

This document contains Chapter 5: Findings and Recommendations from the California High School Exit Examination (CAHSEE): Year 5 Evaluation Report dated September 30, 2004, as prepared by the Human Resources Research Organization (HumRRO) for the California Department of Education. All sections of the report are located at <http://www.cde.ca.gov/ta/tg/hs/year5.asp>

## CHAPTER 5: FINDINGS AND RECOMMENDATIONS

Five years have passed since efforts to develop the CAHSEE were launched. As the independent evaluator for that period, we have watched the HSEE Panel work to identify appropriate content for the ELA and mathematics tests and observed the development and piloting of questions for these tests. The quality of the examination has been surprisingly high given a very tight schedule for initial development. The two contractors for test development have managed to field more than a dozen forms of the tests. As documented in our AB 1609 Study report, schools have responded positively, improving programs of initial instruction and implementing new programs to help students who do not initially pass the CAHSEE.

After reviewing the state of instruction related to the CAHSEE content standards, the Board decided that more time was needed to be sure that all students had access to effective instruction. The CAHSEE requirement was restarted this year with minor changes to the content and format of the exam. In concluding our work as the independent evaluator, we offer a last list of findings based on observation and analysis of the CAHSEE exam developed for the Class of 2006. As in prior years, we also offer recommendations for improving the validity of the test and the effectiveness of the CAHSEE requirement more generally. We conclude by highlighting some questions that will need to be addressed as the CAHSEE program continues to mature.

### Findings

The following findings are based on results from the analyses and activities described in the previous chapters. The first four findings have broad implications for the CAHSEE program and are labeled as general findings. These are followed by two more specific findings.

#### **General Finding 1. Student performance on the CAHSEE mathematics test improved significantly for the Class of 2006 in comparison to the Class of 2005. Performance on the ELA improved only slightly, if at all.**

Passing rates on the mathematics test, after accounting for changes in the score scale, increased by about five percent in 2004. Mathematics passing rates also increased for every one of the demographic groups that we analyzed. With this increase and the impact of the new score scale, more than 70 percent of the students in the CAHSEE data files passed each part of the CAHSEE. Improvements in mathematics were related to the fact that slightly more students were taking or had taken algebra and higher-level mathematics courses (79.0% compared to 77.8%) and also that passing rates were higher for each level of mathematics courses taken. For example, the CAHSEE mathematics passing rates for students whose highest math course was Algebra I rose from 51 percent to 58 percent. These increases in passing rates indicate that either the effectiveness of the algebra and higher-level courses had improved and/or that students were better prepared by their prior coursework to benefit from high school mathematics courses.

The reason for the lack of a significant increase in performance on the ELA test is unclear. We found modest increases in the percentage of students classified as English learners (16.9% to 18.3%) and students receiving special education services (8.6% to 9.2%). It also appears that a greater proportion of 10<sup>th</sup> grade students took the CAHSEE, most likely in response to the participation requirements of federal No Child Left Behind legislation. In 2003 the number of 10<sup>th</sup> grade students taking one or both parts of the CAHSEE was 90 percent of the 2002–2003 fall 10<sup>th</sup> grade enrollment. In 2004, the corresponding percentage was up, to 94. It is reasonable to assume that by increasing the participation rate, schools tested more students, including English learners and students receiving special education services, who were not well prepared to pass the CAHSEE.

**General Finding 2. The performance of students receiving special education services on the CAHSEE remains low.**

Students receiving special education services showed the smallest increase in mathematics passing rates of all demographic groups, improving by only 1 percent, from 27 percent to 28 percent. This group also showed a noticeable drop in ELA passing rates, from 32 percent to 29 percent. There continued to be very significant differences in passing rates for students receiving special education services in different ethnic categories. For ELA, only 17 percent of African American students receiving special education services and 19 percent of Hispanic students receiving special education services passed, compared to 37 percent of Asians and 47 percent of White students. For mathematics, 13 percent of African American students and 19 percent of Hispanic students receiving special education services passed, compared to 46 percent of Asians and 44 percent of White students receiving special education services.

**General Finding 3. Despite predictions by principals and teachers, the current CAHSEE requirement has been accompanied by a decrease rather than an increase in dropout and retention rates.**

Seventy-three percent of the principals responding to our longitudinal survey and 41 percent of the teachers responding predicted that the CAHSEE would have a negative or strongly negative impact on dropout rates (that is, the dropout rate would increase). Last year, we noted that 10<sup>th</sup> grade to 11<sup>th</sup> grade enrollment declines for the Class of 2004, the class initially affected by the CAHSEE, were only 6.8 percent compared to about 7.8 percent for each of the prior five classes. This year, the 10<sup>th</sup> to 11<sup>th</sup> grade enrollment decline for the Class of 2005 was even slightly less, 6.6 percent. In addition, 11<sup>th</sup> to 12<sup>th</sup> grade enrollment declines were only 7.7 percent for the Class of 2004 this year, compared to 8.4 percent for the Class of 2003 and well over 10 percent for each of the prior four classes. It is possible that increased remediation efforts associated with the CAHSEE requirement have contributed to a decline in dropouts, although we cannot rule out alternative explanations such as reduced employment alternatives. In any event, it is clear that the CAHSEE requirement has not led to any significant increase in dropout rates for the first two classes affected by the CAHSEE.

**General Finding 4. Principals reported continued efforts to implement programs and practices to help students who are not prepared to pass the CAHSEE and to promote learning for all students.**

Principals were asked about activities to help students who do not pass the CAHSEE or who are not prepared. They reported significant increases from 2002 to 2004 in full implementation of several important efforts including:

- *Work with feeder middle school* increased from 5 to 28 percent.
- *Develop parent support* rose from 0 to 11 percent.
- *Offering demanding courses from the beginning* increased from 25 to 64 percent.
- *Ensure students take demanding courses from the beginning* increased from 20 to 64 percent

Principals were also asked about actions to promote learning for all students. They reported significant increases from 2003 to 2004 in full implementation of the following:

- *Teacher access to in-service training on content standards* increased from 60 to 73 percent.
- *Teacher access to in-service training on instructional techniques* increased from 50 to 64 percent.
- *Student and parent support services* increased from 10 to 27 percent.

In addition to the above four general findings, we note two specific findings based on data from the student, teacher, or principal surveys. Many specific findings from these surveys are discussed in detail in Chapters 3 and 4. We have selected two that appear to be significant both in magnitude and in meaning.

**Specific Finding 1. About 90 percent of the students tested reported that most or all of the topics on the test were covered in courses that they had taken.**

Several new questions were added to the student questionnaire in 2004. These questions were designed to probe student views about how well their courses prepared them to take the CAHSEE. This information complements information about courses collected from teachers and principals in 2003 in the AB1609 study. The first question asked whether the topics on the test were covered in courses they had taken. Only 8.5 percent of the students reported that many topics on the ELA test were not covered in courses they had taken. Only 11.4 percent reported that many topics on the mathematics test were not covered in their courses. These responses were closely related to passing rates. Of the students who responded that many topics were not covered in mathematics courses, only 50 percent passed the mathematics test compared to a 69 percent passing rate for students who said most topics were covered and 89 percent for students who said that all topics were covered.

For mathematics, reported coverage of the CAHSEE topics was also related to the level of mathematics courses taken. Of students who had taken only general math, 29.1 percent said that many topics on the CAHSEE mathematics test were not covered in their courses, compared to 16.5 percent of the students who had taken or were taking Algebra I and less than 7 percent of students taking courses beyond Algebra I (or beyond Integrated Math I).

The rate at which students report coverage of tested topics in their classes is important as one indicator of the opportunity to learn material, or the instructional validity of the CAHSEE test. Student self-report of exposure to tested topics is only a rough measure, but the high percentage of students indicating that most topics were covered in their courses is a positive indication that course instruction is aligned with the tested content standards.

**Specific Finding 2. Principal estimates of parents' knowledge of the CAHSEE increased significantly in 2004.**

Principal estimates of the percentage of parents who know which students had the opportunity to take the CAHSEE increased from 60 percent to 67 percent and estimates of the percentage of parents who knew when the CAHSEE was given rose from 57 percent to 79 percent. Most significantly, estimates of the percentage of parents who know what knowledge and skills are covered by the CAHSEE increased from 26 percent to 44 percent. These increases in parental awareness are important because they could play a significant role in encouraging students to take advantage of available opportunities to prepare for the CAHSEE, such as summer school offerings and remedial courses. In addition, increases in parental knowledge reflect greater general public awareness.

**Recommendations**

Based on the findings described above and on findings included in prior reports, HumRRO offers four general recommendations and one more specific recommendation.

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

One of the most positive results of the CAHSEE requirement has been to help schools identify students who need additional help in acquiring essential skills and to implement programs to provide that help. Initial results for the Class of 2006 suggests that it is quite likely that, given some effort on their part, nearly all students will be able to pass the CAHSEE (with the exception of some students receiving special education services, as addressed in a later recommendation). Remediation programs put in place for the Class of 2004 resulted in passing rate increases of about 10 percent a year. Given that nearly two-thirds of the Class of 2006 has completely met the CAHSEE requirement, increases of about 10 percent per year

will result in approximately the same percentage of students in the Class of 2006 being able to meet the CAHSEE requirement as currently graduate from high school.

Based on survey responses, principals, teachers, students, and parents now know a lot more about the CAHSEE and appear to believe the requirement must be met. Canceling or further deferring the requirement would likely not only reverse much of the progress that has been made in helping students master required skills, but also would weaken or destroy the credibility of future efforts to improve instruction and student achievement.

**General Recommendation 2. Continue efforts to help students prepare for and take more challenging courses.**

In addition to developing new programs, simply encouraging students to take advantage of courses and programs already in place would help enormously. Results have consistently shown that students who are prepared for and take Algebra 1 and subsequent courses are very likely to pass the mathematics portion of the CAHSEE. Preparing students to take higher-level mathematics courses is a particular challenge for students receiving special education services. Many fewer of these students are currently taking Algebra I by the 10<sup>th</sup> grade.

In prior administrations, passing rates for the mathematics test were considerably lower than passing rates for the ELA test (about 50% compared to 70%). Our previous reports highlighted mathematics performance. Similarly, schools' best efforts were naturally focused on improving performance in mathematics. Now that the passing rates are essentially equal, more attention needs to be given to the effectiveness of ELA coursework and to efforts to prepare students for success in this coursework and to help students who are not initially successful in learning required skills. Note, too, that English learners who reach English proficiency have little difficulty in passing the ELA portion of the CAHSEE. Further efforts to help English learners reach proficiency will further improve ELA passing rates for this group.

**General Recommendation 3. Encourage efforts to identify remedial programs that work and disseminate information about these programs to all schools.**

The CDE has developed various guides and workshops to facilitate improved remediation efforts across the state. In addition, successful remediation programs developed by schools and districts could be identified (by the CDE or by the districts themselves) and shared with other schools to encourage their broader implementation. "Success" of the programs could be measured by student passing rates on the CAHSEE subsequent to completion of these programs.

#### **General Recommendation 4. Continue to explore options for students receiving special education services.**

A High School Exit Examination for Pupils With Disabilities Advisory Panel, formed in response to SB 964, is studying alternatives for helping students receiving special education services address the CAHSEE requirement (<http://www.cde.ca.gov/ta/tg/hs/sb964study.asp>). In past evaluation reports, we also called for consideration of alternatives for students receiving special education services. Given no significant improvement in passing rates for students receiving special education services in the Class of 2006, our recommendation stands. Here are some examples of the types of ideas that might be considered:

- Set realistic expectations. Work to more clearly differentiate students who can attain the regular curriculum from those who cannot. Set alternate goals with alternate recognition of accomplishments for students who cannot manage the regular curriculum. As noted below, more study is required to identify appropriate expectations and instruction for the very different types of students qualifying for special education services.
- Allow more time. The majority of students receiving special education services may be able to meet the CAHSEE requirement, but it may take many of them longer to reach the required level of achievement. Providing regular alternatives to the usual twelve-year curriculum for these students would support development of required skills. A careful study of ways of spreading out the curriculum at different points would be preferable to simply adding one or more years at the end as makeup time.
- Investigate curricula. Collect information on the curriculum provided to different types of students receiving special education services. Information on the effectiveness of different curricula for students with specific types of disabilities could be used to improve the effectiveness of individualized educational plans (IEPs) for students receiving special education services.
- Collect accommodation information. Information should be collected on relationships of specific accommodations provided for CAHSEE (e.g., small group administration, oral presentation of instructions), accommodations specified in IEPs and provided with instruction, and performance on the CAHSEE. This information would enhance CDE's ability to counter challenges of fairness for students with specific disabilities and would support further research on the appropriateness of these accommodations in measuring the intended constructs.

**Specific Recommendation 1. 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.**

As the Class of 2006 nears graduation, policymakers will want to know how many students have passed the CAHSEE. Up to this point, there has not been a statewide data system that would allow us to accurately determine how many of the students who have passed the CAHSEE earlier are still in school and how many new students have come into the state who have not yet taken the CAHSEE. Comparing the number of students who passed the CAHSEE in prior years to current enrollments would not give an accurate estimate of the number of students who still need to pass the exam. Further, some students transfer from one high school to another within the state and other students do not complete sufficient credits to advance to the next grade, thus changing the date of their expected graduation. Without statewide identifiers, it is also impossible to count these students appropriately in cumulative estimates of the CAHSEE passing rates.

The California Longitudinal Pupil Achievement Data System (CALPADS) was established in response to SB 1453 (enacted in 2002) to further comply with federal accountability requirements. Student identifiers, required to implement this data system, are being established by the California School Information Services (CSIS). If successful, this effort will enable more complete answers to policymakers' questions about the CAHSEE passing rates.

The CDE may also wish to work with districts to track students beyond high school accountability. As noted under "Questions for Further Inquiry" 2 on the next page, information, even for a modest sample of students, on the relationship of the CAHSEE scores to success in college work and in other endeavors would be very useful in reviewing the rigor of the CAHSEE requirement.

### **Questions for Further Inquiry**

This report brings our five-year effort as the independent evaluator for the CAHSEE to a close. Because students have not yet graduated or failed to do so under the CAHSEE requirement, much remains to be learned about the longer-term effects of this program. The CDE has embedded a number of new ideas for addressing CAHSEE issues in a request for proposals (RFP) for continuing the evaluation. In concluding this report and this evaluation contract, we offer our own perspective on questions for further inquiry.

#### **1. What are effective strategies for ensuring that students have the knowledge and skill to pass the CAHSEE?**

The request for proposals to continue the independent evaluation of the CAHSEE included a specific requirement to identify "effective remediation strategies for students who have difficulty in ELA and math." The 2003 study of instruction

conducted in response to the AB 1609 requirement concluded that the CAHSEE requirement had led to many new classes or programs to help students having difficulty with the CAHSEE but that these programs were not yet fully effective. We also noted that the CAHSEE passing rates varied considerably by program and school. The CDE has developed guides for teachers and students to assist in preparation for the CAHSEE. A systematic review of the use and effectiveness of these guides, together with identification of additional remediation strategies that might be included in expanded guides would go a long way toward maximizing opportunities for all students to learn the material covered by the CAHSEE.

## ***2. Is the CAHSEE requirement sufficiently rigorous?***

As independent evaluators, we feel that the current CAHSEE requirement reflects a delicate balance between what students need to know and be able to do and what it is currently reasonable to expect them to achieve. Other groups have called for significantly more rigorous graduation requirements (e.g., Achieve Inc. 2004). Kirst (2003) has pointed to the high proportion of college enrollees who must take remedial coursework as evidence that many high school graduates do not yet have expected levels of knowledge and skill.

It would be very useful to have data relating the CAHSEE scores to subsequent success in college and in other post-high-school activities, and perhaps to other predictors of college performance, such as SAT scores. SBE has indicated intentions to increase the CAHSEE requirement over time. Longitudinal data on the CAHSEE examinees would provide empirical information that could be quite useful in deciding how and when/whether to adjust the CAHSEE passing levels.

## ***3. What options might be provided for students receiving special education services?***

As noted above, we believe that further consideration of options for students receiving special education services is needed. New research and new syntheses of existing research would support identification and consideration of these options. Most commonly, the population of students receiving special education services is treated as a single group in research studies. In fact, these students are a collection of students with diverse physical and mental challenges that they must overcome. Research identifying appropriate and effective programs and accommodations for students with different types of challenges is essential to the identification of options for helping these students meet the CAHSEE requirement.