**No Evidence** OR X points	**Type of Evidence**
MATHEMATICS **Number Sense (NS)** 7NS1.1	Read, write, and compare rational numbers in scientific notation (positive and negative powers of 10) with approximate numbers using scientific notation.	Write the radius of the earth's orbit, 150,000,000,000 meters, in scientific notation.	Writes 1.5×10^{11}	Writes 1.5×10^{9} Or 1.5×10^{12}	Writes 15×10^{10} Or 150×10^{9}	Writes 1.5×10^{-11} Or 150×10^{-9}	Does not write any value with exponents	
ELA **Reading Compre-hension (RC)** 10RC2.4	Synthesize the content from several sources or works by a single author dealing with a single issue; paraphrase the ideas and connect them to other sources and related topics to demonstrate comprehension	Write an accurate summary of the passage in your own words	Correctly describes the focus of the passage	Copies text from the focal parts of the passage	Describes information supported by but not central to the passage	Copies text from random part of the passage	Writes text unrelated to passage	

Respondents were first asked to consider use of the model scoring rubric recommended by the AB 2040 Panel along with appropriate scorer training. As shown in Table 5.19, about three-fourths of the respondents (75.4 percent) agreed or strongly agreed that this model rubric could provide for consistent evaluation of any type of student evidence. About the same proportion of school respondents (21.9 percent) and of district respondents (25 percent) strongly agreed; however, some respondents disagreed or strongly disagreed (11.4 percent). More of the school respondents (15.1 percent) than of the district respondents (3.1 percent) disagreed or strongly disagreed.

About three-fourths of the respondents (73.6 percent) agreed or strongly agreed that this model rubric could provide for consistent evaluation of evidence for any standard. About the same proportion of school respondents (20.3 percent) and of district respondents (25 percent) strongly agreed; however, some respondents disagreed or strongly disagreed (11.3 percent). More of the school respondents (13.5 percent) than of the district respondents (6.2 percent) disagreed or strongly disagreed.

Table 5.19. Extent of Agreement with Statements About Using the AB 2040 Panel's Recommended Model Scoring Rubric (0–No Evidence to 4–Ample Evidence) (Q20)

Q20. To what extent do you agree with these statements: With appropriate training, the scorers could use the AB 2040 Panel's recommended model scoring rubric (0–No Evidence to 4–Ample Evidence)	a. … to provide for consistent evaluation of any type of student evidence (e.g., letter of support, work sample).			b. … to provide for consistent evaluation of evidence for any standard.		
	Sch.	Dist.	All	Sch.	Dist.	All
A. Strongly Agree	21.9%	25%	22.9%	20.3%	25.0%	21.7%
B. Agree	49.3%	59.4%	52.5%	51.4%	53.1%	51.9%
C. Neutral	13.7%	3.1%	10.5%	13.5%	3.1%	10.4%
D. Disagree	13.7%	0.0%	9.5%	10.8%	3.1%	8.5%
E. Strongly Disagree	1.4%	3.1%	1.9%	2.7%	3.1%	2.8%
F. Not Enough Information to Answer	0.0%	9.4%	2.9%	1.4%	12.5%	4.7%
Total[1]	100%	100%	100%	100%	100%	100%
N	73	32	105	74	32	106
Skipped question	6	2	8	5	2	7

[1] Totals may not add to 100.0% due to rounding.

Next, we asked respondents to consider use of a rubric targeted at the standard level, a standard-specific rubric with specific benchmarks. HumRRO presented examples of work-sample prompts for mathematics and ELA standards assessed in CAHSEE and for each prompt illustrated the types of responses that would earn No Evidence, Little Evidence, and so forth evaluations for all points on the rubric. Table 5.20 shows that about three-fourths of the respondents (75.2 percent) agreed or strongly agreed that a standard-specific rubric with specific benchmarks would be needed for consistent evaluation of student evidence. About the same proportion of school respondents (30.1 percent) and of district respondents (34.4 percent) strongly agreed; however, some respondents disagreed or strongly disagreed (9.5 percent). About the same proportion of school respondents (9.6 percent) and district respondents (9.4 percent) disagreed or strongly disagreed.

Table 5.20. Extent of Agreement with Statement About Standard-Specific Rubric with Specific Benchmarks (Q23)

Q23. To what extent do you agree with this statement: Analytic scoring rubrics at the level of individual standards are needed for consistent evaluation of student evidence?	School	District	All
A. Strongly Agree	30.1%	34.4%	31.4%
B. Agree	42.5%	46.9%	43.8%
C. Neutral	15.1%	6.3%	12.4%
D. Disagree	8.2%	6.3%	7.6%
E. Strongly Disagree	1.4%	3.1%	1.9%
F. Not Enough Information to Answer	2.7%	3.1%	2.9%
Total[1]	100%	100%	100%
N	73	32	105
Skipped question	6	2	8

[1] Totals may not add to 100.0% due to rounding.

About the same proportion of respondents agreed that the model rubric could provide for consistent evaluation of student evidence as agreed that the standard-specific rubric with specific benchmarks could provide for consistent evaluation.

The AB 2040 Panel recommended that scoring of evidence be done at the district level rather than at the school level. Some focus-group participants raised a concern as to whether teachers should be on scoring panels or not, and HumRRO asked this directly in the questionnaire. As shown in Table 5.21, most of the respondents (84.9 percent) agreed or strongly agreed that teachers should participate in the district PVP scoring panels. More of the school respondents (60.8 percent) than of the district respondents (43.8 percent) strongly agreed. Some respondents disagreed or strongly disagreed (9.4 percent).

Table 5.21. Degree of Agreement with the Statement: Teachers Should Participate on the District PVP Scoring Panels (Q25)

Q25. To what extent do you agree with this statement: Teachers should participate on the district PVP scoring panels?	School	District	All
A. Strongly Agree	60.8%	43.8%	55.7%
B. Agree	27.0%	34.4%	29.2%
C. Neutral	4.1%	6.3%	4.7%
D. Disagree	5.4%	12.5%	7.5%
E. Strongly Disagree	2.7%	0.0%	1.9%
F. Not Enough Information to Answer	0.0%	3.1%	0.9%
Total[1]	100%	100%	100%
N	74	32	106
Skipped question	5	2	7

[1] Totals may not add to 100.0% due to rounding.

Uniformity

We asked respondents several questions to probe whether they agreed that the proposed CAHSEE PVP as described in the presentations could ensure uniformity. As shown in Table 5.22, about three-fourths of all respondents (74.5 percent) agreed or strongly agreed that the types and numbers of required work samples could be adequately defined to ensure uniformity of evidence collected across the state. More of the school respondents (25.7 percent) than of the district respondents (18.8 percent) strongly agreed. Some respondents disagreed or strongly disagreed (17 percent). More of the school respondents (20.3 percent) than of the district respondents (9.4 percent) disagreed or strongly disagreed.

More than two-thirds of the respondents (69.8 percent) agreed or strongly agreed that procedures and training for scoring could be adequately defined to ensure uniformity across the state in the scoring of evidence. More of the district respondents (81.3 percent) than of the school respondents (64.9 percent) agreed or strongly agreed. However, 17 percent of respondents disagreed or strongly disagreed. More of the school respondents (20.3 percent) than of the district respondents (9.4 percent) disagreed or strongly disagreed.

Table 5.22. Extent of Agreement with Statements About Ensuring Uniformity in Work Samples and Scoring (Q29)

Q29. To what extent do you agree with these statements:	A. The types and number of required work samples could be adequately defined to ensure uniformity across the state in the evidence collected.			B. Procedures and training for scoring could be adequately defined to ensure uniformity across the state in the scoring of evidence.		
	Sch.	Dist.	All	Sch.	Dist.	All
A. Strongly Agree	25.7%	18.8%	23.6%	25.7%	21.9%	24.5%
B. Agree	45.9%	62.5%	50.9%	39.2%	59.4%	45.3%
C. Neutral	8.1%	9.4%	8.5%	14.9%	9.4%	13.2%
D. Disagree	17.6%	3.1%	13.2%	16.2%	3.1%	12.3%
E. Strongly Disagree	2.7%	6.3%	3.8%	4.1%	6.3%	4.7%
F. Not Enough Information to Answer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total[1]	100%	100%	100%	100%	100%	100%
N	74	32	106	74	32	106
Skipped question	5	2	7	5	2	7

[1] Totals may not add to 100.0% due to rounding.

Time and Effort

Since we could not obtain cost information directly from our respondents, we instead asked a number of questions about the time that would be involved in implementing various steps of the Tier II process.

Respondents were asked to apply the idea of the "streamlined" option to help quantify the time required for students to generate work samples, assuming no existing student work was available to use as Tier II evidence. We asked respondents to assume that all student work would need to be generated to paint a picture of the worst-case scenario. Response options were in increments of 20 hours (e.g., 0–20 hours), with a write-in option for more than 60 hours. Table 5.23 presents a summary of the responses to this question.

With respect to mathematics, more than half of all respondents (57.1 percent) chose a response that exceeded 30 hours; the median response was 31–40 hours. For ELA more than half of all respondents (62.8 percent) chose a response that exceeded 30 hours; the median response was 31–40 hours.

Table 5.23. Estimated Amount of Time Required for a Senior Student to Generate All Work Samples (Q17)

Q17. Assume there was no existing student work to select from for use as Tier Two evidence. About what amount of time would be required for a senior student to generate the work samples?	…for math, streamlined option?			…for ELA, streamlined option?		
No. of Hours	Sch.	Dist.	All	Sch.	Dist.	All
A. 0–20 hours	16.2%	16.1%	16.2%	14.9%	12.9%	14.3%
B. 21–30 hours	24.3%	32.3%	26.7%	17.6%	35.5%	22.9%
C. 31–40 hours	20.3%	19.4%	20.0%	21.6%	12.9%	19.0%
D. 41–60 hours	28.4%	12.9%	23.8%	36.5%	16.1%	30.5%
E. More than 60 hours____(specify)	10.8%	19.4%	13.3%	9.5%	22.6%	13.3%
Total[1]	100%	100%	100%	100%	100%	100%
N	74	31	105	74	31	105
Skipped question	5	3	8	5	3	8

(Q17.) No. of Hours, as specified by respondents who chose "More than 60 hours"[2]

	…for math, streamlined option?			…for ELA, streamlined option?		
	School	District	All	School	District	All
Average number of hours	93.3	77.5	89.4	102.5	77.5	94.2
Median number of hours	95.0	77.5	85.0	100.0	77.5	95.0
Standard Deviation	17.2	3.5	16.4	12.6	3.5	16.3
N	6	2	8	4	2	6

[1] Totals may not add to 100.0% due to rounding.
[2] Not all respondents who chose "More than 60 hours" specified a value

Respondents were asked to apply the idea of the "streamlined" option again, to help quantify the time required for teachers to complete the proposed CAHSEE PVP

checklist and prepare evidence for submission for one student. This was not a forced-choice item; respondents typed in their estimated number of hours. As shown in Table 5.24, for mathematics, almost half of all respondents (43.6 percent) estimated it would take a teacher 3–6 hours, with the median school respondent estimate being 5 hours. For English-language arts, as shown in Table 5.25, more than a third of respondents (39.8 percent) estimated it would take a teacher 3–6 hours, with the median school respondent estimate being 5 hours.

Table 5.24. Estimated Amount of Time Required per Student for a Teacher to Complete Checklists and Prepare Evidence for Submission for Math (Q18a)

Q18.a.About what amount of time (per student) would be required for a teacher to complete checklists and prepare evidence for submission?	….for math, streamlined option?			….for math, full option?		
	School	District	All	School	District	All
Average number of hours	9.3	5.2	8.1	12.9	9.7	12.0
Median number of hours	5.0	3.0	4.0	7.0	5.0	6.0
Standard Deviation	11.9	6.6	10.8	14.4	13.0	14.0
N	67	27	94	65	27	92
Skipped question	12	7	19	14	7	21
Q18. About what amount of time (per student) would be required for a teacher to complete checklists and prepare evidence for submission?	….for math, streamlined option?			….for math, full option?		
No. of Hours	School	District	All	School	District	All
1 hour	13.4%	22.2%	16.0%	3.1%	7.4%	4.3%
2 hours	7.5%	25.9%	12.8%	10.8%	14.8%	12.0%
3 or 4 hours	23.9%	18.5%	22.3%	12.3%	18.5%	14.1%
5 or 6 hours	22.4%	18.5%	21.3%	23.1%	29.6%	25.0%
7 or 8 hours	3.0%	0.0%	2.1%	7.7%	3.7%	6.5%
9 or 10 hours	11.9%	3.7%	9.6%	7.7%	3.7%	6.5%
More than 10 hours	17.9%	11.1%	16.0%	35.4%	22.2%	31.5%
Total[1]	100%	100%	100%	100%	100%	100%

[1] Totals may not add to 100.0% due to rounding.

Table 5.25. Estimated Amount of Time Required per Student for a Teacher to Complete Checklists and Prepare Evidence for Submission for ELA (Q18b)

Q18b. About what amount of time (per student) would be required for a teacher to complete checklists and prepare evidence for submission?	….for ELA, streamlined option?			….for ELA, full option?		
	School	District	All	School	District	All
Average number of hours	9.9	5.7	8.8	14.0	10.8	13.1
Median number of hours	5.0	3.5	5.0	8.0	6.0	7.0
Standard Deviation	12.3	6.7	11.2	15.1	13.1	14.6
N	67	26	93	65	26	91
Skipped question	12	8	20	14	8	22

Q18. About what amount of time (per student) would be required for a teacher to complete checklists and prepare evidence for submission?	….for ELA, streamlined option?			….for ELA, full option?		
No. of Hours	School	District	All	School	District	All
1 hour	13.4%	19.2%	15.1%	3.1%	3.8%	4.3%
2 hours	6.0%	19.2%	9.7%	10.8%	11.5%	12%
3 or 4 hours	26.9%	19.2%	24.7%	9.2%	15.4%	14.1%
5 or 6 hours	11.9%	23.1%	15.1%	23.1%	26.9%	25%
7 or 8 hours	11.9%	3.8%	9.7%	4.6%	11.5%	6.5%
9 or 10 hours	9.0%	3.8%	7.5%	12.3%	7.7%	6.5%
More than 10 hours	20.9%	11.5%	18.3%	36.9%	23.1%	31.5%
Total[1]	100%	100%	100%	100%	100%	100%

[1] Totals may not add to 100.0% due to rounding.

We asked respondents to estimate the time it would take to score work samples, using the streamlined quantity of work samples and assuming initial training had already taken place. Table 5.26 presents respondents' estimates of the amount of time, after initial training, that would be required to review and score one student's work-sample evidence using the AB 2040 Panel's model rubric. For the streamlined option for mathematics, the median time estimate for all respondents was two hours. For the streamlined option for ELA, the median time estimate for all respondents was four hours.

Table 5.26. Estimated Amount of Time (per Student, After Initial Training) Required to Review and Score Work Sample Evidence Using the AB 2040 Panel's Recommended Model Scoring Rubric (Q21)

Q21. If you were on a scoring panel, about what amount of time (per student, after initial training) would be required to review and score the work sample evidence using the AB 2040 Panel's recommended model scoring rubric?	….for math, streamlined option			….for ELA, streamlined option		
	Sch.	Dist.	All	Sch.	Dist.	All
Average number of hours	5.5	3.6	4.9	5.9	4.0	5.4
Median number of hours	2.0	3.0	2.0	4.0	3.0	4.0
Standard Deviation	7.9	2.7	6.8	7.5	3.0	6.6
N	70	29	99	70	28	98
Skipped question	9	5	14	9	6	15

We also asked respondents to consider how long it would take to score student work samples using standard-specific rubrics with specific benchmarks, such as the example presented in the Scoring presentation. Table 5.27 presents respondents' estimates of the amount of time, after initial training, that would be required to review and score one student's work-sample evidence using the standard-specific rubrics. For the streamlined option for mathematics, the median time estimate for all respondents was two hours. For the streamlined option for English-language arts, the median time estimate for all respondents was three hours.

Table 5.27. Estimated Amount of Time (per Student, After Initial Training) Required to Review and Score Work Sample Evidence Using Analytic Rubrics (Q24)

Q24. If you were on a scoring panel, about what amount of time (per student, after initial training) would be required to review and score the work sample evidence using analytic rubrics?	….for math, streamlined option			….for ELA, streamlined option		
	Sch.	Dist.	All	Sch.	Dist.	All
Average number of hours	4.1	2.8	3.7	4.8	3.2	4.3
Median number of hours	2.0	2.0	2.0	3.0	2.0	3.0
Standard Deviation	5.7	2.0	4.9	6.2	2.5	5.4
N	67	29	96	67	29	96
Skipped question	12	5	17	12	5	17

To estimate annual costs for Tier II operations, HumRRO first assumes that cost will be driven primarily by the effort required for each student. Using the respondents' estimates of teacher time to prepare evidence (5 hours per subject per student), of district personnel time to score work samples (5–6 hours per student) we arrive at a

maximum cost, in terms of time, of 15 hours per student. Using the earlier estimate of 20,000 students eligible for Tier I but not passing Tier I requirements, we arrive at total time estimate of 300,000 hours.

This estimate does not include fixed costs such as those associated with training or professional development for teachers and scorers, or with CDE staff time to specify the Tier I and Tier II details and monitor implementation.

Table 5.28 provides a summary of information related to respondents' estimates of required time for the main procedures needed to implement Tier II via the streamlined option.

Table 5.28. Summary of Estimated Amounts of Time for PVP Tasks, per Student

	Hours		
Task	Math	ELA	Total
Student produces work samples (Q17)	31–40	31–40	62–80
Teacher completes checklist and prepares evidence for submission (Q18)	5	5	10
District panel reviews and scores work sample evidence using either the generic or standard-specific rubric (Q21 & Q24)	2	3–4	5–6
Total	38–47	39–49	77–96

Summary of Themes in Qualitative Responses

At the end of seven sections of the questionnaire, we asked respondents to offer additional comments about the topic (e.g., Eligibility) they had just been questioned about. Of the 79 school-level respondents, 54 respondents (68 percent) answered at least one of these open-ended questions. Of the 34 district-level respondents, 27 respondents (79 percent) answered at least one of the open-ended questions. The Evidence topic received comments from the most respondents (55), while the Eligibility topic received comments from the fewest respondents (32). We present the most frequent themes of comments submitted by respondents about each topic here. A complete set of all open comments received is found in the appendices volume of HumRRO's 2010 Annual Report.

Eligibility. Of the 32 respondents who answered this open-ended item, 25 percent indicated that the second semester of senior year is too late to initiate PVP.

Administration. Of the 51 respondents who answered this open-ended item, 25 percent expressed concern about the amount of time required of Special Education teachers for PVP training and evidence collection.

Evidence. Of the 54 respondents who answered this open-ended item, 52 percent commented about or questioned the work-sample requirements (e.g., concern that time spent on work samples reduces time for instruction, need to collect work samples before senior year, how consistency in work samples could be assured, where all the work samples would be stored).

Scoring. Of the 34 respondents who answered this open-ended item, 47 percent had concerns about or recommendations to ensure the consistency of scoring (e.g., expect variation across districts, expect variation using a generic rubric, plan for much scorer training, and monitor for consistency).

Uniformity. Of the 37 respondents who answered this open-ended item, 57 percent expressed concerns about the feasibility of uniformity regarding scoring.

General comments regarding alternative means. Of the 46 respondents who answered this open-ended item, 28 percent expressed a preference for a CAHSEE modified assessment instead of the proposed CAHSEE PVP.

Summary of Findings

Results from our analyses suggest that the Tier I screen would be a feasible process. Further, this process could be automated and performed by CDE rather than requiring school personnel to fill out and judge individual student worksheets, if only CST and CMA scores are considered. It was not clear, at this time, how uniformity could be imposed on the use of community college placement scores as part of the Tier I screen. Such scores are not available for many or most students and even if available, often not until late in their senior year. If reliable information on course grades becomes available through CALPADS, grades could be included in an automated Tier I screen. Otherwise, if the decision were made to include grades, input at the local level would be required.

A number of key policy decisions would need to be made to go beyond the exploratory analyses of a possible Tier I screen reported here. Decisions are needed regarding (1) comparability, specifically which CST or CMA scores to include, and, if grades are also included, which courses should be considered, and (2) the equivalency of scores on a Tier I worksheet and CAHSEE passing levels.

Responses from school and district special education experts to the questionnaire suggest the Tier II collection of evidence process might be feasible, but HumRRO and the Panel agree that a test development contractor would be needed to develop more specific criteria for work sample requirements. Depending on what the work sample criteria might be, the time requirements for special education teachers and students might be a considerable burden. CDE might consider reducing eligibility for Tier II (e.g., from 20,000 down to 4,000 students) to target teacher time to the most eligible students. Perhaps a test development contractor would recommend a reduced number of work samples, even fewer than the “streamlined” option, thus reducing time

requirements for collection and scoring of evidence. Responses to the open-ended questions indicate support for an alternative means, but also continuing concerns about the comparability of results across the state if scoring is done at the local level.

If judged feasible, development of the alternative means should include a pilot test before a system such as the proposed CAHSEE PVP becomes operational. A pilot test would be recommended for a number of reasons:

- It provides an opportunity to collect a variety of actual student work samples to help fine-tune Tier II criteria for the number and types of work samples.
- A test would identify aspects of operations that are critical to success (e.g., record keeping of checklists, timeline for screening for eligibility, collecting evidence, scoring, etc.).
- A pilot program allows smaller scale effort to test out procedures, choose rangefinders, and establish passing criteria for hand scored student evidence.
- A test program provides data that can be extrapolated to better estimate costs and time for full scale implementation.

A pilot test could also explore further screening criteria to reduce the burden on students as well as school and district staff of having to create and evaluate extensive work samples. For example, a minimum grade point average might be used, not as evidence of mastery of the knowledge and skills required by the CAHSEE, but as a criterion for eligibility for the Tier II screen. Similarly, a minimum CAHSEE score (below the passing level) might be set as a criterion for eligibility for Tier II screening.

In prior evaluation reports, HumRRO has recommended consideration of alternative criteria for SWD who have difficulty demonstrating competency through standardized tests. Consideration of evidence from work samples, collected over a period of weeks or months rather than just a few hours, appears to be a feasible alternative. However, much work remains to establish the comparability and equivalency of this type of evidence to the current CAHSEE requirement, to ensure uniformity throughout the state, and to keep the generation and evaluation of work samples from becoming prohibitively expensive.

Chapter 6: Trends in Educational Achievement and Persistence During the CAHSEE Era

D. E. (Sunny) Becker

Introduction

The California High School Exit Examination (CAHSEE) examination is used to satisfy both Elementary and Secondary Education Act (ESEA) requirements and statewide high school graduation requirements. Therefore, it is a high-stakes examination for both students and school staff that could have profound effects on the education system as a whole.

Other chapters in this report address direct characteristics and results of the CAHSEE program. This chapter explores a broader view of the educational milieu in California such as dropout rates, graduation rates, and college preparation. We look at year-by-year trends to reveal changes over time. While we cannot attribute any of the trends cited to CAHSEE alone, the trends reflect the presence of the CAHSEE as a significant determinant of educational policies and practices. To the extent possible, we look at trends beginning prior to the introduction of the CAHSEE graduation requirement and continuing up to the present; however when statistics are not comparable from one year to the next we truncate trend lines to limit the information to meaningful comparisons. While the other chapters in this report reflect data through the 2010–11 school year or in some cases, through September 2010, many of the sources of information in this chapter lag at least a year behind. For example, graduation and dropout rates in this October 2011 report reflect trends through the 2009–10 school year.

As in previous annual evaluation reports, we have gathered data from publicly available sources to inform this chapter. The primary source is the CDE online system, the California Basic Educational Data System (CBEDS). The CDE recently implemented a new data collection system, the California Longitudinal Pupil Achievement Data System (CALPADS), with the potential to expand and improve available data. The CALPADS system aggregates data from a student-level database. Throughout this chapter we note instances when the introduction of the CALPADS system limits comparability (because data are aggregated differently than in the past) or provides information previously unavailable.

In the following sections, we look at students who leave high school prematurely, examining them from a number of perspectives, including official California Department of Education (CDE) dropout rates and enrollment trends. We also explore officially reported graduation rates and indicators of achievement by college-bound students such as SAT (formerly Scholastic Aptitude Test) and ACT (formerly American College Testing) participation and scores, as well as shifts in participation and success in Advanced Placement (AP) examinations.

We conclude this chapter with a discussion of a special study in its early implementation stage: the Human Resources Research Organization's (HumRROs') Post-High School Outcomes (PHO) Study. While the data routinely included in this chapter of HumRRO's annual evaluation report terminate at high school completion for all students, the PHO study will go a step further to investigate outcomes for a sample of students after graduation, such as college enrollment, college persistence, college graduation, military enlistment and persistence, and career paths. The PHO study will be completed in fall 2012.

Students Who Leave High School Prematurely

An early and persistent concern regarding the implementation of the CAHSEE requirement was that struggling students would become frustrated and drop out at higher rates. This phenomenon is difficult to measure, however, because the definition of what a "dropout" is and the requisite data underpinnings to clearly identify dropouts are in flux. Dropout tracking has improved markedly over the past few years, but because these systems are new we continue to look at the dropout phenomenon from multiple perspectives.

At the same time, support systems for repeat grade twelve students have increased. We provide multiple views of trends in student persistence through grade twelve. We first present the State of California's official dropout statistics. We then look at enrollment trends for grades nine through twelve for various student cohorts.

The CDE reports dropout rates publicly on its Web site. Two types of dropout calculations are common: one is based on the number of students who drop out in a given school year; the other is based on the percentage of a cohort of students (e.g., Class of 2010) who drop out over the four years between their class entering grade nine and their original graduation date. We look first at single-year dropout rates and then at cumulative four-year dropout rates, both as reported by CDE. At the time of this report the most recent available data reflected the Class of 2010.

Changes to dropout calculations. The introduction of statewide student identifier numbers in 2006–07 made possible more accurate identification of student outcomes once students left a school. New procedures were implemented to identify more accurately the status of students who left a school, and dropout rates are now derived from those student-level data. Due to this change, the dropout rates from 2006–07 onward are not comparable with dropout rates in previous years.

CDE single-year dropout rate. The single-year dropout rate measures the percentage of students enrolled in grade levels nine through twelve who are identified as dropouts in a single school year. The official CDE dropout calculation derives the total number of students who drop out of grades nine through twelve as a percentage of the total grade nine through twelve enrollment in a single school year (See Equation 6.1.). Under the revised reporting procedures described above, the single-year dropout rate in the 2006–07 school year was 5.5 percent, declining slightly to 5.3 percent in the

2007–08 school year, rising to 5.7 percent in the 2008–09 school year and dropping to 4.6 percent in the 2009–10 school year. Equation 6.1 depicts the calculation for the single-year dropout rate for the 2009–10 school year.

Single-Year Dropout Rate for 2009–10 =

Number of Grade 9 Dropouts + Grade 10 Dropouts + Grade 11 Dropouts + Grade 12 Dropouts in the 2009–10 school year

divided by

Grade 9 Enrollment + Grade 10 Enrollment + Grade 11 Enrollment + Grade 12 Enrollment in the 2009–10 school year

Equation 6.1

Table 6.1 disaggregates the single-year dropout rate by race/ethnicity and for economically disadvantaged students, EL students, and SWD. The racial/ethnic groups are listed in descending order by dropout rate for the Class of 2010. The right-most column indicates the reduction in dropout rate for the four-year period and reveals that the dropout rate for each racial/ethnic group is lower in the 2009–10 school year than in the 2006–07 school year, with the exception of Limited English Proficient (LEP) students. The overall dropout rate decreased by 0.9 percentage points, from 5.5 percent to 4.6 percent. Table 6.1 indicates that the most recent dropout rate for African American students is 8.4 percent—substantially higher than for all other groups, including students struggling with language challenges or disabilities. Rates for American Indian/Alaska Native, Hispanic, and Pacific Islander students, English learners and economically disadvantaged students also exceed the rate for the state as a whole.

The single-year dropout rate described in Table 6.1 does not distinguish the point within the high school years at which dropouts were increasing. Table 6.2 shows the number of students dropping out at each grade level for the classes of 2007 through 2010. As seen in previous years, the number of students dropping out during grade twelve far exceeded the dropouts in earlier grades. Cells marked with a dagger (†) were calculated under the new rules. Because the grade twelve dropouts for the Class of 2007 were the first in that class to be calculated under the new procedures, it is impossible to distinguish how much of the increase was due to the changes in identification and methodology. However, similar spikes in the numbers of students who dropped out during grade twelve compared to earlier grades were seen for the classes of 2008, 2009, and 2010, when the new procedures were in effect earlier in the students' high school years.

Table 6.1. CDE Single-Year Dropout Rates by Demographic Group

Demographic Group	Adjusted Grade 9–12 One-year Dropout Rate				Percentage Point Decrease in Dropout Rate From 2006–07 to 2009–10
	2006–07	2007–08	2008–09	2009–10	
Race/Ethnicity					
African American (not Hispanic)	9.8%	9.0%	10.3%	8.4%	1.4
American Indian/Alaska Native, Not Hispanic[A]	7.6%	6.6%	8.3%	6.5%	1.1
None Reported	N/A	N/A	N/A	6.5%	N/A
Hispanic or Latino of Any Race[B]	6.7%	6.0%	7.0%	5.8%	0.9
Pacific Islander, not Hispanic[A]	6.7%	5.6%	6.9%	5.0%	1.7
Two or More Races. Not Hispanic[A]	N/A	N/A	1.3%	3.1%	N/A
White, Not Hispanic[A]	3.5%	3.1%	3.7%	2.8%	0.7
Filipino, Not Hispanic[A]	2.7%	2.2%	2.8%	1.9%	0.8
Asian, Not Hispanic[A]	2.3%	2.0%	2.5%	1.8%	0.5
Multiple/No Response	7.2%	6.1%	N/A	N/A	N/A
Other Demographic Groups					
LEP†	5.7%	5.3%	6.7%	5.8%	-0.1
Economically Disadvantaged	6.3%	5.8%	6.4%	4.8%	1.5
Special Education	7.2%	6.4%	7.5%	4.0%	3.2
State Total	5.5%	5.3%	5.7%	4.6%	0.9

Source: California Department of Education (CDE) DataQuest. http://data1.cde.ca.gov/dataquest (accessed August 30, 2011).
[A] Subgroup names listed here are names as they are reported in DataQuest. Prior to 2008–09 these names did not include "Not Hispanic)"
[B]Prior to 2008–09 DataQuest reported this subgroup as "Hispanic."
† Limited English Proficient for federal reporting includes English learners and fluent-English proficient students that have not yet tested at the proficient or above level for three years on the California Standards Test (CST) English-language arts (ELA) test.

Table 6.2 reports the number of students who dropped out at each grade as well as the percentage of grade nine enrollment represented by each number. For example, the 51,105 grade twelve dropouts in the Class of 2007 represent 9.7 percent of the grade nine enrollment for that class. This rate decreased to 7.8 percent for the Class of 2010.

Table 6.2. CDE Dropout Counts by Grade Level for Classes of 2007 Through 2010

Class of	Enrollment Grade 9	Number (Percentage of Grade 9 Enrollment)			
		Grade 9 Dropouts	Grade 10 Dropouts	Grade 11 Dropouts	Grade 12 Dropouts
2007	526,442	11,678 (2.2%)	*10,458 (2.0%)	*12,529 (2.4%)	*51,105 (9.7%)†
2008	549,486	10,447 (1.9%)	10,177 (1.9%)	22,045 (4.0%)†	*50,217 (9.1%)†
2009	547,014	10,643 (1.9%)	18,210 (3.3%)†	19,496 (3.6%)†	55,966 (10.2%)†
2010	545,040	17,375 (3.2%)†	15,168 (2.8%)†	23,346 (4.3%)†	42,586 (7.8%)†

Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed August 23, 2011).
Note. † Indicates dropout rate was calculated under new 2006–07 procedure.
The * before a number represents an adjustment in data from the 2010 biennial report due to an updating of the figures used.

Figure 6.1 is a graphical representation of the same information presented in Table 6.2. Although the dropout rate in grade twelve is larger than all other grades for every graduating class depicted, the Class of 2010 shows a slightly different pattern than the preceding classes. The Class of 2010 has a larger dropout rate at grade nine and a smaller dropout rate at grade twelve than previous classes. The classes of 2007 through 2009 had more dropouts in grade twelve than in the previous three grades, combined.

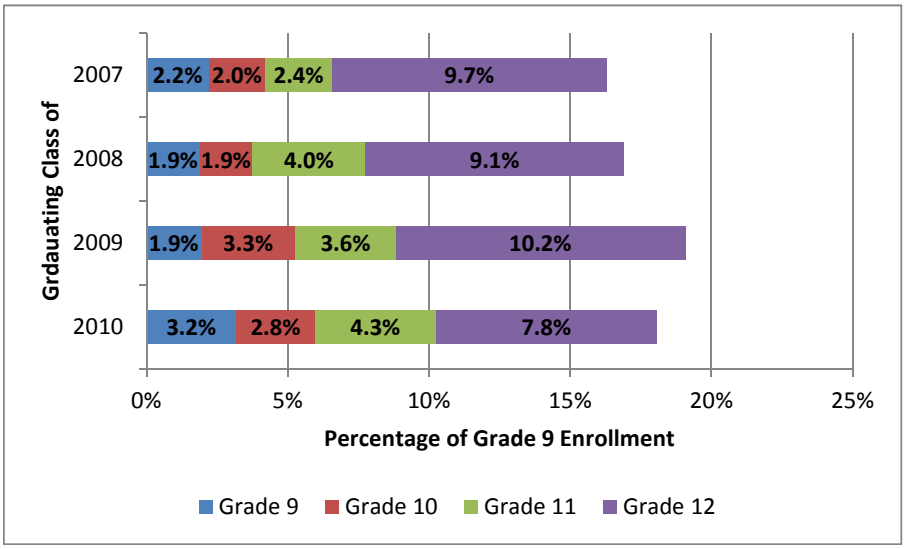


Figure 6.1. Dropout rates by grade level for classes of 2007 through 2010, based on percentage of grade 9 enrollment.

CDE cumulative four-year dropout rate and graduation rate. The CDE also routinely produces a cumulative derived four-year dropout rate, which is another common dropout metric. Equation 6.2 depicts the formula for this rate. This calculation is based upon the number of dropouts at grades nine, ten, eleven, and twelve in a given year, and projects what the four-year dropout rate would be in a four-year period based on these single year data.

Four-year Derived Dropout Rate =

(1-((1-(Reported or Adjusted Gr. 9 Dropouts/Gr. 9 Enrollment))*(1-(Reported or Adjusted Gr. 10 Dropouts/Gr. 10 Enrollment))*(1-(Reported or Adjusted Gr. 11 Dropouts/Gr. 11 Enrollment))*(1-(Reported or Adjusted Gr. 12 Dropouts/Gr. 12 Enrollment))))*100

Equation 6.2

The four-year derived dropout rate is an estimate of the percent of students who would drop out in a four-year period based on data collected for a single year.

In 2010 CDE added a new calculation to its standard reporting on the Web: the Cohort Dropout Rate. This is an important calculation that more accurately reports dropouts for the members of a graduating class as they move through their high school years. Equation 6.3 depicts this calculation.

Four-Year Adjusted Cohort Dropout Rate for Class of 2010 =

Number of cohort members who dropped out by the end of the 2009-10 school year

divided by

Number of first-time grade nine students in Fall 2006 (starting cohort) plus students who transfer in, minus students who transfer out, emigrate, or die during school years 2006-07, 2007-08, 2008-09, and 2009-10

Equation 6.3

Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest. (Retrieved on August 30, 2011).

Table 6.3 shows the CDE four-year derived dropout rates by race/ethnicity for the school years 2006–07 through 2009–10, ordered by descending rates for the most recent year. As described earlier, the identification of dropouts changed in the 2006–07 school year, so it is not comparable with previous years. Note that the four-year dropout rate is a derived rate based on dropouts at all grade levels in a given year. (See Equation 6.2.)

The table indicates that more than a fifth of students in 2006–07 (21.1 percent) dropped out over the four years. The rate was reduced by 2.2 percent for 2007–08, rose to 21.5 percent in 2008–09, and declined again to 17.7 percent in 2009–10. The rightmost column indicates the decrease in dropout rate across those four years and reveals that the dropout rate for each group is lower in the 2009–10 school year than in 2006–07. Table 6.3 indicates that the four-year dropout rate for African American students in the 2009–10 school year is 30.3 percent—substantially higher than for other groups. Rates for Hispanic, American Indian/Alaskan Native, and Pacific Islander students also exceed the rate for the state as a whole. The percentage of special education students dropping out was more volatile than other groups; this may be due in part to changes in the exemption policies for these students. SWD in the classes of 2006, 2007, 2010, and 2011 were exempt from the CAHSEE requirement as a condition of graduation, while SWD in the classes of 2008 and 2009 were required to pass the CAHSEE to earn a diploma, although the local waiver process was available.

Table 6.3 also reports the new dropout calculations in the column labeled Cohort Dropout Rate for Class of 2010. Absent historical data we cannot analyze any trends with these data. They are provided here for comparison to the traditional four-year derived dropout calculation in 2009–10. The two metrics yield similar, but not identical dropout rates.

Table 6.3. CDE Four-Year Derived Dropout Rates by Demographic Group

Demographic Group	Four-Year Derived Dropout Percentage				Cohort Dropout Rate	Percentage Point Decrease in Four-Year Derived Dropout Rate
	2006–07	2007–08	2008–09	2009–10	Class of 2010	
Race/Ethnicity						
African American (not Hispanic)	35.8%	32.9%	36.8%	30.3%	30.1%	5.5
American Indian	28.1%	24.1%	30.0%	23.8%	23.8%	4.3
Hispanic	26.7%	23.8%	26.7%	22.0%	22.7%	4.7
Pacific Islander	24.8%	21.3%	25.4%	18.8%	20.9%	6.0
White	13.3%	11.7%	14.1%	10.8%	11.7%	2.5
Filipino	10.6%	8.6%	10.7%	7.3%	8.4%	3.3
Asian American	9.0%	7.9%	9.6%	7.1%	7.7%	1.9
Multiple/No Response	26.8%	23.3%	N/A	N/A	N/A	N/A
Other Demographic Groups						
Socioeconomically Disadvantaged	25.4%	23.2%	25.2%	18.9%	N/A	6.5
LEP†	23.5%	21.7%	26.4%	22.7%	N/A	0.8
Special Education ‡	26.6%	23.6%	27.0%	15.0%	N/A	11.6
State Totals	21.1%	18.9%	21.5%	17.7%	18.2%	3.4

Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed August 30, 2011).
† Limited English Proficient for federal reporting includes English learners and fluent-English proficient students that have not yet tested at the proficient or above level for three years on the CST ELA test.
‡Special education students in the Classes of 2006, 2007, 2010 and 2011 were exempt from the CAHSEE requirement.

Enrollment Trends

Enrollment counts are documented at the schoolhouse level in the fall of each school year. CDE maintains statewide aggregations of these figures. Since the beginning of this evaluation process, we have tracked enrollment figures by graduation class cohort. Comparing enrollment trend patterns over time serves as an independent indicator of trends in retention or dropout rates. California's student-level data tracking system is still relatively new so we retain this independent measure of student persistence. Overall enrollment figures provide an indication of the extent to which students in each grade do not proceed to the next grade with the rest of their classmates.

Before investigating the California enrollment trends, we offer a description of two typical enrollment patterns that are commonly seen both within and outside California. One persistent enrollment pattern is a grade nine "bubble." That is, in any given year more students are enrolled in grade nine than in either grade eight or ten. One oft-theorized explanation is that some first-time grade nine students fail to earn sufficient credits to achieve grade ten status on time. Therefore in the fall of each year the grade nine population comprises the prior year's grade eight graduates plus some number of students who would have been grade ten students if they were on pace with their classmates. (These students may earn extra credits in the coming year and "catch up" with their classmates, or may drop back to a later graduating class.) At the same time, the grade ten enrollment counts would be suppressed by exclusion of those same

students. A second persistent enrollment pattern is a decrease in enrollment (drop-off) each year after grade nine. This decrease is generally considered to include high school dropouts.

The CDE Web site (http://www.cde.ca.gov/ds/) provides fall enrollment counts by grade level each year. To present enrollment trends in a manner that is comparable across years despite population growth or declines, we have converted these enrollment counts to percentages. Table 6.4 and Figure 6.2 show the decrease in enrollment from grade nine to ten for several recent years, going back far enough to precede the introduction of the CAHSEE. The most recent classes are listed first. The Classes of 2004 and 2005 are highlighted as classes subject to "partial implementation" of the CAHSEE (because the requirement was delayed before any diplomas were withheld) and classes from 2006 on are highlighted as classes for which the CAHSEE requirement was "fully in effect." As noted in the 2004 evaluation report (Wise, et al., 2004), the grade ten drop-off rate increased by 0.1 percent for the Class of 2006. It was hypothesized that the increased drop-off rate was primarily due to a larger than usual increase in the number of students classified as grade nine students for more than a year. In the 2004–05 school year the drop-off rate declined somewhat to 5.6 percent. This was followed by a substantial increase to 6.1 percent in 2005–06, an even more substantial decrease to 5.3 percent in 2006–07, then increases to 5.7, 6.0, and 6.1 percent in subsequent years. This upward trend reversed in the 2010–11 school year when the grade ten class was only 4.2 percent smaller than the previous year's grade nine class.

Table 6.4. Enrollment Declines Between Grades Nine and Ten by High School Class

School Year	High School Class	Grade 10 Enrollment	Prior Year's Grade 9 Enrollment	Decrease	
				Number	Percent
2010–11	2013	502,452	524,527	22,075	4.2%
2009–10	2012	506,042	539,167	33,112	6.1%
2008–09	2011	*509,157	541,650	32,493	6.0%
2007–08	2010	513,707	545,040	31,333	5.7%
2006–07	2009	517,873	547,014	29,141	5.3%
2005–06	2008	515,761	549,486	33,725	6.1%
2004–05	2007	497,203	526,442	29,239	5.6%
2003–04	2006	490,465	520,287	29,822	5.7%
2002–03	2005	471,726	499,505	27,779	5.6%
2001–02	2004	459,588	485,910	26,322	5.4%
2000–01	2003	455,134	482,270	27,136	5.6%
1999–00	2002	444,064	468,162	24,098	5.1%
1998–99	2001	433,528	458,650	25,122	5.5%
1997–98	2000	423,865	450,820	26,955	6.0%

Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed July 7, 2011).
The * before a number represents an adjustment in data from the 2010 biennial report due to an updating of the figures used.
The light green horizontal line indicates the demarcation between classes prior to and initially subject to the CAHSEE graduation requirement; the heavy green line indicates the transition to the CAHSEE requirement being fully in effect.

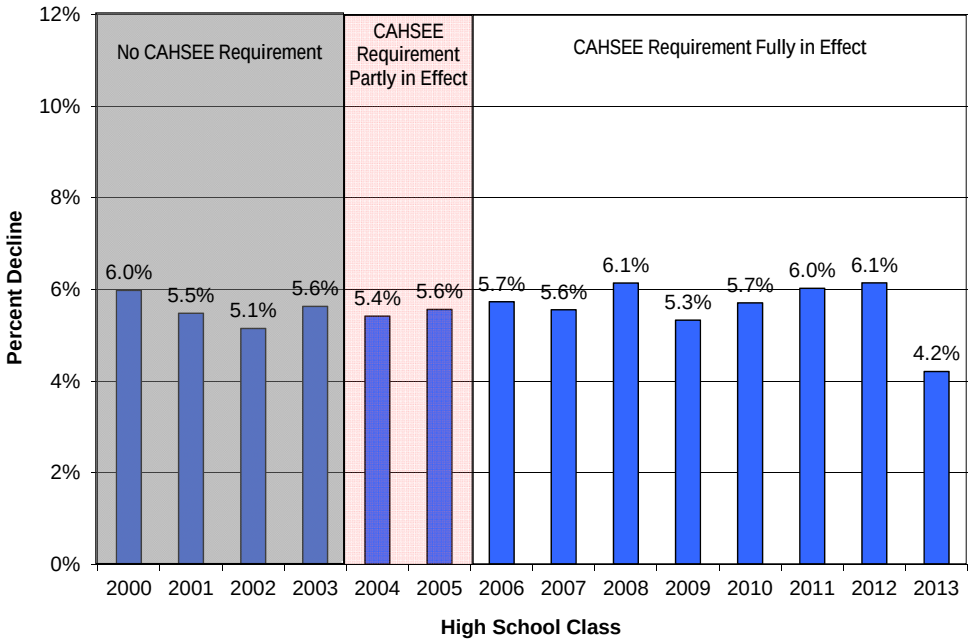


Figure 6.2. Enrollment declines between grades nine and ten by high school class.

Table 6.5 and Figure 6.3 show similar information for the enrollment drop-offs between grades ten and eleven. Results show that the enrollment drop-off rate between grades ten and eleven declined beginning with the Class of 2004. The rate declined fairly steadily from 6.4 percent for the Class of 2005 down to 3.5 percent for the Class of 2012.

Table 6.5. Enrollment Declines from Grade Ten to Grade Eleven

School Year	High School Class	Grade 11 Enrollment	Prior Year's Grade 10 Enrollment	Decrease	
				Number	Percent
2010–11	2012	488,530	506,042	17,512	3.5%
2009–10	2011	487,505	509,157	21,523	4.2%
2008–09	2010	*489,207	513,707	24,500	4.8%
2007–08	2009	488,227	517,873	28,646	5.5%
2006–07	2008	*487,493	515,761	28,268	5.5%
2005–06	2007	467,304	497,203	29,899	6.0%
2004–05	2006	459,114	490,465	31,351	6.4%
2003–04	2005	441,316	471,726	30,410	6.4%
2002–03	2004	428,991	459,588	30,597	6.7%
2001–02	2003	420,295	455,134	34,839	7.7%
2000–01	2002	409,119	444,064	34,945	7.9%
1999–00	2001	401,246	433,528	32,282	7.4%
1998–99	2000	390,742	423,865	33,123	7.8%

Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed July 7, 2011).
The * before a number represents an adjustment in data from the 2010 biennial report due to an updating of the figures used.
The light green horizontal line indicates the demarcation between classes prior to and initially subject to the CAHSEE graduation requirement; the heavy green line indicates the transition to the CAHSEE requirement being fully in effect.

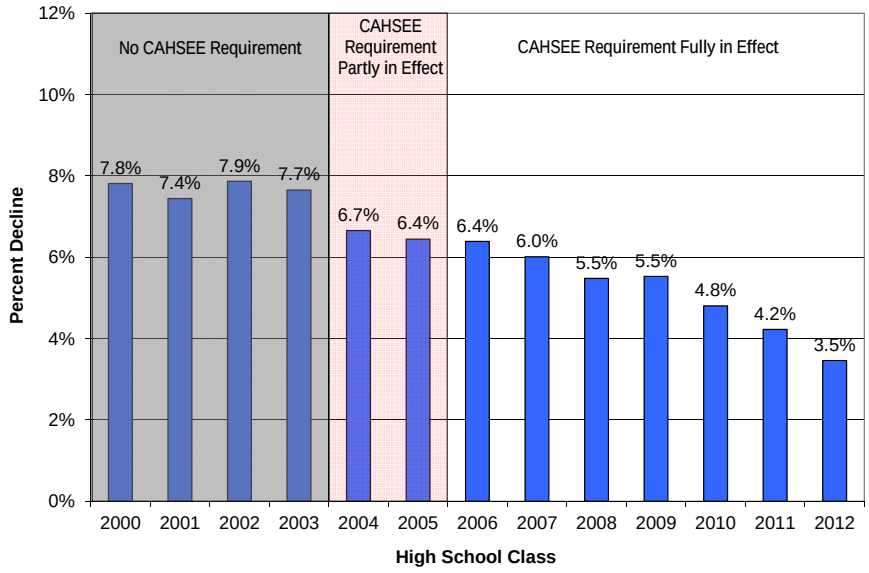


Figure 6.3. Enrollment declines from grade ten to grade eleven by high school class.

Table 6.6 and Figure 6.4 show similar information for the enrollment drop-off between grades eleven and twelve. This rate decreased substantially (2.5 percentage points) with the Class of 2003. The reduced drop-off rate continued for subsequent cohorts, with the exception of the Class of 2006. The drop-off rate from grade eleven to grade twelve for the Class of 2011 actually reversed—that is, more students were enrolled in the Class of 2011's senior class than had been enrolled at the start of the junior year. This may in part be due to the continuation of grade twelve repeat students after failing to graduate with their original graduating class.

Table 6.6. Enrollment Declines Between Grades Eleven and Twelve

School Year	High School Class	Grade 12 Enrollment	Prior Year's Grade 11 Enrollment	Decrease	
				Number	Percent
2010–11	2011	492,545	487,505	-5,040	-1.0%
2009–10	2010	477,885	489,032	11,147	2.3%
2008–09	2009	*476,156	*489,227	13,071	2.7%
2007–08	2008	468,281	487,493	19,212	3.9%
2006–07	2007	443,154	467,304	24,150	5.2%
2005–06	2006	423,241	459,114	35,873	7.8%
2004–05	2005	409,568	441,316	31,748	7.2%
2003–04	2004	396,272	428,991	32,719	7.6%
2002–03	2003	386,379	420,295	33,916	8.1%
2001–02	2002	365,907	409,119	43,212	10.6%
2000–01	2001	357,789	401,246	43,457	10.8%
1999–00	2000	347,813	390,742	42,929	11.0%

Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed July 7, 2011).
The * before a number represents an adjustment in data from the 2010 biennial report due to an updating of the figures used.
The light green horizontal line indicates the demarcation between classes prior to and initially subject to the CAHSEE graduation requirement; the heavy green line indicates the transition to the CAHSEE requirement being fully in effect.

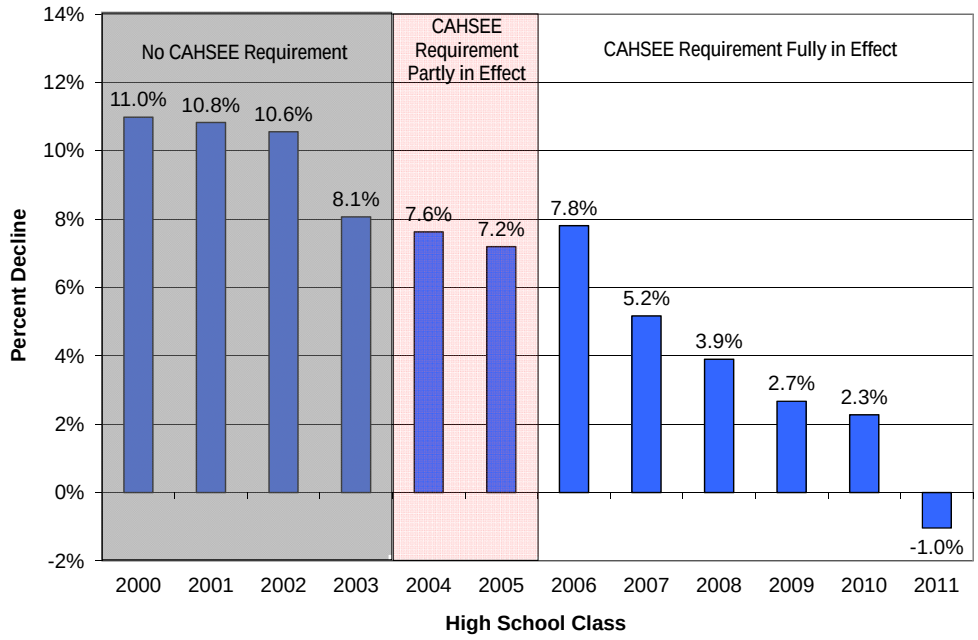


Figure 6.4. Enrollment declines from grade eleven to grade twelve by high school class.

Students Who Leave High School Prematurely: Summary

We examined single-year and four-year dropout rates among high school students in the classes of 2007 through 2010. We found that the dropout rates, while substantial, declined overall and for every demographic group. However, we found that both the one-year and four-year dropout rates among African American students far exceeded those of every other racial/ethnic group, as well as disadvantaged groups such as economically disadvantaged, LEP, and special education students. As reported in previous annual evaluation reports, we found that the bulk of dropouts occur in grade twelve.

We analyzed enrollment trends by graduation class cohort from the Class of 2000 through the fall 2010 enrollment counts. The fall enrollment numbers for the 2010–11 school year reflect lower grade-by-grade reductions than for any year since 1997–98, including a gain in the number of grade twelve students in the Class of 2011.

Graduation Rates

Another indicator that could conceivably be affected by the CAHSEE requirement is the high school graduation rate. In California, high school graduates include students assigned any of the following exit codes by their high school:

- Graduated, standard high school diploma
- Graduated, CAHSEE modifications and waiver for special education
- Graduated, CAHSEE special education exemption
- Adult education high school diploma
- Passed California High School Proficiency Exam

CDE publicly reports the graduation rate in two ways. The following descriptions are taken directly from the CDE Web site.

a) ***Ninth Grade to Graduate Rate***: "This rate is calculated using two different types of data, single point-in-time data (enrollment) and year-end cumulative data (graduates). When used at the state level, this calculation provides a reasonable statewide graduation rate estimate. However, application of this calculation at the school-level creates invalid rates for schools with increasing or declining enrollment, or moderate student mobility. Therefore this rate is only calculated at the state level."[12] This rate is calculated as the number of graduates divided by grade nine enrollment from four years prior. Equation 6.4 demonstrates the calculation of the Ninth Grade to Graduate Rate for the Class of 2010.

Ninth Grade to Graduate Rate for Class of 2010 =
Number of cohort members who earned a regular high school diploma by the end of the 2009-10 school year
divided by
Number of first-time grade 9 students in Fall 2006

Equation 6.4

Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest. (Retrieved on August 30, 2011).

b) ***Four-Year Adjusted Cohort Graduation Rate:*** This rate complies with the U.S. Department of Education's *High School Graduation Rate - Non-regulatory Guidance, December 22, 2008.*[13] "The four-year graduation rate is calculated by dividing the number of students in the 4-year adjusted cohort who graduate in four years or less with either a traditional high school diploma, an adult education high school diploma, or have passed the California High School Proficiency Exam (CHSPE) by the number of students who form the adjusted cohort for that graduating class. The following formula provides an example of the four-year graduation rate for the cohort entering grade 9 for the first time in the fall of the 2006–2007 school year and graduating by the end of the 2009–10 school year."[1] Equation 6.5 depicts the calculation of the Four-Year Adjusted Cohort Graduation Rate for the Class of 2010.

[12] *See* http://dq.cde.ca.gov/dataquest/CompletionRate/comprate1.asp?cChoice=StGradRate&cYear=2009-10&level=Statehttp://data1.cde.ca.gov/dataquest/CompletionRate/comprate1.asp?cChoice=StGradRate&cYear=2009-10&level=State.
[13] *See* http://www2.ed.gov/policy/elsec/guid/hsgrguidance.pdf.

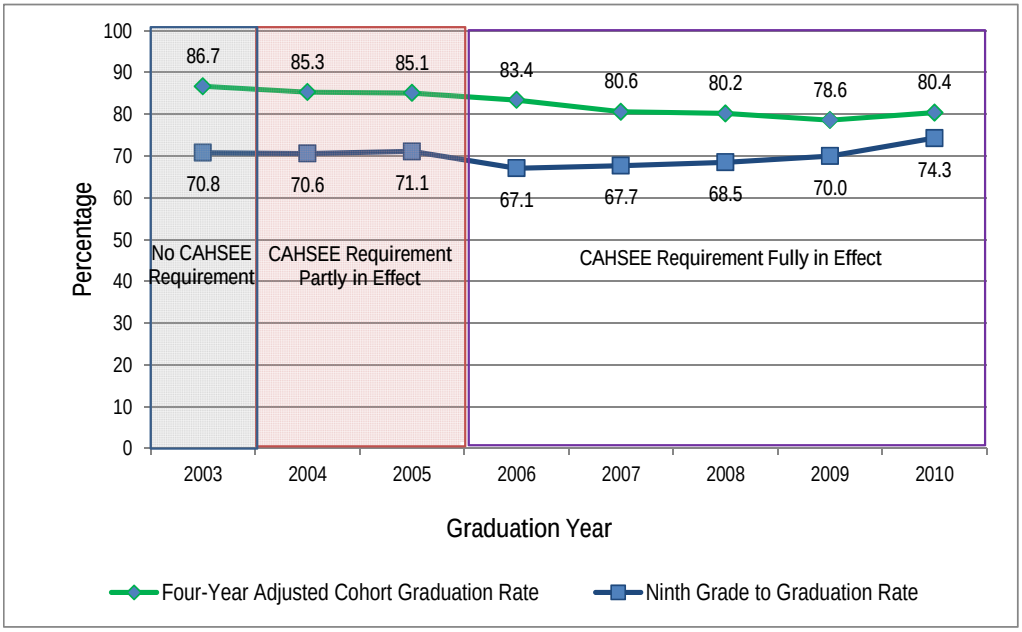
Four-Year Adjusted Cohort Graduation Rate for Class of 2010 =
Number of cohort members who earned a regular high school diploma by the end of the 2009-10 school year
divided by
Number of first-time grade 9 students in Fall 2006 (starting cohort) plus students who transfer in, minus students who transfer out, emigrate, or die during school years 2006-07, 2007-08, 2008-09, and 2009-10

Equation 6.5

Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest. (Retrieved on August 30, 2011).

The reader is cautioned that a number of types of high school completion are categorized neither as graduating nor as dropping out, including completing the GED and enrolling in college or an adult education program.

Overall graduation rates. Inspection of Figure 6.5 reveals that both graduation rates dropped in 2006, the first year CAHSEE took effect. The percentage of graduates based on grade nine fall enrollment had increased slightly in previous years but dropped by 4.0 percentage points in 2006, to 67.1 percent. This rate increased in subsequent years to a peak of 74.3 percent in 2010. However, the four-year adjusted cohort graduation rate, which is the graduation rate used for ESEA reporting, declined every year from 2003 to 2009, then rose in 2010. Between 2003 and 2010, this graduation rate dropped by 6.3 percentage points.



Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest. (Data retrieved on August 24, 2011).

Figure 6.5. Trends in two graduation rates.

A careful reader may notice that the graduation rate from grade nine for a given class (depicted in Figure 6.5) and the four-year dropout rate (reported in Table 6.3) do not total to 100 percent. The Class of 2007 had a 67.7 percent graduation rate and a 21.1 percent four-year dropout rate; the Class of 2010 had a 74.3 percent graduation rate and a 17.7 percent four-year dropout rate. These figures represent gaps of approximately 12 percent and 8 percent. Some of the unaccounted for students may have left the state, completed high school without graduating, or continued on for a second year of grade twelve.

Graduation rates for demographic groups. Our next step was to examine graduation rates separately for various demographic groups. We note that the CDE Web site added a new report this year that facilitates these comparisons: *Cohort Outcomes Summary by Race/Ethnicity 2009–10*.

Table 6.7 shows the grade nine to graduation rates by racial/ethnic group. These are presented in order of declining graduation rate for the Class of 2010. Two patterns are notable here. First, the overall graduation rate and the rate for each individual group increased from 2007 to 2010, with the exception of the Asian students group, which, despite a small decline, remains the highest-performing group. Second, the graduation rates for three groups of students—African American, American Indian/Alaska Native, and Hispanic students—are substantially lower than the overall graduation rates. The horizontal line in the middle of Table 6.7 separates the groups of students with graduation rates above and below the overall state rate of 74.4 percent.

Table 6.7. Grade Nine to Graduate Rates by Race/Ethnicity

Grade 9 to Graduation Rate	2007	2008	2009	2010	Change in Graduation Rate
Asian	90.0%	92.0%	91.9%	89.4%	-0.6
Filipino	85.4%	89.0%	88.8%	87.5%	2.1
White	77.8%	79.1%	80.4%	83.4%	5.6
Pacific Islander	68.2%	71.4%	75.7%	72.6%	4.4
Hispanic	55.7%	58.0%	61.3%	67.7%	12.0
American Indian/Alaska Native	58.3%	62.3%	61.4%	67.1%	8.8
African American (not Hispanic)	55.3%	54.6%	55.2%	59.0%	3.7
TOTAL	67.7%	68.5%	70.0%	74.4%	6.7

Source: Derived from CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed August 24, 2011).

We noted earlier that the sum of graduation rates and dropout rates does not account for all students. We next explored whether the rates of students not included in either graduation or dropout rates varied by race/ethnicity. Table 6.8 combines the graduation rates in Table 6.7 with derived four-year dropout rates in Table 6.3. The columns labeled “Rate Not Graduating or Dropping Out,” indicate the percentage of students in each racial/ethnic group not included in the graduation or dropout rates in 2008 and 2010. This percentage varied widely by demographic group in 2008, from a low of 0.1 percent of Asian students to 18.2 percent of Hispanic students. The

percentages of students unaccounted for dropped from 12.6 percent in 2008 to 7.9 percent in 2010, as seen in the column labeled "Improvement in Accounting for Students." However, the pattern for individual demographic groups varied. As mentioned earlier, outcomes such as passing the GED are not counted as either graduation or dropping out, so some modest discrepancy is to be expected.[14] Although the percentages of unaccounted-for Hispanic and African American students decreased in 2010, the rates continued to be substantial (at 10.3 percent and 10.7 percent, respectively).

Table 6.8. Combined Dropout and Graduation Rates by Race/Ethnicity

Demographic Group	2010 Grade 9 to Graduation Rate	2010 Derived Four-Year Dropout Rate	Sum of 2010 Graduates and Dropouts	Rate Not Graduating or Dropping Out: 2008	Rate Not Graduating or Dropping Out: 2010	Improvement in Accounting for Students (Percentage Points)[A]
Asian	89.4%	7.1%	96.5%	0.1%	3.5%	-3.4
Filipino	87.5%	7.3%	94.8%	2.4%	5.2%	-2.8
White	83.4%	10.8%	94.2%	9.2%	5.8%	3.4
Pacific Islander	72.6%	18.8%	91.4%	7.3%	8.6%	-1.3
American Indian/Alaska Native	67.1%	23.8%	90.9%	13.6%	9.1%	4.5
Hispanic or Latino	67.7%	22.0%	89.7%	18.2%	10.3%	7.9
African American	59.0%	30.3%	89.3%	12.5%	10.7%	1.8
TOTAL	74.4%	17.7%	92.1%	12.6%	7.9%	4.7

Source: Table 6.3 and 6.7, this report for 2010 rates; 2010 evaluation report for 2008 rates.
[A] Positive numbers indicate a larger percentage of students were accounted for in the graduation and dropout rates over time.

Graduation Rates: Summary

We examined two kinds of graduation rates: the graduation rate based on grade nine enrollment, and the graduation rate required by ESEA, which is based upon the number of graduates in a given year and the number of dropouts associated with that class from grades nine through twelve. We found that the graduation rate as a percentage of grade nine students increased each year from 2007 through 2010 while the ESEA rate declined until 2010, when the rate recovered somewhat. Nearly three-quarters (74.3 percent) of students who entered grade nine in the fall of 2006 graduated four years later.

Review of disaggregated grade nine to graduation rates revealed that only the Asian graduation rate declined in 2010 from its 2007 level. Graduation rates vary widely, from 59.0 percent among African American students to 89.4 percent for Asian students.

[14] See HumRRO's 2009 annual report (Becker, Wise, and Watters, 2009) for a detailed mapping of student-level exit codes to categories such as graduation and dropout.

Performance on Other Assessments

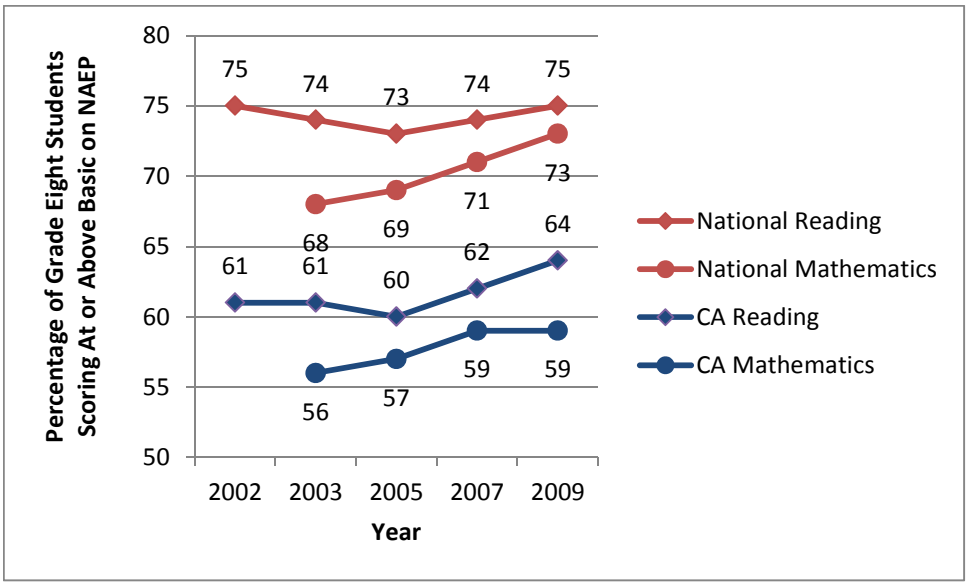
The CAHSEE examination is part of a statewide testing program that is aligned to California's standards for the knowledge and skills students are expected to learn. This is a high-stakes examination for students because satisfying the CAHSEE requirement is one mandatory accomplishment to earn a high school diploma.

The National Assessment of Educational Progress (NAEP), also known as "the nation's report card," is overseen by the U.S. Department of Education. NAEP tracks the progress of U.S. students in key subjects at the national and state levels. The main NAEP assessment is administered every two years and includes national and state results in reading and mathematics. A sample of students from a sample of schools participate in the NAEP examination and meticulous sampling and weighting procedures ensure the results represent all students in the state. Individual student scores are not reported.

Examination of trends on NAEP provides an independent view of student achievement over time that may confirm or disconfirm state-reported trends. Some cautions are in order, however. NAEP is not aligned with any individual state standards so gains or losses in unique areas of state standards may not be reflected. Unlike CAHSEE, NAEP is not a high stakes test for students, so student motivation is an ongoing concern. The achievement level cut points defining whether a score is below basic, basic, proficient, or advanced are commonly considered to be aspirational; that is, the NAEP achievement levels represent a higher level of achievement than similarly-named state achievement level standards. This last issue leads many researchers to compare state results at the proficient-and-above level to NAEP results at the basic-and-above level. Finally, for the purposes of this report, NAEP grade eight achievement is the most relevant to investigate implications of the CAHSEE. Although NAEP does include a grade twelve assessment, results for individual states are not included.

Figure 6.6 depicts NAEP trends for California students and students in the nation as a whole. The red lines represent national trends and the blue lines reflect California trends. Lines marked with diamonds denote reading performance and lines marked with circles signify mathematics performance. The trend line begins with school year 2001–02, in which the grade eight cohort was in the graduation class of 2006—the first class for which CAHSEE was fully in effect as a graduation requirement.

Inspection of Figure 6.6 reveals that the performance of California students was below the nation as a whole, but the pattern of gains and losses were very similar. The most recent year, 2009, deviates somewhat. California gains in Reading exceeded nationwide gains, while California mathematics showed no gains but the nation gained by two percentage points.



Note. NAEP began reporting state-level results for Reading in 2002. In 2003 NAEP introduced state-level Mathematics results and commenced a cycle of reporting state-level results every odd year.

Figure 6.6. NAEP state and national trends for grade eight students.

College Preparation

Indicators of educational quality include the rigor of coursework undertaken in high school as well as the proportion of students intending and prepared to engage in postsecondary education. We turn now to two sets of indicators (other than the CAHSEE) of student preparedness for college.

Percentage of Students Taking College Preparation Courses

One indicator of educational quality is the caliber of coursework completed. Two of California's statewide university systems, the University of California (UC) and the California State University (CSU), have developed a list of courses known as "A–G courses" that are required for incoming freshmen. This list includes 16 units of high school courses, of which at least 7 must be taken in the last two years of high school. In this system, a unit represents a full year (two semesters) of study.

Table 6.9 indicates the percentage of public high school graduates who completed A–G courses over several years. Note that this calculation excludes students who did not graduate; if this were based, for example, on grade nine enrollment, the rates would be considerably lower. Demographic groups are listed in order of percentage in 2009–10. Among graduates, the rate of completing A–G courses varies widely, from 24.9 percent among American Indian/Alaska Native students to 60.3 percent among Asian students. The rate of completion overall and for every group increased from 2003–04 to 2009–10. Over one-third (35.6 percent) of the Class of 2010 graduates completed the course requirements to enter a UC or CSU school.

Table 6.9. Trends in Percentages of Graduates Completing Minimum Coursework (A–G courses) for Entry into UC or CSU systems

	School Year						
Ethnic Category	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Asian	56.2%	58.7%	60.2%	59.8%	*59.2%	59.3%	60.3%
Filipino	44.9%	46.6%	45.4%	45.7%	*44.8%	45.8%	47.6%
Two or More Races	N/A	N/A	N/A	N/A	N/A	40.1%	42.0%
White	39.6%	40.9%	40.5%	39.5%	*39.8%	40.5%	40.9%
Pacific Islander	27.2%	27.7%	28.9%	28.1%	*27.4%	29.5%	30.7%
African American (not Hispanic)	25.2%	25.2%	25.6%	26.5%	*23.3%	26.8%	28.5%
Hispanic	21.9%	24.1%	25.6%	25.2%	*22.5%	25.5%	26.5%
None Reported	N/A	N/A	N/A	N/A	N/A	37.3%	25.1%
American Indian/Alaska Native	22.3%	23.0%	23.6%	23.6%	*25.7%	23.8%	24.9%
Multiple/No Response	26.9%	31.0%	32.7%	35.4%	*32.4%	N/A	N/A
State Total	33.8%	35.2%	36.1%	35.5%	*33.9%	35.3%	35.6%

Source: Derived from CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed August 24, 2011).
The * before a number represents an adjustment in data from the 2010 biennial report due to an updating of the figures used.

College Entrance Examination Participation and Performance

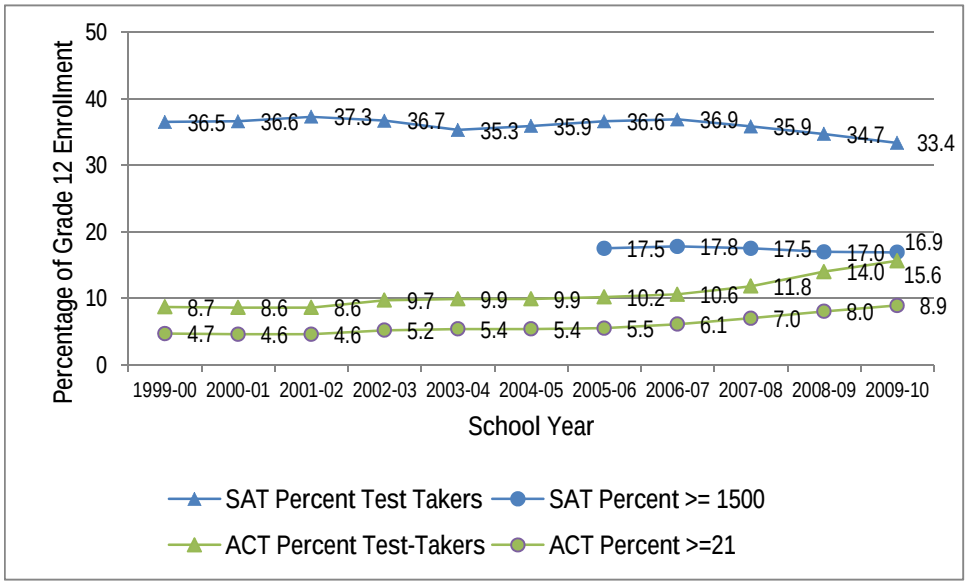
The level of student aspirations for education beyond high school is reflected in the proportion of students who sit for college entrance examinations. College readiness can also be examined by looking at the performance of students who take such tests. These two factors are confounded, in that higher participation may be related to lower scores overall. For example, if only a small, high-performing proportion of a class takes an examination, scores will be high but participation will be low. If a larger proportion of students, who may be lower performing, are encouraged to take the test, the average scores will drop but participation rates will increase. Interpretation of patterns requires care because of this confounding effect.

Two college-entrance examination programs are most prevalent in the United States: the SAT and the ACT. Figure 6.7 indicates the percentage of California students participating in these two examination programs. The lines with triangle-shaped markers represent the proportion of each grade twelve class that took either the SAT or ACT. Approximately 33 percent of the Class of 2010 took the SAT and nearly 16 percent took the ACT. This was a decrease in SAT participation and an increase in ACT participation relative to the previous year, continuing both trends from the previous two years.

Figure 6.7 also shows the percentage of students who achieved a particular score on these two examinations, over time. The graph uses the same cut points used for reporting on the CDE Web site. The lines with circular pointers reflect the percentage of students ***in the class*** achieving a minimum combined score of 1500 on the SAT or 21 on the ACT, respectively.[15] The percentage of students attaining the designated score on the SAT declined from a peak of 17.8 percent in 2007–08 to a low of 16.9 in 2009–10. Student

[15] The average national scores for Reading, Mathematics, and Writing at the 50th percentile level are approximately 500 each. The national rank for an ACT Composite score of 21 is the 57th percentile.

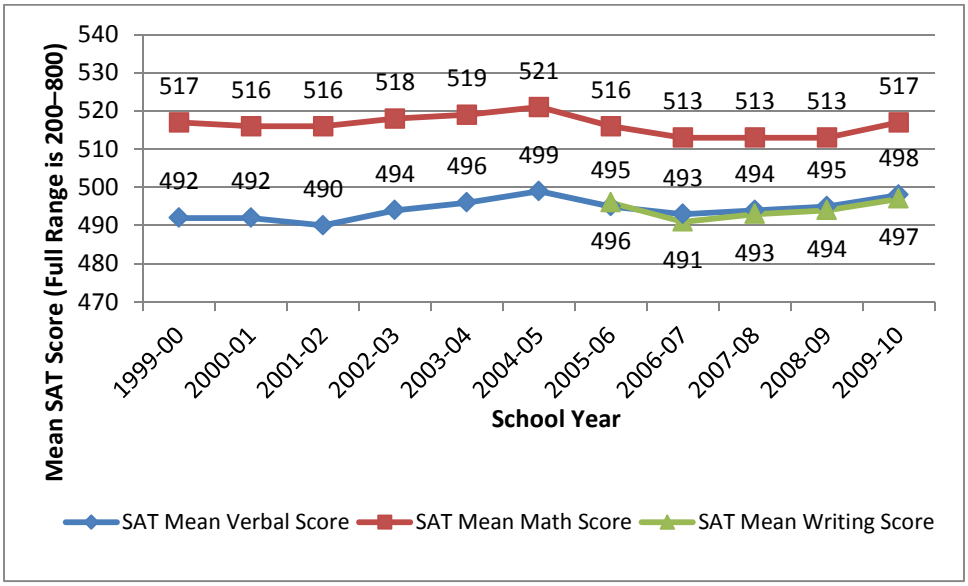
ACT performance continued its upward trajectory of the last several years to a peak of 8.9 percent of students in 2009–10 reaching an ACT score of at least 21.



Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed August 24, 2011).
Note. Prior to 2005–06 CDE reported the percentage of students achieving a combined SAT Verbal and Mathematics score of 1,000. SAT Writing was introduced in 2006; in 2005–06 CDE changed its reporting to a combined Verbal, Mathematics, and Writing score. The latter metric is reported here.

Figure 6.7. SAT and ACT participation rates and success rates over time.

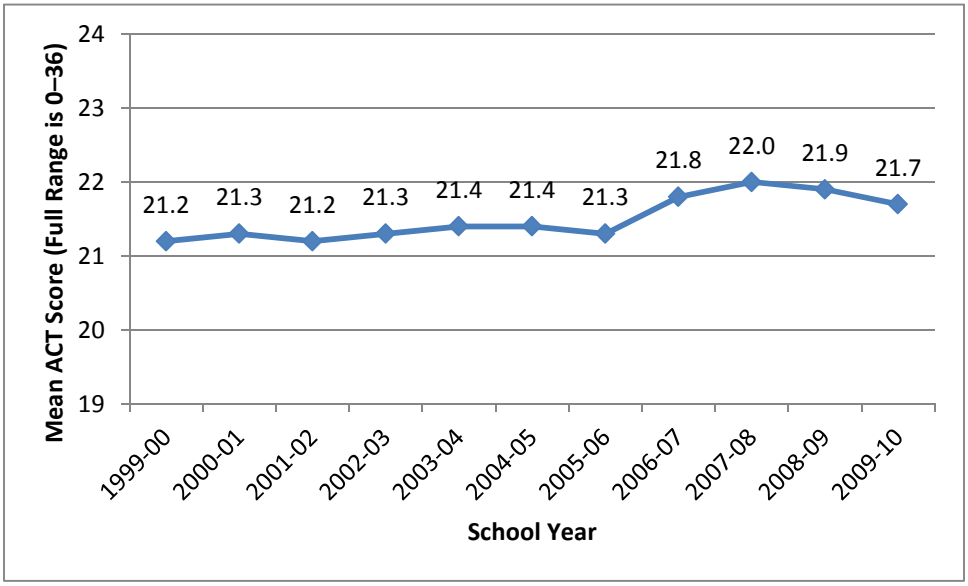
Another metric to assess success on tests such as the SAT and ACT is to look at mean scores. SAT mathematics, verbal, and writing examinations are each scored on a range of 200–800. Figure 6.8 indicates that mean SAT mathematics and verbal scores generally increased each year between 2001 and 2005, but both verbal and mathematics mean scores dropped in 2006 and 2007 (the CAHSEE went into effect in 2006). Verbal and writing scores increased in 2008 and 2009 while mathematics scores remained flat. In 2010 all three mean scores rose. The downward trend in mean scores mimicked a national trend; between 2005 and 2007 the nationwide mean score dropped from 508 to 502 in Critical Reading and from 520 to 515 in Mathematics (see http://professionals.collegeboard.com/profdownload/Total_Group_Report.pdf). SAT writing was introduced in 2006.



Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed August 29, 2011).
Note. 2005–06 value is revised from the 2010 biennial evaluation report.

Figure 6.8. SAT mean math, verbal, and writing scores over time.

Figure 6.9 shows mean scores on the ACT examination over the same period. Scores were highly consistent until 2006–07, when they increased from 21.3 to 21.8. The next three years stayed comparatively flat near this higher level of performance. ACT examinations are scored on a range of 1–36; a smaller range is depicted to make the trends more visible.



Source: CDE DataQuest. http://data1.cde.ca.gov/dataquest (accessed August 29, 2011).
Note. 2006–07 value is revised from the 2010 biennial evaluation report.

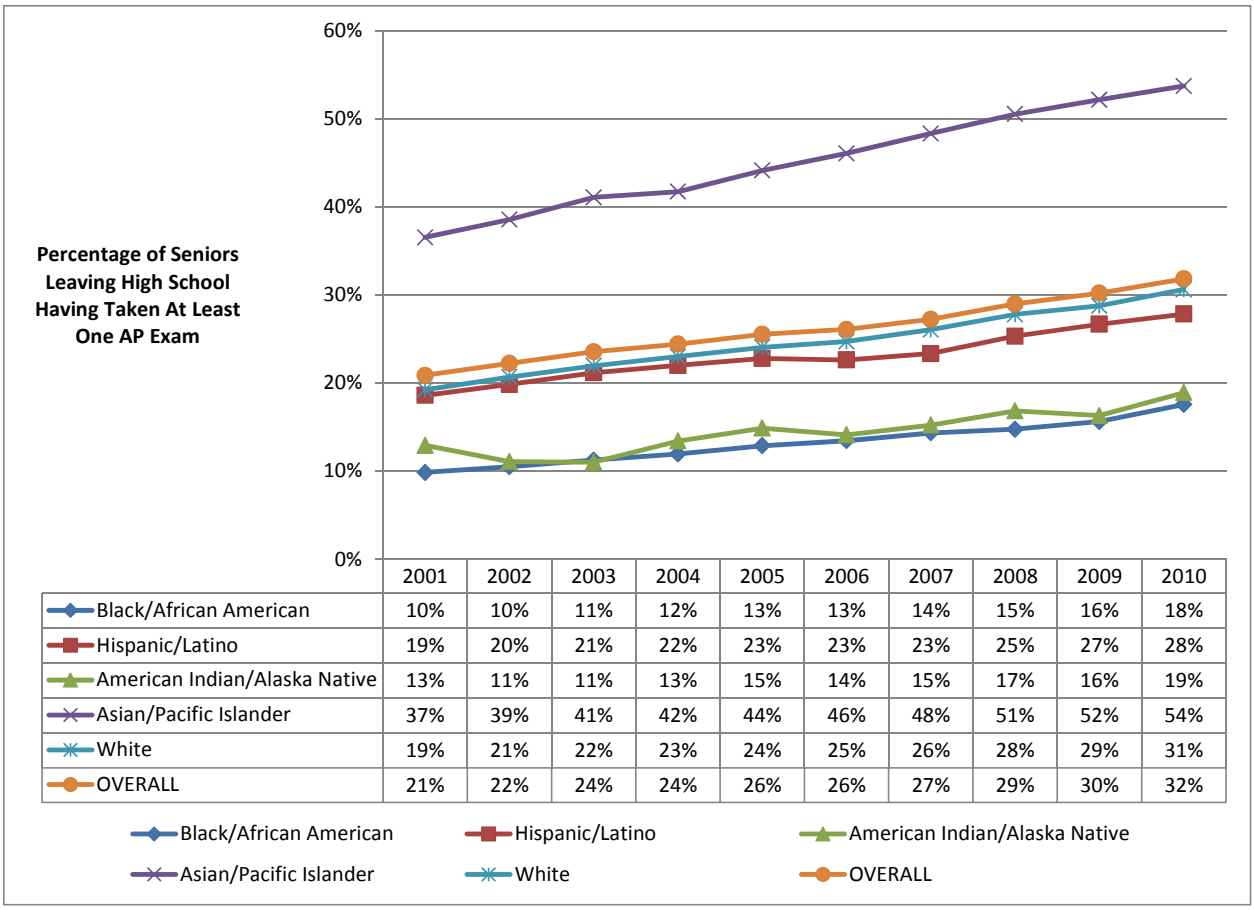
Figure 6.9. ACT mean scores over time.

AP Test Achievement

The College Board's Advanced Placement (AP) program comprises a set of college-level courses offered in high school. Students have the option of taking a standardized AP examination after completing the course to earn college credit and/or gain placement in advanced college courses. AP examination participation rates and scores are indicators of the rigor of high school courses as well as of the intentions of students to attend college. The College Board currently offers more than 30 AP courses and examinations, but not all courses are offered at all high schools.

In previous HumRRO annual reports, AP participation rates and performance were drawn from the CDE Web site. These data were difficult to interpret for the purposes of this report because they represented the number of examinations rather than the number of examinees. In other words, a high school student who completed five AP examinations was counted five times. In the current report, AP results were retrieved from the College Board Web site and represent the number of seniors in a given cohort leaving high school having taken an AP exam at any point in high school.

Figure 6.10 displays AP examination participation rates among California students over time. The orange line with the circular pointers shows the percentage of seniors in each graduating class that participated in at least one AP examination by the end of senior year, rising steadily from 21 percent in the Class of 2001 to 32 percent in the Class of 2010. Each additional line represents a single racial/ethnic group. Every group increased participation over time.



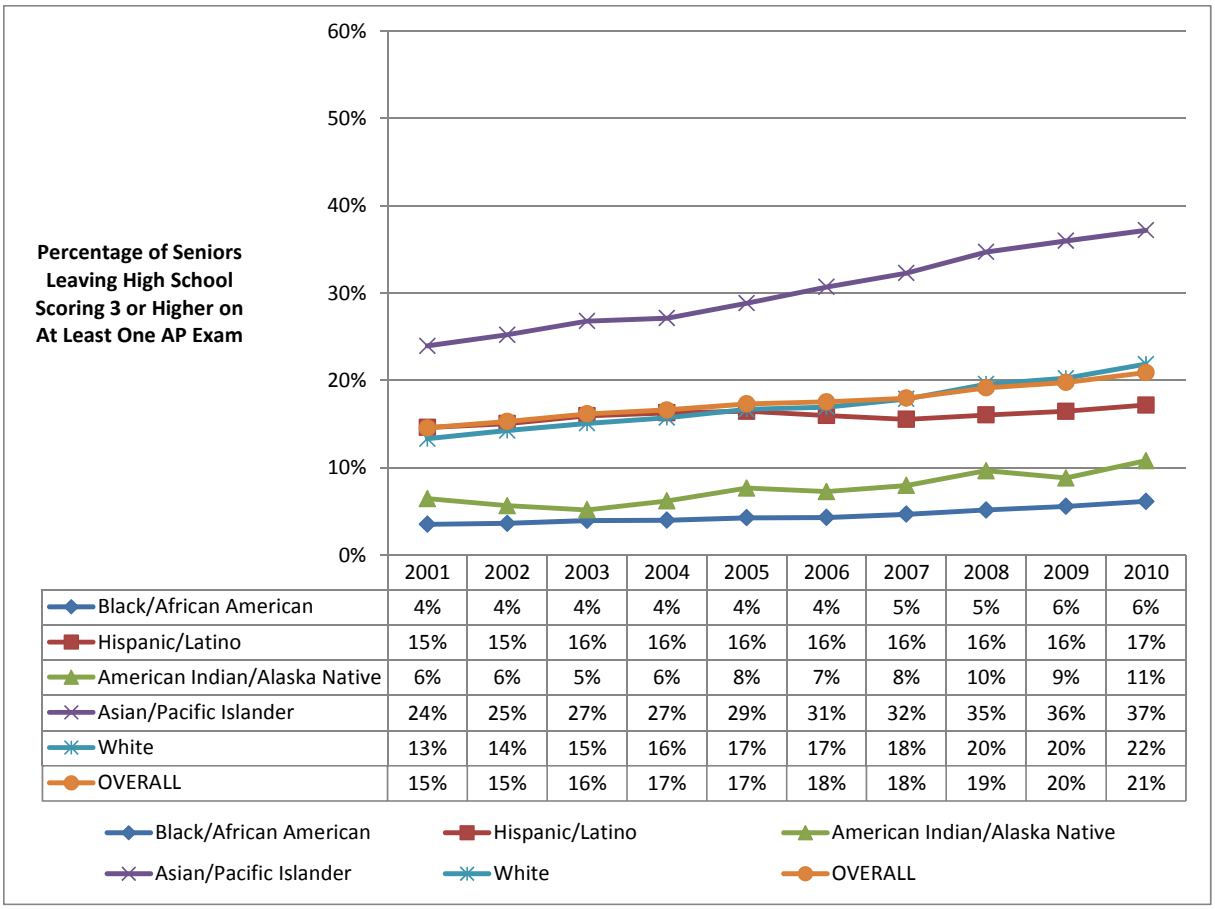
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Black/African American	10%	10%	11%	12%	13%	13%	14%	15%	16%	18%
Hispanic/Latino	19%	20%	21%	22%	23%	23%	23%	25%	27%	28%
American Indian/Alaska Native	13%	11%	11%	13%	15%	14%	15%	17%	16%	19%
Asian/Pacific Islander	37%	39%	41%	42%	44%	46%	48%	51%	52%	54%
White	19%	21%	22%	23%	24%	25%	26%	28%	29%	31%
OVERALL	21%	22%	24%	24%	26%	26%	27%	29%	30%	32%

Source: College Board Web site. http://apreport.collegeboard.org/report-downloads (accessed August 30, 2011).

Figure 6.10. AP participation rates over time, by race/ethnicity and overall.

Figure 6.11provides a measure of success by reporting the percentage of seniors in each graduating class that earned a score of 3 or greater[16] on at least one AP examination by the end of senior year. The orange line with the circular pointers represents students overall and shows a slow but steady increase from 15 percent in 2001 to 21 percent in 2010. Each additional line represents a single racial/ethnic group. Results for every group increased over time. The greatest gains were made among Asian students, which climbed from 24 percent to 37 percent over ten years.

[16] AP examination scores are on a scale of 1–5. Typically postsecondary institutions grant credit or advanced placement for minimum scores of 3 or 4. A score of 3 is a commonly accepted indicator of success on an AP examination.



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Black/African American	4%	4%	4%	4%	4%	4%	5%	5%	6%	6%
Hispanic/Latino	15%	15%	16%	16%	16%	16%	16%	16%	16%	17%
American Indian/Alaska Native	6%	6%	5%	6%	8%	7%	8%	10%	9%	11%
Asian/Pacific Islander	24%	25%	27%	27%	29%	31%	32%	35%	36%	37%
White	13%	14%	15%	16%	17%	17%	18%	20%	20%	22%
OVERALL	15%	15%	16%	17%	17%	18%	18%	19%	20%	21%

Source: College Board Web site. http://apreport.collegeboard.org/report-downloads (accessed August 30, 2011).

Figure 6.11. Percentage of seniors leaving high school after scoring 3 or higher on at least one AP examination by race/ethnicity and overall.

College Preparation: Summary

Among graduates, the rate of completing A–G courses varies widely, from 24.9 percent among American Indian/Alaska Native students to 60.3 percent among Asian students. The rate of completion overall, and for every racial/ethnic group, increased from 2003–04 to 2009–10. Over one-third of the Class of 2010 (35.6 percent) completed the course requirements to enter a UC or CSU school.

The percentage of high schools seniors taking the SAT examination decreased in the most recent years for which records are available, from 36.9 percent in 2006–07 to 33.4 percent in 2009–10. Over the same time period the percentage of students achieving a score of 1500 or better declined from 17.8 percent to 16.9 percent. On the other hand, the participation and performance of students on the ACT in terms of percentage of students scoring 21 or above has continued its steady climb over several years. On both the SAT and ACT, however, the trend in mean scores was the reverse of the analyses of percentages about the common cut points. Between 2004–05 and 2009–10, the participation rate increased from 9.9 percent to 15.6 percent and the

percentage of students reaching a score of 21 or better rose from 5.4 percent to 8.9 percent.

A given student may take the SAT, the ACT, or both. We cannot determine the overlap between the SAT and ACT examinee groups, but do note that summing the percentages of students taking the two examinations increased steadily from a total of 45.8 percent in 2004–05 to 49.0 percent in 2009–10. This may indicate that more students are taking both examinations, or possibly the inclusion of a wider range of students in this important step toward college participation.

Another indicator of the rigor of high school coursework is participation in, and success on, Advanced Placement examinations. The 2009–10 school year brought increased participation and increased achievement on these examinations. Participation and success for every racial/ethnic group increased steadily as a percentage of exiting seniors from 2001 through 2010. Nearly a third of the 2010 graduating class (32 percent) took at least one AP examination and over one-fifth (21 percent) achieved a score of 3 or better on at least one AP examination.

Summary Findings

Data sources outside the CAHSEE program provide indications of the state of education in California. The Class of 2006 was the first cohort required to pass both parts of the CAHSEE to receive a high school diploma, so trends from 2006 through 2010 are of particular import. Results for the Class of 2011 were not available in time for this report.

One important indicator of the impact of the CAHSEE requirement is whether the proportion of students who leave high school without a diploma changes in some way. This seemingly straightforward question demands a multifaceted answer. In 2007, California made important improvements in its student-level data systems, facilitating more accurate dropout tallies. Therefore we report here trends from 2007 through 2010; the reader is referred to previous reports in this series for earlier trends.

First, we note that the 2007 dropout rates were substantially larger than previous rates but we cannot disentangle how much of this change is a real increase in dropouts versus more accurate reporting. We found that official dropout rate calculations indicate that both single-year and four-year dropout rates decreased between 2007 and 2010, overall and for all ethnic categories. Both dropout metrics revealed that African American students drop out at a substantially higher rate than every other group, including groups such as economically disadvantaged, Limited English Proficient (LEP) and special education students. In addition, American Indian/Alaskan Native, Hispanic, Pacific Islander, economically disadvantaged, LEP, and special education students show notably higher dropout rates than White, Filipino, and Asian students. As reported previously, we found that the bulk of dropouts occur in grade twelve.

As a second look at students leaving high school prematurely, we investigated enrollment trends by grade and over time. While this measure does not directly account

for mobility in and out of the state, substantial changes in enrollment declines can be interpreted as an indirect indicator of dropout rates. Enrollment patterns indicate that the drop-off rates of sophomores, juniors and seniors declined in fall 2010; in fact the number of grade twelve students in the Class of 2011 exceeded the number of juniors in that same class. This grade twelve phenomenon may be attenuated by the continuation of students in a second senior year. In short, we found a trend toward more students persisting to the fall of their senior year, and more students dropping out during their senior year.

High school graduation rates can also be measured in multiple ways. We examined two measures: the graduation rate as a percentage of grade nine enrollment four years earlier, and the graduation rate required by ESEA, which is based upon the number of graduates in a given year and the number of dropouts in the relevant grade nine through grade twelve years. We found that the graduation rate as a percentage of grade nine students increased each year from 2007 through 2010 while the ESEA rate declined until 2010, then recovered somewhat. Nearly three-quarters (74.3 percent) of students who entered grade nine in the fall of 2006 graduated four years later.

Review of disaggregated grade-nine-to-graduation rates revealed that graduation rates for most racial/ethnic groups increased from 2007 to 2010; the only exception was the group with the highest graduation rate, Asian students. Graduation rates vary widely, from 59.0 percent among African American students in 2010 to 89.4 percent for Asian students. We also note that CDE added disaggregated graduation rates for graduating cohorts in 2010 for the first time, making this important educational indicator more transparent.

We also looked at the percentage of students, by demographic group, who are not accounted for in either the grade-nine-to-graduation or the four-year dropout rates. We found that more students were accounted for in 2010 than 2008. However, large differences remain across racial/ethnic groups, to a high of 10.7 percent of African American students not included in either the graduation or dropout rates. The recently introduced cohort analyses provide information heretofore unavailable, such as the number of cohort members still enrolled after their original class graduated, the number of cohort members who completed the GED, and the number of special education completers. This information, as it is tallied over time, will facilitate important improvements in the evaluation and provide transparency to interested parties.

Participation in the SAT college entrance examination continued its slight decline in the 2009–10 school year. Participation on the ACT—which had only about one-quarter of the participation among California students that the SAT program did—increased. We presented achievement on the SAT and ACT using two metrics each and found inconsistent results for both examinations. Mean SAT scores continued a three-year increase, but the percentage of students earning a combined score of 1500 or better continued a two-year decline. Mean scores on the ACT decreased slightly but the percentage of students achieving a score of 21 or higher increased.

In short, we found that graduation rate trends varied depending on the metric used, either rising slightly or declining less quickly in 2010 relative to 2007. While rates overall are worrisome—just under three-quarters of grade nine students graduated on time in 2010—rates for specific demographic groups are substantially lower. Dropout rates decreased for the Class of 2010 compared with the Class of 2007. The dropout rates for African American students are nearly three times the rates for White students, and rates for American Indian, Hispanic, and English learners are more than twice the rate for White students, for example.

Over one-third of the graduates in the Class of 2010 completed the A–G courses required by the University of California and California State University systems. Rates varied widely among racial/ethnic groups. Participation in Advanced Placement examinations increased in 2010, as did measures of success on the AP. Nearly a third of the 2010 graduating class (32 percent) took at least one AP examination and over one-fifth (21 percent) achieved a score of 3 or better on at least one AP examination.

Post-High School Outcomes Study

More than ten years ago, the High School Exit Examination Panel recommended the content to be included in the CAHSEE, and the State Board of Education (SBE) adopted both the content blueprints and passing standards for each of the two CAHSEE tests (ELA and mathematics). In 2003, when the SBE determined that schools and students needed more time to prepare for the CAHSEE and deferred the requirement for two years, they adopted minor revisions to both the CAHSEE content blueprints and the passing levels. The revised standards have now been in place for seven years. Six high school classes (2006 through 2011) have had to meet the CAHSEE requirement to receive a diploma. When the SBE set the initial cut score for the graduation requirement, the board expressed an intention of increasing the rigor of the CAHSEE requirement over time. It is now reasonable to ask how students who graduated with differing levels of success on the CAHSEE are doing after high school, so as to help evaluate the CAHSEE passing standards and blueprints. Other states and the nation are also taking a serious look at what it means to be ready for college or work at the end of high school.

As part of the contract with the CDE to conduct an independent evaluation of the CAHSEE, HumRRO has been tasked to conduct a PHO Study. This study seeks to answer the following question:

> "How do different levels of performance on the CAHSEE ELA and mathematics tests relate to student success in post-high school endeavors?"

It should be noted that this is an exploratory study that will investigate the feasibility of working with local educational agencies (LEAs) to gather and aggregate data on important post-high school outcomes.

The PHO Study is designed as a collaborative effort between HumRRO and several LEAs, including charter schools. The LEAs will provide a variety of data, as available[17], including lists of graduates, senior surveys (for post-high school intentions), EAP results, Cal-PASS data, course taking histories, and participation in program interventions. HumRRO will merge these data with CAHSEE scores. HumRRO will also select a sample of graduates and submit a request to the National Student Clearinghouse to collect college records for that sample.

HumRRO will analyze the data and provide each LEA's analytic results to that LEA. HumRRO and the LEAs will participate in a summer 2012 workshop to review all findings and generate conclusions. The final report will be submitted to the CDE in fall 2012.

[17] Each LEA will submit any data available. Most LEAs will not provide all types of data.

Chapter 7: Findings and Recommendations

Lauress L. Wise, Michele M. Hardoin, D.E. (Sunny) Becker

Background

As described in Chapter 1of this year's annual report, an independent evaluation of the California High School Exit Examination (CAHSEE) was launched in January 2000 and has continued every year since. The evaluation is required to assess both the impact of the CAHSEE requirement and the quality of the CAHSEE tests. Key 2009–10 and 2010–11 evaluation activities included:

- review of the quality of the assessment (Chapter 2),
- analyses of test results (Chapter 3),
- analyses of student questionnaire responses (Chapter 4),
- an analysis in 2010 of Assembly Bill (AB) 2040 recommendations for alternative means for eligible SWD to meet the CAHSEE requirement (Chapter 5), and
- examination of other indicators of student achievement and success (Chapter 6).

In this final chapter of our biennial report, we summarize key findings from each of these activities and the conclusions we derived from these findings about the CAHSEE and its impact. We also offer several recommendations for improving the quality and effectiveness of the CAHSEE.

Key Findings

Test Quality (Chapter 2)

We addressed a number of aspects of CAHSEE item quality in 2010–11. As in prior years we conducted a content alignment and accessibility study. We continued our observations of CAHSEE processes, adding reviews of test development and range finding sessions to our test administration site visits. We again analyzed consistency of essay scoring, and we conducted additional score equating analyses.

HumRRO conducted another study of content alignment of the CAHSEE, reviewing the March 2011 English-language arts (ELA) and mathematics tests against their respective content specifications. Both the study design and the study results were very similar to the studies conducted in 2005, 2008, and 2009, although the smaller panel of independent reviewers in 2011 was comprised of experts in alignment and universal design for assessment rather than California teachers. Overall the alignment was judged to be good, although a few specific areas were identified where the depth of knowledge required by the test questions or the clarity of their coverage of targeted standards might be improved. In both ELA and mathematics, as noted in prior years,

there was some disagreement between the test developers and our independent reviewers about the specific objectives assessed by each test question. We offer specific suggestions for addressing persistent alignment issues for the strands of Mathematical Reasoning, Reading Comprehension, and Writing Applications.

HumRRO partnered with the National Council on Educational Outcomes (NCEO) to review the March 2011 ELA and mathematics tests relative to the principles of universal design for assessment (UDA). This identified visual presentation or visual components of a number of items in both subject area tests as potentially challenging for students without the cultural knowledge or visual capacity to understand the item context. Given the changing procedures that have recently been in place for CAHSEE item development, it will be important for the Educational Testing Service (ETS) to attend to visual presentation and standardized formatting (e.g., typeface) to address UDA concerns when readying field-tested items for operational use on CAHSEE test forms.

We observed two item review sessions, one for content and one for bias and sensitivity, conducted by ETS with high school teachers of ELA and mathematics. No significant problems were encountered. ETS procedures for item development have been affected in recent years by California budget cuts. Content reviews as well as bias and sensitivity reviews were cut in 2010 year but reinstated in 2011. These reviews by subject-matter experts are vital steps to assure quality of item content, and result in substantial improvements to the content accuracy and expected measurement quality of CAHSEE test questions prior to field testing.

We observed two March 2011 test administrations of the CAHSEE. Although no significant problems were encountered, we raise several concerns about the use of modifications for SWD. We offer a few suggestions for improving district and school site test administration training and for modifying ETS test administration manuals for district and school personnel. Based on the variety of quality assurance situations we encountered, we recommend CDE continue to have HumRRO perform such site visits to supplement the ETS test site audits.

We observed one range-finding session conducted by ETS to select field-tested student responses for use in training readers of CAHSEE essays. No significant problems were encountered.

We analyzed the consistency with which the CAHSEE essays were scored and found results generally comparable to last year. We noted slightly lower levels of scoring consistency for the February 2011 administration, the first very high volume administration of the year. It is likely that new scorers were recruited and trained to handle the extra volume of scoring. ETS may want to review selection, training, qualification, and monitoring procedures to achieve higher levels of consistency with new scorers.

We replicated the equating of the March 2011 CAHSEE test form, using different software and a slightly different calibration sample and obtained the same results as ETS. It is reassuring to know that the equating results are not dependent on the particular software used or the sample being analyzed. Since our equating results validated the current operational procedures, we have no suggestions for changes to the equating procedures.

Test Results (Chapter 3)

CAHSEE test results show significant increases in competency in targeted skills since the implementation of the CAHSEE requirement. As shown in Table 3.9, overall passing rates for seniors have increased steadily from 91.2 percent for the Class of 2006 to over 94.2 percent for this year's Class of 2011. Similarly, overall passing rates for grade ten students taking the CAHSEE for the first time have increased steadily from 64.3 percent for the Class of 2006 (tested in 2004) to 73.8 percent for the Class of 2013 tested this year.

As shown in Table 3.21, passing rates for grade ten students have increased significantly for all demographic groups, including SWD, whose initial passing rates increased from 18.8 percent to 23.1 percent. In addition, passing rates for Hispanic, African-American, and economically disadvantaged students increased more than the overall grade ten passing rate, indicating a modest closing of the achievement gap at grade ten. That said, it should also be noted that passing rates for SWD are still unacceptably low: only about half the special education students who receive regular instruction more than 80 percent of the time pass the CAHSEE in grade ten and passing rates for students who receive regular instruction less frequently are quite a bit lower. Passing rates for English learners are also very low and have increased only modestly since the CAHSEE requirement went into effect. Passing rates for economically disadvantaged and some groups of minority students also continue to be significantly lower than passing rates for white and Asian students.

Another encouraging finding is the considerable number of students who continue to try to pass the CAHSEE after their originally scheduled graduation date. Roughly 25,500 general education students who were first-time seniors in 2010 had not met the CAHSEE requirement by June 2010 (Table 3.31). More than a third of these students took the CAHSEE at least once this year, and more than 2,600 of them completed the requirement in their fifth year of high school. A similar pattern was observed last year, when nearly half of the general education students in the Class of 2009 who had not completed the CAHSEE requirement by the end of their senior year took the CAHSEE in 2010. This year, nearly 2,500 students in the Class of 2009 who had not yet passed the CAHSEE continued to try to pass it, and over 600 of them did.

One new analysis HumRRO conducted last year looked more closely at the 2010–11 testing status of students in the Class of 2011 who had not passed one or both parts of the CAHSEE as grade eleven students, with testing status defined as either "continuing" or "not continuing" to test in grade twelve. The latter group includes transfers out of state or to private schools as well as students who left school altogether.

As might be expected, the percentage of students not continuing to test was higher for those who had passed neither the ELA nor mathematics test through grade eleven (35.5%) than for those who had passed one of the two tests, with 21.5 percent of those who had passed ELA not continuing, and 18.6 percent of those who had passed mathematics not continuing (Table 3.10). The percentage of students who did not continue to take the CAHSEE was generally higher for white students than for other racial/ethnic groups. When testing status was compared to the prior mean CAHSEE score earned by students on the test they had yet to pass, the prior mean was found to be only very slightly higher for students who continued to test compared to the mean for students who did not. This seems to indicate that there is a reason other than prior test performance that may be responsible for students choosing not to continue testing, hence denying themselves the opportunity to be successful on the CAHSEE.

One other significant trend since the implementation of the CAHSEE requirement has been the proportion of students taking more advanced high school mathematics courses. As shown in Table 3.23, the percentage of students taking math courses beyond Algebra I by grade ten has increased from 56 percent for the Class of 2006 to 73 percent for grade ten students in the Class of 2013. All demographic groups showed significant increases in the percentage of students taking more advanced courses, including very significant gains for students in special education, which increased from 19 percent in the Class of 2006, to 42 percent of those in the class of 2013. Here too, however, significant gaps exist. Analyses show that, compared to white and Asian students, smaller percentages of SWD, English learners, economically disadvantaged students, and African American and Hispanic students are taking advanced mathematics courses by grade ten.

Student Questionnaire Responses (Chapter 4)

Students completed a brief questionnaire following each part of the CAHSEE. Over the past seven years student perceptions about the CAHSEE have changed in several positive ways, including changes in test preparation, perception of test importance, coverage of CAHSEE topics in class, and future plans. Analyses of responses for grade ten students, in which all students were required to participate, indicated several interesting trends. Specifically, in 2011 an increased percentage of students reported:

- A teacher spent time in class helping them to prepare for the CAHSEE.
- They used the CAHSEE online prep to prepare for the CAHSEE.
- They will attend a four-year college or university after high school.
- Test items were similar to those that they had seen in class.
- None of the test topics were difficult for them (reported only after ELA).
- They did not have to work any harder to pass the CAHSEE requirement.

A decreased percentage of grade ten students reported:

- The CAHSEE might prevent them from earning a high school diploma

Though students answer the questionnaires before they receive their test scores, our analyses are able to compare responses in light of actual test performance. We compared student responses for those who passed both tests, passed only ELA, passed only mathematics, and passed neither. Overall, in 2011, grade ten students who passed both tests reported the most positive perceptions about the CAHSEE, and those who passed neither test reported the most negative perceptions.

A higher percentage of students who passed both tests were most likely to report that:

- They used released (sample) items to prepare for the CAHSEE.
- They would graduate with the rest of their class or earlier.
- They were confident that they would receive a high school diploma.
- The topics and test questions were familiar and easy.

While the 2011 student questionnaire results for grade ten were generally positive and were fairly consistent with previous years, some differences in responses across key demographic characteristics are important to note. These results indicate schools may need to pay special attention to ensure that all students have the opportunity to learn the content included in the test.

- ***By Ethnicity.*** Black or African American and Hispanic or Latino students were more likely than other races to report that test items were more difficult than those they had seen in class, and they were the least likely to report that they did not have to work harder to meet the CAHSEE requirement.

- ***By Disability and English Learner Status.*** The pattern of student responses for SWD and EL students were similar. SWD and EL students were less likely to be familiar with the CAHSEE topics and test items than the general population. They also reported higher levels of nervousness while taking the CAHSEE than any other group. A lower percentage of SWD and EL students than among the general population reported that they would stay in school and try again if they did not pass the CAHSEE, and fewer of these students planned to attend a four-year college after high school.

- ***By Economically Disadvantaged Status***. In general, ED students were more likely than the general student population to respond that test items and topics were different and more difficult than those they had seen in class. They were also more likely to report nervousness as preventing them from doing as well as they could. Fewer ED students planned to attend a four-year college or university than those who were not ED, and they were less confident that they would receive a high school diploma.

We also used the student questionnaire data to investigate how grade twelve students still taking the CAHSEE in 2011 responded to the questions pertaining to post-graduation plans and content and instruction coverage. To compare perceptions of these students near the end of their education to their perceptions when they were in

grade ten, we analyzed a selection of questionnaire responses from 2011 and from 2009 (when these students first took but did not pass the examination), and we compared the responses of grade twelve students who passed the CAHSEE in 2011 to those who did not.

About one-fourth of the students who did not pass the CAHSEE as grade twelve students were confident that they would receive a high school diploma. Slightly more than half of the students who did not pass the CAHSEE as grade twelve students believed that the CAHSEE would prevent them from earning a high school diploma. About two-thirds of those not passing indicated that they would continue to try to pass the CAHSEE—either by staying in school, taking a community college course, or participating in some other type of program to help them pass the CAHSEE.

Of the grade twelve students who had not yet passed the CAHSEE in 2011, only a small percentage more in 2011 than in 2009 responded that test items and topics were similar to those they had encountered in class. This indicates that some students may not be passing due to a lack of exposure to CAHSEE topics and test items throughout their entire high school career.

Alternative Means for Students with Disabilities (Chapter 5)

To provide complete documentation of our 2010–11 activities, we presented results from our 2010 analyses of the AB 2040 Panel recommendations. The California Department of Education (CDE) has undertaken further steps since that time to develop and pilot test an alternative means. Some of our 2010 findings, though somewhat outdated, are still relevant.

Our findings in 2010 suggested that the Tier I screen would be a feasible process. Further, this process could be automated and performed by CDE rather than requiring school personnel to fill out and judge individual student worksheets, if only Standardized Testing and Reporting (STAR) Program California Standards Test (CST) and California Modified Assessment (CMA) scores are considered. At the time we conducted our study, it was not clear how uniformity could be imposed on the use of community college placement scores as part of the Tier I screen. Such scores are not available for many or most students and even if available, often are not reported until late in their senior year. If reliable information on course grades becomes available through California Longitudinal Pupil Achievement Data System (CALPADS), grades could be included in an automated Tier I screen. Otherwise, if the decision were made to include grades, input at the local level would be required.

We pointed out that to go beyond the exploratory analyses of a possible Tier I screen as reported in our study, a number of key policy decisions would need to be made. Decisions would be needed regarding:

- Comparability; specifically, which CST or CMA scores will be included, and, if grades are also included, which courses should be considered.
- The equivalency of scores on a Tier I worksheet and CAHSEE passing levels.

Responses from school and district special education experts to the questionnaire suggested the Tier II screen might be feasible, but that a test development contractor would be needed to develop more specific criteria for work sample requirements. Depending on what the work sample criteria might be, our study indicated that the time requirements for special education teachers and students might be a considerable burden. We suggested consideration might be given to reducing eligibility for Tier II (e.g., from 20,000 down to 4,000 students) to target teacher time to the most eligible students. Alternatively, we suggested a test development contractor might recommend a reduced number of work samples, even fewer than the "streamlined" option, thus reducing time requirements for collection and scoring of evidence. Responses to the open-ended questions indicated support for an alternative means, but also continuing concerns about the comparability of results across the state if scoring is done at the local level.

After our study, we indicated that, if judged feasible, development of the alternative means should include a pilot test before a system such as the proposed Performance Validation Process became operational. A pilot test was recommended for a number of reasons:

- A pilot test provides an opportunity to collect a variety of actual student work samples to help fine-tune Tier II criteria for the number and types of work samples.
- Testing identifies aspects of operations that are critical to success (e.g., record keeping of checklists, timeline for screening for eligibility, collecting evidence, scoring, etc.).
- A pilot allows smaller scale effort to test out procedures, choose rangefinders, and establish passing criteria for hand-scored student evidence
- Pilot testing provides data that can be extrapolated to better estimate costs and time for full scale implementation.

A further reason we recommended a pilot test was to explore further screening criteria to reduce the burden, on both students and school and district staff, of having to create and evaluate extensive work samples. For example, a minimum grade point average might be used, not as evidence of mastery of the knowledge and skills required by the CAHSEE, but as a criterion for eligibility for the Tier II screen. Similarly, a minimum CAHSEE score (below the passing level) might be set as a criterion for eligibility for Tier II screening. A pilot test was conducted in 2011.

In prior evaluation reports, HumRRO has recommended consideration of alternative criteria for SWD who have difficulty demonstrating competency through standardized tests. In 2010, consideration of evidence from work samples collected over a period of weeks or months rather than just a few hours appeared to be a feasible alternative; however, additional work was needed to establish the comparability and

equivalency of this type of evidence to the current CAHSEE requirement, to ensure uniformity throughout the state, and to keep the generation and evaluation of work samples from becoming prohibitively expensive.

Trends in Educational Achievement and Persistence (Chapter 6)

Data sources outside the CAHSEE program provide indications of the state of education in California. The Class of 2006 was the first cohort required to pass both parts of the CAHSEE in order to receive a high school diploma, so trends from 2006 through 2010 are of particular import. Results for the Class of 2011 were not available in time for this report.

One important indicator of the impact of the CAHSEE requirement is whether the proportion of students who leave high school without a diploma changes in some way. This seemingly straightforward question demands a multifaceted answer. In 2007, California made important improvements in its student-level data systems, facilitating more accurate dropout tallies. Therefore we report here trends from 2007 through 2010; the reader is referred to previous reports in this series for earlier trends.

First, we note that the 2007 dropout rates were substantially larger than previous rates but we cannot disentangle how much of this change is a real increase in dropouts versus more accurate reporting. We found that official dropout rate calculations indicate that both single-year and four-year dropout rates decreased between 2007 and 2010, overall and for all ethnic categories. Both dropout metrics revealed that African American students drop out at a substantially higher rate than every other group, including groups such as economically disadvantaged, Limited English Proficient (LEP) and special education students. In addition, American Indian/Alaskan Native, Hispanic, Pacific Islander, economically disadvantaged, LEP, and special education students show notably higher dropout rates than white, Filipino, and Asian students. As reported previously, we found that the bulk of dropouts occur in grade twelve.

As a second look at students leaving high school prematurely, we investigated enrollment trends by grade and over time. While this measure does not directly account for mobility in and out of the state, substantial changes in enrollment declines can be interpreted as an indirect indicator of dropout rates. Enrollment patterns indicate that the drop-off rates of sophomores, juniors and seniors declined in fall 2010; in fact the number of grade twelve students in the Class of 2011 exceeded the number of juniors in that same class. This grade twelve phenomenon may be attenuated by the continuation of students in a second senior year.

High school graduation rates can also be measured in multiple ways. We examined two measures: the graduation rate as a percentage of grade nine enrollment four years earlier, and the graduation rate required by the Elementary and Secondary Education Act (ESEA), which is based upon the number of graduates in a given year and the number of dropouts in the relevant grade nine through grade twelve years. We found that the graduation rate as a percentage of grade nine students increased each year from 2007 through 2010 while the ESEA rate declined until 2010, then recovered

somewhat. Nearly three-quarters (74.3 percent) of students who entered grade nine in the fall of 2006 graduated four years later.

Review of disaggregated grade-nine-to-graduation rates revealed that graduation rates for most racial/ethnic groups increased from 2007 to 2010; the only exception was the group with the highest graduation rate, Asian students. Graduation rates vary widely, from 59.0 percent among African American students in 2010 to 89.4 percent for Asian students. We note that the CDE added disaggregated graduation rates for graduating cohorts in 2010 for the first time, making this important educational indicator more transparent.

We also looked at the percentage of students by demographic group who are not accounted for in either the grade-nine-to-graduation or the four-year dropout rates. We found that more students were accounted for in 2010 than in 2008. However, large differences remain across racial/ethnic groups, with a high of 10.7 percent of African American students not included in either the graduation or dropout rates. The recently introduced cohort analyses provide information heretofore unavailable, such as the number of cohort members still enrolled after their original class graduated, the number of cohort members who completed the GED, and the number of special education completers. As this information is tallied over time, the accumulated data will facilitate important improvements in the evaluation, as well as transparency to interested parties.

Participation in the SAT College entrance examination, as well as the percentage of students reaching a score of 1500 or higher, continued a three-year decline in the 2009–10 school year, while participation and performance on the ACT increased for the fifth year in a row.

In short, we found that graduation rate trends varied depending on the metric used, either rising slightly or declining less quickly in 2010 relative to 2007. While rates overall are worrisome—just under three-quarters of grade nine students graduated on time in 2010—rates for specific demographic groups are substantially lower. Dropout rates decreased for the Class of 2010 compared with the Class of 2007. The dropout rates for African American students are nearly three times the rates for white students, and rates for American Indian, Hispanic, and English learners are more than twice the rate for white students, for example.

Over one-third of the graduates in the Class of 2010 completed the A–G courses required by the University of California and California State University systems. Rates varied widely among racial/ethnic groups. Participation in Advanced Placement examinations increased in 2010, as did measures of success on the AP. Nearly a third of the 2010 graduating class (32 percent) took at least one AP examination and over one-fifth (21 percent) achieved a score of 3 or better on at least one AP examination.

Recommendations

As in past years, we offer a number of recommendations for improving the CAHSEE and its use. For this Biennial Report, we have three general recommendations for consideration by the Legislature and the governor as well as by CDE and SBE. We also offer a number of more specific suggestions targeted primarily to CDE and the CAHSEE test development contractor.

Based on our analyses over the past several years, we conclude that the CAHSEE is a reasonably accurate measure of competency in the required ELA and mathematics content and that it has had a positive, albeit moderate, influence on increasing student competencies in these subjects. Six high school classes (2006 through 2011) have been required to demonstrate competency in the targeted content by passing the CAHSEE ELA and mathematics tests and both initial and grade twelve passing rates have increased. When the CAHSEE was first introduced, the SBE indicated an intention of reviewing and strengthening the required levels of competency as standards-based instruction improved. Our first recommendation suggests the need to review the CAHSEE content requirements in light of six years of experience in helping students to meet them.

General Recommendation 1: *The SBE and the CDE should work collaboratively to review the content and rigor of the CAHSEE requirement and propose alternatives for consideration by the Legislature and the governor.*

It has been more than ten years since the content requirements for the CAHSEE were first adopted by the SBE. Over this time only one minor change was introduced, reducing slightly the scope of the mathematics test. Since then, instruction has improved, initial passing rates for grade ten students have increased, and the proportion of students passing by the end of grade twelve has increased steadily. It is reasonable to ask whether expectations for high school graduates should now be increased.

California recently adopted the Common Core State Standards (CCSS) and is participating as a governing state in the SMARTER Balanced Assessment Consortium (SBAC). By the 2014–15 school year, a new set of assessments measuring competency in the CCSS will be in place. The CCSS were developed to build student knowledge and skill toward a rigorous conception of college and career readiness by the end of high school. It is reasonable to ask whether expectations for high school graduation should be aligned to the new CCSS.

Many states have moved away from a single graduation test to a series of end-of-course tests (Zabala, Minnici, McMurrer & Briggs, 2008). In addition to demonstrating competency in core ELA and mathematics courses, students are often given options for demonstrating competencies in additional areas of study, such as science, social studies, foreign language, or even the arts. It is reasonable to ask whether competencies in subjects beyond ELA and mathematics should be required and

whether students should be allowed to demonstrate these competencies whenever they complete the related course. It may also be instructive to review the experience of other states in introducing high school graduation tests and to review their plans for further changes as most of them transition to one of the common assessments.

As part of the current CAHSEE evaluation contract, HumRRO is engaged in an effort to relate scores on each of the CAHSEE tests to post-high school outcomes, including college attendance and graduation. Initial results will be reported in 2012. In the spirit of assessing college and career readiness, this information would be helpful to a new panel appointed by SBE and CDE to consider recommendations for revision to the CAHSEE requirement.

The CAHSEE cannot be changed overnight. A High School Exit Examination committee met for over a year to develop initial recommendations for CAHSEE content. If changes in graduation requirements are identified, it is important to provide sufficient lead time in implementing these changes to allow adjustment of both the high school and earlier curriculum to make sure students are prepared to meet any new requirements. As required by AB 250 (Curriculum Support and Reform Act of 2011), instruction will be revised at all grade levels over the next few years to align with new content standards based on the CCSS. Now would be an appropriate time to also introduce curricular changes corresponding to any new CAHSEE requirements. Sufficient lead time is also needed for revisions to the CAHSEE or other assessments to be sure that test quality is not compromised.

Our second recommendation concerns the desirability of preventive efforts to ensure that more students are successful in their first attempt to pass the CAHSEE. Significant effort and funding has been put into helping students who do not initially pass the CAHSEE. The idea of the second recommendation is that it may be more cost-effective and certainly better for the students to provide help before grade ten. Our second recommendation is:

> ***General Recommendation 2***: *Interventions should be targeted at earlier grades, using test scores to identify students who have fallen behind their classmates and are at risk of failing to meet the CAHSEE requirement.*

In our 2009 evaluation report (Becker and Watters, 2009), we showed that virtually all students who score at or above the mean on the grade seven ELA and mathematics CSTs were able to pass the CAHSEE on their first attempt. At the same time, students who scored well below the mean in grade seven were at significant risk of not passing the CAHSEE in grade ten. Thus, it is clearly possible to identify students who need additional help in preparing to pass the CAHSEE while they are in middle school and reasonable to ask whether middle school interventions could significantly reduce the percentage of students who struggle to pass the CAHSEE. Another key finding was that a high proportion of the students who score low on grade seven assessments will need additional

help to meet the CAHSEE requirement by the end of grade twelve (Becker, Wise & Watters, 2010a).

Over the next several years, the assessments used for accountability at all grades will be realigned to the CCSS. It will be important to develop linkages between middle school assessment results, college and career readiness at the end of high school, and the knowledge and skill required by the CAHSEE or its successor.

Beyond simply identifying students who may need more help during middle school, it is important to study the effectiveness of various ways of providing that help. With recent improvements to longitudinal student data bases, it should be possible to identify middle schools that are particularly effective in helping struggling students catch up with their classmates. Studying the programs used in these exemplary schools should provide information that can be used to improve effectiveness in other schools.

Our final general recommendation concerns the need to clarify expectations for students with disabilities (SWD). Policy concerning graduation requirements for SWD has been inconsistent, with two years of exemption, two years of being required to pass the CAHSEE, and now another three years of exemption for these students. This leads us to suggest:

General Recommendation 3: *California should set consistent expectations for students with disabilities.*

The CAHSEE requirement was appropriately deferred for two years for all students, from 2004 to 2006, to allow time for instruction at earlier grades to prepare students to take and pass Algebra I and also to prepare students to meet high school ELA expectations. The requirement was deferred two additional years for SWD, from 2006 to 2008, while a law suit on behalf of these students was resolved. This second delay provided additional time to adjust individual education programs (IEPs) at earlier grades to prepare students for the high school requirements. For the high school classes of 2008 and 2009, SWD had to meet the CAHSEE requirement to receive a diploma, although waivers were granted if students needed a testing modification to receive a passing score. During the period from 2004 through 2009 initial passing rates for SWD increased, reflecting more rigorous and effective instruction for SWD.

Under current law, the CAHSEE requirement has once again been deferred for SWD, leaving teachers, parents, and the students themselves uncertain as to what is expected of them. Issues leading to the current exemption need to be resolved so that efforts to improve instruction for SWD will resume in full. Findings from CDE's study of the second tier (evidence collection and scoring) of an alternative means process for eligible SWD indicate that additional refinement is needed before the procedures can be fully implemented (ETS CAHSEE Alternative Means Pilot Study, 2011). Until such time as an alternative means is in place, expectations for SWD are still unresolved, and this

uncertainty impacts SWD educational outcomes and future success. Resolution of these issues will require agreement on appropriate alternative ways that SWD can demonstrate required knowledge and skills, and might include identifying appropriate goals for students who are not able to participate in regular academic instruction.

Several more specific recommendations for improving the CAHSEE were noted during our review of CAHSEE processes. The first aims to improve the provision of appropriate testing variations for SWD.

Specific Recommendation 1: *California should ensure that LEAs and school site test administration personnel are trained to deliver appropriate accommodations and modifications to students with disabilities.*

Our limited observations of test administration identified weaknesses in the process for identifying and delivering appropriate testing accommodations and modifications to SWD, for example with respect to the "test questions read aloud" sessions. CDE should review the training materials provided through ETS to LEAs and school site personnel and ensure the IEP decision-making team is engaged in the test preparation process for SWD—the subgroup that has demonstrated the greatest difficulty meeting the CAHSEE requirement. CDE might also ask its test contractor to suggest approaches to ongoing monitoring of the effectiveness of test administration training at all levels (i.e., district coordinator, test site coordinator, test examiner, and test proctor).

Our next specific recommendation concerns the statewide data systems that support analysis and interpretation of CAHSEE results.

Specific Recommendation 2: *California should ensure that statewide student data systems are as accurate and up-to-date as possible.*

CDE is responsible for an extremely large and geographically dispersed educational system. With such size and diversity come many challenges, and an effective data system is crucial to understanding, monitoring, and improving the effectiveness of our educational systems. The California Longitudinal Pupil Achievement Data System (CALPADS) includes a comprehensive design for the collection and integration of student data. CALPADS is a very significant step in providing data for research and policy analyses that can lead to significant improvements in curriculum and instruction. Budget limitations and other constraints have slowed the full implementation of this system, including key quality assurance components. As in prior years, we found, for example, the exit information collected on high school students was not consistent with information from the CAHSEE test records. We were thus not able to identify unambiguously students who left high school having completed all requirements except the CAHSEE. Further work on training and monitoring those responsible for providing data to CALPADS, as well as additional consistency checks to detect and correct submission errors, might be useful at this time.

The following two specific recommendations address the outcomes of our alignment reviews of CAHSEE test forms with respect to content and accessibility.

Specific Recommendation 3: *California should work with its test administration vendor to achieve improved content alignment of items assessing the content standards in the strands of Mathematical Reasoning and Reading and Comprehension.*

While the overall content alignment of the CAHSEE in both mathematics and ELA is quite positive, we believe alignment for these two strands can be strengthened. For both the Mathematical Reasoning and Reading and Comprehension strands, the issue is that test items may be assessing students at a lower level of rigor than called for by the content standards. It may be that, when California responds to our first general recommendation, the content standards for these strands will be changed or clarified, but until that time greater attention is needed to verify the content of items targeted to these areas.

Specific Recommendation 4: *California should examine the visual presentation of the CAHSEE to achieve closer alignment with the principles of universal design for assessment.*

Small changes in the visual presentation of items, which should not impact the validity of the items' ability to measure certain California state standards, are advised so as to improve the accessibility of the test to SWD. There may be cost implications to making such changes, so further study of particular populations' visual presentation needs may be warranted. As new versions of tests emerge, CDE should direct test designers to attend to visual and sensitivity aspects so as to help create assessments that closely align with universal design principles.

Specific Recommendation 5: *California education leaders and educators should encourage students who do not pass in four years to continue to work to achieve competency in the content assessed by the CAHSEE, and work to improve effectiveness of fifth-year programs.*

Research shows that attaining a high school diploma is associated with positive life outcomes including higher income and subsequent achievements such as completing military contracts. We have seen evidence that some struggling students persist in seeking a high school diploma after their graduating class. We recommend that California educators communicate the importance of a high school diploma to students and educate them on the opportunities to develop competency in the content assessed by the CAHSEE after the regular high school years. At the same time, the effectiveness of fifth-year programs should be monitored and improved upon. A study of effective schools might yield best practices that could be shared with the wider education community.

Another recommendation concerns identification and dissemination of programs that are effective in helping students meet the content standard of academic achievement required to passthe CAHSEE, particularly students in groups that currently have the most difficulty in meeting the CAHSEE requirement.

Specific Recommendation 6: *Study schools that are doing a better job in helping all and particular groups of students to meet the CAHSEE requirement. Identify approaches and programs that might be effectively adopted in other schools.*

We see variations across schools and districts in CAHSEE pass rates and in gaps in passing rates for racial and ethnic minority groups, economically disadvantaged students, English learners, and SWD. A careful study of higher performing schools could identify programs that are effective in helping students who have fallen behind in academic achievement to catch up and meet the CAHSEE requirement by the end of high school. Programs that are effective for particular groups, such as helping English learners become more proficient speakers, readers, and writers or providing students with specific disabilities better access to general education instruction are also needed to reduce gaps in passing rates for these groups. Detailed study is needed to determine what makes these programs successful and how they might be adopted in other districts and schools.

We also note an increasing concern that the state's dire economic situation may make continued improvement in CAHSEE results difficult and might even make it difficult to sustain improvements already achieved. This leads to our next recommendation.

Specific Recommendation 7: *California should study the impact of fiscal constraints on systems to help students master the skills required by the CAHSEE.*

California, like many states, has been struggling financially, resulting in cutbacks, furloughs, and an eye toward cost savings. The effects of reductions in and reallocation of funding may have implications for student success in the future, including loss of effective teachers and increases in class size. In particular, reductions in remediation offerings could reverse progress made in recent years. We recommend that programmatic changes resulting from fiscal constraints be carefully monitored, evaluated, and adjustments made if necessary.

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Appendix A

CAHSEE Evaluation Recommendations (2000–11 by Category)

Organization of Recommendations

Table A.1 presents a summary of recommendation categories and topics from HumRRO's eleven years of independent evaluation of the CAHSEE. Subsequent tables present, for each general category, specific recommendation topics and the corresponding text and sources of each recommendation. The text of recommendations is taken directly from the original reports.

Table A.1. Recommendation Categories and Topics from HumRRO's Independent Evaluation of the CAHSEE (2000–11)

General Category	Specific Recommendation Topic
Recommendations about the CAHSEE	Initial Implementation
	Clarification of the CAHSEE Requirements
	Setting Passing Levels
	Revising Test Content Specifications
	Improving Test Quality
	Test Administration
Recommendations to Help Students Pass the CAHSEE	Early Identification of At-Risk Students
	Improving Preparation for the CAHSEE
	Improving Remedial Programs for Students Who Do Not Pass
	Alternative Means of Meeting the CAHSEE Requirement
Recommendations for Students with Disabilities and English Learners	Testing Accommodations
	Considerations for Students with Disabilities
	Considerations for English Learners
Other Recommendations	Student Data Systems
	Technical Oversight

Table A.2. Recommendations About the CAHSEE from HumRRO's Independent Evaluation of the CAHSEE (2000–11)

Topic	Text of Recommendations	Sources[18]
Initial Implementation	• The State Board of Education, Legislature, and Governor should give serious consideration to postponing full implementation of the CAHSEE requirement by 1 or 2 years.	2000 Annual Report, 2000 Supplemental Report
	• Stay the course. The legislature and Board should continue to require students in the Class of 2004 to pass the exam, but monitor schools' progress in helping most or all of their students to master the required standards.	2001 Annual Report, 2002 Biennial Report, General Rec. 1
	• For future classes, testing should be delayed until the 10th grade	2002 Biennial Report, Specific Rec. 2
	• Restarting the exam with the Class of 2006 provides some opportunities for improvement; however, careful consideration should be given to any changes that are implemented.	2003 Annual Report, 2004 Biennial Report, Rec. 1
	• Keep the CAHSEE requirement in place for the Class of 2006 and beyond.	2005 Annual Report, 2006 Biennial Report, General Rec. 1
Clarification of the CAHSEE Requirements	• The Department and the Board need to work together to clarify the relationships and differences among the different high school testing programs, most notably the CAHSEE, the standards-based STAR assessment, and the Golden State Examinations.	2000 Annual Report, Specific Rec. 1
	• The Department and Board should establish, expand, or accelerate processes for communicating with local districts about the CAHSEE and supporting their preparation for its implementation.	2000 Annual Report, Specific Rec. 2
	• The legislature should specify in more detail how students in special circumstances will be treated by the CAHSEE requirements.	2001 Annual Report, 2002 Biennial Report, Specific Rec. 6
	• The CAHSEE Web site includes a wealth of useful information about the CAHSEE that teachers should find useful. CDE should consider ways to increase teacher familiarity with and use of the CAHSEE Web site.	2006 Annual Report, Specific Rec. 2

[18] Copies of HumRRO's annual and biennial evaluation reports may be found on the CDE CAHSEE Independent Evaluation Reports Web page at http://www.cde.ca.gov/ta/tg/hs/evaluations.asp

Table A.2 (continued)

Topic	Text of Recommendations	Sources
Setting Passing Levels	• The Board should adopt a clear statement of its intentions in setting CAHSEE content and performance standards. This statement should describe the extent to which these standards are targeted to ensure minimum achievement relative to current levels or to significantly advance overall expectations for student achievement.	2000 Supplemental Report, Rec. 4
	• The Board should exhibit moderation in selecting content standards and setting performance standards for the initial implementation of HSEE. Standards should be subsequently expanded or increased based on evidence of improved instruction.	2000 Supplemental Report, Rec. 5
	• Members of the CAHSEE Panel and its Technical Advisory Committee should participate in developing recommendations for minimum performance standards.	2000 Supplemental Report, Rec. 6
	• The score scale needs to be changed for students scoring below 300 (chance levels). A short-term solution is to simply recode scores below 300 to 299. Teachers, students, and parents need to be cautioned against interpreting differences below the 300 level.	2002 Annual Report, Specific Rec. 1
Revising Test Content Specifications	• Data on success in college and other endeavors for students who pass the CAHSEE will be needed soon to determine whether the CAHSEE requirements are sufficiently rigorous.	2006 Annual Report, General Rec. 6
	• For students who do graduate, it would be useful to link their high school test scores to information on community college, state college, and university experiences.	2007 Annual Report, Rec. 2
	• The SBE should initiate a new review of the CAHSEE content requirements. The Board should allow at least 3 years for implementation of changes to the CAHSEE test specifications, including development and field testing of new questions and test forms based on the revised specifications.	2008 Annual Report, 2009 Annual Report, 2010 Biennial Report Rec. 8
	• Collect post-high school outcome information for students who have taken the CAHSEE and use this information in reviewing the content and rigor of the CAHSEE requirements.	2010 Annual Report, Rec. 4
	• The State Board of Education and the California Department of Education should review the content and rigor of the CAHSEE requirement and propose alternatives for consideration by the Legislature and the Governor.	2011 Annual Report, General Rec. 1

Table A.2 (continued)

Topic	Text of Recommendations	Sources
Improving Test Quality	• ETS should follow up on (a) specific test question issues identified in our item review workshops and (b) specific suggestions for improving their new scoring process from our review of their current online training.	2002 Annual Report Specific Rec. 4
	• A number of suggestions for improving specific test questions, particularly with respect to making them accessible to all students, were offered based on the item review. These might provide useful insights as the test development contractor continues to improve and enhance its item development and review procedures.	2005 Annual Report, Specific Rec. 1
	• CDE and ETS should seek ways to improve scoring consistency for the CAHSEE essays during high volume administrations.	2006 Annual Report, Specific Rec. 1
	• California should work with its test administration vendor to achieve improved content alignment of items assessing the content standards in the strands of Mathematical Reasoning and Reading and Comprehension	2011 Annual Report, Specific Rec. 3
	• California should examine the visual presentation of the CAHSEE to achieve closer alignment with the principles of universal design for assessment.	2011 Annual Report, Specific Rec. 4
Test Administration	• More extensive monitoring of test administration and a system for identifying and resolving issues is needed.	2001 Annual Report, 2002 Biennial Report, Specific Rec. 4
	• The CDE should work with its CAHSEE contractor to improve the system used by districts for ordering regular and special needs versions of the CAHSEE.	2010 Annual Report, Rec. 2
	• California should ensure that local educational agencies (LEAs) and school site test administration personnel are trained to deliver appropriate accommodations and modifications to students with disabilities.	2011 Annual Report, Specific Rec. 1

Table A.3. Recommendations to Help Students Pass the CAHSEE, from HumRRO's Independent Evaluation of the CAHSEE (2000–11)

Topic	Text of Recommendations	Sources
Early Identification of At-Risk Students	• For future classes, testing should be delayed until the 10th grade. Many students do not receive instruction in important content standards until the 10th grade. Other options should be available for assessing the readiness of 9th graders to pass this exam.	2001 Annual Report Specific Rec. 2
	• A practice test of released CAHSEE items should be constructed and given to districts and schools to use with 9th graders to identify students at risk of failing the CAHSEE.	2001 Annual Report, 2002 Biennial Report, Specific Rec. 3
	• Now that statewide student identifiers are generally in use, CDE should analyze student progress at earlier grades as measured by CSTs and, for English Learners, the CELDT to see where and when students begin to get off track.	2007 Annual Report, 2008 Biennial Report, Rec. 4
	• New interventions should be targeted at earlier grades, using test scores to identify students who have fallen behind their classmates and are at risk of failing to meet the CAHSEE requirement.	2009 Annual Report, 2010 Biennial Report, 2010 Annual Report, Rec. 2
Improving Preparation for the CAHSEE	• Schools need to focus attention on effective ways of helping students master the required skills in mathematics. CDE might consider a "what works" effort with respect to remedial programs, and disseminating information about effective programs and practices.	2002 Annual Report, General Rec. 1
	• The CDE and the SBE should continue to monitor and encourage efforts by districts and schools to implement effective standards-based instruction.	2003 Annual Report, 2004 Biennial Report, Rec. 2
	• Professional development for teachers is a significant opportunity for improvement.	2003 Annual Report, 2004 Biennial Report, Rec. 3
	• Continue efforts to help students prepare for and take more challenging courses.	2004 Annual Report, General Rec. 2
	• Research is needed on factors that lead to lower CAHSEE passing rates in schools with higher concentrations of at-risk students. Programs in schools with high concentrations of at-risk students who are successful in passing the CAHSEE should be identified and information about these programs should be disseminated widely.	2006 Annual Report, General Rec. 5
	• Reasons for low performance in schools with higher densities of minorities and low-income students should be studied to identify possible remedies.	2007 Annual Report, 2008 Biennial Report, Rec. 3
	• California should explore options for supporting and improving professional development programs for high school teachers.	2007 Annual Report, 2008 Biennial Report, Rec. 5

Table A.3 (continued).

Topic	Text of Recommendations	Sources
Improving Preparation for the CAHSEE (continued)	• In these tight financial times, districts may need particular help and direction to attract and retain teachers who are experienced and well qualified in the subjects that they teach. District and school efforts to increase coordination across grade levels and between general and special instructional programs should be encouraged and supported	2009 Annual Report, 2010 Biennial Report, Rec. 3
	• Study schools that are doing a better job in helping all and particular groups of students to meet the CAHSEE requirement. Identify approaches and programs that might be effectively adopted in other schools.	2010 Annual Report, Rec. 7
	• California should study the impact of fiscal constraints on systems to help students master the skills required by the CAHSEE.	2010 Annual Report, Rec. 8
Improving Remedial Programs for Students Who Do Not Pass	• .Encourage efforts to identify remedial programs that work and disseminate information about these programs to all schools.	2004 Annual Report, General Rec. 3
	• Identify specific options for students who are not able to satisfy the CAHSEE requirement and implement them by June 2006.	2005 Annual Report, 2006 Biennial Report, Rec. 2
	• Collect data from districts on students who are not able to satisfy the CAHSEE requirement by June 2006 and use this information to further refine options for students having difficulty mastering the skills assessed by the CAHSEE.	2005 Annual Report, 2006 Biennial Report, Rec. 4
	• CDE worked to publicize options for students who do not complete the CAHSEE requirement in time to graduate with their class. Now data are needed on how many students take advantage of the various programs and on the effectiveness of each program in helping students to learn essential skills and earn their diploma.	2006 Annual Report, General Rec. 1
	• In addition to continued efforts to help seniors who have not yet passed the CAHSEE, work is needed to improve programs for juniors who did not pass in the 10th grade and, even more importantly, to improve programs to prepare students to be ready to pass on their first try as 10th graders.	2006 Annual Report, General Rec. 2
	• Undertake further study to find ways to increase graduation rates for low-income and minority students.	2008 Annual Report, Rec. 4

Table A.3 (continued)

Topic	Text of Recommendations	Sources
Improving Remedial Programs for Students Who Do Not Pass (continued)	• California should seek ways to encourage students who do not pass in 4 years to continue their studies for 1 or more additional years. The paths of students who do continue should be studied to identify programs that help them succeed.	2008 Annual Report, 2009 Annual Report, 2010 Biennial Report, Rec. 1
	• California schools and districts should find ways to increase graduation rates for low-income and minority students.	2009 Annual Report, 2010 Biennial Report, Rec. 7
	• California education leaders and educators should encourage students who do not pass in four years to continue to master CAHSEE skills and work to improve effectiveness of fifth-year programs.	2010 Annual Report, Rec. 5
Alternative Means of Meeting the CAHSEE Requirements	• The legislature and Board should continue to consider options for students with disabilities and English learners.	2001 Annual Report, 2002 Biennial Report, General Rec. 2
	• State policymakers need to engage in a continued discussion about reasonable options for students with disabilities who may not ever be likely to pass the test.	2002 Annual Report, General Rec. 2
	• Further consideration of the CAHSEE requirements for special education students is needed, in light of the low passing rates for this group.	2003 Annual Report, 2004 Biennial Report, 2004 Annual Report, Rec. 4
	• Continue to explore options for students receiving special education services.	2004 Annual Report, General Rec. 4
	• California should continue to explore alternate routes to demonstrating proficiency. Programs that consider grades and other factors besides test scores, introduced in Massachusetts and Washington, provide examples for consideration.	2007 Annual Report, 2008 Biennial Report, Rec. 7
	• The state and districts need to support additional study of non-academic factors that may limit some student's ability to meet the CAHSEE requirement. Procedures that are effective in overcoming psychological barriers should be identified and disseminated.	2009 Annual Report, 2010 Biennial Report, Rec. 6
	• A pilot study is needed to try out specific criteria for meeting the CAHSEE requirement using an approach similar to that recommended by the AB 2040 Panel. The study should address the feasibility of collecting and scoring the required work samples. The study should also explore ways to ensure uniform application of criteria for demonstrating equivalent mastery of the knowledge and skills required for passing the CAHSEE.	2010 Annual Report, Rec. 1

Table A.4. Recommendations for Students With Disabilities and English Learners, from HumRRO's Independent Evaluation of the CAHSEE (2000–11)

Topic	Text of Recommendations	Sources
Testing Accommodations	• The Department and the development contractor need to gather, review, and discuss more information on the appropriateness and effectiveness of testing accommodations for special needs students and English-language learners.	2000 Annual Report, Specific Rec. 3
	• The CDE should work with schools to collect more information on documentation of student needs for accommodations or modifications	2002 Annual Report, Specific Rec. 3
	• Statistical review of test items should include checks for differential item functioning for students with disabilities.	2005 Annual Report, Specific Rec. 2
	• Information on the curriculum and services received by students in special education programs was quite useful. CDE may want to link this information to CAHSEE results on a more regular basis.	2005 Annual Report, Specific Rec. 3
Considerations for Students with Disabilities	• Districts and the state should provide support and guidance to IEP teams in making key decisions about whether students in special education programs can meaningfully participate in the regular curriculum. Students who can participate in the regular high school curriculum should be held to the same high expectations as the rest of their classmates. At the same time, districts and the state should identify alternative goals and ways of recognizing the accomplishment of these goals for students who are not able to participate meaningfully in the regular curriculum.	2006 Annual Report, General Rec. 4
	• Districts, schools, and IEP teams should make all possible efforts to provide access to the general curriculum to students with disabilities so that these students can obtain the skills needed to pass the CAHSEE.	2007 Annual Report, 2008 Biennial Report, Rec. 6
	• Districts, schools, and IEP teams should make all possible efforts to provide access to the general curriculum to students with disabilities so that these students can obtain the skills needed to pass the CAHSEE. The SBE should establish alternative goals and ways of recognizing the accomplishment of students who cannot meaningfully participate in the general curriculum.	2008 Annual Report, Rec. 2
	• Districts, schools, and IEP teams should make all possible efforts to provide access to the general curriculum to students with disabilities so that these students can obtain the skills needed to pass the CAHSEE.	2009 Annual Report, 2010 Biennial Report, Rec. 4
	• California should set consistent expectations for students with disabilities.	2011 Annual Report, General Rec. 2

Table A.4 (continued)

Topic	Text of Recommendations	Sources
Considerations for English Learners	• Research is needed on why many students remain classified as English learners for long periods of time. CDE should gather lessons from districts and schools that have been more successful in helping students achieve proficiency in English and make this information available to those with lower rates of success.	2006 Annual Report, General Rec. 3
	• Curricular goals, possibly including a fifth year of high school, should be studied for English learners who enter U.S. schools during high school. California schools should also find further ways to help English learners who enter U.S. schools prior to high school but continue to have difficulty learning English.	2008 Annual Report, 2009 Annual Report, 2010 Biennial Report Rec. 5

Table A.5. Other Recommendations, from HumRRO's Independent Evaluation of the CAHSEE (2000–11)

Topic	Text of Recommendations	Sources
Student Data Systems	• The state needs a more comprehensive information system that will allow it to monitor individual student progress.	2001 Annual Report, 2002 Biennial Report, Specific Rec. 5
	• Districts and schools should be asked to supply more complete information on who has taken, is taking, and still needs to take the CAHSEE.	2002 Annual Report, Specific Rec. 2
	• Work to implement a system of student identifiers and student records that provide information, including (a) CAHSEE passing status, (b) students on track to graduate with their class, (c) students who have been retained, and (d) students who have dropped out.	2004 Annual Report, Specific Rec. 1
	• Accelerate efforts to implement a statewide system of student identifiers and develop and maintain a database with information on students who have and have not satisfied the CAHSEE requirements.	2005 Annual Report, 2006 Biennial Report, General Rec. 3
	• Conduct a field trial or demonstration project with a small number of districts that already use student identification codes to model the design and use of detailed student data.	2005 Annual Report, Specific Rec. 4
	• CDE should work with districts to track students who do not graduate on time.	2007 Annual Report, 2008 Biennial Report, Rec. 1
	• California should ensure that statewide student data systems are as accurate and up-to-date as possible.	2010 Annual Report, 2011 Annual Report, Rec. 3
Technical Oversight	• CDE should move swiftly to establish an independent Technical Issues Committee (TIC) to recommend approval or changes to the HSEE development contractor's plans for item screening, form assembly, form equating, and scoring and reporting.	2000 Supplemental Evaluation Report, Rec. 7
	• More technical oversight is needed. Because of the rapid pace of implementation, a number of decisions have been made without technical review of the consequences. Examples are the decision to shorten the tests without public consideration of consequences for test score accuracy and the lack of review of plans for equating scores from the different test forms used in March and May.	2001 Annual Report, 2002 Biennial Report, Specific Rec. 1