

This document contains *Chapter 7: Summary of Conclusions and Recommendations*, from the Third Biennial Report, California High School Exit Examination (CAHSEE) published on February 1, 2006, by the California Department of Education. The entire report is available at <http://www.cde.ca.gov/ta/tg/hs/thirdbiennial.asp>.

Chapter 7: Summary of Conclusions and Recommendations

Introduction

A wide range of information has been gathered, analyzed, and reported during the CAHSEE evaluation. This information has implications for most aspects of the CAHSEE from the development of the test itself to how it is used and its impact on specific groups of students. In this final chapter, we provide a summary of findings from evaluation activities conducted since the February 2004 Biennial Report. As in prior reports, we go on to offer both a number of general policy recommendations and specific technical recommendations for further improving the CAHSEE and its use.

Summary of Findings

Chapter 2: Review of the Test

HumRRO conducted reviews of CAHSEE test questions in 2000, before the first form was developed, and again in 2002 after the first administration of CAHSEE to 10th graders. We conducted a third review of CAHSEE test questions during 2005. The review included assessment of (a) the alignment of an intact operational test to the content standards using Webb's alignment method and (b) how well the test questions conform to emerging principles of universal test design.

This year's review was prompted by two important policy questions. First, we asked whether revisions to the test specifications in 2004, when the CAHSEE was restarted for the Class of 2006, resulted in an accurate assessment of students' knowledge. The revised math test was less difficult than prior CAHSEE forms. It was important to know whether the new forms covered the math standards in sufficient depth to provide valid information on mastery of the CAHSEE content standards. Second, we asked if there were ways of removing unintended barriers for English learners and students with disabilities, whose scores have been significantly lower than for other groups. We examined universal test design principles and research to provide focus on ways of creating test questions that are as accessible as possible for these groups of students.

The following are key findings with respect to alignment. Reviewers had questions or comments on a number of specific questions; these comments were provided to CDE and the test development company for their consideration and review.

Key Findings: ELA

1. Educators had some issues with the depth of knowledge of questions on the ELA test although the overall results showed acceptable alignment.
2. Reviewers wanted to use the essay responses to measure additional or different content standards beyond those in Writing Applications.

Key Findings: Math

1. The depth of knowledge of the math questions matched the test content standards well; the test was not inappropriately easy or difficult.
2. Reviewers had difficulty matching test questions to the mathematical reasoning standards, which was not surprising since all of these questions also assessed content standards in other areas.

In reviewing the appropriateness of the CAHSEE questions for English learners and students receiving special education services, reviewers again had some questions and comments about specific questions. These were also forwarded to CDE and the test developers for their consideration and review. Overall, the current process was judged to yield acceptable results. Several recommendations for continued improvement of the CAHSEE item development process with respect to principles of universal test design include the following:

1. Ensure the CAHSEE is designed to optimize access by all groups of students.
2. Extend item-level analyses to include indicators of specific problems for English learners or students receiving special education services.
3. Make changes to future CAHSEE tests at the whole-test level first.
4. Revisit regularly issues related to alignment between the tests and the California Content Standards.

Chapter 3: Results from Test Administrations through Spring 2005

Results from the five CAHSEE administrations during the 2004–05 school year were analyzed separately for 10th grade students in the high school Class of 2007 and 11th grade students in the high school Class of 2006. The results for 10th graders in the Class of 2007 were very similar to last year's results for 10th graders in the Class of 2006. Passing rates improved slightly for the ELA exam and were about the same for the mathematics exam. Passing rates for the various demographic groups were also largely unchanged. Students receiving special education services continued to have considerably more difficulty in passing the CAHSEE than all other groups of students.

Students in the Class of 2006 who retested as 11th graders showed some improvement in their scores. About half of those testing each part had passed that part by the end of the 11th grade. Conversely, about half of those retested members of the Class of 2006 still have not passed. In addition, some unknown, but possibly large, number of students who did not pass in 2004 appears not to have retested in 2005. We could not find 11th grade 2005 test records for nearly 45,000 students (about 10% of all 2004 10th graders) who tested but did not pass in 2004. Some of these students likely did test in 2005, but with identifiers that did not permit matching to their 10th grade results. Others have left school or been retained in 10th grade, although accurate counts are not available for these conditions. With the implementation of a statewide student identifier system, this type of gap in knowledge of what happens to students in the testing process should narrow.

In addition to analyzing the results, we examined factors relating to test accuracy, including a review of test equating procedures, the raw-to-scale score conversion tables, and analyses of the consistency with which the essays were scored. No significant issues were noted in any of these procedures.

Chapter 4: How Instruction Has Improved

In Chapter 4 we analyzed district, high school, and feeder school survey and interview responses to determine the impact of instructional trends on students' success on the CAHSEE. We also compared survey responses between schools with and without relatively high concentrations of at-risk students (i.e., English learners, students receiving special education services, economically disadvantaged, Hispanic, and African American).

High school ELA teachers, and to a greater extent, math teachers, continue to report that students come to high school unprepared for their courses. Both ELA and math teacher ratings were less optimistic in schools with high concentrations of EL, economically disadvantaged, and Hispanic students, as well as math ratings in schools with high concentrations of African American students. In both ELA and math, teachers rated students as more prepared in schools with high concentrations of SD students.

More than half of surveyed high school teachers cited student motivation as an important factor limiting the effectiveness of the courses they teach. Over a third of teachers noted low parental support and low student attendance as impediments. Teacher ratings of these three problem areas were higher for remedial courses than for other courses. Parental support was rated as a greater problem for required supplemental courses targeted to remediation than for any other course type.

We investigated teacher credentialing and the assignment of subject-area credentialed teachers to courses and students. While three quarters of high schools report that nearly all their teachers hold appropriate credentials, in other schools at least a quarter of the teaching staff remains uncredentialed. Over half of schools report using some mathematics teachers with emergency credentials and a third of schools report some ELA teachers with emergency credentials. While EL students reportedly receive instruction from credentialed teachers at nearly the same rate as all students, students receiving special education services are more likely to receive both ELA and mathematics instruction from a teacher who does not hold a subject-area credential. ELA credentialing is lower in schools with high concentrations of African American students. Lower percentages of schools with high concentrations of EL, economically disadvantaged, Hispanic, and African American students report math teachers with subject-area credentials than do schools without such high concentrations of at-risk students.

HumRRO examined whether numerous survey responses were related to school-level CAHSEE performance. Among those factors that were related to higher CAHSEE pass rates were teacher subject-area credentialing, years of teaching

experience, and articulation between the feeder middle school and the high school as well as coordination between special education and general education staff.

In in-person interviews, a small majority of general education math and ELA teachers at both high school and feeder school levels stated that the Class of 2006 was ready to be held accountable to the CAHSEE graduation requirement. However, approximately half of special education and EL teachers believe their students are not ready to pass the CAHSEE. A number of respondents emphasized that students need to be held accountable.

We also investigated trends in California education that may have been influenced by the introduction of the CAHSEE requirement. For example, alignment of instruction to California content standards has increased steadily over the past several years at both the high school and middle school levels and efforts are underway to ensure that the level to which content standards are being taught is consistent across teachers. Nearly all high school and middle school respondents identified one or more systems used to track student proficiency in the content standards.

Most high school and middle school teachers have participated in content-related professional development. Schools have focused attention on remedial courses, as evidenced by the fact that the education level and years of experience of high school teachers assigned to teach remedial courses closely paralleled—and in some cases, exceeded—the education level and years of experience of teachers in primary courses. High school department heads generally indicated their courses were demanding for students, although some differences were noted in schools with high concentrations of at-risk students.

Some exemplary programs (e.g., Advancement via Individual Determination (AVID), Student Success Team (SST)) were identified through site visit interviews. These may warrant further targeted evaluation to determine whether they would be effective in additional schools.

Chapter 5: Trends in Other Important Student Outcomes

Data sources outside the CAHSEE program provide indications of the state of education in California, and can be used to infer effects of the CAHSEE program on education as a whole. Since no students have yet been held to the CAHSEE requirement as a condition of obtaining a high school diploma, direct effects cannot be assessed at this point. Arguably, these effects—if any—may not be seen until after the Class of 2006 graduates. However, we begin analyzing trends in this report, and will continue to follow these trends in subsequent CAHSEE evaluation reports.

Inspection of enrollment levels, by grade and over time, was used as a proxy for existing calculations of dropout rates. Enrollment patterns indicate that the drop-off rate from 9th to 10th grade has risen above historical levels for the Classes of 2006 and 2007;

however, the rates have been declining in the 11th and 12th grades. This may be an artifact of changes in retention rates that are not directly measurable.

Official dropout rate calculations indicate that both single-year and four-year dropout rates have increased slightly as of 2004. These results should be interpreted with caution because CDE amended its definition of dropouts in 2003; it now aligns with federal NCES guidelines. High school graduation rates declined slightly in 2003 and again in 2004.

Participation in, and performance on, college entrance examinations paint a mixed picture. The percentage of students taking the SAT exam declined in 2003 and 2004 but recovered somewhat in 2005. The percentage of students earning a combined score of 1000 or greater reached a high in 2005. The average SAT score increased steadily between 2002 and 2005. The percentage of students taking the ACT exam increased over that same time frame, as did the percentage of students earning a composite score of 21 or better. Average ACT scores have remained relatively flat.

Rates of completion of A–G courses dropped in 2003 but recovered somewhat in 2004. Meanwhile, participation in AP exams, and scores of 3 or greater on those exams, have steadily increased since 2000.

We note that the above results are consistent with a March 2005 report published by The California Postsecondary Education Commission, *University Preparedness of Public High School Graduates* (Report 05-5). This report's conclusions, which investigated students through the Class of 2003, included:

- A lower proportion of students are enrolling in A–G coursework;
- A lower proportion of students are taking the SAT I admissions test;
- SAT I and ACT test performance has improved;
- A higher proportion of students are enrolling in AP courses and taking AP examinations;

Percentages of enrollment of California high school graduates as first time freshmen have decreased in both University of California and California State University institutions in 2003 and 2004, while enrollment rates in California community colleges dropped in 2003 then increased in 2004.

These results provide a mixed view of the state of education in California high schools in recent years. HumRRO's Year 7 report will include CAHSEE performance and survey results through the spring of 2006. The survey questions will be expanded to provide insight regarding students who have met all graduation requirements except the CAHSEE. These data, taken in conjunction with the data sources described in this chapter, should provide a rich depiction of the impact of the CAHSEE on the California educational system.

Chapter 6: Options for Students Who have Difficulty Passing the CAHSEE

Additional data on special education services was linked to CAHSEE outcomes. Our analyses of the linked data revealed a strong relationship between the types of special education services a student receives and success on the CAHSEE. More than one-third of the students analyzed received non-intensive services such as in-class accommodations or a resource specialist and were able to spend more than 80 percent of their time in regular instruction. About half of these students passed the CAHSEE while still in 10th grade. Students receiving these services who had not passed in the 10th grade showed significant gains when they retested in the 11th grade. It seems likely that with continued assistance these students will have a good chance of meeting the CAHSEE requirement. It is thus reasonable to ask that both the schools and these students themselves continue to work to meet the required standards.

About one quarter of the students receiving special education services required more intensive assistance. These students participated in regular instruction less than 20 percent of the time and only about 10 percent of them passed the CAHSEE during the 10th grade. Those who retested in the 11th grade showed only small gains in CAHSEE scores compared to other students. These students received services specified by Individualized Education Program (IEP) teams, who have statutory authority for making such judgments. There is no basis for second-guessing the services being provided to these students, although it is important to ask IEP teams to be sure student classifications are appropriate. It is less reasonable to hold these students responsible for mastering the skills assessed by the CAHSEE when they are not receiving instruction related to the skills tested by the CAHSEE. Alternate goals and some way of recognizing achievement of these alternate goals are needed for students in this second group.

Another quarter of the students we analyzed received other combinations of services and showed mixed results on the CAHSEE. More detailed information on the needs of these students and the specific services provided is needed to determine which ones have a reasonable chance of meeting the CAHSEE requirement.

Our general conclusion from these results is that it would be a mistake for legislators to impose a single set of alternatives on all students who receive special education services. Students who may be able to master the CAHSEE standards should not be lightly excused from doing so. Other students have little likelihood of mastering the CAHSEE standards and require other options to achieve graduation.

The number of students testing with accommodations or modifications did vary somewhat as a function of the type of service the student was receiving. Overall, however, passing rates for accommodated students were slightly lower compared to those who took the CAHSEE without accommodations. Students who received modifications would have passed at slightly lower rates still, had their scores counted. As noted above, however, additional information is needed to determine whether many students might benefit from some additional forms of accommodation or from a different

form of assessment altogether. Under NCLB accountability requirements, states are allowed to use an alternate form of assessment that, except for a small number of students with severe mental retardation, must allow students to demonstrate mastery of the same standards used with the regular assessment. So far, no states have shown a significant number of students demonstrating mastery through such alternate assessments.

Recommendations

Policy makers face critical decisions about the CAHSEE as the Class of 2006 nears graduation. As in past years, we offer several general recommendations based on observations and findings from our evaluation activities. These recommendations are targeted to the Board and the legislature as they consider additions or modifications to policies concerning the CAHSEE and its use. In our 2005 Evaluation Report, we also offered several more technical recommendations for the continued improvement of the CAHSEE. These latter recommendations are targeted to CDE and to the test developers and are not discussed further here.

Key Policy Recommendations

General Recommendation 1: Keep the CAHSEE requirement in place for the Class of 2006 and beyond.

Approximately 68,000 students who were not able to demonstrate mastery of essential skills in the 10th grade have now, by the end of 11th grade, been able to do so. While we cannot offer solid evidence, it seems likely that many would not have done so without being identified through CAHSEE scores as needing additional help and being motivated by the CAHSEE graduation requirement to take advantage of the help that was available to them. It is also evident that the requirement motivated schools to expand programs to help students master the required skills both before and after initial CAHSEE testing.

It would be a disservice to students, parents, and educators to send a message that some or all of the students in the Class of 2006 do not have to master language arts and mathematics skills deemed to be critical for success after high school.

General Recommendation 2: Identify specific options for students who are not able to satisfy the CAHSEE requirement and implement them by June 2006.

Nearly 100,000 students in the Class of 2006 did not satisfy the CAHSEE requirement by the end of the 11th grade. With continued effort and help many of these students will be able to satisfy the requirement in time to graduate with their class. However, many of these students, perhaps 50 to 60 percent, will not. To date, nearly half of English learners and nearly two thirds of students with disabilities have not met the CAHSEE requirement. Score gains from 10th to 11th grade were smaller for these

students than for other students. If current trends prevail, a significant number of students including a substantial proportion of English learners and students with disabilities will not have passed the CAHSEE by the end of 12th grade. Many of these students will be denied a diploma for failing to meet other requirements as well¹⁰.

Our second recommendation is that schools, districts, and the state provide options for students who want to earn a high school diploma but still do not pass the CAHSEE by the end of the 12th grade. We would urge consideration of multiple options to recognize the varying needs of students with different likelihoods of mastering the CAHSEE skills. Some of the options may be interim steps while others may be required long term.

In considering different options for earning a diploma, a key policy question is whether to include options that, at least initially, may not require the student to demonstrate the same level of mastery as currently required by the CAHSEE. One set of options would hold firmly to the skill requirements and provide options for students willing to spend additional time and effort to master the skills. Another set of options might require students to exert further effort to master the skills but allow some leniency in judging the extent of mastery achieved.

Whether the second set of options is considered may depend on how those making the decision view responsibility for some students' current inability to pass the CAHSEE. If the student has failed to exert effort in classes or attendance has been a problem or if the students lack parental support for participation in regular or supplemental instruction, the responsibility may be viewed as falling on the student. If, on the other hand, current instruction was poorly delivered or prior instruction failed to prepare students for more recent courses, then schools may share some responsibility for students who cannot pass the CAHSEE. If responsibility for not passing the CAHSEE is primarily attributed to students or their parents, it would be reasonable to require that any alternative way of demonstrating mastery meet the same high standards as the CAHSEE. If more responsibility is attributed to schools, it may be reasonable to grant students some leeway in mastering the full set of CAHSEE skills until the work necessary to develop a rigorous alternative is completed.

It is clear that students have had adequate notice of the CAHSEE requirement, even though some may have continued to believe that the requirement would be lifted. Students in the Class of 2006 were entering 7th grade when the content requirements for the CAHSEE were adopted and when the statewide requirement to take algebra was added.

All of the schools where surveys or interviews were conducted had programs in place to help students master the skills required by the CAHSEE. Still, many of these

¹⁰ According to the Pocketbook of Special Education Statistics 2002-03 (California Department of Education, 2005, p. 25), only 59 percent of students with disabilities who were in the 12th grade (or were 18 years of age or older) in 2002 and 2003, before the CAHSEE was required, exited high school with a diploma.

programs were not yet fully effective. Student motivation and preparation were frequently cited as key reasons why students participating in the programs still could not pass the CAHSEE. Some may argue that deficits in the development of prerequisite skills in the early grades, prior to the enactment of the CAHSEE requirement, may have left some students ill prepared to benefit from the courses and programs now offered.

In reviewing options for students who do not pass the CAHSEE by the end of the 12th grade, policy makers must decide how much weight to give arguments that some schools share responsibility for some students' poor preparation. Policy makers could decide that, on an interim basis, good faith effort and partial mastery of the CAHSEE skills are sufficient for earning a diploma. Alternatively, they may decide that students have had adequate opportunities and nothing short of full mastery of the CAHSEE skills should be required for a diploma.

We differ strongly from the general conclusion of the SB 964 report that the CAHSEE requirement should be deferred until alternative ways of demonstrating mastery of the standards and alternative diploma options for students unable to demonstrate mastery can be implemented with rigor. We believe it is better to keep the requirement in place and implement options now, improving rigor over time as necessary. The state should avoid sending the message that students should not continue to strive to master the essential skills, but provide options now for students who do not do so.

Some general principles in considering options are:

1. Insofar as possible, options should be available to all students who need them.
2. Options should not excuse students and schools from continued effort to develop and demonstrate the skills assessed by the CAHSEE.
3. Every possible effort should be made to help students master the targeted skills; alternative diploma options should be reserved for students who clearly cannot access the general education curriculum.
4. All students and their parents should be made aware of alternative options open to them.

In reviewing options for students with disabilities in response to SB 964 requirements (Rabinowitz, et al., 2005), WestEd discussed three types of options:

- Alternate forms of testing,
- Modifications to graduation requirements, and
- Alternative types of diplomas.

We add a fourth category of options:

- Giving students additional time and support to meet the requirements.

As discussed in Chapter 6, we agree with the conclusion of the SB 964 report that it is not currently possible to implement alternate forms of testing that still require students to demonstrate full mastery of the content standards covered by the CAHSEE. Further, as discussed under our first recommendation, we cannot support weakening the CAHSEE requirement since this would be interpreted as telling students that the skills covered by the CAHSEE are not important for them to master. This leaves the last two categories of options for near-term consideration. A clear theme of this report is that different types of options are needed for students in different circumstances.

Ways of Recognizing Accomplishment Short of Full Mastery of the CAHSEE Standards

Many districts already offer a certificate of completion. To the extent that such certificates are primarily indicators of attendance, they are not likely to be highly valued. One option that might be considered would be to encourage districts to recognize accomplishment of individualized academic goals. To the extent that certificates or alternative diplomas offered require demonstration of mastery of important skills, they will be more highly valued by employers and perhaps colleges and by the students themselves. Districts might choose to institute a system of senior portfolios as a way to challenge students to continue to master important skills and also to document their accomplishments. Alternatively, districts might offer certificates for passing a remedial course targeted to CAHSEE skills.

Additional Time and Support

Many of the examples offered for consideration in our 2005 Evaluation Report (Wise, et al., 2005) encouraging students to continue to work on mastering essential skills past the end of their senior year. These examples included:

- Community College Program—Update community college programs that lead to a high school diploma to focus on the CAHSEE skills. Allow students who need more time up to two additional years to master the CAHSEE skills and receive a diploma through participation in these programs. One advantage of this approach is that it would provide students with instruction in a different setting, not just repeating instruction that was previously ineffective.
- Summer Course(s) After 12th Grade—Allow and encourage districts to develop a summer program for students who have not been able to pass the CAHSEE and grant diplomas to students who successfully complete this program. Separate ELA and math courses could be offered, with students required to take or pass courses only if they had not yet passed the corresponding test on the CAHSEE.
- Additional Years of High School—By statute, students in special education programs can continue their high school education until age 22. This option might be expanded to allow other students to take an additional year or two of high school as well. This option would be most reasonable if the opportunities

provided go beyond the remedial programs to which the students already had access.

General Recommendation 3: 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 requirement.

It is unfortunate that policy makers have to wait for our annual report to get any estimate of how many students in the Class of 2006 have and have not satisfied the CAHSEE requirement. Even so, the estimates we provided were very approximate due to difficulties in matching student records across administrations. More exact information on the numbers of students yet to meet the CAHSEE requirement for each high school class is needed to design programs to help these students and to estimate funding requirements for these programs.

Currently, it is necessary to match student records from different administrations by name and birth date and a few other relatively stable student characteristics. Unfortunately, these fields do not always uniquely identify an individual student. An even bigger problem in combining results across administrations is the frequent inconsistency with which names, and sometimes birth dates, are coded.

The student identifiers now under development were not generally used with the 2004-05 CAHSEE administrations. It would be highly desirable to go back and add the statewide identifiers to the records for 10th graders who took the CAHSEE in February, March, and May 2005, so that 11th grade results can be merged unambiguously with this information.

General Recommendation 4: 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.

An important policy question for evaluating the impact of the CAHSEE is how many students will be denied a diploma due to the CAHSEE requirement alone. Currently there is no statewide database with information on satisfaction of other graduation requirements, some of which may be district-specific. While there is some uncertainty about who has met the CAHSEE requirement, there is also uncertainty as to how many students have met the algebra course requirement or any other specific graduation requirement. Most schools review graduation requirements with students early in their senior year. With this information, they should be able to respond accurately to a statewide survey fielded in the latter half of the school year. Alternatively, the department might wait until after June to see how many students who were seeking a diploma were actually denied the diploma and why.