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California High School Exit Examination (CAHSEE): Year 3 Evaluation Report

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Independent Evaluation of the California High School Exit Examination (CAHSEE): Year 3 Evaluation Report

EXECUTIVE SUMMARY

California has just concluded the second year spring administration of its High School Exit Examination, which is part of the state's requirement that students pass a proficiency exam in mathematics and English-language arts (ELA) in order to graduate, beginning with the Class of 2004. California began this initiative in response to widespread support for high standards and the corresponding need for some mechanism that holds students to those standards. As a component of California's testing program, the exit examination is intended to ensure that all students graduating from high school demonstrate grade level competency in reading, writing, and mathematics. The California Education Code, Chapter 8, Section 60850, specifies requirements for the California High School Exit Examination (CAHSEE)[1].

The legislation that mandates the requirements for the graduation exam also specifies an independent evaluation of the CAHSEE. The California Department of Education (CDE) awarded a contract for this evaluation to the Human Resources Research Organization (HumRRO). HumRRO's efforts focus on analyses of data from the field tests of questions on the CAHSEE, its operational administrations, and report on trends in pupil performance and retention, graduation, dropout, and college attendance rates. The legislation also specifies that the evaluation reports will include recommendations for improving the quality, fairness, validity, and reliability of the examination. The present report meets the contract requirement for a report of activities and findings during the third year of the evaluation. This report extends results beyond those reported in the legislatively mandated January 2002 report covering the 2001 CAHSEE administration (Wise, Sipes, Harris, George, Ford, & Sun, 2002).

Test Development, Administration and Scoring

A considerable part of our Year 3 effort involved monitoring and analyzing the development, administration, and scoring of the March 2002 CAHSEE. Three things made this an important process to watch: the change in the test development contractor, the very tight timeline for the assembly of the March 2002 form, and the implementation of revised administration procedures. A complete description of our review processes and resulting findings are presented in Chapter 2.

Our review of test development focused on the quality of new CAHSEE test questions. Activities included monitoring several different types of item reviews conducted by the development contractor, Educational Testing Service (ETS), including traditional reviews by content experts and the use of cognitive labs as an alternative way of identifying possible flaws in test questions. We also conducted an independent review of the quality of the test questions.

[1] As specified in the Education Code, the CAHSEE consists of two separately timed and scored sections, referred to in this report as the ELA test and the mathematics test.

The processes used by ETS were both thoughtful and thorough. Results from our independent item review workshops suggest that the general quality of the test questions remains high. Nonetheless our panelists did identify a number of issues that could limit the validity of some test questions; they also raised some issues about specific questions.

HumRRO researchers observed workshops that prepared district and school personnel for the 2002 test administrations and observed the March and May administrations at six sites. We also surveyed testing coordinators from our longitudinal sample of schools about their experiences with the 2002 CAHSEE administration. Finally, we reviewed the accommodations and modifications used in the March 2002 administration.

We noted a number of improvements in the preparation and logistics for the 2002 administrations and did not observe any significant problems. Procedures were much more clearly specified than they were in the 2001 administration. A significant number of students (nearly 10,000) were given accommodations or modifications. It was particularly noteworthy that more than 4,000 students used calculators for the mathematics exam, a modification that invalidated their scores. For the most part, passing rates were still very low for students who were allowed accommodations and would have been for students receiving modifications, had their scores counted.

We reviewed the process for training scorers for the essay questions and analyzed the consistency of the scores that resulted from their efforts. The process ETS used for scoring the essays was new and innovative. Scoring consistency results from this first application of the process were similar to those in the 2001 administrations.

To verify ETS' proposed equating of the March 2002 test form to the base form used in the March 2001 administration, we conducted analyses of preliminary data from the March 2002 administration. Though we used a divergent approach to test a number of the assumptions underlying ETS' methods, our results were highly consistent with the results from the operational equating developed by ETS.

We also examined the accuracy of the March 2002 test form. As in the past, we looked at the accuracy with which scores from this form classified students as passing or not passing. Our results showed that more of the March 2002 examinees were very near the minimum passing level than in either of the 2001 administrations. The March 2002 form had a slightly wider "zone of uncertainty" but we estimated that there were fewer misclassifications of students who were significantly below or above the minimum passing level.

Test Results

Our analyses of results from the 2002 CAHSEE administration are summarized in Chapter 3. Passing rates for students taking the CAHSEE for the first time in 2002 were very similar to passing rates for the 9th graders who took the CAHSEE in 2001. Overall, 65 percent of first-time test takers passed the ELA portion of the CAHSEE while 44 percent of those taking the mathematics portion for the first time passed it. Passing rates for different demographic groups also closely matched the 2001 passing rates.

Roughly half of the students tested in March 2002 were making a second attempt to pass. A significant proportion (42 percent) of the students who did not pass the ELA exam on the first try have now passed that part of the CAHSEE. The proportion of students converted from not passing to passing the mathematics portion of the test was lower (25 percent), but still a sizeable number. Cumulative success rates were significantly lower for students with disabilities and, in mathematics, for African American students and English learners.

ELA passing rates for English learners who had been redesignated as fluent English proficient (R-FEP) were comparable to other student groups, raising hope that the lower passing rates for English learners will be erased once they achieve English proficiency. For math, passing levels for English learners (EL) were closely related to level of coursework completed.

With the exception of students with disabilities, average score gains were relatively consistent across demographic groups—about 17 points for ELA and 10 points for mathematics.

Student Questionnaire

Responses to the student questionnaire administered at the end of each section of the test are presented in Chapter 4. An overwhelming majority of students thought that the test was very important or somewhat important to them and believed they would graduate from high school. However, more than 50 percent of students indicated that a requirement to pass a test like the CAHSEE would make it "a lot harder" or "somewhat harder" to graduate from high school. A large majority of respondents reported that they did as well as they could on the test. The most common reasons reported for not doing as well as they could were that some topics covered in the test had not been taught or that they could not recall the correct answers.

Principal and Teacher Reactions

A discussion of results from our third survey of teachers, principals, and test administrators is presented in Chapter 5. As in prior surveys, key topics were: familiarity with the CAHSEE, preparation of students for the exam, an assessment of current preparedness, and estimates of potential impact.

Familiarity

Principals' ratings of student and parent familiarity with CAHSEE increased from last year. Most principals and teachers relied primarily upon official channels such as state and district sources and the California Department of Education Web site to learn about the CAHSEE; education organizations and newspapers were also common sources.

Preparation

Preparatory activities continue and have increased, across the board, since last year. Nearly all principals reported that districts encourage the use of content standards and approximately three quarters indicated that their district is in the process of aligning curriculum with the

standards across grade levels and has adopted algebra as a graduation requirement. Over two thirds of mathematics teachers indicate that almost all the CAHSEE mathematics standards are covered by their curriculum; just over half of ELA teachers report full coverage.

Activities to prepare for CAHSEE administrations increased notably from 2001 to 2002. In particular, most principals reported (a) encouraging students to work hard and prepare, (b) adoption of California Content Standards, and (c) teaching test-taking skills. Teacher-reported activities were more consistent with their 2001 estimates; the most frequently-indicated activities were (a) talking with students, (b) teaching test-taking skills, (c) encouraging students to work hard, and (d) increased classroom attention to content standards.

Student Preparedness

Teacher and principal estimates of student preparedness continued to be somewhat pessimistic. Fewer teachers indicated that 10th grade students were well prepared for the test than had made this estimate the previous year. However, a third of principals and a quarter of teachers reported that students performed better on the spring 2001 CAHSEE than they had expected. Spring 2002 results were not available at the time of survey administration.

Impact

Teachers and principals were again in basic agreement about the impact of the test on students and their parents in various situations: prior to the first test, after passing the test, and after not passing the test. This year, more principals and more teachers expected an increase in student motivation and parental involvement both preceding the exam and after failing the exam. Principals and teachers remained very consistent in their prediction that the CAHSEE would increase student dropout rates; predictions of impact on student retention rates were more mixed. Despite these concerns about the effects on student motivation and parental involvement, principals and teachers continued to expect that the impact of the CAHSEE on instructional practices would be positive, with greater improvement with time.

Findings and Recommendations

The main findings and recommendations stemming from Year 3 evaluation activities are presented in Chapter 6. In brief, the general findings were as follows:

General Finding 1: Available evidence suggests that the CAHSEE has not yet had any impact on retention, dropout rates, or expectations for graduation and post-high-school plans.

General Finding 2: Progress in developing the exam continues to be noteworthy. We found no significant problems with the development, administration, or scoring of the March 2002 exam.

General Finding 3: Students made significant progress in mastering the required ELA skills, but less progress in mathematics.

General Finding 4: For disadvantaged students, initial passing rates continued to be low and progress for repeat test takers was limited.

General Finding 5: Teachers and principals remain positive about the CAHSEE's impact on instruction. More of them now expect positive impact on student motivation and parental involvement.

General Finding 6: Teachers and principals report planning and/or implementing a number of constructive programs for helping students master the skills covered by the CAHSEE.

Based on information available to date, as summarized in our six general findings, we offer two main recommendations at this time:

General Recommendation 1: 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.

Initial passing rates for the mathematics portion of the CAHSEE were low. Fewer than half of those taking the test as 9th graders passed. Passing rates for those testing for the first time in March 2002 were equally low, and only one quarter of the repeat test takers in March 2002 passed on their second try. Unless more dramatic progress is made over the next two years, a significant number of students in the Class of 2004 may not pass the mathematics test and will be denied a diploma.

While the state already has a number of programs designed to help schools teach the California content standards, there is still considerable variation across schools in mathematics passing rates. Identification and dissemination of effective practices in schools with higher passing rates might be a significant aid to schools with lower passing rates.

General Recommendation 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.

There is significant tension between the desire to have high expectations for all students, including students with disabilities, and the need to be realistic about what some students can accomplish. Initial and continuing low passing rates for students with disabilities suggest particular concern with the time it may take to help these students master the required standards.

Options to be considered include some form of alternative diploma for students who are physically or mentally unable to develop or demonstrate the required skills, alternate means of demonstrating competency for students who cannot meaningfully complete the CAHSEE, even with accommodation, and new work on special remedial courses targeted specifically to this population.

One final option for further discussion is deferring the CAHSEE requirement one or more years to give more time for students to update educational plans to cover not only the CAHSEE content areas, but all of the prerequisite or foundational skills as well. Last year, the California legislature passed a bill (AB-1609) calling for a study of whether standards-based instruction is sufficient to support the use of the CAHSEE for the Class of 2004 and authorizing the State Board of Education to decide, after reviewing this report (and also reviewing testing results through March 2003), whether the CAHSEE requirement should be deferred. It is likely that progress or lack of progress for students with disabilities will be a key concern in the required study and in the Board's decision.

Other Specific Recommendations

Based on activities and findings from the first three years of the evaluation, we also offer a number of more specific recommendations for improving the quality of the exam. These include:

Specific Recommendation 1: 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.

Specific Recommendation 2: Districts and schools should be asked to supply more complete information on who has taken, is taking, and still needs to take the CAHSEE.

Specific Recommendation 3: The CDE should work with schools to collect more information on documentation of student needs for accommodations or modifications.

Specific Recommendation 4: 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.

These recommendations are described in more detail in Chapter 6. In making each of the above recommendations, we recognize the provisional nature of the data available at this time. We also commend the CDE for the extensive efforts that have already been made to improve the program in response to these and earlier suggestions.

Independent Evaluation of the California High School Exit Examination (CAHSEE): Year 3 Evaluation Report Table of Contents

Independent Evaluation of the California High School Exit Examination (CAHSEE): Year 3 Evaluation Report Table of Contents (*Continued*)

List of Tables

List of Figures