

Independent Evaluation of the California High School Exit Examination (CAHSEE): AB 1609 Study Report—Volume 1

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EXECUTIVE SUMMARY

The California High School Exit Examination

In 1999, the California legislature passed Senate Bill (SB)-2X, a bill creating the California High School Exit Exam (CAHSEE) and requiring students to pass this exam to earn a high school diploma, beginning with the Class of 2004. The legislation specifying the requirements for the new exam also called for 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) through a competitive procurement process. As specified in EC 60854, HumRRO's efforts focus on analyses of data from the field test of items (test questions), annual administrations of the CAHSEE, and on trends in pupil performance and pupil retention, graduation, dropout, and college attendance rates. As also specified in EC 60854, reports from the evaluation include recommendations for improving the quality, fairness, validity, and reliability of the examination.

AB 1609 Study Requirements

California State Assembly Bill (AB) 1609, passed in 2001, required an additional evaluation of the extent to which the CAHSEE meets standards for development and use for the Class of 2004. AB 1609 added Section 60857 to the California Education Code specifying that the new evaluation must assess "whether the test development process and the implementation of standards-based instruction meet the standards required for a test of this nature." Thus, the new study involved two primary areas of focus:

- The test development process
- Implementation of standards-based instruction

The first topic was already being addressed in the independent evaluation conducted by HumRRO. The evaluation contract was modified to include addressing the remaining issues identified under AB-1609.

This report is being submitted to the California State Board of Education (SBE) and the Governor and state legislature in fulfillment of the AB 1609 requirements. Study questions and our approach to answering them are described in Chapter 1. Our review of the test development process is presented in Chapter 2. Chapters 3 through 5 of this report describe results and conclusions from a survey of instruction completed by principals and teachers in 298 California high schools and by principals and teachers at 173 middle-grade feeder schools for these high schools. The teacher surveys covered 3,270 high school courses and 2,006 middle-grade feeder school courses.

Information from the survey was supplemented by visits to a smaller sample of schools. Principals and teachers at each site were interviewed to elicit information to confirm and expand on the information obtained through the surveys. Interview protocols are provided in Appendix B. A total of 62 schools were visited, including 45 high schools (four of which

were charter, continuation, or alternative schools) and 17 middle-grade feeder schools. A total of 499 interviews were conducted at these schools.

Information from the CAHSEE administrations was also used in assessing standards-based instruction. Passing rates were computed for each of the state's 1,843 high schools and used in assessing the effectiveness of standards-based instruction in each high school together with its associated middle and elementary schools. This information is used extensively in Chapter 4, which discusses the effectiveness of current standards-based instruction.

The final chapter of the report summarizes main findings and discusses choices that the State Board of Education must make in deciding whether to defer the CAHSEE graduation requirement. The findings and conclusions are also summarized here.

Main Findings

Test Development

We reviewed all of the relevant standards published in *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999). These standards were developed by joint committees of the American Educational Research Association, the American Psychological Association, and the National Council for Measurement in Education. They are the most widely accepted standards for testing. Results of our review of these standards led to the first general finding:

General Finding 1: The development of the CAHSEE meets all of the test standards for use as a graduation requirement.

One particularly important standard is 13.5, which requires that students have adequate opportunity to learn the material covered by tests used to make important decisions about them. As described in the balance of this report, instruction in some schools was not closely aligned to the California Content Standards at the time the Class of 2004 was in grades 7 through 9. However remedial programs, providing additional opportunities to learn the required material, have been created in nearly all high schools. In the end, the Board and others must decide whether these opportunities are sufficient.

Standards-Based Instruction

The Impact of the CAHSEE on Instruction

General Finding 2. The CAHSEE requirement has been a major factor leading to dramatically increased coverage of the California Content Standards at both the high school and middle school levels and to development or improvement of courses providing help for students who have difficulty mastering these standards.

Chapter 3 of this report describes the profound impact that the CAHSEE requirement has had on standards-based instruction. At the high school level, coverage of the California Content Standards assessed by the CAHSEE has increased steadily from 1999, when only about 20 percent of the schools reported covering at least three-quarters of the standards, to the current school year, in which more

than 80 percent of the schools reported at least 75 percent coverage. Changes to instruction are also indicated by the number of new courses started in the past 3 years, the number of existing courses that have adopted new textbooks in this time period, and the increased alignment of these courses and texts to content standards. Alignment at the middle school has shown similar improvement.

An even more important indication of the impact of the CAHSEE requirement is the number of new remedial or supplemental courses, many specifically targeting students who do not initially pass the CAHSEE. Schools have always worked to help students who did not master important standards the first time around, but the CAHSEE has expanded these efforts very considerably. New programs also include courses designed specifically for English learners and special education students. Principal and teacher interviews suggest that the CAHSEE requirement was a major factor in driving schools to increase alignment of their courses to the California Content Standards and to develop programs for students who were not mastering key standards.

Effectiveness of Instruction for the Class of 2004

General Finding 3. Available evidence indicates that many courses of initial instruction and remedial courses have only limited effectiveness in helping students master the required standards.

Chapter 4 of this report presents evidence for the effectiveness of standards-based instruction for the Class of 2004. The general conclusion from these analyses is that instruction throughout the state has not been effective for all students, particularly in mathematics. In half of the state's high schools fewer than 50 percent of the Class of 2004 has passed the mathematics portion of the CAHSEE.

High school passing rates are closely related to the reported coverage of the CAHSEE standards in the high school curriculum. For ELA, 100 percent of schools in the survey where high levels of content coverage were implemented early (just subsequent to passage of the CAHSEE legislation) had passing rates of 75 percent or greater. In comparison, only 59 percent of schools that have not yet implemented high levels of coverage had ELA passing rates this high. For mathematics, the percentage of schools with high passing rates ranged from 100 percent for early implementers down to only 22 percent for schools that have not yet implemented high levels of alignment between curriculum and content standards.

Student Preparation

General Finding 4. Lack of prerequisite skills may prevent many students from receiving the benefits of courses that provide instruction in relevant content standards. Inadequate student motivation and lack of strong parental support may play a contributing role in limiting the effectiveness of these courses.

Survey and interview results indicated a major reason that courses were not more effective in helping students master the required standards was inadequate student preparation. Many students participating in both initial and remedial instruction did not have essential prerequisite skills. For supplemental and remedial courses, more than half the teachers reported that most of their students did not yet have prerequisite skills; among teachers of remedial courses targeting special education students, 72 percent gave this response.

A number of other reasons for the limited effectiveness of current instruction were explored in the survey and interviews. Low student attendance and motivation were frequently cited as contributing factors. Students do not always take advantage of remedial activities that are offered, particularly summer programs. Many of the interview respondents stated that the CAHSEE requirement has had some positive influence on student motivation.

We also investigated the possible impact of teacher qualifications, defined by their credentials and years of experience, and professional development programs for the teachers on the effectiveness of standards-based instruction. There was no clear evidence that teacher qualification was an important factor. Few schools made extensive use of teachers with emergency credentials, and the majority of courses targeting English learners or special education students were taught by teachers who were experienced with these populations. There was some indication that the qualifications of mathematics teachers could be improved. Mathematics teachers had lower rates of participation in professional development targeted to teaching the standards, and as many as 25 percent of high school mathematics courses targeting special education students are being taught by teachers without appropriate credentials. In general, however, those who teach courses targeting English learners and special education students have considerable experience with these populations.

Potential Improvements for Subsequent Classes

General Finding 5. Many factors suggest that the effectiveness of standards-based instruction will improve for each succeeding class after the Class of 2004, but the speed with which passing rates will improve is currently unknown.

Recent changes in standards-based instruction offer considerable hope for improved effectiveness for the Class of 2005 and beyond. Coverage of the content standards has increased at both the middle and high school levels. New, aligned textbooks have been introduced to courses at these levels. Teachers are continuing to receive professional development aimed at guiding them in teaching the content standards. The Class of 2004 did not have the advantage of most of these changes when they were in middle school. Efforts to overcome this lack have been of limited effectiveness in many high schools. Students in the Class of 2006 and beyond are receiving considerably more benefit from the adoption of textbooks aligned to the standards and of professional development efforts for teachers.

Potential improvements in the effectiveness of instruction in mathematics are particularly significant. The Algebra requirement was not adopted until students in the Class of 2004 were already in high school. Many students required extensive instruction in prerequisite skills before instruction in Algebra could be effective. Middle-grade feeder school principals report significant increases in the proportion of students taking some Algebra by the 8th grade. The full scope of the California Content Standards, from elementary through high school, has been implemented for students in more recent classes.

While the potential for improvement in the effectiveness of instruction for subsequent high school classes is great, the rate at which this improvement will lead to increased mastery of the CAHSEE standards is unknown. Current funding issues raise questions as to the extent to which schools can continue to support remedial courses and to provide training and

professional development for those who teach these courses. Initial passing rates for the Class of 2005 should be available in June 2003.

Recommendations

The State Board of Education must decide by August 1, 2003 whether to continue to require students in the Class of 2004 to pass the CAHSEE in order to earn a diploma. In reaching a decision on this issue, the Board must weigh competing risks and benefits. A decision to continue the requirement will maintain the momentum for continued improvements to instruction and signal that the Board is committed to ensuring that all students achieve essential skills. Continuing the requirement will also likely lead to an intensive debate over the adequacy of instructional opportunities and fairness to specific groups within the Class of 2004. Such a debate would take time and resources away from the primary focus on educating students.

The values assigned to potential risks and benefits are matters of public policy, not of science. Therefore, we cannot recommend what the Board's decision should be. Instead, we offer several recommendations, based on findings from the study, for factors to consider in implementing either a decision to continue or a decision to defer the CAHSEE requirement for high school graduation.

Continuing the CAHSEE Requirement

If the requirement is continued, what options might be considered to lessen concerns over fairness stemming from inadequate or unequal opportunities to learn the required standards? Alternatives for increasing the passing rates, providing additional ways of meeting the requirement, and providing alternatives for students who cannot earn a diploma are discussed outlined.

Increasing the Passing Rate

The Board might consider a retroactive lowering of the passing standards for the Class of 2004. For mathematics, the current standard requiring students to answer 55 percent of the questions in the initial test form correctly is already relatively low. It may not be credible to lower this rate very much further.

Another approach might be to reduce the content covered by the CAHSEE, eliminating sections giving current students the most difficulty. This option is also limited, as there are difficult questions for each different content area. In mathematics, for example, it is not just Algebra that gives students difficulty. There are difficult questions in each of the five major content strands. In addition, it would be difficult to change test content retroactively for the Class of 2004.

One other way passing rates might be increased would be to adopt a compensatory approach where achievement above the minimum in one subject could compensate for some deficiency in achievement in the other subject. For example, a total score of 700 could be required rather than requiring students to obtain scores of 350 or higher on each portion of the CAHSEE. The rationale for this approach is that students with exceptional skill in

mathematics [English-language arts] might not need as much skill in language arts [mathematics] to be successful. If this criterion had been used with the initial administration of the CAHSEE, overall passing rates would have been about 13 percent higher for most student groups.

Additional Ways of Demonstrating Mastery

The Board might also give further consideration to other ways that students could demonstrate mastery of the content standards. Some states (e.g., Indiana, Massachusetts, Ohio) have policies allowing students who pass (or earn high grades in) relevant courses and complete any required remedial courses to petition for a waiver if they do not pass the graduation exam.

Some states also allow additional forms of assessment, such as evaluation of portfolios of student work, for severely handicapped students unable to take the graduation exam. A key difficulty with this approach is making sure that the same high standards are applied to passing criteria for these alternative assessments.

Options for Students Who Cannot Earn a Diploma

Finally, concerns about the CAHSEE could be decreased if there were additional options for recognizing the achievement of students who are unable to meet the required standards. School districts could decide to issue alternate certificates of completion to motivate students who might be unable to reach passing levels and to recognize students who demonstrate commendable effort despite failing to master the standards or who are unable to test successfully. The legislature might consider state-wide options for recognizing levels of achievement below that required for a diploma.

Deferring the CAHSEE Requirement

If the CAHSEE requirement is deferred, the biggest concern will be maintaining momentum for improved instruction in the content standards and the motivation of students to take advantage of this instruction. Options that may be considered include:

- Offering a diploma seal or certificate for students who pass the CAHSEE and/or noting satisfaction of the CAHSEE requirement on high school transcripts.
- Allowing or encouraging districts to include the CAHSEE as part of their own graduation requirements. This option might involve releasing one or more forms of the CAHSEE for district use, if testing beyond the 10th grade is not continued.
- Continuing to use the CAHSEE for school accountability in the Academic Performance Index and in meeting requirements under No Child Left Behind legislation.

The Class of 2005 has now taken the CAHSEE as 10th graders. If the requirement is deferred past the Class of 2006, the Board must decide whether to offer the CAHSEE next year at all. The current Academic Performance Index, used for accountability, and the requirements of the No Child Left Behind act dictate continued administration of the CAHSEE to 10th graders. We recommend that California continues to allow students who do

not pass the exam in the 10th grade to have subsequent opportunities to take it during the 11th and 12th grades. Such an approach would be essential to continued use for school accountability and would maximize options for use by districts in identifying students who have not mastered the required standards and recognizing those who have.

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CHAPTER 1: INTRODUCTION

The California High School Exit Examination

California State Senate Bill (SB)-2X, passed in 1999, created the California High School Exit Exam (CAHSEE) and required students to pass this exam to earn a high school diploma. In addition, the legislation created the High School Exit Examination (HSEE) Standards Panel, composed of teachers, principals, school board members, parents, and the general public, which was appointed by the Superintendent and approved by the Board. The HSEE Standards Panel's primary responsibility was to ensure that the exam is aligned with the Board's rigorous content standards for English-language arts (ELA) and mathematics (EC60850b). The Panel also considered and made recommendations on a range of test development and administration issues such as frequency of testing, accommodations for students with disabilities, and determination of passing levels. In addition, the legislation made provisions for 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) through a competitive procurement process. As specified in EC 60854, HumRRO's efforts focus on the following analyses:

- data from the field test of items (test questions);
- annual administrations of the CAHSEE; and
- trends in pupil performance and pupil retention, graduation, dropout, and college attendance rates.

As specified in EC 60854, reports from the evaluation include recommendations for improving the quality, fairness, validity, and reliability of the examination.

AB 1609 Study Requirements

California State Assembly Bill (AB) 1609, passed in 2001, required an additional evaluation of the extent to which the CAHSEE can meet standards for development and use for the Class of 2004. AB 1609 added Section 60857 to the California Education Code specifying that the new evaluation must assess "whether the test development process and the implementation of standards-based instruction meet the standards required for a test of this nature." Thus, the new study involved two primary areas of focus:

- the exam (the test development process), and
- instruction (implementation of standards-based instruction).

The first area already was being addressed in the ongoing evaluation. The test development process is being thoroughly reviewed in developing recommendations for improving the quality, fairness, validity, and reliability of the CAHSEE as specified under EC 60854. The additional work required to address the first area was to document the results of this review with respect to specific standards for test development as presented in *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999), the most widely accepted professional standards for a test of this nature.

Work in the second area included an assessment of the current state of California Content Standards-based instruction relative to professional and legal standards for using the CAHSEE as a high school graduation requirement. Both middle-grade instruction, where relevant content standards are first taught, and regular and remedial instruction in high schools were examined.

Specific Research Questions

1. What proportion of students in the Class of 2004 who have *not* yet passed the CAHSEE are in high schools that provide effective remedial programs to help them master the required skills?
2. What proportion of students with disabilities and English learners, who have *not* yet passed the CAHSEE, are in high schools that provide these students with effective remedial instruction in the relevant standards?
3. What proportion of students in the Classes of 2004, 2005, 2006, and subsequent classes attended schools in grades 7 through 9 where instruction in English-language arts and mathematics was not closely aligned to the California Content Standards and was effective in helping all students to master the standards?
4. What proportion of students with disabilities and English learners in these classes attended schools in grades 7 through 9 where instruction was closely aligned to the California Content Standards and was effective in helping these students to master the standards?
5. What are the characteristics of courses providing initial instruction in the content standards that are associated with high levels of mastery for all students and for students with specific disadvantages?
6. What are the characteristics of remedial courses that are associated with high levels of mastery for all students and for students with specific disadvantages?

Overview of Study Procedures

In this section, we provide a brief overview of the procedures used in reviewing both the exam and instruction. The review of instruction included development and administration of a survey of instruction to a representative sample of high schools and middle-grade feeder schools. A middle-grade feeder school was defined as one that sends a large portion of its students to the high school in the sample. Middle-grade feeder school names included middle school, intermediate school, junior high school, and elementary school. Procedures for developing the instruments and selecting the samples are described. Results from the survey were extended and validated through visits to a subset of the sampled schools that included interviews with the principals and selected teachers. Procedures for administering and processing the surveys and for scheduling and conducting the validation interviews are described below.

Review of Test Standards

Standards for test development have been prepared by joint committees of the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME). The most recent edition of these standards was published in 1999 (AERA, APA, NCME, 1999). These standards are widely accepted as the most comprehensive and authoritative statement of standards for educational tests.

The AB 1609 study included a review of the relevant standards for educational and psychological tests. Analyses of the appropriateness and quality of the exams developed to date, which have been a major focus of ongoing evaluation efforts (see Wise et al., 2000a, 2000b, 2001, 2002a, 2002b), are cited to demonstrate the extent to which the CAHSEE meets these standards.

Development of Instruments for the Instruction Survey

Addressing the question of whether all students were provided an adequate opportunity to learn the material covered by the exit exam presented challenges in that California has a very diverse educational system. Further, the exam is designed to cover standards taught in different courses and grades, beginning as early as 6th grade. Prior analyses of instruction in California have started with whether teachers were trained and qualified to teach in their subject area through initial coursework or ongoing professional development. Thus, we anticipated that a more comprehensive view of instructional quality would present new challenges.

Case studies

Given these complexities, we used case study methodology to gather information from five schools, together with their middle-grade feeder schools, regarding where and how the content covered by the CAHSEE was taught and to learn more about the commonalities and differences we were likely to encounter in collecting our survey data. The case study design called for visits to the following five types of schools:

1. a large school that is moderate to moderately low-performing
2. a medium-size school that is moderately high-performing
3. a medium-size school that is moderately low to low-performing
4. a small school that is moderate to moderately low-performing
5. a continuation or county school

Two-person teams visited each of five high schools to document in detail how content covered by the CAHSEE is taught. The teams identified associated middle-grade feeder schools for inclusion in their study, since most of the standards are first covered in grades 6–8. Teams followed interview protocols that were open-ended but intended to provide information that would allow for development of more closed-ended questions for the surveys. The following broad topics were covered:

- Site Characteristics (selection designation, geographic designation, size, SES, community setting/atmosphere, student population, challenging instructional groups, student achievement characteristics)
- Curriculum Content (the extent to which students have been exposed to the specific subjects and topics that are essential to succeeding on the CAHSEE; implementation levels of standards-based instruction in English-language arts [ELA] and mathematics; alignment efforts; coordination with middle-grade feeder schools; systematic review/reinforce of earlier concepts)
- Instructional Strategies (the extent to which students have been exposed to the kinds of teaching and instructional experiences that would prepare them to succeed on the CAHSEE)
- Instructional Resources (the extent to which there are appropriate resources to prepare students for success on the CAHSEE [e.g., teacher preparation—degree, certification, experience, participation in relevant in-service training, attitudes toward the subject area and the test; availability of material resources—recent textbooks, supplementary materials, tools/manipulatives/technology])
- Challenging Student Groups (special needs—accommodation and modification, English learners (EL), African American/other race, low socioeconomic status (SES))
- Other (effects on graduation rate; information to the State Board of Education (SBE))

Surveys

The results of the case studies were used to document (a) the range of courses in which the content standards assessed by the CAHSEE are covered and (b) different indicators of the type and quality of instruction in these courses. Separate high school and middle-grade feeder school principal surveys and high school teacher and middle-grade feeder school teacher surveys were developed in scannable format. (See Appendix A in Volume 2 for copies of the principal and teacher surveys.)

The high school and middle-grade feeder school principal surveys included four types of listings:

6. “Common” primary or initial courses (primarily from California Basic Educational Data System [CBEDS]) in ELA plus space for additional ELA courses that the school might offer
7. “Common” primary or initial courses (primarily from CBEDS) in mathematics plus space for additional math courses that the school might offer
8. State-adopted ELA programs for middle school basic and intervention programs plus space for additional remediation ELA courses or programs that the school might offer
9. State-adopted mathematics program for middle school basic and intervention programs plus space for additional remediation math courses or programs that the school might offer

The principals also were asked to complete closed-ended questions about coverage of the California Content Standards; teacher professional development related to the California

Content Standards; tracking mastery of the content standards; articulation; and for high school principals, information about proportion of students not passing the CAHSEE.

For each of the four listings of subject area and type of course—initial or remedial—the principals were asked to identify up to 10 courses from each provided list and/or by entering their additions. Then, for each course listed on the principal survey, one teacher most knowledgeable about that course was to receive a teacher survey to complete.

The teacher survey had a place for the title of the identified course, and the instructions asked the teacher to respond only relative to that course. Questions related to a basic description of the course, grade level(s) of enrolled students, total enrollment, percentages of subpopulations enrolled in the course, textbook and supplementary materials used, educational backgrounds and years of experience of the teachers of the course, teacher credentials, and teachers' experience in working with subpopulations who may be challenged to meet the CAHSEE standards.

Selection of Survey and Validation Samples

A total of 600 high schools were selected for inclusion in the instruction survey. These schools formed a representative sample of all California high schools. We controlled for the following characteristics (in order of importance): district, charter status, and mean reading scores. The selection process began by identifying a target number of schools for each district (1, 2, 3 or Los Angeles) on the basis of the total 10th grade enrollment in 2002. Within each district, schools were ordered by charter versus regular public school and then by their mean 10th grade Reading scale score from the 2002 Standardized Testing and Reporting (STAR) assessment. Schools were selected systematically (every *n*th) from this list with probability proportional to their 10th grade enrollment. Characteristics of the schools in the sample and those that ended up participating in the survey are described in Chapter 3.

The validation sample was a subset of the survey sample. The characteristics controlled for, in order of importance, were district (except that most districts had only one or two schools) and mean Reading scores. To select the sample, all of the schools selected for the survey were ordered by the district mean from the 2002 10th Grade STAR Reading Assessment (this grouped all schools from a given district together) and then by the school's own mean. Schools were selected systematically from this list with probability proportional to the original sampling weight for the school (so that the final sample would have equal weights).

Administration and Receipt Processing

Sending out the surveys and following up with non-responders was a multi-stage process. First, all California superintendents of school districts with grade 10 were faxed a form listing the high schools in their district that were included in the survey sample. The superintendent's office was asked to provide the principal's name and address, and to identify a middle-grade feeder school to this high school, with accompanying principal contact information. When the middle-grade feeder school was in another district, the superintendent's office was asked to forward the background information to the appropriate

person in the middle-grade feeder school district. Each superintendent's office was instructed to fax the completed form to HumRRO.

Districts that failed to respond to this fax request were phoned a few weeks later. In the phone call, they were reminded of the request, and another form was faxed, if requested. Districts that declined to participate were flagged in a sample database to ensure they were not contacted again.

As the fax-back forms arrived, the sample database was updated with the contact information for the high school and middle-grade feeder schools. Each school was assigned an identification number between 1 and 600. Beginning January 24, 2003, HumRRO staff shipped packets containing a cover letter, one principal survey, 40 course surveys with instruction letters, and a Federal Express package to return the completed surveys. For tracking purposes, the school identification number was written on the surveys prior to shipping. The database was updated to indicate the date the packet was sent to each school. The cover letter asked the principal to return the completed surveys within two weeks from the ship date. Each day, new fax-back form information was added to the database and new packets were shipped.

When HumRRO received completed surveys, we updated a survey receipt log file to indicate the number of principal and teacher surveys received from that school ID number. We then forwarded surveys for scanning and data entry of open-ended (i.e., handwritten) responses.

Periodically, we inspected the survey receipt log file to identify schools that had not returned surveys shipped to them at least two weeks prior. We mailed a reminder letter to these schools. Surveys were accepted through April 11, 2003. Surveys received after this date could not be included in analyses in time for the final report.

Schools and districts were provided HumRRO contact information in both the fax-back forms and the school cover letters. Corrections to school information, school declinations, and requests for additional time to complete the surveys were logged in the sample database.

Scheduling the Validation Interviews

The validation sample was drawn from the larger survey sample. All initial contact with the districts was made in conjunction with the survey sample to update the database information on the high schools and obtain information on middle-grade feeder schools. For the validation sample, researchers worked from the updated database as much as possible.

We decided that it was important to visit some middle-grade feeder schools, so as the schedule was being completed we attempted to arrange middle-grade feeder school visits for every third or fourth high school. The following list outlines the procedure we used to schedule the site visits:

- Called districts to collect contact information from 53 districts that had not returned fax-back sheets
 - Obtained principal's name, current telephone numbers and address

- Identified main middle-grade feeder school and collected contact information for middle-grade feeder
- Seven districts declined to participate
- Clustered districts for visits
 - Typically within 1 hour of central site
 - Seven clusters in Southern California, 4 clusters in Central/Northern California
- Assigned teams by date to clusters
 - Eight team leaders: experienced HumRRO staff members
 - Fifteen "team weeks"
- Contacted high school principals to schedule specific dates
 - Faxed information sheet and schedule worksheet
 - Called principal
 - Worked around conflicts and holidays
 - School staff arranged times of interviews
- Filled gaps with middle-grade feeder schools
 - Same process but fewer options for date, tried to get adjacent days
 - In three cases, scheduled middle-grade feeder school same day as high school
 - Avoided middle-grade feeder schools outside the district
- Conducted telephone interviews with:
 - Two schools because East Coast weather delayed travel
 - One school because of remote location and difficulty fitting into regular schedule

Seven districts declined to participate in any portion of the study. Four districts did not respond to requests for the site visits. The selected schools in two districts—special education and a charter—were not considered viable choices for site visits by the district contacts. The final sample included 62 schools as described in the Table 1.1 below.

Table 1.1. Final Validation School Sample

	South	North	Total
High Schools	31	10	41
Middle-Grade Feeder Schools	13	4	17
Other (charter, continuation or alternative, juvenile authority)	2	2	4
Total	46	16	62

Organization of This Report

This report covers activities completed during the additional evaluation carried out under AB 1609 to examine the extent to which the CAHSEE can meet standards for development and use for the Class of 2004. These activities focused on a review of the extent to which the CAHSEE development meets the accepted standards and on the level of implementation of standards-based instruction.

- Chapter 2 presents a listing of standards for test development along with a discussion of the extent to which the CAHSEE development meets these standards.
- Chapter 3 describes findings of the impact of the CAHSEE requirement on instruction at both the high school and middle school levels.
- Chapter 4 discusses the extent to which instruction has been adequate to prepare the Class of 2004 to pass the CAHSEE.
- Chapter 5 discusses the extent to which subsequent classes may be better prepared to pass the CAHSEE.

The report concludes with a summary of findings and recommendations for consideration by the State Board of Education (SBE) for its consideration whether to continue the CAHSEE requirement for the Class of 2004.

CHAPTER 2: REVIEW OF THE CAHSEE AGAINST STANDARDS FOR TEST DEVELOPMENT

Introduction

The first question asked in AB 1609 is whether development of the CAHSEE meets the standards for a test of this type. Analyses of the appropriateness and quality of the exams developed to date have been a major focus of ongoing evaluation efforts (e.g., Wise et al., 2002).

Standards for test development have been prepared by joint committees of the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education (Standards for educational and psychological testing referred to here simply as the Standards). The most recent edition of these standards was published in 1999 (AERA, APA, NCME, 1999). These Standards are widely accepted as the most comprehensive and authoritative statement of standards for educational tests.

In this chapter, the relevant standards for educational and psychological tests are listed and findings from the ongoing evaluation are used to determine the extent to which the CAHSEE meets these standards. The chapter is organized into several sections that cover standards for different aspects of test development and use, beginning with standards for validity. The chapter concludes with a summary of overall findings and a discussion of a few overarching issues.

Note that the *Standards* cover a wide range of tests and testing situations. Not all standards are relevant to the CAHSEE. Many cover issues unique to areas such as employment testing or the use of tests in making psychological diagnoses. In the interests of brevity and clarity, we have not included the irrelevant standards nor discussed why they do not apply to the CAHSEE. So, in the following text where standard numbers are not consecutive, the skipped standards were not considered relevant. In a few cases, standards of possible relevance are listed and the conclusion that they are not relevant to the primary use of the CAHSEE as a requirement for high school graduation is discussed.

In addition to information from prior evaluation reports, we reviewed technical documentation provided by the test development contractors. These documents include Yoon and Williams (2002), Smith, Suh, Yoon, and Williams (2002), and Educational Testing Service (2003).

Test Construction, Evaluation, and Documentation

The first part of the *Standards* covers standards for the development and documentation of tests. Validity and reliability are the two most central issues. These are covered first, followed by discussion of standards for development, administration, and reporting.

Standards for Validity

As described in the *Standards*, “Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of the test.” For the CAHSEE, test scores are interpreted as an indicator of whether students have or have not mastered the content set by policy as a graduation requirement. The standards for validity that the CAHSEE must meet are shown and discussed in this section.

Validity may be established in a number of ways, depending on the nature and use of the test. Since the CAHSEE is not explicitly used to predict future outcomes (as are employment tests), the validity of the CAHSEE as a graduation requirement is established through expert judgment of the extent to which the CAHSEE scores accurately reflect mastery of the content established by the State Board of Education (SBE) as required for graduation. Other forms of validation, such as predictive validity studies or analyses of relationships between the CAHSEE scores and other measures of the same construct are not appropriate. Standards for these other forms of validation are omitted from the present discussion.

Standard 1.1: A rationale should be presented for each recommended interpretation and use of test scores, together with a comprehensive summary of the evidence and theory bearing on the intended use or interpretation.

The rationale for the use of the CAHSEE as a high school graduation requirement was initially specified in the legislation establishing the exam. (See California Education Code, Chapter 8, Section 60850.) The content covered by the CAHSEE was adopted by the SBE at its October 2000 meeting, following recommendations from an independent panel of experts. Criteria for demonstrating adequate proficiency in the two sections of the exam (English-Language Arts and Mathematics) were also adopted by SBE (June 2001) based on recommendations from another independent panel. Both actions were public and well documented in the minutes of the SBE. The California Department of Education (CDE) has subsequently published descriptions of the CAHSEE and its use on the CDE website (<http://www.cde.ca.gov/ta/tg/hs/>). **Standard 1.1 is fully met.**

Standard 1.2: The test developer should set forth clearly how test scores are intended to be interpreted and used. The population(s) for which a test is appropriate should be clearly delimited, and the construct that the test is intended to assess should be clearly described.

The intended interpretation and use of the CAHSEE scores in determining whether students meet diploma requirements is specified in EC 60854. The CAHSEE scores are intended to represent mastery of specified content standards in English-language arts and mathematics. These content standards are laid out in blueprints for the exam adopted by SBE (<http://www.cde.ca.gov/ta/tg/hs/admin.asp>) and in subsequent documents published by CDE, the target populations are clearly specified as successive classes of California high school students beginning with the Class of 2004. **Standard 1.2 is fully met.**

Standard 1.6: When the validation rests in part on the appropriateness of test content, the procedures followed in specifying and generating test content should be described and justified in reference to the construct the test is intended to measure or the domain it is intended to represent. If the definition of the content sampled incorporates criteria such as importance, frequency, or criticality, these criteria should be clearly explained and justified.

Each test question is targeted to a particular standard in the content domain established by SBE. The relevance of the question to the targeted content standard is checked by the item writer, content editors, and independent review panels as described in technical documentation provided by the test development contractors (Yoon & Williams, 2002; Smith et al., 2002; Educational Testing Service, 2003). In conducting the independent evaluation of the CAHSEE, HumRRO has twice convened additional panels to check the procedures used by the developer for generating appropriate test questions for each of the targeted content standards (Wise et al., 2000; Wise et al., 2002b). Results of these independent checks corroborated the validity of the process used by the developers. **Standard 1.6 is fully met.**

Standard 1.7: When a validation rests in part on the opinions or decisions of expert judges, observers, or raters, procedures for selecting such experts and for eliciting judgments or ratings should be fully described. The qualifications, and experience, of the judges should be presented. The description of procedures should include any training and instructions provided, should indicate whether participants reached their decisions independently, and should report the level of agreement reached. If participants interacted with one another or exchanged information, the procedures through which they may have influenced one another should be set forth.

The processes used by the developers to review each test question, for conducting expert reviews of test content and the composition of the panels used with these procedures are described fully in their technical documentation. The selection and characteristics of the panels used by the independent evaluator in confirming the appropriateness of the CAHSEE test questions for the targeted content also are fully documented in the evaluation reports. **Standard 1.7 is fully met.**

Standard 1.10: When interpretation of performance on specific items, or small subsets of items, is suggested, the rationale and relevant evidence in support of such interpretation should be provided. When interpretation of individual item responses is likely but is not recommended by the developer, the user should be warned against making such interpretations.

The determination of whether a student does or does not pass each part of the CAHSEE is based on all of the ELA or mathematics items, not on specific items or on small sets of items. Thus **Standard 1.10 does not apply to the CAHSEE** in its use as a graduation requirement. Note, however, that the CAHSEE score reports do include information on performance on items in each content strand. In many cases, the number of items covering a given strand is limited. CDE may wish to consider further review of whether appropriate caution is given for the interpretation of these subscores.

Standard 1.12: When interpretation of subscores, score differences, or profiles is suggested, the rationale and relevant evidence in support of such interpretation should be provided. Where composite scores are developed, the basis and rationale for arriving at the composites should be given.

Separate scores for English-language arts and mathematics are used in determining eligibility for high school graduation. Each of these scores is a composite of scores on questions assessing the individual standards. The method and rationale for computing the composites follows the test blueprints adopted by the SBE. **Standard 1.12 is fully met** with respect to use of the CAHSEE scores as a high school graduation requirement.

Standard 1.22. When it is clearly stated or implied that a recommended test use will result in a specific outcome, the basis for expecting that outcome should be presented, together with relevant evidence.

The use of the CAHSEE scores in determining eligibility for a diploma is set by policy and not explicitly tied to specific outcomes. The implied outcome is that students receiving a high school diploma will possess core skills essential for success in school, work, or other activities following high school. The basis for expecting this outcome is the judgment of the HSEE Standards Panel¹ and the SBE in establishing the content and performance standards measured by the CAHSEE. Empirical checks on these judgments cannot be conducted until the CAHSEE has been in place for some period of time, thus we conclude that **Standard 1.22 is not relevant at this time.**

Standard 1.23: When a test use or score interpretation is recommended on the grounds that testing or the testing program per se will result in some indirect benefit in addition to the utility of information from the test scores themselves, the rationale for anticipating the indirect benefit should be made explicit. Logical or theoretical arguments and empirical evidence for the indirect benefit should be provided. Due weight should be given to any contradictory findings in the scientific literature, including findings suggesting important indirect outcomes other than those predicted.

A clearly implied benefit from the imposition of the CAHSEE graduation requirement is that instruction in knowledge and skills deemed essential will be significantly improved. The validity of this assumption was a target of the current investigation. Empirical support for this assumption is provided in Chapter 3 of this report. **Standard 1.23 is fully met.**

Standard 1.24: When unintended consequences result from test use, an attempt should be made to investigate whether such consequences arise from the test's sensitivity to characteristics other than those it is intended to assess or to the test's failure fully to represent the intended construct.

¹ Following provisions in the legislation, a panel of teachers, principals, school board members, parents, and the general public was appointed by the Superintendent and approved by the Board. The HSEE Standards Panel's primary responsibility is to ensure that the exam is aligned with the Board's rigorous content standards for ELA and mathematics (EC60850b). The Panel also considers and makes recommendations on a range of test development and administration issues such as frequency of testing, accommodations for students with disabilities, and determination of passing levels.

A major goal of the ongoing independent evaluation of the CAHSEE is to identify any unintended consequences resulting from the use of the CAHSEE as a graduation requirement. To date, no unintended consequences have been found, although it should be noted that no student has yet been denied a diploma. In addition, the development contractor, other experts selected by SBE and CDE, and the independent evaluators have reviewed test questions to ensure that they do not require extraneous knowledge or skill and do represent content standards fully. Thus, even if unintended consequences should arise, it is highly unlikely that they will be associated with either inappropriate or incomplete measurement. **Standard 1.24 is fully met at this time.**

Standards for Test Reliability

Whereas validity concerns the extent to which tests measure content appropriate to the interpretations made of the test scores, reliability concerns the accuracy with which such content is measured. Accuracy can be described in a number of ways. Traditional reliability coefficients estimate the degree to which (percent of) variation in test scores is repeatable across independent assessments. Standard errors of measurement assess the extent of variation in test scores for a given individual that would likely result from independent administrations of the test. In the present context, the CAHSEE scores are used to classify students as either passing the graduation standards or failing to meet these standards. In this case, the accuracy of such classifications overall, and for students in different score ranges, is a primary reliability issue.

Standard 2.1: For each total score, subscore, or combination of scores that is to be interpreted, estimates of relevant reliabilities and standard errors of measurement or test information functions should be reported.

Reliability estimates and standard error of measurement for each test form are included in the technical documentation provided by the test development contractor. In addition, the evaluation reports include extensive analyses of classification accuracy. **Standard 2.1 is fully met with respect to the use of the CAHSEE scores as a graduation requirement.**

It should be noted that subscores for each content area are reported for diagnostic use. The reliability of these scores can vary across different forms of the test. Reliability estimates for these scores are included in the technical documentation (Educational Testing Service, 2003, p. 105), although the analysis of subscore reliability is not extensive.

Standard 2.2: The standard error of measurement, both overall and conditional (if relevant), should be reported both in raw score or original scale units and in units of each derived score recommended for use in test interpretation.

Reliability of the CAHSEE scores has primarily been reported with respect to the derived scale used for reporting. Analyses by the evaluator have indicated error bands with respect to the percent of items answered correctly as well as with respect to this reporting scale. **Standard 2.2 is adequately met.**

Standard 2.3: When test interpretation emphasizes differences between two observed scores of an individual or two averages of a group, reliability data, including standard errors, should be provided for such differences.

Interpretation of score differences is not relevant to the use of the CAHSEE as a high school graduation requirement, thus **Standard 2.3 is not relevant to the primary use of the CAHSEE**. Nonetheless, students repeating the CAHSEE receive multiple scores and interpretation of differences in these scores by the students and their parents and teachers is likely. Evaluation results suggest some issues with the accuracy of individual change scores for some parts of the score scale (Wise et al., 2002). Cautions based on these findings are being considered.

The CAHSEE scores also are being used for school accountability purposes. Comparisons across schools and districts are inevitable when accountability results are presented. Analyses of the accuracy of such comparisons have been conducted by CDE but are outside the scope of the current investigation.

Standard 2.4: Each method of quantifying the precision or consistency of scores should be described clearly and expressed in terms of statistics appropriate to the method. The sampling procedures used to select examinees for reliability analyses and descriptive statistics on these samples should be reported.

The procedures and samples used by the test development contractor in estimating reliability coefficients and standard error of measurement for each test form are described completely in their technical documentation. The procedures and samples used by the evaluator in analyses of classification accuracy are similarly well described. **Standard 2.4 is fully met.**

Standard 2.7: When subsets of items within a test are dictated by the test specifications and can be presumed to measure partially independent traits or abilities, reliability estimation procedures should recognize the multifactor character of the instrument.

The CAHSEE covers content standards organized into a number of discrete areas or strands. Scores for separate strands are reported for diagnostic use. The psychometric model used for the overall scores assumes that results for each standard are indicators of performance on a single underlying dimension of achievement. Thus **Standard 2.7 is not relevant to the use of the CAHSEE in determining eligibility for a diploma.**

Standard 2.8: Test users should be informed about the degree to which rate of work may affect examinee performance.

Standard 2.9: When a test is designed to reflect rate of work, reliability should be estimated by the alternate-form or test-retest approach, using separately timed administrations.

Students are given essentially unlimited time to complete each portion of the exam. Consequently rate of work is not part of the construct being measured and **Standards 2.8 and 2.9 do not apply to the CAHSEE.**

Standard 2.10: When subjective judgment enters into test scoring, evidence should be provided on both inter-rater consistency in scoring and within-examinee consistency over repeated measurements. A clear distinction should be made among reliability data based on (a) independent panels of raters scoring the same performances or products, (b) a single panel scoring successive performances or new products, and (c) independent panels scoring successive performances or new products.

Responses to the essay questions in the ELA exam are rated by scorers following specified rubrics for judging these responses. Each response is independently rated by two different scorers. This provides a basis for establishing the consistency of scoring judgments. Analyses of inter-rater consistency are reported in the test development contractors' technical documentation and have also been analyzed in the evaluation reports. **Standard 2.10 is fully met.**

Standard 2.11: If there are generally accepted theoretical or empirical reasons for expecting that reliability coefficients, standard errors of measurement, or test information functions will differ substantially for various subpopulations, publishers should provide reliability data as soon as feasible for each major population for which the test is recommended.

Information on the CAHSEE score accuracy is based on Item Response Theory (IRT) models in which performance on the test questions and the exam as a whole has the same functional relationship to the underlying trait being measured for all groups. Individual test questions are screened for differential item functioning (DIF) using checks to see that performance on the questions is not differentially related to membership in racial/ethnic groups or to gender. **Standard 2.11 is adequately met**, although CDE may wish to consider additional analyses of reliabilities for targeted subgroups.

Standard 2.14: Conditional standard errors of measurement should be reported at several score levels if constancy cannot be assumed. Where cut scores are specified for selection or classification, the standard errors of measurement should be reported in the vicinity of each cut score.

Standard 2.15: When a test or combination of measures is used to make categorical decisions, estimates should be provided of the percentage of examinees who would be classified in the same way on two applications of the procedures, using the same form or alternate forms of the instrument.

Technical documentation of each test form includes estimates of standard errors of measurement for different score levels. Classification accuracy overall, and for students in different score ranges, has been estimated by the evaluation contractor. **Standards 2.14 and 2.15 have been fully met.**

Standard 2.18: When significant variations are permitted in test administration procedures, separate reliability analyses should be provided for scores produced under each variation if adequate sample sizes are available.

Some variations in test administration procedures are allowed to accommodate students with special needs whose Individualized Education Plans (IEPs) or Section 504 plans, specify the need for such accommodations. In all cases, the accommodations have been judged to not alter the construct being assessed. The number of students allowed specific accommodations has been too small to permit separate estimates of reliability to be computed accurately. Thus, **Standard 2.18 is not relevant at this time**. As additional data are collected, CDE may wish to investigate further the reliability of scores for students requiring specific accommodations.

Standard 2.19: When average test scores for groups are used in program evaluations, the groups tested should generally be regarded as a sample from a larger population, even if all examinees available at the time of measurement are tested. In such cases the standard error of the group mean should be reported, as it reflects variability due to sampling of examinees as well as variability due to measurement error.

Standard 2.19 does not apply to the use of the CAHSEE as a high school graduation requirement. Treatment of existing students as a sample of a larger population is a consideration in the use of the CAHSEE scores for accountability.

Test Development and Revision

Standard 3.1: Tests and testing programs should be developed on a sound scientific basis. Test developers and publishers should compile and document adequate evidence bearing on test development.

Test development procedures have been reviewed extensively by internal and outside experts and are fully documented in technical reports provided by the development contractor. **Standard 3.1 is fully met.**

Standard 3.2: The purpose(s) of the test, definition of the domain, and the test specifications should be stated clearly so that judgments can be made about the appropriateness of the defined domain for the stated purpose(s) of the test and about the relation of items to the dimensions of the domain they are intended to represent.

The purpose and general domain of the test are clearly specified in the enabling legislation. Specific descriptions for the domain covered by the test and specifications for coverage of each area are provided in test blueprints. These documents are publicly available in printed form through the CDE website. **Standard 3.2 is fully met.**

Standard 3.3: The test specifications should be documented, along with their rationale and the process by which they were developed. The test specifications should define the content of the test, the proposed number of items, the item formats, the desired psychometric properties of the items, and the item and section

arrangement. They should also specify the amount of time for testing, directions to the test takers, procedures to be used for test administration and scoring, and other relevant information.

A detailed and public process was used in specifying the content of the CAHSEE. As required in the enabling statutes, an advisory committee was formed, held extensive public hearings, and recommended content standards for the CAHSEE to the SBE. The State Board made final decisions on the standards to be tested and approved blueprints specifying the number and types of questions for each standard. The specifications and blueprints have been published on the Department's website and widely distributed. Documents describing test administration procedures are also posted on the Department's website and have been distributed to testing coordinators for each district. These documents are reviewed during training for test administrators. **Standard 3.3 is fully met.**

Standard 3.4: The procedures used to interpret test scores, and, when appropriate, the normative or standardization samples or the criterion used should be documented.

The primary use of the test scores is to determine whether students have or have not achieved sufficient mastery of the targeted content standards to be granted a diploma. The criterion for passing each test, specified in terms of the number and percent of items on the original form answered correctly, was adopted by the State Board of Education and is recorded in the SBE minutes as well as in several documents published by the Department and its test development contractor. Score reports clearly indicate whether students did or did not meet the passing criteria. **Standard 3.4 is fully met.**

Note that the test is not intended to be used to compare a student's performance to that of other students. Norms showing the percentage of students in some reference population at or above each score level have not been published.

As students who do not pass on their first try subsequently retake one or both parts of the exam, another interpretive use arises. Students, parents, and teachers will seek to interpret differences between a student's original and subsequent scores on the underlying reporting scale. As noted by Wise et al. (2002), the impact of guessing with multiple choice questions may confound the interpretation of gain scores for students at very low score levels. The Department may wish to develop and distribute more detailed guidelines for interpreting gain scores.

Score reports also include information on the number of questions in each major content area (strand) that are answered correctly. These numbers can be compared to the total number of questions in each area. Interpretation of these numbers may be limited by differences in the relative difficulty of questions in different strands. Normative information on the subscores is provided in technical documentation for each test form. CDE may wish to develop more specific guidance for use and interpretation of subscores as indicators of a student's relative strengths and weaknesses.

Standard 3.5: When appropriate, relevant experts external to the testing program should review the test specifications. The purpose of the review, the processes by which the review is conducted, and the results of the review should be documented. The qualifications, relevant experience, and demographic characteristics of expert judges should also be documented.

The CAHSEE Panel convened to develop the test specifications as required in the enabling legislation included individuals with specific expertise in different aspects of instruction and testing. The composition and deliberations of this panel are well documented in the panel minutes and in the final report to SBE. In addition, the panel assembled technical committees with specific expertise in mathematics and in English-language arts. The recommendations of the technical committees and of other experts who participated in public hearings also are documented in minutes from the panel meetings. **Standard 3.5 is fully met.**

Standard 3.6: The type of items, the response formats, scoring procedures, and test administration procedures should be selected based on the purposes of the test, the domain to be measured, and the intended test takers. To the extent possible, test content should be chosen to ensure that intended inferences from test scores are equally valid for members of different groups of test takers. The test review process should include empirical analyses and, when appropriate, the use of expert judges to review items and response formats. The qualifications, relevant experiences, and demographic characteristics of expert judges should also be documented.

Essay questions are used to assess writing skills and multiple-choice questions are used to assess mastery of other content standards. These response formats are both common and appropriate for the target population of high school students.

The specific questions included in each test form are reviewed extensively by contractor staff, outside panels, CDE, and ultimately SBE. Reviews include consideration of whether the question is an appropriate measure of the targeted content standard. Specific review for bias and fairness is an integral part of this process. Procedures for conducting bias and fairness reviews developed by ETS are an industry standard. Review of item statistics for any differential functioning across examinee groups also follows industry standards developed by ETS. Both the content and statistical review procedures have been followed by the original test development contractor and now by ETS. Description of the procedures and the reviewers included at each stage are included in the contractor's technical documentation. **Standard 3.6 is fully met.**

Standard 3.7: The procedures used to develop, review, and try out items, and to select items from the item pool should be documented. If the items were classified into different categories or subtests according to the test specifications, the procedures used for the classification and the appropriateness and accuracy of the classification should be documented.

Item development and review procedures are included in the development contractor's technical documentation. Each question is subjected to a field test and statistical results from the field test are used in further screening potential questions before they are added to the

bank of available questions. The development contractor also provides documentation of the results from each field test. In addition to reviews conducted by CDE and its contractors, HumRRO's evaluation of the CAHSEE has included two independent reviews of the match of test questions to content standards (Wise et al., 2000; Wise et al., 2002). Results indicated that the contractor's development and review procedures were working appropriately.

Standard 3.7 is fully met.

Standard 3.8: When item tryouts or field tests are conducted, the procedures used to select the sample(s) of test takers for item tryouts and the resulting characteristics of the sample(s) should be documented. When appropriate, the sample(s) should be as representative as possible of the population(s) for which the test is intended.

Standard 3.9: When a test developer evaluates the psychometric properties of items, the classical or item response theory (IRT) model used for evaluating the psychometric properties of items should be documented. The sample used for estimating item properties should be described and should be of adequate size and diversity for the procedure. The process by which items are selected and the data used for item selection, such as item difficulty, item discrimination, and/or item information, should also be documented. When IRT is used to estimate item parameters in test development, the item response model, estimation procedures, and evidence of model fit should be documented.

All questions used in operational forms of the CAHSEE are first included in a field test. With two exceptions, field test questions are embedded within operational test forms so that the field test samples and testing conditions are identical to operational conditions. The only exceptions are the initial field tests conducted in 2000 before any operational forms were assembled and a subsequent field test of essay questions. (Tryout versions of essay questions cannot be embedded into operational test forms because of time considerations.) In all cases, the contractor has documented the characteristics of the field test samples, and they have been judged to be appropriate by the independent evaluators.

Procedures used to review field test results include analysis of both classical item statistics and IRT parameter estimates. The procedures and their results are included in technical documentation provided by the contractor. **Standards 3.8 and 3.9 are fully met.**

Some of the field tests have been based on examinees retaking the CAHSEE for the second or subsequent times. While these examinees are a key part of the target population for the CAHSEE, their performance is typically lower than that of first-time test takers in general. As new classes of students begin to take the CAHSEE, the number of first-time test takers will increase dramatically. CDE may wish to restrict future field tests to first-time test takers. Test forms designed exclusively for retest situations might include additional equating questions rather than field test questions.

Standard 3.11: Test developers should document the extent to which the content domain of a test represents the defined domain and test specifications.

As noted above, test blueprints indicate intended coverage of each content standard and all test forms follow these blueprints. **Standard 3.11 is adequately met.** Educational researchers are developing measures of alignment between tests and content standards with more sensitive measures of the coverage of specific standards by test questions. One example is the depth of content dimension in Webb's (2002) model. CDE and the development contractors may wish to explore the appropriateness of such approaches for identifying particular content standards that are difficult to assess completely with an aim toward either revising the content descriptions or expanding item types to cover the content more fully.

Standard 3.13: When a test score is derived from the differential weighting of items, the test developer should document the rationale and process used to develop, review, and assign item weights. When the item weights are obtained based on expert judgment, the qualifications of the judges should be documented.

With the exception of the essay questions, the test questions are given equal weight. Specifications for the relative weight given to the essay questions were developed in consultation with the CAHSEE Panel and approved by SBE. The qualifications of the participants in this process are fully documented in Panel and SBE minutes. **Standard 3.13 is fully met.**

Standard 3.14: The criteria used for scoring test takers' performance on extended-response items should be documented. This documentation is especially important for performance assessments, such as scorable portfolios and essays, where the criteria may not be obvious to the user.

The test publisher documents general descriptions of score levels for the essay questions and the specific rubrics used with each individual question. The independent evaluators have reviewed the scoring procedures and have made minor suggestions for improvement. **Standard 3.14 is fully met.**

Standard 3.19: The directions for test administration should be presented with sufficient clarity and emphasis so that it is possible for others to replicate adequately the administration conditions under which the data on reliability and validity, and, where appropriate, norms were obtained.

First, note that the validity of the CAHSEE scores for high school graduation has been established through expert judgment about test content that does not depend on actual administration of the test. Similarly, normative information is not relevant to the use of the CAHSEE as a high school graduation requirement. Nonetheless, test administration procedures have been documented in detail and training has been provided to testing coordinators. **Standard 3.19 is fully met.**

Standard 3.20: The instructions presented to test takers should contain sufficient detail so that test takers can respond to a task in the manner that the test developer intended. When appropriate, sample material, practice or sample questions, criteria for scoring, and a representative item identified with each major area in the test's classification or domain should be provided to the test takers prior to the

administration of the test or included in the testing material as part of the standard administration instructions.

The instructions to test takers have been reviewed by CDE and SBE staff, as well as by the test developer's technical experts. Sample questions were released before the first administration of the CAHSEE and additional questions are being released each year. The released questions are linked to the test content standards. One minor concern with the instructions to test takers was noted in the Year 3 report from the independent evaluation (Wise et al. June 2002). Scoring rubrics for some of the essay questions include evaluation of whether the response is appropriate for the intended audience, but the question posed to the test takers has not always indicated an audience for the student's response. The test developer is addressing this issue. With this one minor adjustment, **Standard 3.20 is fully met.**

Standard 3.21: If the test developer indicates that the conditions of administration are permitted to vary from one test taker or group to another, permissible variation in conditions for administration should be identified, and a rationale for permitting the different conditions should be documented.

The development contractor, CDE staff, and SBE have given careful consideration to allowable accommodations. These accommodations are consistent with common practice and constitute the only permissible variation in administration procedures. The rationale for these variations is included in the regulations for test accommodations. **Standard 3.21 is fully met.**

Standard 3.22: Procedures for scoring and, if relevant, scoring criteria should be presented by the test developer in sufficient detail and clarity to maximize the accuracy of scoring. Instructions for using rating scales or for deriving scores obtained by coding, scaling, or classifying constructed responses should be clear. This is especially critical if tests can be scored locally.

The ELA portion of the CAHSEE includes two essays that are scored by the test development contractor. Scoring criteria for each question are developed and thoroughly reviewed before test forms are printed. Scorer training is documented, and there are extensive quality-control checks on scoring accuracy both before and during operational scoring. All essays are scored by two independent scorers and, if significant disagreements are found, by one or two additional scorers. **Standard 3.22 is fully met.**

Standard 3.23: The process for selecting, training, and qualifying scorers should be documented by the test developer. The training materials, such as the scoring rubrics and examples of test takers' responses that illustrate the levels on the score scale, and the procedures for training scorers should result in a degree of agreement among scorers that allows for the scores to be interpreted as originally intended by the test developer. Scorer reliability and potential drift over time in raters' scoring standards should be evaluated and reported by the person(s) responsible for conducting the training session.

Technical documentation supplied by the test developer described the process for selecting, training, and monitoring scoring of the essays. Monitoring procedures include recalibration exercises at the beginning of each scoring session and periodic checks for scoring drift. Agreement statistics have been analyzed and reported both by the developer and the evaluator. **Standard 3.23 is fully met.**

Scales, Norms, and Score Comparability

Section 4 of the *Standards* covers the development of scales used for reporting test results along with the creation and documentation of information to support interpretations of these scores.

Standard 4.1: Test documents should provide test users with clear explanations of the meaning and intended interpretation of derived score scales, as well as their limitations.

The score scale used for reporting was designed to run from 250 to 450. The scale was adjusted so that the passing level would be at 350 and the point corresponding to chance responding on the multiple choice questions would be 300. Information on guessing levels is described in detail only in technical documentation, but the passing level is clearly communicated in all documents describing test results. Since the interpretation of scores with respect to the passing level is the primary use intended for these scores, **Standard 4.1 is adequately met.** More information on the guessing levels might be provided to users to avoid possible misinterpretation of scores and score gains below the chance level.

Standard 4.2: The construction of test scales used for reporting scores should be described clearly in test documentation.

Conversion tables showing how reported scale scores are derived from the raw score have been provided for each test form. The raw score is simply the number of correct responses for mathematics. For ELA, the raw score is a weighted sum of the number of correct responses to the multiple-choice questions and the scores on the two essay questions. **Standard 4.2 is fully met.**

Standard 4.3: If there is sound reason to believe that specific misinterpretations of a score scale are likely, test users should be explicitly forewarned.

The score scale used for reporting was developed to provide a constant interpretation of test scores across test forms that vary slightly in difficulty. The nature of this scale is explained in the score reports and tables for converting number correct scores from a given form onto the reporting scale are provided in technical documentation, along with estimates of error or measurement. Limitations on the interpretations of scores at the low end of the scale due to the impact of guessing have been reported by the evaluator. **Standard 4.3 is adequately met.**

Standard 4.9: When raw score or derived score scales are designed for criterion-referenced interpretation, including the classification of examinees into separate

categories, the rationale for recommended score interpretations should be clearly explained.

The reporting scale has been designed so that 350 is always the minimum passing score for each test. Mastery of the required content was initially also defined in terms of minimum percent correct scores (60 percent for ELA and 55 percent for mathematics), although this varies slightly across test forms. No further explanation is required and **Standard 4.9 is fully met.**

Standard 4.10: A clear rationale and supporting evidence should be provided for any claim that scores earned on different forms of a test may be used interchangeably. ... The specific rationale and the evidence required will depend in part on the intended uses for which score equivalence is claimed.

Standard 4.11: When claims of form-to-form equivalence are based on equating procedures, detailed technical information should be provided on the method by which equating functions or other linkages were established and on the accuracy of equating functions.

Standard 4.13: In equating studies that employ an anchor test design, the characteristics of the anchor test and its similarity to the forms being equated should be presented, including both content specifications and empirically determined relationships among test scores. If anchor items are used, as in some IRT-based and classical equating studies, the representativeness and psychometric characteristics of anchor items should be presented.

Standard 4.17: Testing programs that attempt to maintain a common scale over time should conduct periodic checks of the stability of the scale on which scores are reported.

Each test form is built to the same test blueprint, specifying the required number of questions for each content standard. Technical documentation for each administration includes an extensive discussion and analysis of test form equating procedures and results. Equating procedures involve the use of a substantial number of anchor questions that cover each subscale of each of the tests. In all cases, equating results have supported the equivalence of the resulting scale scores. These results have been reviewed by the independent evaluator and by other outside technical experts. **Standards 4.10, 4.11, 4.13, and 4.17 are fully met.**

Standard 4.19: When proposed score interpretations involve one or more cut scores, the rationale and procedures used for establishing cut scores should be clearly documented.

Standard 4.21: When cut scores defining pass-fail or proficiency categories are based on direct judgments about the adequacy of item or test performances or performance levels, the judgmental process should be designed so that judges can bring their knowledge and experience to bear in a reasonable way.

Procedures used to develop recommended cut scores have been documented in a technical report provided by the development contractor. Industry standard procedures for selecting panelists and for eliciting valid judgments from them were employed. Considerations by the SBE in making final decisions on the cut scores that define passing levels for each of the two content areas are documented in SBE meeting minutes. **Standards 4.19 and 4.21 are fully met.**

Test Administration, Scoring, and Reporting

Section 5 of the *Standards* covers additional issues in the administration and use of tests. Relevant standards are listed here, although there is considerable overlap with the standards for test development discussed above.

Standard 5.1: Test administrators should follow carefully the standardized procedures for administration and scoring specified by the test developer, unless the situation of a test taker's disability dictates that an exception should be made.

Test administration manuals describing prescribed testing procedures have been developed by the contractor responsible for development, administration, and scoring of the CAHSEE. Training workshops are provided for testing coordinators during which the test administration manuals are reviewed in detail. **Standard 5.1 is fully met.**

Standard 5.2: Modifications or disruptions of standardized test administration procedures or scoring should be documented.

Standard 5.3: When formal procedures have been established for requesting and receiving accommodations, test takers should be informed of these procedures in advance of testing.

Test accommodations and procedures for requesting them have been established in regulations adopted by SBE. Letters were sent to parents of students in the Class of 2004 informing them of students' rights to these accommodations. **Standards 5.2 and 5.3 are fully met.**

Standard 5.4: The testing environment should furnish reasonable comfort with minimal distractions.

Guidance for testing environments is provided to local testing coordinators. Test administrations are monitored at a sample of sites. Insofar as can be determined, **Standard 5.4 is adequately met.**

Standard 5.5: Instructions to test takers should clearly indicate how to make responses. Instructions should also be given in the use of any equipment likely to be unfamiliar to test takers. Opportunity to practice responding should be given when equipment is involved, unless use of the equipment is being assessed.

No equipment, beyond a number 2 pencil, is required. Instructions for marking responses are provided. **Standard 5.5 is fully met.**

Standard 5.6: Reasonable efforts should be made to assure the integrity of test scores by eliminating opportunities for test takers to attain scores by fraudulent means.

Standard 5.7: Test users have the responsibility of protecting the security of test materials at all times.

Test administration procedures include very explicit instructions for protecting the security of test materials as well as for preventing or detecting various forms of cheating. **Standards 5.6 and 5.7 are fully met.**

Standard 5.8. Test scoring services should document the procedures that were followed to assure accuracy of scoring. The frequency of scoring errors should be monitored and reported to users of the service on reasonable request. Any systematic source of scoring errors should be corrected.

Standard 5.9: When test scoring involves human judgment, scoring rubrics should specify criteria for scoring. Adherence to established scoring criteria should be monitored and checked regularly. Monitoring procedures should be documented.

Procedures for monitoring the accuracy of scoring, particularly the scoring of student essays, are described in the technical documentation, along with analyses of resulting scoring accuracy. **Standards 5.8 and 5.9 are fully met.**

Standard 5.10: When test score information is released to students, parents, legal representatives, teachers, clients, or the media, those responsible for testing programs should provide appropriate interpretations. The interpretations should describe in simple language what the test covers, what scores mean, the precision of the scores, common misinterpretations of test scores, and how scores will be used.

Score reports provided to students and parents have been thoroughly reviewed for completeness, clarity, and accuracy. **Standard 5.10 is fully met.**

Standard 5.13: Transmission of individually identified test scores to authorized individuals or institutions should be done in a manner that protects the confidential nature of the scores.

Standard 5.15: When test data about a person are retained, both the test protocol and any written report should also be preserved in some form. Test users should adhere to the policies and record-keeping practice of their professional organizations.

Standard 5.16: Organizations that maintain test scores on individuals in data files or in an individual's records should develop a clear set of policy guidelines on the duration of retention of an individual's records, and on the availability and use over time, of such data.

CDE does not maintain individually identified information on students. Contractors for the development, administration, scoring, and evaluation of the CAHSEE were required to submit data confidentiality plans that were subject to legal review. Ongoing information on individual students is retained by schools and districts, subject to confidentiality restrictions in the California Education code. **Standards 5.13, 5.15, and 5.16 are fully met.**

Supporting Documentation for Tests

Section 6 of the *Standards* covers documentation requirements. Relevant standards are listed here. Nearly all of the items to be documented are discussed above. Discussion in this section is focused on documentation of these items.

Standard 6.1: Test documents (e.g., test manuals, technical manuals, user’s guides, and supplemental material) should be made available to prospective test users and other qualified persons at the time a test is published or released for use.

Standard 6.2: Test documents should be complete, accurate, and clearly written so that the intended reader can readily understand the content.

Standard 6.3: The rationale for the test, recommended uses of the test, support for such uses, and information that assists in score interpretation should be documented. Where particular misuses of a test can be reasonably anticipated, cautions against such misuses should be specified.

Standard 6.4: The population for whom the test is intended and the test specifications should be documented. If applicable, the item pool and scale development procedures should be described in the relevant test manuals. If normative data are provided, the norming population should be described in terms of relevant demographic variables, and the year(s) in which the data were collected should be reported.

Standard 6.5: When statistical descriptions and analyses that provide evidence of the reliability of scores and the validity of their recommended interpretations are available, the information should be included in the test’s documentation. When relevant for test interpretation, test documents ordinarily should include item level information, cut scores and configural rules, information about raw scores and derived scores, normative data, the standard errors of measurement, and a description of the procedures used to equate multiple forms.

Standard 6.9: Test documents should cite a representative set of the available studies pertaining to general and specific uses of the test.

Standard 6.14: Every test form and supporting document should carry a copyright date or publication date.

Standard 6.15: Test developers, publishers, and distributors should provide general information for test users and researchers who may be required to determine the

appropriateness of an intended test use in a specific context. ... General information also should be provided for test takers and legal guardians who must provide consent prior to a test's administration.

CDE provides extensive documentation of the CAHSEE through its website and also distributes this information directly to testing coordinators in each high school district that includes grade 10. Very detailed technical documentation for each administration has been provided by the test development contractors (Yoon 2002; Smith et al., 2002; Educational Testing Service, 2003). The independent evaluator has reviewed this documentation and confirms its completeness. **All of the relevant standards in Section 6 are fully met.**

Fairness in Testing and Test Use

The second part of the *Standards* includes standards for fairness. These include general standards for fairness in testing and test use as well as standards specific to the use of tests with linguistic minorities and for individuals with disabilities who may require accommodation.

Standard 7.1: When credible research reports that test scores differ in meaning across examinee subgroups for the type of test in question, then to the extent feasible, the same forms of validity evidence collected for the examinee population as a whole should also be collected for each relevant subgroup. Subgroups may be found to differ with respect to appropriateness of test content, internal structure of test responses, the relation of test scores to other variables, or the response processes employed by individual examinees. Any such findings should receive due consideration in the interpretation and use of scores as well as in subsequent test revisions.

Standard 7.2: When credible research reports differences in the effects of construct-irrelevant variance across subgroups of test takers on performance on some part of the test, the test should be used, if at all, only for those subgroups for which evidence indicates that valid inferences can be drawn from test scores.

Standard 7.4: Test developers should strive to identify and eliminate language, symbols, words, phrases, and content that are generally regarded as offensive by members of racial, ethnic, gender, or other groups, except when judged to be necessary for adequate representation of the domain.

Validity of the CAHSEE tests is established through review of the content of the test questions. Each test question is specifically reviewed for sensitivity and fairness to different demographic groups by panels that include representatives of the relevant demographic groups. **Standards 7.1, 7.2 and 7.4 are fully met.**

Standard 7.3: When credible research reports that differential item functioning exists across age, gender, racial/ethnic, cultural, disability, and/or linguistic groups in the population of test takers in the content domain measured by the test, test developers should conduct appropriate studies when feasible. Such research should seek to detect

and eliminate aspects of test design, content, and format that might bias test scores for particular groups.

Statistical analyses to check for differential item functioning (DIF) meet industry standards. Any test question flagged for DIF is subjected to a careful review leading to a decision regarding operational use. **Standard 7.3 is fully met.**

Standard 7.5: In testing applications involving individualized interpretations of test scores other than selection, a test taker's score should not be accepted as a reflection of standing on the characteristic being assessed without consideration of alternate explanations for the test taker's performance on that test at that time.

Care has been taken to remove any irrelevant difficulties from the test form. Examinees who do not perform well at one testing session are provided several opportunities to retake the test. The State Board of Education also has established policies on accommodations, modifications, and waivers that remove barriers to students' ability to demonstrate mastery of the required standards. **Standard 7.5 is adequately met**, although additional consideration might be required if new and convincing alternate explanations for poor test performance were advanced.

Standard 7.7: In testing applications where the level of linguistic or reading ability is not part of the construct of interest, the linguistic or reading demands of the test should be kept to the minimum necessary for the valid assessment of the intended construct.

Some concerns about linguistic requirements for responding to mathematics questions were expressed in independent item reviews conducted by the evaluator (Wise et al, 2002). Questions are specifically reviewed for reading ability requirements prior to operational use and the test developer is continuing efforts to further simplify reading levels. **Standard 7.7 is adequately met.**

Standard 7.9: When tests or assessments are proposed for use as instruments of social, educational, or public policy, the test developers or users proposing the test should fully and accurately inform policymakers of the characteristics of the tests as well as any relevant and credible information that may be available concerning the likely consequences of test use.

The test developer provides technical documentation and regular information to CDE and SBE. An independent evaluation of test characteristics and consequences of the CAHSEE requirement is also ongoing. Regular reports are issued to the governor, legislature, State Board of Education, and the California Department of Education. **Standard 7.9 is fully met.**

Standard 7.10: When the use of a test results in outcomes that affect the life chances or educational opportunities of examinees, evidence of mean test score differences between relevant subgroups of examinees should, where feasible, be examined for subgroups for which credible research reports mean differences for similar tests. Where mean differences are found, an investigation should be undertaken to

determine that such differences are not attributable to a source of construct underrepresentation or construct-irrelevant variance. While initially the responsibility of the test developer, the test user bears responsibility for uses with groups other than those specified by the developer.

Scoring differences for relevant subgroups have been monitored and reported by CDE and by the independent evaluator. While such differences exist, every indication is that the target content is covered fully and fairly for each group. As noted above, some questions have been raised about the possible impact of reading requirements for linguistic minorities. These concerns are clearly not relevant to the section of CAHSEE that assesses reading, which all students are required to pass. Given that students have passed the reading section, there should not be problems with the reading level of mathematics. Nonetheless, the development contractor is continuing work to keep reading requirements to a minimum on the mathematics test. **Standard 7.10 is fully met.**

Standard 7.11: When a construct can be measured in different ways that are approximately equal in their degree of construct representation and freedom from construct-irrelevant variance, evidence of mean score differences across relevant subgroups of examinees should be considered in deciding which test to use.

Guidance from the original HSEE Panel and the expert experience of the test developers have led to an assessment judged to best represent the intended ELA and mathematics achievement constructs. No alternative ways of measuring these constructs have been suggested, so **Standard 7.11 is not relevant at this time.**

Standard 7.12: The testing or assessment process should be carried out so that test takers receive comparable and equitable treatment during all phases of the testing or assessment process.

As noted above, test administration procedures have been carefully standardized and training has been provided to local testing coordinators. **Standard 7.12 is fully met.**

Testing Individuals of Diverse Linguistic Backgrounds

California has a large population of students who are not native speakers of English. Consequently, section 9 of the Standards concerning testing individuals with diverse linguistic backgrounds is particularly relevant. On the other hand, by statute, part of the CAHSEE covers reading in English. This requirement limits the types of requirements that could be provided to linguistic minorities without altering the construct being assessed.

Standard 9.1: Testing practice should be designed to reduce threats to the reliability and validity of test score inferences that may arise from language differences.

As noted above, all test questions are reviewed for sensitivity and fairness for different examinee groups and for reading level requirements. Work to ensure minimal language requirements for the mathematics test is proceeding. **Standard 9.1 is adequately met.**

Standard 9.2: When credible research evidence reports that test scores differ in meaning across subgroups of linguistically diverse test takers, then to the extent feasible, test developers should collect for each linguistic subgroup studied the same form of validity evidence collected for the examinee population as a whole.

Validity evidence is based on expert judgments about content coverage. Additional judgments on language requirements and the appropriateness of the question for different groups of students also are collected. To date, there is no clear evidence that test scores have different meaning for different linguistic groups, so **Standard 9.2 is not relevant at this time.**

The remaining standards in this section cover situations where test forms in different languages are available. These standards do not apply to the CAHSEE.

Testing Individuals with Disabilities

Section 10 of the *Standards* covers requirements for testing individuals with disabilities. Relevant standards from this section are listed here. Note that the standards refer to modifications to the test and test administration procedures in a generic sense. For CAHSEE, the term modification has been reserved for changes that alter the construct being assessed. Changes that do not alter the construct are referred to as accommodations.

Standard 10.1: In testing individuals with disabilities, test developers, test administrators, and test users should take steps to ensure that the test score inferences accurately reflect the intended construct rather than any disabilities and their associated characteristics extraneous to the intent of the measurement.

Current policies and regulations covering appropriate testing accommodations for students with disabilities have clearly identified changes judged to alter the construct being measured (e.g., oral presentation of the ELA test or use of calculators on the mathematics test). These policies are consistent with policies adopted in most other states. Allowable accommodations, designed to enhance the appropriateness of scores for students with disabilities, are also consistent with common industry practice. **Standard 10.1 is fully met.**

Standard 10.2: People who make decisions about accommodations and test modification for individuals with disabilities should be knowledgeable of existing research on the effects of the disabilities in question on test performance. Those who modify tests should also have access to psychometric expertise for so doing.

Standard 10.8: Those responsible for decisions about test use with potential test takers who may need or may request specific accommodations should (a) possess the information necessary to make an appropriate selection of measures, (b) have current information regarding the availability of modified forms of the test in question, (c) inform individuals, when appropriate, about the existence of modified forms, and (d) make these forms available to test takers when appropriate and feasible.

Standard 10.10: Any test modifications adopted should be appropriate for the individual test taker, while maintaining all feasible standardized features. A test professional needs to consider reasonably available information about each test taker's experiences, characteristics, and capabilities that might impact test performance, and document the grounds for the modification.

As specified in the Individuals with Disabilities Education Act (IDEA), decisions about the appropriateness of accommodations in instruction and testing are made by the local team that works with students to develop their Individualized Education Plans (IEP). Individuals on these teams are experts on issues affecting students with disabilities. Requirements of the IEP govern the provision of accommodations on the CAHSEE. **Standards 10.2, 10.8, and 10.10 are fully met.**

Standard 10.3: Where feasible, tests that have been modified for use with individuals with disabilities should be pilot tested on individuals who have similar disabilities to investigate the appropriateness and feasibility of the modifications.

Standard 10.4: If modifications are made or recommended by test developers for test takers with specific disabilities, the modifications as well as the rationale for the modifications should be described in detail in the test manual and evidence of validity should be provided whenever available. Unless evidence of validity for a given inference has been established for individuals with the specific disabilities, test developers should issue cautionary statements in manuals or supplementary materials regarding confidence in interpretations based on such test scores.

Standard 10.5: Technical material and manuals that accompany modified tests should include a careful statement of the steps taken to modify the tests to alert users to changes that are likely to alter the validity of inferences drawn from the test score.

Standard 10.6: If a test developer recommends specific time limits for people with disabilities, empirical procedures should be used, whenever possible, to establish time limits for modified forms of timed tests rather than simply allowing test takers with disabilities a multiple of the standard time. When possible, fatigue should be investigated as a potentially important factor when time limits are extended.

Standard 10.7: When sample sizes permit, the validity of inferences made from test scores and the reliability of scores on tests administered to individuals with various disabilities should be investigated and reported by the agency or publisher that makes the modification. Such investigations should examine the effects of modifications made for people with various disabilities on resulting scores, as well as the effects of administering standard unmodified tests to them.

The preceding standards cover the development and validation of specific testing accommodations. Because of limited numbers of students in most disability categories, it is not feasible to pilot test each accommodation with separate groups of students in these categories, although students with disabilities have been included in field tests of new questions as well as in the operational administration. Separate studies of fatigue and other

factors are also not feasible, but the accommodations offered follow common practices adopted in most testing programs. All students are allowed essentially unlimited time. **Standards 10.3 through 10.7 are fully met.**

Standard 10.11: When there is credible evidence of score comparability across regular and modified administrations, no flag should be attached to a score. When such evidence is lacking, specific information about the nature of the modification should be provided, if permitted by law, to assist test users properly to interpret and act on test scores.

Score reports do not indicate whether a testing accommodation was used. The reports do, appropriately, indicate if a modification that invalidates the results was used. **Standard 10.11 is fully met.**

Testing Applications: Educational Testing and Assessment

Part 3 of the *Standards* covers the standards that apply to specific types of tests. Section 13 covers educational tests and assessments. Relevant standards from this section are listed below.

Standard 13.1: When educational programs are mandated by school, district, state, or other authorities, the ways in which test results are intended to be used should be clearly described. It is the responsibility of those who mandate the use of tests to monitor their impact and to identify and minimize potential negative consequences. Consequences resulting from the uses of the test, both intended and unintended, should also be examined by the test user.

In fact, the legislation establishing the CAHSEE requirement also mandated an ongoing evaluation of impact or consequences of this requirement. Regular reports on the use of test results and the impact and consequences have been prepared for relevant policy-makers, including the legislature and governor, the State Board of Education, and the Superintendent of Public Instruction. **Standard 13.1 is fully met.**

Standard 13.2: In educational settings, when a test is designed or used to serve multiple purposes, evidence of the test's technical quality should be provided for each purpose.

The focus of this review is on a single use of the CAHSEE—assessing mastery of the targeted content standards. Efforts to review the technical quality of the CAHSEE as it is used for school accountability or for diagnostic purposes have been undertaken, but are not reviewed here. Thus, **Standard 13.2 is not relevant to this review.**

Standard 13.3: When a test is used as an indicator of achievement in an instructional domain or with respect to specified curriculum standards, evidence of the extent to which the test samples the range of knowledge and elicits the processes reflected in the target domain should be provided. Both tested and target domains should be described in sufficient detail so their relationship can be evaluated. The analyses should make

explicit those aspects of the target domain that the test represents as well as those aspects that it fails to represent.

As noted above, test blueprints specifying the content domain were extensively debated and finally approved by the State Board. Each test form is reviewed for compliance with these blueprints. **Standard 13.3 is fully met.**

Standard 13.5: When test results substantially contribute to making decisions about student promotion or graduation, there should be evidence that the test adequately covers only the specific or generalized content and skills that students have had an opportunity to learn.

Standard 13.5 is the subject of the remainder of this report. Unfortunately, there are no clearly accepted criteria as to what constitutes adequate opportunity to learn the material on the test. Certainly, instruction covering all of the required content standards is offered in all school systems. Unfortunately, it currently appears that not all students are prepared or willing to take advantage of this instruction. **It is currently unclear whether Standard 13.5 has been fully met at this time.**

Standard 13.6: Students who must demonstrate mastery of certain skills or knowledge before being promoted or granted a diploma should have a reasonable number of opportunities to succeed on equivalent forms of the test or be provided with construct-equivalent testing alternatives of equal difficulty to demonstrate the skills or knowledge. In most circumstances, when students are provided with multiple opportunities to demonstrate mastery, the time interval between the opportunities should allow for students to have the opportunity to obtain the relevant instructional experiences.

Students have at least seven opportunities over a two and a half year period to pass the CAHSEE. **Standard 13.6 is fully met.**

Standard 13.7: In educational settings, a decision or characterization that will have major impact on a student should not be made on the basis of a single test score. Other relevant information should be taken into account if it will enhance the overall validity of the decision.

Standard 13.7 has been the subject of wide-ranging interpretations. Many argue that offering multiple opportunities to take the test satisfies the requirement of not basing an important decision on a single test score. Others argue that there are other requirements for obtaining a diploma, such as course work, that must also be met so that diplomas are not granted on test scores alone.

In fact, however, a diploma can be denied on the basis of test scores alone. Further, while providing multiple opportunities to pass the test is essential, it is also essential that there be some mechanism for consideration of other clear evidence of mastery of the required skills. The original legislation does provide for an alternate way in which students who have clearly mastered the standards can be exempted from passing the test. In addition, the policy on waivers continues to evolve. These are both ways in which other information can be

considered. Given these alternatives, we conclude that **Standard 13.7 is adequately met**. Several states with graduation test requirements have enacted additional provisions for granting waivers based on other evidence of mastery of required standards. California may wish to review such policies in considering further options for allowing students alternative ways to demonstrate the skills required for a diploma.

Standard 13.9: When tests scores are intended to be used as part of the process for making decisions for educational placement, promotion, or implementation of prescribed educational plans, empirical evidence documenting the relationship among particular test scores, the instructional programs, and desired student outcomes should be provided. When adequate empirical evidence is not available, users should be cautioned to weigh the test results accordingly in light of other relevant information about the student.

As a graduation requirement, the CAHSEE is not used to place or promote students into particular programs. Consequently, **Standard 13.9 is not relevant for the intended use of the CAHSEE.**

Standard 13.10: Those responsible for educational testing programs should ensure that the individuals who administer and score the tests(s) are proficient in the appropriate test administration procedures and scoring procedures and that they understand the importance of adhering to the directions provided by the test developer.

As noted above, the development contractor has produced test administration manuals, conducts test administration workshops, and monitors testing at a sample of sites. Tests are generally administered by school staff who also administer a wide range of tests and thus have considerable experience. Tests are scored by professionals trained and closely monitored by the development contractor. **Standard 13.10 is fully met.**

Standard 13.11: In educational settings, test users should ensure that any test preparation activities and materials provided to students will not adversely affect the validity of test score inferences.

CDE is working to provide students and their parents and teachers with appropriate information to inform practice and instruction. Test security is maintained to prevent teaching of specific questions used in operational testing. While inappropriate test preparation will be an ongoing issue, available evidence is that **Standard 13.11 is adequately met at this time.**

Standard 13.12: In educational settings, those who supervise others in test selection, administration, and interpretation should have received education and training in testing necessary to ensure familiarity with the evidence for validity and reliability for tests used in the educational setting and to be prepared to articulate or ensure that others articulate a logical explanation of the relationship among the tests used, the purposes they serve, and the interpretations of the test scores.

CDE and the SBE have policy oversight for the development and use of the CAHSEE under requirements of the Education Code. They have contracted for test development and evaluation activities with organizations and individuals widely recognized as testing experts. These experts are charged with informing them of issues relevant to the uses of the CAHSEE. **Standard 13.12 is fully met.**

Standard 13.13: Those responsible for educational testing programs should ensure that the individuals who interpret the tests results to make decisions within the school context are qualified to do so or are assisted by and consult with persons who are so qualified.

Interpretation of test results is provided on score reports established by CDE and reviewed and approved by the SBE. Local educators are not required to provide further interpretation so **Standard 13.13 is not relevant to the use of CAHSEE as a graduation requirement.**

Standard 13.14: In educational settings, score reports should be accompanied by a clear statement of the degree of measurement error associated with each score or classification level and information on how to interpret the scores.

Measurement and, more importantly, classification error are both described extensively in technical documentation provided by the test developers and by the evaluators. **Standard 13.14 is adequately met.**

Standard 13.15: In educational settings, reports of group differences in test scores should be accompanied by relevant contextual information, where possible, to enable meaningful interpretation of these differences. Where appropriate contextual information is not available, users should be cautioned against misinterpretation.

The primary use of CAHSEE results is for decisions about individual students. Results for different demographic groups are presented annually and evaluation reports have investigated some factors behind such differences. **Standard 13.15 is adequately met.**

Standard 13.16: In educational settings, whenever a test score is reported, the date of test administration should be reported. This information and the age of any norms used for interpretation should be considered by test users in making inferences.

All score reports clearly indicate the test administration data. Normative information is not relevant to the use of CAHSEE results as a graduation requirement. **Standard 13.16 is fully met.**

Standard 13.17: When change or gain scores are used, such scores should be defined and their technical qualities should be reported.

Gain scores are not relevant to the use of CAHSEE as a graduation requirement so **Standard 13.17 is not applicable to this use.** As noted above, however, gain scores may be used by students, teachers, and parents in making decisions about appropriate remediation

strategies. Further investigation of the technical qualities of such gain scores may be warranted.

Standard 13.19: In educational settings, when average or summary scores for groups of students are reported, they should be supplemented with additional information about the sample size and shape or dispersion of score distributions.

The primary reports for groups of students are in terms of the percent passing each section of the CAHSEE. The percent passing includes complete information on the underlying dichotomous distribution, so **Standard 13.19 is adequately met.**

Summary

Each of the standards for test development and use adopted by a joint committee of the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education was reviewed. *For use as a high school graduation requirement, the CAHSEE meets all of the relevant standards, with the possible exception of Standard 13.5.* The one exception concerns whether students have had adequate opportunity to learn the material covered by the CAHSEE. Information on this issue is the focus of the remainder of this report.

One other particular standard, 13.7, requiring that important decisions not be made based on a single test score, is open to some interpretation. Expanded options for ways students might meet the CAHSEE requirement could further strengthen California's case for compliance with this standard.

The focus of the current investigation was on whether the CAHSEE meets standards for use as a high school graduation requirement. There are, of course, other possible or contemplated uses of the CAHSEE score information. These include use of the CAHSEE in the state's academic performance index (API) used for school accountability, use of the CAHSEE scores together with additional performance level standards to satisfy requirements of the No Child Left Behind legislation, and diagnostic interpretation of subscores and score gains. Further review and documentation would likely be required to conclude that these uses of the CAHSEE are in full compliance with the *Standards*. We've noted specific issues with some of these uses in the text above.

CHAPTER 3: IMPACT OF THE CAHSEE REQUIREMENT ON INSTRUCTION AND REMEDIATION

Introduction

Results from the survey of instruction and the interviews to confirm and extend survey results are presented in the next three chapters. Chapter 3 provides a description of the courses and programs of instruction found in our survey. Particular attention is given to the impact that the CAHSEE requirement may have had on changes in curriculum and instruction. The focus of Chapter 4 is on the effectiveness of the courses and programs, primarily at the high school level, for the Class of 2004. Further analyses of the potential effectiveness of both high school and middle-grade feeder school instruction for subsequent classes are described in Chapter 5.

Before turning to information about specific courses, we present a brief description of the schools responding to the survey and the schools in which interviews were conducted in the validation effort.

Surveys

As described in Chapter 1, HumRRO conducted a survey of high school principals and teachers and of principals and teachers at schools feeding into the high schools. Copies of the survey instruments are provided in Appendix A in Volume 2.

Response Sample

Schools. A sample of 600 schools was selected to represent the entire state. The sample was stratified by district so that at least one school was included from each of the 483 high school districts that include grade 10. The sampling design also assured that, across all districts, the sample would match overall state distributions for academic performance (based on results from the 2002 10th Grade ELA STAR assessment), school size, and the percent of English learners (EL). Responses were obtained from 298 of the 600 high schools (50%) in the original sample including 263 of the state's 483 school districts that include grade 10 (54%). Appendix C in Volume 2 contains the response frequency tables for the survey results.

Table 3.1 shows the distribution of high schools participating in the survey in comparison to the original sample. Slightly fewer of the responders were small schools, probably because small schools had fewer personnel resources to devote to the survey. Also, schools with relatively high passing rates were somewhat more likely to respond. Nonetheless, the sample of responders includes schools at each level in terms of size and CAHSEE passing rates.

Survey responses were also received for 173 middle-grade feeder schools. We attempted to find one middle-grade feeder school for each high school in the sample, but some of the high schools were continuation or other special schools that received students from other high schools more than from middle-grade feeder schools. In addition, interest in the middle-grade feeder schools appears to be more focused on the content standards overall rather than

more specifically on the CAHSEE, which is a greater interest at the high school level. Table 3.2 shows characteristics of the high schools for which middle-grade feeder school responses were obtained.

Table 3.1 Sample Characteristics by Response Status (High Schools)

School Category	% in Sample	% of Responders
School Size (2002 Grade 10 Enrollment)		
1–99	23%	20%
100–500	44%	49%
> 500	33%	32%
CAHSEE ELA Pass Rates (Through Jan. 2003)		
< 50%	11%	8%
50–75%	14%	11%
> 75%	75%	81%
CAHSEE Math Pass Rates (Through Jan. 2003)		
< 50%	26%	21%
50–75%	34%	33%
> 75%	40%	48%
CAHSEE ELA Pass Rates for Special Education Students		
< 20%	8%	5%
20–50%	30%	28%
> 50 %	62%	67%
CAHSEE Math Pass Rates for Special Education Students		
< 20%	27%	23%
20–50%	40%	42%
> 50 %	33%	35%

NOTE: Percent totals may not equal 100 due to rounding.

Table 3.2 Characteristics of High Schools by Middle-Grade Feeder School Response Status

School Category	% in Sample	% of Responders
School Size (2002 Grade 10 Enrollment)		
1–99	23%	17%
100–500	44%	42%
> 500	33%	42%
CAHSEE ELA Pass Rates (Through Jan. 2003)		
< 50%	11%	5%
50–75%	14%	9%
> 75%	75%	85%
CAHSEE Math Pass Rates (Through Jan. 2003)		
< 50%	26%	16%
50–75%	34%	37%
> 75%	40%	48%
CAHSEE ELA Pass Rates for Special Education Students		
< 20%	8%	6%
20–50%	30%	26%
> 50 %	62%	68%
CAHSEE Math Pass Rates for Special Education Students		
< 20%	27%	24%
20–50%	40%	44%
> 50 %	33%	33%

NOTE: Percent totals may not equal 100 due to rounding.

Site Visit Interviews

Site visits were conducted at 45 high schools—including charter, continuation, and juvenile authority—and 17 middle-grade feeder schools, resulting in 499 total interviews. (Interview protocols are provided in Appendix B in Volume 2.) Survey and interview data were collected from principals, ELA teachers, and mathematics teachers. Respondents were asked to focus on “initial or primary” instruction on the standards covered by the CAHSEE and on “remedial or intervention” instruction. Interviews also were conducted with high school and middle-grade feeder school special education (SE) teachers, EL teachers, the CAHSEE remediation teachers (high school only), and special program teachers.

Interviews were analyzed using N5, produced by QSR International Pty. Ltd. (QSR), (formerly known as NUD*IST, or Non-numerical Unstructured Data Indexing Searching and Theorizing), the fifth version of a qualitative data analysis software program that allows researchers to develop their own coding system using a hierarchical tree design. Prior to the site visits, a preliminary coding scheme for the interviews was developed that included some demographic information, such as interview type (principal, math teacher, special education teacher, etc.) and school level (high school, middle-grade feeder school, etc.). QSR refers to this information as “base data.” The scheme also included coding by content, or what was being said. In QSR each item in the hierarchical tree is called a “node,” and each node has a unique “address.” The hierarchical tree can be changed as needed during the life of the project; for example, nodes can be added, deleted, moved, or merged with one another. Both automatic and highlighting QSR coding methods were used on this project. Selected results

from the interviews are presented in this chapter. Refer to Appendix D in Volume 2 for the complete summary of interview responses.

Sixty-five documents were coded as principal interviews. Of those documents, 50 were coded as high school principals and 15 as middle-grade feeder school principals. In five high schools, researchers conducted separate interviews with the principal and an assistant principal; both these interviews were coded as principal interviews, thus accounting for the difference between the number of principals (50) and the number of high schools (45). At only one middle-grade feeder school did we fail to obtain an interview with a principal.

We interviewed 86 high school and “other” ELA teachers, 36 middle-grade feeder school ELA teachers, 86 high school and “other” math teachers, and 35 middle-grade feeder school math teachers and entered their responses into the database.

Findings at the School Level

In addition to supplying a list of relevant courses, principals responded to a number of questions about their curriculum in general. Specific questions included the extent to which instruction covering the California Content Standards, including those assessed by the CAHSEE, has increased over the past several years; how student mastery of these standards is tracked; and how coordination with middle-grade feeder schools on curriculum issues is handled.

Increasing Coverage of the California Content Standards

Survey Results

Principals reported increasing coverage of both the ELA and the mathematics content standards for CAHSEE (at the high school level) and the California Content Standards in general (at the middle-grade feeder school level) as shown in Tables 3.3 through 3.6. Since CAHSEE blueprints were adopted in December 2000, the percentage of schools reporting *High* (at least 90%) coverage of the standards has risen from about 5 percent to 50 percent. Similarly, the percentage of schools reporting at least *fair* coverage (75% or more) has risen from about 19 percent to about 83 percent. Reported increases in the coverage of the California Content Standards at the middle-grade feeder school level show similar very significant increases.

Table 3.3 High School Principal Report of Coverage of CAHSEE ELA Standards

School Year	Percent of CAHSEE ELA Standards Covered				
	< 25%	25–74%	75–90%	> 90%	Missing/Unknown
Before 1999	15%	27%	15%	4%	40%
1999–2000	13%	34%	23%	7%	23%
2000–2001	6%	37%	32%	12%	14%
2001–2002	2%	23%	42%	26%	8%
2002–2003	0%	11%	34%	49%	6%

NOTE: Percent totals may not equal 100 due to rounding.

Table 3.4 High School Principal Report of Coverage of CAHSEE Mathematics Standards

School Year	Percent of CAHSEE Mathematics Standards Covered				
	< 25%	25–74%	75–90%	> 90%	Missing/Unknown
Before 1999	14%	27%	15%	5%	39%
1999–2000	14%	30%	23%	8%	24%
2000–2001	6%	35%	31%	13%	15%
2001–2002	3%	22%	38%	29%	8%
2002–2003	1%	11%	31%	50%	7%

NOTE: Percent totals may not equal 100 due to rounding.

Table 3.5 Middle-Grade Feeder School Principal Report of Coverage of California ELA Content Standards

School Year	Percent of California ELA Content Standards Covered				
	< 25%	25–74%	75–90%	> 90%	Missing/Unknown
Before 1999	15%	30%	13%	4%	38%
1999–2000	15%	39%	21%	6%	19%
2000–2001	6%	38%	31%	13%	12%
2001–2002	1%	22%	50%	20%	7%
2002–2003	0%	5%	43%	49%	3%

NOTE: Percent totals may not equal 100 due to rounding.

Table 3.6 Middle-Grade Feeder School Principal Report of Coverage of California Mathematics Content Standards

School Year	Percent of California Mathematics Content Standards Covered				
	< 25%	25–74%	75–90%	> 90%	Missing/Unknown
Before 1999	13%	30%	16%	4%	38%
1999–2000	11%	35%	26%	6%	21%
2000–2001	3%	37%	36%	11%	13%
2001–2002	1%	18%	48%	25%	8%
2002–2003	0%	7%	44%	46%	3%

NOTE: Percent totals may not equal 100 due to rounding.

In addition to asking about general coverage of standards, we asked how the districts, schools, and/or teachers track mastery of each standard for each individual student. Table 3.7 shows the responses to this question in the principal surveys. Note that in some cases more than one method was marked indicating either shared or multilevel systems. Overall, 95 percent reported some system for monitoring mastery of specific content standards.

Table 3.7. How is Student Mastery of Content Standards Tracked?

Approach	Percent of Principals Selecting Each Option	
	High School	Middle-Grade Feeder School
Tracked by the District	27%	52%
Tracked by the School	34%	49%
Tracked by Departments	30%	38%
Tracked by Teachers	56%	74%
Other System for Tracking	5%	5%
No System for Tracking	5%	5%

Principals were also asked about coordination with the middle-grade feeder school curriculum, coordination between special programs and their general education program, and coordination between alternative or continuation school programs and their general education program. Table 3.8 summarizes their responses to these questions.

Table 3.8. How Fully Developed is Coordination Among Various Programs?

Coordination between:	Percent of Principals Responding			
	Fully Developed	Partially Developed	Not Developed	Not Applicable
High School Principals				
Feeder School and High School	14%	65%	17%	3%
Special Ed. And General Ed.	18%	73%	6%	3%
EL Staff and General Ed.	16%	58%	13%	13%
Alt./Cont. and General Ed.	9%	48%	24%	19%
Middle-Grade Feeder School Principals				
Feeder School and High School	26%	62%	13%	0%
Special Ed. And General Ed.	29%	64%	6%	1%
EL Staff and General Ed.	24%	61%	7%	7%
Alt./Cont. and General Ed.	6%	29%	20%	45%

NOTE: Percent totals may not equal 100 due to rounding.

Site Visits

In the interviews, we asked principals a series of questions regarding the use of standards-based instruction (SBI) in their schools. First, they discussed when SBI had been implemented. Next, the principals rated on a scale of 1 to 5 (1—not at all implemented, 5—fully implemented) where they felt they were in the implementation process and how long it would take before they were fully implemented. Finally, we asked how they monitored students’ mastery of standards and how they assisted students who did not master standards. Responses to each of these questions are summarized here.

When was standards-based instruction implemented?

Responses to this question varied from as recently as 1 year ago to as many as 6 years ago, with 34 high school principals responding with an average response of 3.0 years. It is important to note that some responses were difficult to interpret cleanly or with absolute certainty. For example, some schools or districts began implementing standards-based instruction in only one department and gradually phased it in over several years in the remaining departments. There was evidence that in some instances a motivated teacher

served as the initiator of SBI within his or her department, and that implementation then gradually spread to other departments at the school. So, while one department may indeed have been using SBI for 4 or 5 years, other departments in the same school may have less experience with it. In other cases, principals who had arrived at their school in the past couple of years typically found that SBI had already been implemented at least to some degree, but they were unable to state with certainty when SBI actually began at their school.

What rate of implementation has your school achieved?

The 36 high school principals responding to this question gave themselves an average rating of 3.6. Many felt that with a little more time, perhaps 2 years or so, they would be able to report a higher rating. Many principals reported that implementation varies among content areas, therefore providing different ratings for specific content areas. This raised the question of whether one particular content area, English or mathematics, would have consistently high or low implementation ratings. After further review, no such pattern was found. Thirteen middle-grade feeder school principals responded to this question with an average response of 3.7 years.

When will standards-based instruction be fully in effect?

Twenty-four principals gave specific timeframe estimates resulting in an average response of 18 years. Five principals discussed the difficulty of getting teachers to “buy into” SBI, while one each mentioned the importance of working with the teachers’ union and ensuring that other supporting changes are made. In this case, the supporting change was the creation of a standards-based report card. The recognition of additional supporting changes is one of the eight stages in the change process posited by Kotter in his books, *Leading Change* (1996) and *The Heart of Change* (2002).

The average middle-grade feeder school principal responses were very similar to the high school principal responses: 1.8 years to fully implement standards-based instruction. Their challenges were, again, similar to what the high schools reported.

How do you track mastery of content standards?

Mastery of standards goes beyond simply being exposed to the standards. It implies that students are being held to a certain level of performance before being able to advance to other classes and that they are provided with opportunities for remediation if they do not achieve mastery. The principals we interviewed reported a variety of methods being used to track student mastery as well as to remediate students who do not master the standards. Thirty-three high school principals discussed systems either in place or currently being developed to track student mastery of the California Content Standards. The most frequently mentioned method of tracking student mastery, with 18 responses, is the development of common semester finals, end-of-course finals, or benchmark exams. The second most commonly mentioned method described, with 13 responses, is the use of standardized tests to track student mastery.

There were 13 middle-grade feeder school principal responses to the “mastery of standards” question. As was found in the high school principal responses, most middle-grade feeder school principals reported using several methods, ranging from individual teacher efforts to those imposed by the district. Six principals reported using or currently developing

some form of common assignment, rubrics, or benchmark tests to measure the mastery of standards. These common measures may have been created at the school or district level. Six principals also reported using results from standardized tests as a measure of mastery.

Have you made changes in the curriculum as a result of SBI?

High school principals described efforts to target students considered at risk of not passing the CAHSEE (14 comments) as well as efforts to remediate students who had already had not passed the CAHSEE (20 comments) by placing them in the CAHSEE remediation courses. One alternative school noted that focusing on at-risk students and those who had not passed the CAHSEE is not anything different than what they have always done. Principals then described their efforts to coordinate instruction across the curriculum, for example greater consistency from class to class, more alignment of classes across the board, and more consistency across curriculum at school and district levels. Another issue was the apparent narrowing of the curriculum in response to SBI: principals cited concern for the loss of elective classes that are important to many students. Other issues mentioned by high school principals begin with comments regarding their efforts to make Algebra more accessible to students (19 comments). This entailed the addition of various math programs (e.g., Essentials in Math), two-year Algebra 1 classes, and a variety of after school and weekend workshops. Another issue (five principal comments) was the concern to provide good professional development opportunities for teachers. And finally, there were two comments regarding new programs that are designed for parents. These programs provide information on parenting, life skills, reading, and job-seeking skills.

Middle-grade feeder school principals presented similar comments on similar topics as the high school principals. Six of the middle-grade feeder school principals specifically noted they have or are planning to obtain textbooks that are aligned with the state standards. Middle-grade feeder school principals also reported targeting at-risk students (five comments), concerns with the loss of electives in response to focusing more on SBI (five comments), and efforts to bring Algebra into their programs (five comments).

How do teachers ensure coverage both across and within grades?

Teachers sometimes described these articulation efforts in very general terms, such as attending department meetings, and sometimes in more specific terms, such as using a benchmark exam or pacing guide (within same grade/course) or meeting with middle-grade feeder school teachers in their subject (across grades/courses). We used these three categories—general, within, and across—to sort responses. Table 3.9 shows that high school ELA and math teachers most frequently mentioned some form of within grade/course articulation.

Table 3.9. Type of Articulation by Subject—High School Teachers

Subject Area	General Articulation	Within Grade/Course	Across Grade/Course	Lack of Articulation
ELA	24	35	25	25
Math	20	45	26	12

Middle-grade feeder school teachers also were asked about articulation, and a similar analysis procedure of responses was used, placing responses into general, within

grade/course, and across grade/course categories. There were 29 and 22 responses from middle-grade feeder school ELA and math teachers, respectively. Table 3.10 shows slight differences between ELA and math, with math responses grouped more tightly among the three categories than are ELA responses. We note that middle-grade feeder school responses were very similar to high school responses, with general articulation indicating some type of reliance on standards, text, or generic department meeting; meeting with same-grade/subject teachers or use of benchmarks or common exams indicating within grade/course articulation, and meeting with teachers in other grades or courses as examples of across grade/course articulation.

Table 3.10. Type of Articulation by Subject—Middle-Grade Feeder School Teachers

Subject Area	General Articulation	Within Grade/Course	Across Grade/Course	Lack of Articulation
ELA	10	20	12	6
Math	12	10	9	5

Information about Specific Courses

Survey data were received on a total 5,276 middle-grade feeder school and high school courses or programs. Table 3.11 shows the breakout of courses by subject for each school level. Of course, many of the courses had the same titles, but were taught in different schools, possibly using different texts and/or covering different portions of the texts that were used. Obviously, one of the challenges in evaluating the adequacy of instruction is analyzing in any depth the very large number of different courses in which CAHSEE Content Standards are covered.

Table 3.11. Number of Courses Covered with Survey Responses by School Level and Subject

School Level	ELA	Math	Total
Middle-Grade Feeder School	1,089	917	2,006
High School	1,894	1,376	3,270
Total	2,983	2,293	5,276

The teacher survey included information on specific courses. Courses were classified by subject (ELA or mathematics) and by course type (primary course taken by most students, an alternative to the primary course, a supplemental or remedial course, and other courses or programs). We also looked at whether the course targeted primarily special education students (> 50 % of course enrollment), English learners (> 50% of course enrollment), or students in general (the remaining courses). Table 3.12 shows the distribution of courses across these categories.

At the high school level, 13 percent of the ELA courses and 10 percent of the mathematics courses targeted special education students and 9 percent of the ELA courses and 14 percent of the mathematics courses targeted English learners. Note that the number of courses may not be indicative of the number of students taking these courses. There might be a single ESL course taken by most or all English learners and several different mathematics courses targeting this population, each with many fewer sections and lower total enrollment.

Table 3.12. Distribution of Courses by Subject, Type, and Students Served

Course Type	Number of Courses	Percent of Courses Targeting Special Populations		
		Special Educ.	Engl. Learners	Not Targeted
High School ELA Courses				
Primary	1,055	1%	8%	90%
Alternative	403	18%	44%	38%
Suppl./Remedial	280	14%	30%	57%
Other	156	13%	23%	64%
Total	1,894	13%	9%	64%
High School Mathematics Courses				
Primary	618	2%	11%	87%
Alternative	396	18%	14%	69%
Suppl./Remedial	237	17%	17%	66%
Other	125	11%	20%	69%
Total	1,376	10%	14%	76%
Middle-Grade Feeder School ELA Courses				
Primary	626	1%	12%	87%
Alternative	238	27%	47%	26%
Suppl./Remedial	143	12%	35%	53%
Other	76	7%	22%	71%
Total	1,083	8%	24%	68%
Middle-Grade Feeder School Mathematics Courses				
Primary	624	1%	11%	88%
Alternative	167	29%	18%	53%
Suppl./Remedial	68	24%	15%	62%
Other	58	7%	9%	84%
Total	917	8%	13%	79%

NOTE: Percent totals may not equal 100 due to rounding.

The majority of courses described in our survey were regular, long-established courses. Some courses, however, particularly courses targeting special education students and English learners, were more recently developed. Table 3.13 shows the distribution of each type of course by the year in which the course was first introduced.

At the high school level, more than a quarter of the ELA courses and a third of the mathematics courses targeting special populations were introduced in the past two years. The majority of these were new in the 2002-2003 school year. At the middle-grade feeder school level, recent development has been relatively even across the different course types. Significantly more of the middle-grade feeder school mathematics courses were introduced in the past three years. This is likely the result of efforts to accelerate the mathematics curriculum so that Algebra can be taught at the 8th rather than 9th grade.

Table 3.13. Year Each Type of Course was Introduced

Population Targeted	Number of Courses	Percent Introduced:				
		Before 1999	1999–2000	2000–2001	2001–2002	2002–2003
High School ELA Courses						
Special Education	135	64%	4%	5%	10%	16%
English Learners	379	63%	5%	5%	8%	20%
Not Targeted	1,319	78%	5%	4%	6%	7%
High School Mathematics Courses						
Special Education	128	54%	6%	6%	12%	23%
English Learners	183	47%	4%	9%	15%	24%
Not Targeted	1,013	61%	7%	6%	13%	14%
Middle-Grade Feeder School ELA Courses						
Special Education	89	66%	7%	10%	7%	10%
English Learners	250	69%	3%	8%	8%	11%
Not Targeted	718	73%	6%	5%	5%	11%
Middle-Grade Feeder School Mathematics Courses						
Special Education	75	65%	3%	9%	9%	13%
English Learners	111	47%	5%	20%	16%	13%
Not Targeted	696	53%	7%	10%	17%	13%

NOTE: Percent totals may not equal 100 due to rounding.

Coverage of Targeted Standards

We asked teachers the extent to which each course was aligned with the content standards that the course was intended to cover. For about half of the courses, teachers indicated that the alignment was very great (more than 90%). Teachers were also asked when the textbook for the course was adopted. As shown in Table 3.14, there was a clear relationship between how recently the textbook was adopted and the likelihood that the course would be rated as having very great alignment.

Table 3.14 Course Coverage of Content Standards by Year Textbook Was Adopted

Year Textbook was Adopted	ELA		Mathematics	
	No. of Courses	Percent with Very Great Alignment	No. of Courses	Percent with Very Great Alignment
High School Courses				
2002–2003	288	67%	141	72%
2001–2002	159	54%	330	65%
2000–2001	126	49%	160	63%
1999–2000	108	44%	71	44%
Before 1999	489	37%	303	50%
N.A. (no Text)	366	38%	151	39%
Total	1,536	46%	1,156	57%
Middle-Grade Feeder School Courses				
2002–2003	346	74%	136	77%
2001–2002	139	64%	329	66%
2000–2001	49	37%	127	65%
1999–2000	58	38%	58	62%
Before 1999	216	36%	87	54%
N.A. (no Text)	120	36%	67	40%
Total	928	54%	804	64%

Site Visits

High School Teacher Interviews. There was a surprising range of answers to the question, *When did this course begin using Standards-Based Instruction (SBI)?* Answers at each end of the range proved difficult to analyze with accuracy. Several experienced teachers, for example, stated that they had always used SBI throughout their careers, some of which began as long as 30 years ago. In further comment, most of these teachers explained that they had always followed an established curriculum guide, most often developed by their districts.

Since our focus is on the Class of 2004, the question becomes: Were the teachers using SBI for these students? For high school teachers to have used SBI for the Class of 2004, the 9th grade teachers would have had to start during the 2000–2001 school year. In an attempt to get a school response, we grouped teachers’ responses by school. We coded responses into three categories: (a) started before the Class of 2004, (b) probably started with the Class of 2004, and (c) started after the Class of 2004.

English-Language Arts

Sixty-two ELA teachers at 37 high schools provided an answer to the question of when they started using SBI in their course. We coded responses from 14 schools as indicating that ELA teachers at the high school began using SBI prior to the Class of 2004. Responses at another 12 high schools indicated that ELA teachers at the school appeared to start using SBI with the Class of 2004. Teachers at the remaining 11 schools gave responses that indicated that they started using SBI after beginning to teach the Class of 2004 or were not using SBI.

Mathematics

Sixty-six math teachers at 34 high schools provided an answer (that we could code) to the question of when they started using SBI in their course. We coded responses from math teachers at 15 high schools as indicating that they began using SBI prior to the Class of 2004. Responses from 13 high schools indicated that the teachers began using SBI with the Class of 2004. Responses from six high schools indicated that they began SBI after students in the Class of 2004 were 9th graders.

We asked ELA and math teachers to *rate the implementation of SBI* in their courses, using a 5-point Likert-type scale. In the scale, a 1 indicated, “not at all implemented” and a 5 indicated, “completely implemented.” Most of the 68 high school ELA teachers rated their implementation of SBI very near a 4. Most of the 72 high school math teachers rated implementation just over a 4. No high school math teachers provided a rating of ‘1.’

Middle-Grade Feeder School Teacher Interviews. Middle-grade feeder school teachers would have had to start using SBI in the 7th grade by school year 1998–1999 to use it with the Class of 2004. We again grouped the teacher responses by school and coded the schools in the same three categories as before.

Middle-grade feeder school teachers rated the implementation of SBI in their courses, using the same 5-point Likert-type scale as used by high school teachers. Responses for middle-grade feeder school teachers were slightly higher, with 33 middle-grade feeder school ELA teachers responding with an average of 4.4, and 31 middle-grade feeder school math teachers responding with an average of 4.9. No ratings of ‘1’ or ‘2’ were given by high school ELA or math teachers.

English-Language Arts

For the ELA teachers, we received responses from 31 teachers from 15 middle-grade feeder schools. As could be expected, teachers from only 3 of those 15 schools indicated they started using SBI in time for the Class of 2004. We did not code any school as starting prior to the Class of 2004. Thus, responses from 12 of the 15 middle-grade feeder schools indicated that they had started using SBI after the Class of 2004. Most of the responses indicated that the schools had begun implementing SBI sometime within the last three to four years. Many times that implementation corresponded with the adoption of new textbooks.

Mathematics

Twenty-eight math teachers at 15 middle-grade feeder schools provided responses to when they started using SBI in their courses. Only two middle-grade feeder schools’ responses indicated that the teachers had implemented SBI for the Class of 2004. We did not code any middle-grade feeder school as starting SBI prior to the Class of 2004. Responses from the remaining 12 schools were coded as starting to use SBI since the Class of 2004. Again, most responses indicated that teachers at the school started to use SBI in the last two years.

Remediation Programs Targeted to the CAHSEE

The site visits included interviews with high school teachers who were working to help students having difficulty passing the CAHSEE. Interviews focused on those who had taught

courses or programs designed to help students considered at-risk of not succeeding on the CAHSEE subsequent to their taking and not passing the exit exam. In all, 21 high school teachers in this category were interviewed.

Fifteen of 21 CAHSEE remediation teachers referred to their CAHSEE remediation program as a “course”, though it was not always clear if the course was held during regular school hours or after school. Some schools had a 7th “after school” period during which they may have chosen to offer remediation. Two programs were held on Saturday, while another was described as a pull-out program held during students’ elective or gym period. Below are some comments describing how some programs/courses are organized:

- Students must take the course during their junior year if they have not passed the CAHSEE.
- The class was a 2-hour intercession course conducted from 1 p.m. to 3 p.m. Monday through Friday. There were two teachers teaching 80 students in the cafeteria. This was the only class conducted during those hours in the cafeteria.
- This course is held after school so it doesn’t interfere with the other scheduled classes.
- Class is held on Monday, Wednesday, Thursday and Saturday for eight weeks.
- The school is doing this course on a pull-out basis—from gym or elective.

Programs ranged from 14 to 170 students being served. However, not all respondents had a complete count of students in the programs. In some situations, teachers only had a count of the number of students in their section of a remedial course.

Eighteen of 21 CAHSEE remediation teachers reported the use of the California standards in their course or program. Those few that did not refer specifically to the use of standards often spoke of using the CAHSEE released items or the CAHSEE blueprints as a means of targeting the needs of their students. Several stated that they used a standards-aligned text that helped them stay focused on standards-based instruction. Five of 21 teachers rated the implementation level for standards-based instruction within their course or program, on a 1 to 5 scale (5 being full implementation). Their average score was 4.6. The following comments provide good representation of teachers’ input regarding increasing alignment to California Content Standards:

- The district team—teachers from all the schools—focused on getting familiar with the standards. They used the standards, the exit exam blueprint—and mapped them to a course, sequenced the lessons, and produced a daily calendar for what content is covered and tested. This teacher took the course design and embellished it by formalizing lesson plans to relate directly to specific standards.
- I take it straight off the exit exam. I work on the test blueprint outline.
- The teacher lets the book keep track of the standards since it is aligned to the content standards.

The consensus among the CAHSEE remediation teachers seemed to be that accountability in itself is a good thing; some thought the Class of 2004 was ready, others did

not, and still others were somewhere in between. A few CAHSEE remediation teachers offered a prediction of when they thought students would be ready to be held accountable to the CAHSEE.

- Now that we have standards-based instruction, I would delay the CAHSEE for a year or two.
- In 6 years, if students work, they can pass the CAHSEE.

Though not all remediation courses had begun the evaluation process, several had used or planned on using student performance on the CAHSEE, or on the CAHSEE released items, as a means of measuring program effectiveness. The following responses provide examples of evaluation methods used by the CAHSEE remediation teachers:

- There are plans to look at the CAHSEE scores following student enrollment in this course.
- Passing the CAHSEE is the ultimate evaluation.
- 75 percent of summer students passed the math test.
- 60 percent of students taking this course are passing the CAHSEE on their second try.
- We will accumulate data for this course comparing the performance on the CAHSEE between students who took the remediation course and students who did not.
- The course will involve a pre- and post-test based on the released items.
- Records have not been kept on student performance after the course yet.

Other evaluation was ongoing throughout the course, including in-class testing, pre-and post-tests, individualized assignments, and keeping student work on file. Below are examples of during-class evaluation used by the CAHSEE remediation teachers:

- We can track students' performance and progress with different ways, including weekly tests and individualized assignments.
- We administer an 80-item diagnostic test at the start; students determine their status related to the standards. We give it again at the end to show progress.
- The program includes an assessment component with pre-post tests for each strand.

Targeted Programs for Students with Disabilities

The interviews with Special Education teachers focused on those who were responsible for the Individualized Education Plans (IEP) or who taught primary or remedial ELA or math courses offered to special education students. A total of 72 interviews were conducted with 50 high school, 20 middle-grade feeder school, and 2 "other" special education teachers.

High Schools. Special education teachers in the high schools mentioned several types of assistance offered to their students in preparation for the CAHSEE, examples of which are listed here:

- Practice tests
- Remedial classes
- Test taking strategies
- After school tutoring
- Tutors
- Saturday school

- Study skills classes
- Lunchtime tutoring
- Summer school
- Note-taking strategies
- Computer based instruction
- Targeted review periods

In addition to special assistance offered prior to taking the CAHSEE, many SE teachers emphasized the importance of allowing accommodations for special education students during testing, or the need for differential standards for special education students. Some examples of these responses are provided below:

- There need to be differential standards for the truly handicapped kids.
- Maybe there should be a changed cut score to begin with, or have a different score for special education students.
- We need many accommodations to help them.
- The teacher would like to see a multiple diploma situation similar to that of New York, such as the Regents Diploma for those who pass the state’s test. There are also vocational diplomas or certificates in a specific area.
- It would be important to allow students to use calculators if it is in their IEP.²
- There should be a modified version for anyone with an IEP. Test whether kids can analyze and get the main point at a lower level. This would be fairer than modifications with material that is beyond their reading level.
- The test could be broken down into sections rather than just English or math so that the students could pass fractions, for example, and not have to take that section again.
- They should give students more choices for the writing samples. Resource students need to have a choice of topics. Some topics are not within their experience.

Thirty-six of the 50 high and “other” school SE teachers indicated that their department uses the standards in developing students’ IEPs. Seventeen of the teachers indicated that they were *very familiar* with the California Content Standards, while 21 characterized themselves as *familiar* with the standards. Four teachers expressed familiarity with the standards but qualified the statement by saying that the standards were “largely irrelevant” for their special education students. These teachers noted that special education students typically function at lower grade levels, and that it was the teacher’s responsibility to put the individual students’ needs first. In one school, standards were not specifically used to determine IEPs, but were used to develop curriculum. Two noted that their department had just begun within the past year to use the standards to develop IEPs, and one of the teachers stated that the school was not yet using the standards completely. Some references were made to the use of the standards in writing goals and objectives for each student. Others noted that the standards were used but were modified to meet students’ specific needs. This often translated into the use of lower grade level standards. The following comments provide examples of the use of standards in developing IEPs:

- The California standards are used to develop IEPs. Goals are established for each standard in order for students to best meet the standard.

² Accommodations and modifications consistent with a student’s IEP or 504 Plan are allowed for the CAHSEE.

- The school is not specifically using the standards to determine IEPs. Teachers look first to the special needs of the individual to determine the IEP, then use the standards to develop curriculum.
- IEPs are written from the California Content Standards and teachers adjust the level of the standards to meet student needs.
- All goals and objectives were written to be aligned with the California Content Standards. They are aligned to the student's grade level content standards rather than at grade level standards.
- The goals and objectives of the IEPs are supposed to be based on the standards. I have to go back to the IEP and find where the student is. I find a standard that fits the student's level of achievement. I may have to go down to the 5th grade level to find a standard that is at the student's level.

High schools seemed to be making a concerted effort to expose their special education students to the California Content Standards. This usually involved “mainstreaming” special education students into general education courses, where they could be exposed to the same standards as the rest of their grade-level cohort. Often, as suggested in the previous section on IEPs, special education students were exposed to lower grade-level standards, in accordance with their individual needs.

In several schools, all Resource Specialist Program (RSP) students were mainstreamed in at least one subject area. In most situations, Special Day Class (SDC) students were at least mainstreamed in electives, such as physical education (PE). For schools that did not mainstream all their RSP students, more complete data are provided in the Appendix D along with data for those schools that did mainstream their SDC students in ELA or math. Overall, larger proportions of RSP than SDC students were mainstreamed in ELA and math.

The consensus was that all RSP students and some SDC students would be exposed to at least some of the content standards covered on the CAHSEE. Sixteen of 50 teachers stated that RSP students would be exposed to all the standards; 10 of those 16 teachers also stated that all special education students, including SDC, would be exposed to all content. Seventeen of 50 indicated that RSP students would be exposed to some of the standards. What was not always so clear was the grade level at which the standards were being covered. Typically, respondents noted that upper level math content would not be met. One teacher maintained that most special education students would not be exposed to any of the content standards. Within these general responses, there were a few clarifications, some of which are listed below:

- The SE students are exposed to all the standards; the opportunity is there.
- For SE students, getting to Geometry and some Algebra will be difficult.
- The SE students will be exposed, but perhaps not all at the level of the CAHSEE expectations.
- A lot of SE students won't have the opportunity of being exposed to a lot of the standards when they take the CAHSEE the first time.

- SDC students will never be exposed to Algebra content or higher level thinking because they can't read at a high enough level, and they can't retain information consistently or long enough for testing.

Though many high school teachers agreed that most special education students would be exposed to at least some of the required content, mastery of the content was viewed quite differently. Teachers generally agreed that special education students would not master the content necessary for passing the CAHSEE. Several indicated that math standards were the biggest obstacle to be overcome. One comment indicated that mastery is possible, with the appropriate accommodations. The following provide examples from the range of responses about student mastery of the content standards:

- I imagine that some of the SE students won't have mastered math by the time they take the CAHSEE for the first time—Geometry especially.
- Generally speaking, only 50 to 60 percent of the standards can be mastered when the SE students take the CAHSEE for the first time.
- As far as mastering the content SE students have been exposed to—the areas of math will be a problem.
- We can still cover all the CAHSEE standards at a reduced speed with special day students. They would be able to show mastery if they were allowed alternative modes of assessment.
- The mastery of content by SDC students relates to long- and short-term memory—a student may have mastery one day but not the next—it's a moving target.

Thirteen of the high school SE teachers indicated that none of their students had passed both portions of the CAHSEE. Of students that had passed at least one section of the exam, more students had more success in ELA than in math. A few relevant responses are provided here:

- No special education students have passed the math portion of the CAHSEE.
- 70 percent of SE students have taken the CAHSEE at least once and none of those students has passed yet.
- Probably 5 percent or less of SE students have passed both parts.
- I've had roughly nine SE students take the exit exam, and one passed both sections. Five of the others passed ELA, and one passed math.

Some respondents were able to make predictions in terms of how many of their students they expected would eventually pass the CAHSEE. These predictions varied, with some anticipating nearly complete success, others complete failure, and still others somewhere in the middle. Two teachers noted that if special education students were allowed accommodations, more would pass the CAHSEE. Representative comments are provided below:

- There may not even be 1 percent of special education students who will pass the CAHSEE.

- Eventually, over 90 percent of special day and over 90 percent of resource kids will pass.
- About 75 percent of SE students should be able to pass the test with accommodations, and about 50 percent will be able to pass both sections of the exam.
- Without modifications, none of this year's kids will pass. By just allowing the use of a calculator, which is what everyone does in real life, perhaps nine or 10 would pass.

Middle-Grade Feeder Schools. Nine of 20 middle-grade feeder school SE teachers stated that they used the California standards in developing their students' IEPs. Seven other teachers stated that they use the standards, but noted that the standards they use are usually below the students' grade levels. Two teachers made no mention of the IEPs specifically, but stated that they use the standards. Finally, two teachers stated that they focused on students' individual needs rather than the standards when developing IEPs. A few related comments are provided here:

- Goals and benchmarks have to be written to the content standards.
- The standards are written into the IEPs, but they are the standards for where the student is performing, not necessarily grade level.
- The content standards really don't come into play on IEPs; the focus is on the students' needs.

Nine of the 20 middle-grade feeder school SE teachers stated that some proportion of their students (RSP and/or SDC) was mainstreamed. Generally, more RSP students than SDC were mainstreamed, and RSP students were more likely to be mainstreamed in English and math. SDC students were often mainstreamed only in elective courses. Seven teachers stated that all of their RSP students were mainstreamed. Finally, one teacher stated that all special education students were mainstreamed, another stated that no SDC students were mainstreamed, and two teachers failed to provide information about mainstreaming at their school.

Nine of the 20 feeder school teachers stated that their students would be exposed to some portion of the California Content Standards. Similarly to high school teachers, some middle-grade feeder school SE teachers raised concerns over higher-level math standards.

All middle-grade feeder school SE teachers agreed that most of the special education students would not master all of the content necessary to pass the CAHSEE. Eight of 20 stated that their students would have trouble mastering all of the math standards, especially Algebra and word problems. Others mentioned subjects such as writing, spelling and vocabulary that would prove to be a roadblock.

Middle-grade feeder school SE teachers who spoke about the CAHSEE and its impact on both the Class of 2004 and their own students offered a variety of responses. In general, middle-grade feeder school teachers were not familiar with the details of the CAHSEE and its administration. Eight teachers focused on the need for accommodations or alternative diplomas for special education students. Three stated that the Class of 2004 was not ready to be held accountable. Three made predictions about their own students, two stating that most

of their students would be able to pass the CAHSEE, and the third stating that most students would go on to fail the exit exam. Some representative comments are provided below:

- From a special education point of view, I am very concerned about a mandated exit exam, particularly with not allowing accommodations.³
- The state probably should not hold the Class of 2004 accountable on the CAHSEE. But in upcoming years, the students will be better prepared for the CAHSEE.
- The school's RSP and SDC students will not be able to pass the CAHSEE when they get to high school. Students will have a better chance if the CAHSEE allows accommodations and they get a valid score.

Targeted Programs for English Learners

The interviews with EL Teachers focused on those who taught courses offered to EL students as their primary or remedial ELA or math instruction covering standards tested on the CAHSEE. A total of 55 interviews were conducted with 40 high school, 13 middle-grade feeder school, and 2 "other" EL teachers.

High Schools

High school EL teachers mentioned several types of preparatory activities that were used in readying students for the CAHSEE, ranging from special programs to specific test-preparation activities. Some responses are listed below:

- An after school program is in place for students with limited English abilities.
- The school uses the Jean Schaeffer method.
- The teacher uses "Test Best," which is CAT9 aligned.
- The school has a summer program for reading and writing.
- Tutors explicitly help students prepare to pass the CAHSEE. For example, one item was looking at a telephone page and answering questions. The students wonder why they need to do this because they'd just go on the Internet or call 411 for help. The tutor is helping them to understand why it is important to know how to do things "the test way."

Some teachers mentioned using prepackaged test preparation materials, others used released test items, and still others drew from a variety of sources to prepare students in specific areas, such as vocabulary. Activities were created/assembled by a single teacher, created/assembled at the school or department level, or distributed by the district. The following responses illustrate the variety of ways that test preparation activities were developed:

- The teacher knows the topics on the exam and covers them in class prior to the exam.
- The teacher uses word lists provided by the English department, sample CAHSEE items, and skeletons for essay writing.

³ Accommodations and modifications consistent with a student's IEP or 504 Plan are allowed for on the CAHSEE, so this is likely a misunderstanding on the teacher's part.

- The district provides the Kaplan test preparation series for use in the classes.
- Departments are working with the blueprint. Every school in the district is using “Word of the Day” to carry across the curriculum.
- Aside from working on comprehension and increasing vocabulary and grammar skills in general, the teacher does not specifically prepare students for the CAHSEE.

High and “other” school EL teachers indicated a variety of ways in which the California standards were integrated into EL curriculum. Several mentioned the use of textbooks and other materials as a guide in using the standards. As these texts usually listed the standards associated with each chapter, teachers were able to remain focused on the standards simply through the use of a standards-aligned text. The majority of responses indicated in non-specific terms that the standards were used, stating that the curriculum was standards-aligned, or that the standards were incorporated into instruction. A few of the more interesting responses are included below:

- The teacher uses quarterly writing rubrics based on the CAHSEE rubrics.
- The teacher was involved in groups that looked at regular standards and adapted them to levels that were doable for EL students. The groups worked from the California Content Standards and adapted them to create the ELD standards so they are very close.
- The district consults with teacher and committees to map ELD standards to California standards, and they are uniformly implemented across the district. Teachers are recording within courses what standards have been covered, and they are running end-of-unit tests to monitor progress.

Seven of the 26 EL teachers who were able to give an estimate of their ability to cover the California Content Standards with their EL students stated that their EL courses covered the same standards as their general education counterparts. Five of the 26 stated that EL standards were the focus at the lower EL levels, with a movement to the regular standards in higher-level EL courses. Two of these teachers noted that they make every effort to move their students into the higher EL levels as quickly as possible, in order to assure they are exposed to the California standards. Other teachers mentioned various proportions of the standards that they thought they would be able to cover with their students.

Thirty-five high school EL teachers indicated that at least some portion of the Class of 2004 had already passed or would be able to pass the CAHSEE. The following are a few comments made by teachers who were able to estimate the number of students that had passed/would pass the CAHSEE:

- I think the EL juniors are fine and have already passed it.
- Of 60 EL students, the teacher hopes all will take the math portion of the CAHSEE in March and thinks 30 to 40 percent will pass.
- The teacher thinks the Class of 2004 students will all pass except EL special education students.
- The 2004 requirement will not present a roadblock for this teacher’s EL students.

Middle-Grade Feeder Schools

Though three middle-grade feeder school teachers stated that they were not very familiar with the CAHSEE, several others were aware of its importance and had begun preparing their students for the exam. Most of the preparatory activities mentioned were focused on test-taking strategies and familiarizing students with the testing scenario, as these comments illustrate:

- The teacher uses a book called *Scoring High* for reading and language. Many EL students have never had a standardized test and this really helps them understand the style of testing.
- The EL kids do STAR testing and the district conducts tests three times a year in core subjects.
- The teacher starts the EL students with the writing prompt (persuasion, literature) so they get used to seeing that every trimester.

Eleven of 13 middle-grade feeder school EL teachers stated that they used the California standards in their instruction. The standards were integrated into the curriculum in a variety of ways, a few of which are listed below:

- We integrate the standards in all kinds of ways: decoding strategies, phonics programs, reading strategies, writing strategies, WRITE program workshops. EL kids have to keep a portfolio. They prepare a research report that requires that they discuss how they met each of the standards.
- The textbooks are standards aligned.
- The entire school is behind the effort by encouraging things like listing the standards on the boards in the classrooms and pointing them out to the students when they are being covered.

Four of the 13 middle-grade feeder school EL teachers were able to make an estimate of their ability to cover all of the necessary standards in their course. The responses varied from less than half to all of the content standards being covered.

Middle-grade feeder school EL teachers were fairly evenly split in terms of their predictions about the 2004 CAHSEE requirement. Four stated that their current students would probably not be able to pass the CAHSEE, three stated that their students should have no problems passing, and three stated that student success would depend on their current EL level and their ability to advance through the EL program before taking the CAHSEE. The comments below are representative of the range of responses:

- The majority of EL students will not pass the CAHSEE when they get to 10th grade based on where they are right now.
- I am confident that the majority of EL students will pass the CAHSEE.
- If an EL student is a strong level 2 in the ELD program in 8th grade he or she should be able to pass the CAHSEE by the end of high school. If a student is low level 2 or 1 in the ELD program, it is less likely he or she will pass, but it depends on the educational background and support at the high school.

Other Programs

The interviews with Special Program Teachers focused on those who taught courses or programs designed to help students considered at-risk of succeeding on the CAHSEE prior to their taking the exit exam. We conducted 42 interviews with 34 high school, 5 middle-grade feeder school, and 3 “other” special program teachers.

High Schools

Depending on whether the program was structured as a single course, a before- or after-school program, or multiple courses, program length tended to vary. At 21 high schools, programs were structured as a single course that met during the school day; one course met during a seventh, after-school period. Eight other programs were conducted before or after regular school hours. Four programs were organized as a school-within-a-school, with multiple courses and/or multiple years. Some examples of program descriptions appear below:

- Advanced Linguistics is a scheduled full-year class for low performing readers.
- The class meets as a regular class on a block schedule for two hours.
- The tutoring program is a four-week program and students can enroll for before or after school.
- Students may be in the program during one, two or three class periods.

Programs that were organized as a single course tended to last one semester or one school year. Before- and after-school programs varied between a few weeks and an entire school year. Multiple course programs might last a year or more. Some responses are provided here:

- This is an entire semester course.
- There are several sections of Language Skills. The program lasts the entire year.
- Students attend four days a week for 1 hour and 15 minutes. They are supposed to remain for the entire year.
- The *Language! [Exclamation]* program takes 2 to 3 years to complete.

Program sizes range from 10 to 300 student participants. Schools serving a larger population of students might have several sections of an intervention course, each serving 20 or more students. Programs that were organized as a course were typically taken for elective credit.

Two of the three “other” programs were organized as single courses; the third was a school-within-a-school program.

Teachers from 20 of 34 high school and 1 of 3 “other” special programs stated that they used the California standards within their program. The following comments provide good representation of teacher input:

- This program attempts to integrate the students’ learning styles with the content standards.

- Initially this course was based more on national standards, but we have modified it for the CAHSEE standards.
- This course is about a 3 in implementing standards-based instruction on content, but it's a 5 on students feeling successful.
- One problem is that this program is not aligned with the California Content Standards.

Ten high school teachers made general comments about the difficulty that they expected students to have with the exam. Of the 13 who were able to give proportions, five stated that less than one-quarter would pass, four others estimated about one-half, and four estimated 75 to 90 percent. Two stated that students would pass depending on their level of participation or ability level. Two of the three “other” teachers commented that students who arrived at their school at an earlier age had a better chance of passing, simply by being in the system longer. The other stated that only one or two students might be able to pass the CAHSEE. The following comments provide a good representation of teachers’ comments:

- It will be very difficult for the students in this program to pass the CAHSEE.
- Students in this class have little chance of reaching the CAHSEE level competence.
- 25 percent of the students in this program have the potential to pass due to maturing.
- Probably 50 percent of my students can pass the CAHSEE.
- If current students remain in the program for the whole year-and-a-half, the coordinator hopes that approximately 80 percent will pass.
- In total, 90 percent will pass the exam.

Middle-Grade Feeder Schools

Three of the five middle-grade feeder school special program teachers described their program as a course, meeting for one period per day or as a two-period block. The two other special programs were organized more as a school-within-a-school program, with students meeting several periods each day.

Middle-grade feeder school programs served between 16 and 100 students. Three of the five programs served around 40 students.

Three of five middle-grade feeder school special program teachers stated that they used the California standards within their program. The remaining two teachers however, did not mention the standards. Comments about the use of standards are provided below:

- We use the California Content Standards for reading and writing and social studies. The program is driven by the California Content Standards.
- The California Content Standards were used in developing the standards for the program.
- The California standards are used for all English classes. Although this class is more skills based, we do use the standards.

Middle-grade feeder school respondents largely cited student-level factors, most of which were mirrored in the high school responses listed above, that presented challenges for their programs. However, parental education and participation also were mentioned by the middle-grade feeder schools as challenges to program success.

Summary and Conclusions

Both survey and site visit results on the impact of the CAHSEE can be summarized in two key conclusions:

10. Coverage of the California Content Standards at both middle-grade feeder and high school levels has increased dramatically in the past three years. At the high school level, coverage of the particular standards assessed by the CAHSEE has also increased.
11. The number of remedial programs designed to help students who do not initially master relevant content standards has increased dramatically. These include a number of courses targeting special populations, in particular English learners and students with disabilities. A significant number of students are taking advantage of these courses.

While it is not possible to say that these changes were due entirely to the CAHSEE requirement, it is very unlikely that changes of this magnitude would have occurred without such a requirement. Many teachers and principals suggest that the requirement should be continued so that the momentum behind remedial instruction for students who have not yet mastered essential skills can be maintained.

CHAPTER 4: EVIDENCE ON THE EFFECTIVENESS OF INSTRUCTION FOR THE CLASS OF 2004

Introduction

The primary evidence used to evaluate the effectiveness of instruction in the CAHSEE standards was whether most students were able to pass the exam. Passing rates were computed by comparing the number of students who have passed each portion of the exam in each of the administrations from March 2001 through January 2003 with the number of 10th graders enrolled in fall of 2001, the year that the Class of 2004 entered that grade. Passing rates were computed for all students and for disadvantaged or “at-risk” students, including economically disadvantaged, English learners (EL), and special education (SE) students⁴. Overall and subgroup passing rates were also computed separately for 1,843 high schools, using counts of 10th graders from the 2002 STAR administration as the base for each school and demographic subgroup. Again, results from the survey of instruction and the interviews are presented to extend the information on passing rates.

Passing Rates

Notwithstanding the extensive impact that the CAHSEE requirement has had on both initial and remedial instruction, passing rates remain low for many schools. Table 4.1 shows overall passing rates for each portion of the CAHSEE through January 2003. Previously, CDE published cumulative passing rates through July of 2002. Table 4.1 also shows changes in the passing rates resulting from the four administrations provided in July, September, and November of 2002, and January of 2003.

For English-language arts (ELA), the overall passing rate is now above 80 percent. If the cumulative rate continues to increase at about 10 percent per year, it should reach roughly 95 percent by June 2004. Note, however, that the remaining students may have greater difficulty in reaching the passing standard and also that continued progress assumes that significant resources continue to be available to help students to reach this standard. In addition, not all of the students who were in the 10th grade in 2002 will still be in school and attempting to pass the CAHSEE by the end of their senior year. While the overall passing rate for ELA is relatively high, English learners and students with disabilities continue to have problems. Unless the rate of improvement is increased dramatically, at least a quarter of the EL students and over a third of SE students will not reach passing levels by June 2004.

For mathematics, evidence for the effectiveness of current initial and remedial instruction is less positive. So far, just over 60 percent of the Class of 2004 has passed the mathematics portion of the CAHSEE. Unless the rate of improvement increases dramatically, about 20

⁴ Note that fall enrollment counts are not available for economically disadvantaged students, defined in terms of eligibility for free or reduced-price lunch. Disaggregated counts by school and grade are not available for this variable. For this category, counts of Spring 2002 STAR examinees flagged as eligible for the National School Lunch Program (NSLP) were used. This approach undercounts NSLP students to a small extent because students excluded from testing are not in the counts. Thus passing rates for this category apply to students who are eligible for testing.

percent of all students will fail to pass the mathematics requirement, with the result that they will be denied a diploma. Here too, the problem is much worse for EL and SE)students. At the current rate of improvement, about half of the EL students and 75 percent of the SE students will fail to meet the mathematics requirement.

Table 4.1. Approximate Passing Rates for the Class of 2004 (Through Jan. 2003)

Group	2001-2002 10 th Graders*	Number Passing CAHSEE Through Jan. 2003		Ratio** (# Passing / Enrollment)		Change from July 2002	
		ELA	Math	ELA	Math	ELA	Math
All Students	459,588	373,284	287,129	81%	62%	+8%	+9%
Economically Disadvantaged English Learners (EL)	125,139	99,009	67,380	79%	54%	+10%	+11%
Special Education (SE)	77,446	42,013	28,969	54%	37%	+11%	+10%
	47,169	18,804	10,210	40%	22%	+9%	+6%

* Based on fall 2001 enrollment data, except counts of economically disadvantaged students are based on spring 2002 STAR data. (Counts of economically disadvantaged students by grade were not otherwise available.)

** The ratio is not exactly the percent of students who have passed. Some of the students who have passed have transferred out of the state or dropped out and were not included in the counts of 2001-2002 10th graders. Further, some EL or SE students passing the CAHSEE in 9th grade may have been classified differently in the 10th grade and not counted in the base for these groups

As clearly indicated in our survey and interviews and from other sources, instruction varies considerably from district to district and from school to school. The next step in our analysis of instruction for the Class of 2004 was to compute passing rates for each school. The question addressed in these analyses is “How many school systems (high schools plus middle-grade feeder schools) have had instruction that is effective in helping students to master the CAHSEE standards?”

Table 4.2 shows the number of schools with high, moderate, low, and very low passing rates for each portion of the CAHSEE. Results are also shown separately for groups of at-risk students and for schools with varying proportions of each type of student. For these analyses, passing rates less than 50 percent were considered very low, passing rates from 50 percent to 75 percent were considered low, passing rates from 75 percent to 90 percent were considered moderate, and passing rates above 90 percent were considered high. In subsequent analyses, we used a 75 percent passing rate as the dividing line between schools with moderate or high passing rates (more than 75% passing) where evidence for the effectiveness of instruction was generally positive and schools with low or very low passing rates (fewer than 75% passing) where the evidence of effectiveness was less positive. Note that the results shown in Table 4.2 were based on 1,843 high schools (essentially all) and not limited to the sample responding to the survey or participating in the interviews.

Table 4.2. Percent of Schools with High, Moderate, Low, and Very Low Passing Rates

Size (# of 2002 10 th Graders)	Number of Schools	Percent in School Passing ELA*				Percent in School Passing Math*			
		Very Low < 50%	Low 50– 74%	Mod. 75– 94%	High > 95%	Very Low < 50%	Low 50– 74%	Mod. 75– 94%	High > 95%
All Students									
1–99	930	40%	25%	16%	19%	75%	13%	6%	6%
100–499	533	15%	12%	34%	39%	28%	30%	32%	10%
500+	380	5%	16%	49%	30%	19%	43%	33%	6%
All	1,843	26%	19%	28%	27%	50%	24%	19%	7%
English Learners									
1–9	1,071	78%	7%	2%	13%	86%	5%	1%	8%
10–49	386	45%	23%	16%	17%	60%	22%	10%	9%
50+	386	34%	41%	21%	4%	70%	22%	5%	3%
All	1,843	62%	17%	9%	12%	77%	12%	4%	7%
Special Education Students									
1–9	1,056	70%	7%	2%	22%	84%	5%	1%	10%
10–49	629	39%	22%	16%	24%	70%	17%	6%	7%
50+	158	59%	25%	9%	6%	90%	8%	1%	1%
All	1,843	58%	13%	7%	21%	79%	10%	3%	8%

* Note: Percents in each row group may not add to 100 due to rounding.

Overall, half of California’s high schools have passing rates lower than 50 percent for the mathematics portion of the CAHSEE. Passing rates are above 75 percent in only about a quarter of all high schools. Passing rates are lower for smaller schools, which were likely to have fewer resources. Seventy-five percent of the schools with fewer than 100 students had very low passing rates for the CAHSEE mathematics test and only 12 percent had moderate or high passing rates.

Very few schools had high passing rates for English learners and special education students. For mathematics, 77 percent of the schools had very low passing rates for EL and 79 percent had very low passing rates for SE students. Passing rates were even lower for schools that had higher numbers (50 or more) students in each of these categories. Only 8 percent of schools with 50 or more EL students had moderate or high passing rates compared to 19 percent of schools with 10 to 49 EL students. Similarly, only 2 percent of the schools with 50 or more SE students had moderate to high passing rates for these students, compared to 13 percent of the schools with 10 to 49 SE students.

Given low initial passing rates for the CAHSEE, a key question is the effectiveness of high school courses designed to help students who still need to master content standards that were or should have been covered at earlier grades. Principals were asked whether they offered summer courses designed to help students who were having difficulty in passing the CAHSEE. Roughly 8 percent of them said that they did. However, the majority reported that fewer than 25 percent of the students who had not passed the CAHSEE took these courses and that fewer than 25 percent of the students who did take the course were able to pass the CAHSEE on their next attempt. During our site visits, we were able to obtain class lists from

a number of these courses. Indeed, roughly 20 percent of the students we were able to match to records from CAHSEE administrations subsequently passed.

Relationship of Passing Rates to Alignment

Passing rates were significantly higher for schools reporting early alignment to the California Content Standards covered by the CAHSEE. Table 4.3 shows the relationship between coverage of the CAHSEE Content Standards reported by the high school principals in our survey and passing rates for the Class of 2004 computed from the test data.

Table 4.3. Percent of Schools with High Passing Rates (> 75%) by Time of Implementation of Standards-Based Instruction (SBI)

First Year in Which SBI Covered at Least 75% of Content Standards	ELA		Mathematics	
	Schools Reaching 75% Coverage	% with > 75% Passing	Schools Reaching 75% Coverage	% with > 75% Passing
Before 1999	10%	100%	14%	100%
1999–2000	69%	94%	72%	64%
2000–2001	42%	88%	40%	45%
2001–2002	66%	79%	62%	39%
2002–2003	42%	74%	36%	28%
Not Yet	33%	61%	36%	19%

The survey question asked principals to estimate coverage of the content standards in each academic year beginning with “Before 1999” through the current 2002–2003 school year. In virtually all cases, coverage increased each year. We sorted schools by the first year for which coverage was estimated to exceed 75 percent of the standards and looked at the passing rates for each category. As shown in Table 4.3, passing-rate results are quite closely related to the coverage data. All schools reporting high coverage before 1999 had high passing rates. For ELA, the proportion of schools with high passing rates ranged from 100 percent for schools with the earliest coverage down to 61 percent for schools that did not report at least 75 percent coverage at any time. For mathematics, the proportion of schools with moderate or high passing rates ranged from 100 percent for the “early adopters” down to only 19 percent for schools that were not yet reporting 75 percent coverage of the standards.

Factors that Limit the Effectiveness of Current Instruction

Student Preparation

Teachers responding to the surveys were asked about a number of factors that limited the effectiveness of their courses. In both the survey results and the interviews, a critical limitation was the number of students who did not have key skills needed to succeed in the course they were taking. Table 4.4 summarizes teachers’ responses to the question asking what proportion of their students had the necessary prerequisite skills. For the majority of courses targeting special education students and English learners, the teachers reported that “Most students do not yet have prerequisite skills.” Thus, schools may well be offering

effective instruction in the targeted content standards, but teachers reported that many special education students and English learners are not yet ready to benefit from these courses.

Table 4.4. Teachers' Evaluation of How Well Students are Prepared for Their Course

Target Population For the Course	Percent of Teachers Indicating:		
	Few Students Are Well-Prepared	Some Students are Well-Prepared	Most Students are Well-Prepared
High School ELA Courses			
Special Education Students	62%	33%	5%
English Learners	42%	42%	15%
Not Targeted	20%	53%	28%
High School Mathematics Courses			
Special Education Students	62%	25%	3%
English Learners	53%	39%	8%
Not Targeted	31%	53%	16%
Middle School ELA Courses			
Special Education Students	56%	40%	3%
English Learners	45%	45%	10%
Not Targeted	18%	56%	26%
Middle School Mathematics Courses			
Special Education Students	59%	31%	10%
English Learners	44%	45%	11%
Not Targeted	18%	49%	33%

Teachers were also asked what proportion of the students in their course scored at or above the basic level when they took the California Standards Test the year before. The results shown in Table 4.5 are entirely consistent with the teachers' own assessment of student skill levels as shown in Table 4.4 above. Again, the most severe problems were for courses targeting SE students. In more than 80 percent of these courses, fewer than a quarter of the students had demonstrated even basic achievement in the previous year.

Table 4.5. Percent of Students in the Class of 2004 Scoring at Least Basic on the California Standards Test in the Previous Year

Target Population For the Course	Percent of Teachers Indicating Percent of Their Students at Least Basic was:		
	Fewer than 25%	50-75%	More than 75%
High School ELA Courses			
Special Education Students	82%	12%	6%
English Learners	67%	29%	5%
Not Targeted	23%	46%	31%
High School Mathematics Courses			
Special Education Students	85%	8%	7%
English Learners	60%	31%	9%
Not Targeted	32%	50%	18%
Middle School ELA Courses			
Special Education Students	85%	13%	1%
English Learners	54%	38%	8%
Not Targeted	14%	50%	36%
Middle School Mathematics Courses			
Special Education Students	80%	10%	10%
English Learners	42%	44%	14%
Not Targeted	13%	41%	46%

Interviews

Are incoming students better prepared?

Most of the high school principals (27) reported that they either saw little change with the incoming students or they have not had enough time to tell if there has been a change. Ten principals reported that incoming students were better prepared than in the past. Additionally, 12 principals made comments regarding articulation between the high school and middle-grade feeder schools;—seven reported articulation was poor or needed improvement and six reported articulation was good and improving. Although it should not be considered conclusive, it was interesting to note that generally the same schools that reported student improvement also reported good articulation. The same was true for principals reporting the need to improve articulation; they also noted finding little change with incoming students.

The middle-grade feeder school principals reported findings contrary to the high schools. Eight of the 12 middle-grade feeder schools responding to this question stated that their incoming students appeared to be better prepared while four principals reported no changes. The same correlation found with the high schools holds true for the middle-grade feeder schools; that the same schools reporting improved incoming students reported good articulation with their feeder elementary schools.

During the site visits we asked high school ELA and mathematics teachers about any changes they have seen in the *preparation of students entering their classes* since the

implementation of standards-based instruction. Thus, depending on the particular course, a teacher might be describing preparation that took place in middle-grade feeder schools or within the high school.

We placed responses into three main categories: better preparation now, little/no change now, worse preparation now. We also found several other categories, such as variance among middle-grade feeder schools, comments about student preparation in general, and relationship between preparation and student cohort. This question took the form of an open-ended response, with teachers discussing their initial response and often expanding on it. For example, a teacher might state that he or she has seen little change in the quality of student preparation and may also state that student preparation varies among middle-grade feeder schools. Results in Table 4.6 show that teachers of both subjects believe students are still not where they should be in terms of readiness for the course, but that they are starting to see improvements in student preparation, followed closely by those who see little or no change in student preparation levels. Only a few teachers stated that the level of student preparation is worse.

Table 4.6. Interview Responses About the Quality of Student Preparation by High School Subject

	Seeing better prep	Seeing little/no change	Seeing worse prep	Seeing poor prep generally	Feeder school variance	Cohort dependent	New teacher
HS ELA	19	11	3	18	3	2	5
HS math	16	14	8	18	2	1	6

We also asked middle-grade feeder school teachers who were interviewed about the *preparation of their incoming students*; 22 middle-grade feeder school math and 26 middle-grade feeder school ELA teachers responded. We used the same coding scheme as we did with high school teacher responses, and Table 4.7 presents the results. In both subjects, the most frequent response was that students were better prepared, followed by little/no change. We note that in two instances ELA teachers gave both a “better preparation” and “little/no change” comment in the same response.

Table 4.7 Interview Responses about the Quality of Student Preparation by Middle-Grade Feeder School Subject

	Seeing better prep	Seeing little/no change	Seeing worse prep	Seeing poor prep generally	Feeder school variance	Cohort dependent	New teacher
MS ELA	13	6	1	4	2	4	3
MS math	10	6	0	6	0	0	1

Changes in performance of student subpopulations?

Over half of the high school principals (18) said they have not seen improvement in student performance, but 13 of those stated that there has not been enough time yet to see greater results. Four principals discussed concerns that EL students are having difficulty keeping up and one specifically mentioned that SE students are not passing—that they are the ones suffering the most. Only two principals stated that there has been a negative change in

performance with one comment stating that the problem was likely due to a change in the schedule. There were, however, six high schools (22%) indicating that the CAHSEE and standards-based instruction have made a positive difference. They indicated that they were on the right path and should continue to see improvement in the future because of the standards.

The middle-grade feeder schools seemed to report a more positive outlook regarding student subpopulation performance than the high schools. About half of the middle-grade feeder schools felt there had been little change, but 40 percent of the principals felt there were positive changes in student performance. One school noted that all the subpopulations had seen improvement this year, but one school noted that EL students were having trouble.

Teacher Qualification and Experience

The principal survey included a question on the extent of professional development targeting teaching the standards. Table 4.8 shows the levels of professional development activity reported in response to this question. The data presented in Table 4.8 also show that the current level of professional development is not related to cumulative CAHSEE passing rates for the Class of 2004. It is likely too soon to see any impact from the high level of professional development activity reported here. It may also be the case that there is more current professional development activity in schools with lower CAHSEE passing rates, as these schools are most in need of improvement.

Table 4.8. Percent of Teachers Receiving Professional Development in Teaching the Standards (Last 12 Months)

Percent of Teachers Receiving Professional Development.	Percent of Schools	Percent with High (> 75%) Passing Rates	
		ELA	Mathematics
> 90 %	44	78%	42%
75–90 %	18	89%	40%
25–74 %	21	87%	52%
< 25 %	15	76%	49%
Not Applicable	2	50%	50%

The teacher questionnaires included a number of questions about the qualifications and experiences of the teachers of each course. Table 4.9 provides information on the extent to which courses are being taught by teachers who possess appropriate credentials. Overall, nearly all of the teachers for most of the courses have appropriate credentials. The most significant concern is with high school mathematics courses targeting special education student where more than 20 percent of the courses reported in our survey do not have teachers with appropriate credentials.

Interviews

In the interviews, most principals did not cite problems with teacher qualifications or credentials. The following are comments middle-grade feeder and high school principals made related to the qualifications of their teaching staffs.

- Of 14 teachers for Algebra 1, all but one has a math credential.

- Most teachers at our school are teaching within their certificates; two teachers are on emergency certificates.
- My district pays very well, but I'm hearing that getting good, qualified teachers is becoming a problem. The only time we hire someone without proper credentials is when we have a special need (e.g., physics teacher, special education teacher). From what I hear outside it's hard to get really well trained teachers.
- This school could easily have many more sections of Math Concepts, but we don't have credentialed staff to teach them. The principal believes teachers should be credentialed, but there is a situation now where there needs to be some reconsideration. There are science teachers who have lots of math knowledge and understanding but they can't teach math. However, then someone who has a sufficient number of units can teach even when they don't have the mathematical understanding.
- One of the challenges we face is that our district now has a freeze on hiring teachers with emergency credentials. Many teachers we interview really do not qualify to be teachers. Many graduates, who did not obtain teacher certificates while still in college, and who probably have good content knowledge, would like to teach, but they cannot be hired because of the freeze.

Table 4.9. Proportion of Teachers with Appropriate Credentials

Target Population For the Course	Percent of Courses Where Proportion of Teachers with Credentials is:				
	None	Some	About Half	Most	Nearly All
High School ELA Courses					
Special Education	12%	4%	2%	5%	78%
English Learners	4%	2%	4%	7%	84%
Not Targeted	3%	3%	3%	7%	84%
High School Mathematics Courses					
Special Education	22%	5%	5%	7%	61%
English Learners	11%	4%	6%	13%	66%
Not Targeted	8%	4%	6%	10%	72%
Middle-Grade Feeder School ELA Courses					
Special Education	7%	3%	6%	6%	78%
English Learners	3%	2%	3%	7%	85%
Not Targeted	2%	1%	3%	8%	87%
Middle-Grade Feeder School Mathematics Courses					
Special Education	14%	3%	5%	4%	73%
English Learners	8%	4%	6%	13%	70%
Not Targeted	4%	3%	5%	8%	81%

Questions of effectiveness are most pronounced for courses targeting economically disadvantaged students, students in remedial programs, special education students, or English learners. Table 4.10 summarizes responses to questions about the experiences that teachers have with these special populations. The results indicate that courses targeting special

education students and English learners are nearly all being taught by teachers with moderate to very great experience with these populations.

Table 4.10. Teacher Experience with Special Populations

Specific Type of Experience	Target Population For the Course	Percent of Courses where Teacher Experience is:				
		None	Slight	Moderate	Great	Very Great
High School ELA Teachers						
Economically Disadvantaged Students	Special Education	2%	3%	19%	31%	46%
	English Learners	1%	9%	22%	34%	34%
	Not Targeted	1%	10%	34%	31%	24%
Remedial Students	Special Education	1%	2%	15%	40%	43%
	English Learners	2%	9%	27%	37%	25%
	Not Targeted	1%	10%	38%	30%	20%
EL Students	English Learners	2%	5%	18%	32%	42%
Special Needs	Special Education	0%	4%	11%	23%	62%
High School Mathematics Teachers						
Economically Disadvantaged Students	Special Education	0%	4%	25%	35%	36%
	English Learners	0%	5%	33%	36%	26%
	Not Targeted	2%	12%	38%	27%	21%
Remedial Students	Special Education	0%	3%	19%	32%	46%
	English Learners	0%	5%	34%	36%	25%
	Not Targeted	1%	9%	37%	34%	19%
EL Students	English Learners	2%	13%	29%	34%	23%
Special Needs	Special Education	0%	2%	15%	28%	55%
Middle-Grade Feeder School ELA Teachers						
Economically Disadvantaged Students	Special Education	0%	12%	31%	22%	34%
	English Learners	0%	6%	20%	37%	39%
	Not Targeted	1%	6%	33%	37%	23%
Remedial Students	Special Education	2%	2%	6%	26%	65%
	English Learners	1%	9%	21%	36%	32%
	Not Targeted	0%	6%	32%	40%	22%
EL Students	English Learners	0%	7%	22%	29%	41%
Special Needs	Special Education	1%	0%	11%	5%	83%
Middle-Grade Feeder School Mathematics Teachers						
Economically Disadvantaged Students	Special Education	0%	3%	20%	36%	41%
	English Learners	0%	7%	27%	41%	24%
	Not Targeted	2%	7%	38%	29%	24%
Remedial Students	Special Education	2%	0%	6%	38%	54%
	English Learners	1%	7%	27%	36%	30%
	Not Targeted	1%	7%	38%	32%	22%
EL Students	English Learners	1%	8%	31%	25%	34%
Special Needs	Special Education	0%	0%	9%	16%	75%

Other Factors

Teachers were asked on the survey about the potential influence of a number of factors that might limit the effectiveness of the courses on which they were reporting. Table 4.11 summarizes their responses. Consistent with the findings discussed in the preceding section, lack of qualified teachers was not listed as a major concern.

The most significant limitation reported was lack of student motivation. Lack of parental support, low attendance, and other related problems were also cited as limiting factors for a number of courses. Note in Appendix B, “Summary of Questionnaire Response Frequencies,” that principals from most schools reported that fewer than a quarter of students who have not yet passed the CAHSEE take advantage of available summer school courses.

Table 4.11 Other Factors Limiting Course Effectiveness

Limitation	Percent of Teachers Indicating the Effect was:				
	None	Slight	Moderate	Great	Very Great
High School Teachers					
Low Attendance	14%	30%	23%	17%	16%
Low Motivation	5%	17%	26%	27%	25%
Limited English	21%	35%	25%	11%	8%
Low Parental Support	10%	29%	31%	19%	11%
Lack of Materials	53%	27%	12%	5%	3%
Lack of Teachers	70%	19%	6%	3%	2%
Middle-Grade Feeder School Teachers					
Low Attendance	24%	40%	16%	10%	10%
Low Motivation	10%	21%	29%	23%	17%
Limited English	23%	38%	24%	9%	6%
Low Parental Support	14%	27%	31%	18%	10%
Lack of Materials	59%	24%	10%	4%	3%
Lack of Teachers	74%	14%	6%	3%	3%

Interviews

Changes in motivation?

Of the 36 high school principals interviewed, 13 stated they had seen little or no change in student motivation and five stated they had not yet had enough time to tell. Of principals giving both those responses, several made comments to indicate that they felt they were on the right path to see improvement in the future. Eight principals stated that students appear more motivated now and two of those felt students were more motivated for the CAHSEE than for other tests. One principal felt motivation had decreased, stating the EL students are now realizing they will never pass the CAHSEE and have quit trying. Three principals stated there has been no impact on dropout rates; however, three stated that the CAHSEE would negatively impact dropout rates in the future. One reported that the dropout rate has already increased because of the CAHSEE.

Eight of the 17 middle-grade feeder school principals reported they have seen no change in student motivation and dropout rates. We note that, because most middle-grade feeder school students are still too young to drop out, it is unlikely that middle-grade feeder school principals would see much increase in dropout rates. Although the principals stated they talk

to students about the importance of the CAHSEE, it is just too far in the future for them to be very concerned. Three stated that motivation has gone down, but supporting comments indicated it was because of teacher frustration trying to implement another new program (standards) or that the students, particularly minority students, do not care about performing well in school. No principals indicated that students' motivation has increased.

Challenges faced by schools?

Four challenges were addressed multiple times by the high school principals during the interviews. They included the need to increase parental support (10 principals), gain teacher support for making changes (8), meet the needs of SE and EL students (10), and solve logistical challenges for testing (9). These four challenges alone impact most everyone involved in education—students and their families, teachers, schools, districts and state administrators. Other challenges mentioned by principals included finding and keeping good teachers, creating the time needed for teachers to work on articulation and standards, and helping to build better community support.

The middle-grade feeder school principals echoed similar challenges to those mentioned by the high school principals with regard to parental support issues and getting teachers to embrace the standards. Over half of the principals mentioned both challenges. They also discussed the ways in which they are trying to address those challenges through training and education. They are trying to provide classes to teach parents life skills as well as to offer additional professional development opportunities to teachers. Middle-Grade Feeder school principals were also concerned with the challenges EL students present to the staff. Not only is it difficult for those students to get caught up after becoming familiar with the English language, but also one principal stated that they had many students who are not educated in their own language. Primarily, the principals discussed the need for more resources to provide special programs to help these students succeed. One principal summed up the difficulties by stating that for many EL students, school is the only place they have to speak, read, or even listen to English.

High school and “other” special program teachers indicated a number of challenges faced by their programs. Responses generally fell into student-level and school-level challenges, and are listed below:

Student-level challenges

- Getting students to understand their capabilities
- Parental support
- Transportation
- Absenteeism
- Truancy
- Motivation
- Low self-esteem
- Behavior problems
- Drug use

School-level challenges

- Articulation between elementary, middle/junior, and high schools
- Students phased out of EL programs too quickly
- Funding
- Lack of time to prepare students

- Staffing (not enough tutors)
- Large class sizes
- Inability to reach all students in need
- Lack of student preparation upon entering high school

Teachers' and Principals' Conclusions about the Class of 2004

Although there was no specific question about holding the Class of 2004 accountable to the CAHSEE on the principal interview protocol, we found that 31 of the 50 high school principals and 11 of 15 middle-grade feeder school principals volunteered their opinions about this topic.

We categorized principal responses in a simple format:

- No, don't hold them accountable
- Yes, hold them accountable
- Modify the exam in some way, and
- Unclear

For high school principals, we found 13 “No” responses, four “Yes” responses, eight “Modify” responses, and six “Unclear” responses. For middle-grade feeder school principals, we found 4 “No” responses, 2 “Yes” responses, 3 “Modify” responses, and 2 “Unclear” responses. A sample of the principals' responses appears under the following headings.

“No” responses

- I can live with the concept of a standardized test instrument through which students can demonstrate proficiency. We are not there for the Class of 2004—for many reasons. Within 2 to 3 years, we, at this site, will get there.
- There should be full alignment of the standards for 4 years before the exam should be implemented. That would be valid. Now, it is a confused melee of standards in California high schools—various degrees of alignment. All the things that define a curriculum need to be in place for 4 years so students go through the standards-based process as freshmen through seniors. It ought to be our freshmen or sophomores who should be accountable—that would be fairer.
- I would say no. The implementation of the standards did not start until those students were in the 9th grade. Most of the students are not ready. The class of 2006 should be ready. They were in middle school when we started to focus on the standards.

“Yes” responses

- The state absolutely should hold firm with the 2004 date; it would be disastrous if they move the date; people will say they'll never do what they say; it's fine to make exceptions where justifiable but be cautious with the exceptions.
- They should make it count in order to maintain integrity of the test.

“Modify” responses

- There is no need for CAHSEE; the state could select items from STAR (CAT6 and content standards) and Golden State and add a writing sample piece.
- The exit exam is a good idea, but the current one may not be the best. Schools should be able to say a student who graduated from a California school has certain basic skills, but we need some safety net for EL and SE students.

“Unclear” responses

- The exit exam is a good thing, but many students are not ready for it yet.
- The principal is very afraid of the large number of students who will not graduate if the CAHSEE requirement is enforced.

When ELA and math teachers were interviewed, the last question asked for their opinion on whether the Class of 2004 should be required to pass the CAHSEE to get a high school diploma. There were three main themes in their responses—whether standards had been covered for the Class of 2004, whether the Class of 2004 should be held accountable for passing the CAHSEE, and whether there should even be a high school exit exam. In all three categories, responses were coded as positive or negative.

Responses were tallied from 67 ELA teachers at 39 high schools, 73 math teachers at 39 high schools, 21 ELA teachers at 11 middle-grade feeder schools, and 24 math teachers at 11 middle-grade feeder schools. Responses are reported by school level and teacher subject area.

High Schools

English-Language Arts. Twenty-three ELA teachers discussed coverage of standards for the Class of 2004. Of these 23 teachers, 18 teachers said that standards were covered for the Class of 2004, and five teachers stated that standards had not been covered. At the school level, teachers at 14 schools responded that the standards had been covered, teachers at four schools stated they had not been covered, and teachers at one school were divided in their responses. As can be observed by the numbers, most schools were represented by only a single teacher’s response concerning the coverage of standards. The following are some responses to give a flavor of what the teachers told us.

- The Class of 2004 was given the standards, but I do not know if they learned.
- I did not cover the standards as well with the Class of 2004 as I did this year. Next year, we will be doing even better on covering the standards.
- My firm answer is “maybe” for the Class of 2004. I am covering the standards but do not know about others. The next 2 years should be better and more consistent.
- Think the Class of 2004 has received the instruction needed to be ready to pass CAHSEE.

Forty ELA teachers provided responses concerning holding the Class of 2004 accountable for passing the CAHSEE to receive a diploma. Of those 40 teachers, 23 responded that the Class of 2004 should be held accountable and 17 responded that the requirement should be delayed and the Class of 2004 should not be held accountable for passing the CAHSEE. At the school level, the responses were fairly equally split. Teachers at 11 schools responded that the Class of 2004 should be held accountable. Teachers at 11

schools responded that the Class of 2004 should not be held accountable and that the requirement should be delayed. Teachers at four schools were split on their responses.

- More time should be given until the requirement is implemented to allow for teachers to adjust to teaching to standards.
- If the Class of 2004 is not held accountable, it will damage the credibility of the exit exam in the eyes of the students. The exit exam has caused remarkable changes in the students' willingness to work. The classes seem to be getting better every year.
- I believe the state should stand on its requirement. If delayed, it would be a serious mistake—one that reinforces that this is not a serious requirement. Students need to know there is a requirement and that they have a responsibility for their education.
- There will not be a class that is seriously prepared for the CAHSEE for another 6 or 7 years.

Thirty-three ELA teachers provided responses about whether there should be a high school exit exam. Of the 33 teachers, 27 were in favor of having some form of high school exit exam and six were opposed to any kind of high school exit exam.

- I believe the exit exam is an awesome thing.
- I think CAHSEE is good because it gives meaning to graduation.
- We really need the accountability that the CAHSEE requirement will bring. Believe an exit exam is absolutely necessary because it equalizes across the board and keeps schools from passing students on. Believe in accountability. Have seen too many students who have graduated without basic skills.
- Opposed to CAHSEE in general.
- If the diploma is to mean something, the CAHSEE is a fairly decent minimal standard.
- Without the test there will not be a lot of change. Most teachers are like the students. Unless there are consequences and they are held accountable, they will not change.

Mathematics. Thirty math teachers expressed an opinion about the coverage of standards for the Class of 2004. Of the 30 teachers, 18 stated that the standards were covered for the Class of 2004 and 12 teachers stated that the standards were not covered. Aggregated by school, there were teachers at 13 schools who indicated that the standards were covered, teachers at eight schools who indicated that the standards were not covered, and teachers at two schools who offered mixed opinions.

- For the Class of 2004, similar standards were covered, but not all students understood them.
- They have been given the opportunity to learn here. They are given chances to do it. If juniors have not passed, they are in courses targeted to help them pass the test. Those who attend regularly and work hard will pass the exam. Still have some good students who are struggling.
- Class of 2004, students have not covered all of the content; they are always behind.

Thirty-eight math teachers at 27 high schools offered opinions about holding the Class of 2004 accountable for passing the CAHSEE. Of those 38 teachers, 26 responded that the Class

of 2004 should have to pass the CAHSEE in order to receive a diploma, while 12 thought the requirement should be at least delayed. Aggregating at the school level, math teachers at 17 high schools felt the requirement should stay, teachers at seven high schools thought the requirement should be delayed, and teachers at three high schools provided mixed opinions.

- There will be a lot of students who will fail, but they have got to be accountable. Go and let it be a reality check. Not implementing may be detrimental.
- We should not delay. Students who are working hard to pass need to have that goal in front of them. Students who worked and already passed need to see that what they did has value and does not get blown off. Ditch the whole...program but do not delay it. I understand the legislature does not want to be bombarded with complaints, but do not delay. Lower the cut score if you have to, but maintain the requirement. Recognize that the Class of 2004 did not have standards-based instruction for their whole schooling and phase in the passing score until you reach the desired cut point in several years, but do not pull the rug out from the whole program. CAHSEE has been motivational to students to pass this requirement. Ratchet up the cut score for awhile rather than drop the requirement.
- Class of 2004 should be held accountable for CAHSEE because the junior class has spent the last two years focusing on this test and thought it was going to count. Students have been taking the test repeatedly, taking summer classes to pass, and finally passing. Teachers have spent extra time and resources to prepare them for the test. Delaying would send a message to other classes that the requirement will be removed at the last minute. Start with the first class that has been putting the time in, the Class of 2004.
- Withholding of diplomas should not take place until the students have had a chance to get standards-based instruction from the beginning.
- The Class of 2004 is not prepared. Need to wait 5 to 10 years.

Eighteen math teachers provided responses about whether or not there should be a high school exit exam. Of those 18 teachers, 16 were in favor of having some form of high school exit exam, while two were opposed to any kind of high school exit exam.

- We need a test, but not the test we have. The test should have two components—one that does not use calculators and one that does. For the section that measures higher-order math, the students should be allowed to use calculators.
- An exit exam is fine because students need to know something before they leave.
- Think students should be held accountable for their education and the exit exam is a good way to do that.
- Think the diploma should stand for something. Would like to see more than a single test score used though.
- I do not think anyone ever should have to pass the test to get a diploma.

Middle-Grade Feeder Schools

English-Language Arts. We received responses from this question from 21 ELA teachers at 11 middle-grade feeder schools. There were no teachers who had a response concerning the coverage of standards for the Class of 2004.

Nine ELA teachers at five middle-grade feeder schools provided a response concerning holding the Class of 2004 accountable for passing the CAHSEE to receive a diploma. Of those nine ELA teachers, four said that the Class of 2004 should have to pass the CAHSEE in order to receive a diploma. Five teachers thought the requirement of passing the CAHSEE to get a diploma should be at least delayed.

- Class of 2004 should be held responsible for CAHSEE. The students should be responsible. Teachers are taking CAHSEE seriously, but some students have no intention of graduating from high school.
- More time should be given until the requirement is implemented to allow for teachers to adjust to teaching to standards. Class of 2004 is not ready, would be better for 2006 or 2008.
- For the 65 kids I had, yes. But, I had the top kids from my track. For the others, I do not think they should. Because, until they left here, they were not held accountable. We had a no-fail policy here. If these students got 12 fails in 6th grade, they still moved on to 7th grade. The only thing they do not get to do is go through graduation. Our students do not believe us when we tell them. I personally think it should be the first class that they hold accountable in kindergarten.
- Think the 2004 requirement should be waived at this point. It should be delayed until standards-based instruction has been offered from beginning—so, maybe 10 to 12 years.

Seven ELA teachers responded about whether there should be a high school exit exam. Of those seven teachers, five were in favor of having some form of high school exit exam, and two were opposed to any kind of high school exit exam.

- It is grossly unfair to require the exit exam for lower SES. It is punishing to EL groups. Homework should be eliminated, and it would improve students' morale—they have so many things to do at home.
- I like the idea of an exit exam because I like students being held accountable for their learning. There is little motivation when students get to high school. They recognize that they must pass CAHSEE to get a diploma.

Mathematics. We received responses to this question from 24 math teachers at 11 middle-grade feeder schools. There were seven teachers who had a response concerning the coverage of standards for the Class of 2004. Of the seven teachers, four responded that the standards were covered for the Class of 2004. There were three teachers who responded that the standards were not covered.

- The Class of 2004 was being exposed to similar standards.
- The Class of 2004, in his class, they were using the standards at that time. In other classes, they were not.
- Teachers have not had time to cover the standards adequately.

Eight math teachers at four middle-grade feeder schools provided responses concerning holding the Class of 2004 accountable for the CAHSEE. Of those teachers, two stated that students in the Class of 2004 should have to pass the CAHSEE before receiving a diploma. Six, on the other hand, thought the requirement of passing the CAHSEE to get a diploma should be at least delayed.

- Students should be held accountable and have an exit exam. Some will fail. But, the state needs to stick to the requirement. If students are coming to learn, then let us show it.
- The Class of 2009 should be the first class accountable. Teachers have not had time to cover the standards adequately.
- Still need more time. You should wait until all of the issues are resolved. When asked how long that would be, the teacher replied, “A long time.”

There were 18 math teachers who provided responses about whether or not there should be a high school exit exam. Of those 18 teachers, 16 favored having some form of high school exit exam, and two were opposed to any kind of high school exit exam.

- An exit exam is a good thing. But students should not be penalized for not passing.
- I am 100 percent for teachers and students being held accountable.
- CAHSEE is an incentive to work harder. I like CAHSEE.
- CAHSEE is not a positive thing for the students. Getting the students to buy into the test is difficult, because many teachers do not even buy into it. It is a waste of time. CAHSEE will be a problem for 50 percent of the students to get a diploma.

The CAHSEE remediation teachers seemed fairly evenly split on the accountability issues. Of the eight teachers who expressed an opinion about the CAHSEE, three were in favor of holding the Class of 2004 accountable, three were opposed, and two expressed opinions somewhere in between. The following are representative of teachers’ comments:

- By junior year, the students here should be able to pass the exam. The standards were taught at this school for the Class of 2004.
- The date should remain firm, because if it changes, then the message is that we aren’t serious.
- Should the Class of 2004 be held accountable on the CAHSEE? I would say no; I do not think we are ready.
- The Class of 2004 is not yet prepared for the exam. The Class of 2004 probably needs more time because this requirement was not expected of them when they began school.
- On the one hand we should hold kids accountable so they won’t lose faith, but there will be more success on the CAHSEE the longer you put it off.

Sixteen of the 50 high school special education teachers stated explicitly that the Class of 2004 was not ready to be held accountable to the CAHSEE requirement. Most recommended that the exam be postponed for at least another year. Some of their responses and reasons are provided below:

- The Class of 2004 should not be held accountable; the Class of 2004 just isn’t ready.
- The Class of 2004 wasn’t prepared from the start of their education.
- The Class of 2004 had not been held to the standards in earlier years; they were socially promoted and now in mid-stream the rules were changed.

- The teachers or students have not had enough years to regroup their strategies and concentrate on what is expected.
- There should be a delay in the CAHSEE requirement for all students; put it off until 2008.
- The lead time wasn't sufficient to prepare the Class of 2004 for the standards on the exam.
- At least 2 more years would help in preparing the students; the state should delay maybe 2 more years because it has just been sprung on us.
- The Class of 2006 has had more time and should be the first class to be responsible for the CAHSEE requirement.
- The students that were in first grade when the standards were implemented are the ones who should be held accountable.

Among SE teachers who thought that the Class of 2004 was ready for accountability, common reasons were that the current juniors had been adequately prepared, or that postponement would result in a loss of credibility, as shown by the following comments:

- The standards were covered for the Class of 2004.
- Don't delay. When you back off, it looks bad. When students don't have to do it [meet the CAHSEE requirement], they won't take it seriously.

For the majority of high school EL teachers, the CAHSEE accountability was not so much a Class of 2004 issue as it was an EL-level issue. Twenty of 40 EL teachers noted that students who had been in the program since their 9th grade year would have a greater chance of passing the CAHSEE. These students would have had the time to advance to the higher EL levels—levels at which they would be more exposed to the California standards prior to taking the CAHSEE. Students who entered the school in higher grade levels, but at lower levels of English language proficiency, would not have as much time to prepare for the CAHSEE. Below are a few comments that address this issue:

- For EL 9th and 10th graders, they likely can pass if they start here as freshman—about 80 percent could pass. Of EL students at levels 3 and 4 of the ELD program, perhaps 50 percent could pass if they took the exam seriously.
- The intermediate and advanced English Language Development (ELD) students will probably be okay. The beginning Level students will not pass.
- If an EL student comes to this school as a 9th grader, some of these students who progress through EL Level 1 and EL Level 2 and get into EL Levels 3 and 4 may be able to pass.

Not all respondents were positive about any proportion of their students in the Class of 2004 passing the CAHSEE. The following comments illustrate how some of these respondents feel about EL student success on the CAHSEE and when to hold students accountable:

- None of the current EL juniors would pass the CAHSEE.
- I think the expectations are unrealistic [for EL students].

- The Class of 2004 is not ready and will probably not pass, but I think it should be implemented now anyway. The 2005 and 2006 classes will be able to pass the CAHSEE.
- I don't know what will happen to EL students if the Class of 2004 is responsible for the CAHSEE. Many will not succeed.

Fourteen special program teachers expressed their opinion regarding holding the Class of 2004 accountable to the CAHSEE. Five said that accountability should be delayed, while nine thought that the 2004 date should be maintained. A few representative comments are provided below:

- The Class of 2008 would be more appropriate for accountability.
- The state needs to allow more time for a cycle of results of class-size reduction.
- The exit exam should perhaps go ahead and keep on schedule with some conditions.
- The state should definitely follow through with the 2004 date.
- The Class of 2004 should be held responsible for the CAHSEE as a graduation requirement.

Summary and Conclusions

Through January 2003, the CAHSEE passing rates continue to be low, particularly for mathematics. Students in the Class of 2004 will have at least one more chance to take the CAHSEE during their junior year and three more chances to take it during their senior year. Unless the rate of improvement increases dramatically, however, a substantial number of students will be denied a diploma at the end of their senior year. Passing rates for English learners and special education students continue to be particularly low. The CAHSEE diploma requirements will have a particularly large impact on these groups.

Passing rates vary considerably by school. Currently a significant number of schools have low or very low cumulative passing rates. This is particularly true in mathematics, for which half the high schools in the state have passing rates below 50 percent. Passing rates were closely related to reports of coverage of the content standards in our survey, adding considerable credibility to the information provided in response to the survey.

A number of reasons why current instruction was not fully effective were given in response to the survey and in the interviews. Student preparation, or lack thereof, was a clear concern for both initial (in middle-grade feeder school) and remedial (in high school) instruction in the content standards. Student motivation was a continuing concern as was student preparation in prerequisite skills. Concerns about student preparation for Algebra, particularly for special education students, were particularly high.

Teacher qualification and experience did not appear to be a significant problem at present, although with significant budget woes in many districts, concerns with hiring and retaining qualified teachers could increase. One area of possible concern is that some mathematics courses, particularly those targeting special education students, are being taught by teachers who do not have appropriate credentials. In general, however, those who teach

courses targeting English learners and special education students have considerable experience with these populations.

Several other reasons for the limited effectiveness of instruction in some courses were examined. Low student motivation was commonly cited in both the surveys and the interviews, as was low attendance and lack of parental support. It is thus difficult to tell whether the limited effectiveness of standards-based instruction in some schools should be taken as an indicator of inadequate instruction when a significant part of the problem might be that students do not take full advantage of instructional opportunities offered to them. It is difficult to believe, however, that the CAHSEE requirement will not be a significant factor in increasing student motivation.

CHAPTER 5: CHANGES IN INSTRUCTION FOR THE CLASS OF 2005 AND BEYOND

Introduction

The assessment of standards-based instruction presented in the preceding two chapters is mixed. Schools have greatly increased coverage of the California Content Standards at both the middle/junior high school and high school levels and all high schools surveyed have introduced programs to help students who do not initially pass the CAHSEE. The success of these programs for students in the Class of 2004 has been limited, in part because many students do not yet have prerequisite skills and in part because students fail to take full advantage of opportunities available to them. The State Board of Education will have to weigh these mixed results in deciding whether to continue or defer the requirement that students must pass the CAHSEE to receive a diploma.

A key question for the Board to consider is whether evidence for the effectiveness of standards-based instruction will be better in the coming years. In this chapter, we examine the implementation of standards-based instruction for the high school Class of 2005 and later classes. We have used CAHSEE passing rates as key evidence for the effectiveness of instruction for the Class of 2004. Unfortunately, information on passing rates is not yet available for subsequent classes, although preliminary results from the March 2003 administration to the 10th graders who are in this class will be available to the Board before it must make a final decision about deferring the exam.

Increasing Coverage of the Content Standards

Results presented in Tables 3.3 through 3.6 indicate that coverage of the California Content Standards in the middle-grade feeder schools and coverage of the specific standards assessed by the CAHSEE at the high school level has increased steadily over the past four or five years. Further, results presented in Table 4.3 indicate a time lag between the implementation of standards-based instruction and higher passing rates on the CAHSEE. Taken together, these results suggest that passing rates will improve for the Classes of 2005 through 2008 several years after significant increases in coverage of the standards. In mathematics, for example, passing rates increased by about 10 percent for each additional year that high coverage levels had been reached. The earlier “adopters” may have had other advantages, so actual increases from this factor alone are likely to be somewhat less. Yearly gains even half this large would be substantial.

Further evidence for improved prospects for later classes is provided by reports from middle-grade feeder school principals on the proportion of students taking Algebra, or at least pre-algebra courses, prior to entering high school. Table 5.1 shows estimates of the percent of 8th graders taking some Algebra last year, this year, and next year. Over this 3-year period, the percent of students reported to have not taken even a pre-algebra course—teaching prerequisite skills for Algebra—dropped from 14 percent to only 5 percent. At the same time, the proportion of students who took some Algebra increased from 46 percent to 67 percent.

Table 5.1 Percent of 8th Graders Taking Algebra

School Year	High School Class	Percent Whose Highest Level is:			
		None	Pre-Algebra	Algebra A (1 of 2 years)	Algebra 1 (1-year course)
2001–2002	2006	14%	38%	22%	26%
2002–2003	2007	8%	32%	30%	30%
2003–2004 estimated	2008	5%	28%	30%	37%

Note that analyses of the content of the mathematics section of the CAHSEE suggest that students have roughly equal difficulty with questions from each content area, not just with the Algebra questions. In adopting the content standards covered on the CAHSEE, the Board intentionally excluded more advanced Algebra topics. Nonetheless, an Algebra course represents the culmination of the sequence of courses that cover the mathematics content standards on the CAHSEE. Students who have completed Algebra are likely to have had instruction covering all of the mathematics standards while students who have not completed Algebra have not. Earlier analyses of mathematics passing rates for students who have or have not completed Algebra (Wise et al., 2002a, Wise et al. 2002b) indicate a clear and consistent relationship between completing Algebra and passing the CAHSEE mathematics exam.

Standards, Aids, and Accountability

Efforts to encourage implementation of standards-based instruction and to hold both schools and students accountable for achievement outcomes have progressed rapidly over the past several years. The adoption of the CAHSEE by the SBE in October 2000 is just one step in the process that includes both support and accountability measures.

Table 5.2 provides a framework for presenting key timeline information. The basic question is where in the schooling process the Class of 2004 (and subsequent classes) was when key provisions were enacted or put in place. A key example is that the requirement that students take Algebra was enacted when the Class of 2004 was already in the 9th grade. Given that many students first needed to take pre-algebra or other preparatory courses and that Algebra has become a two-year course for many students, it is thus likely that some students in the Class of 2004 would not be able to complete Algebra before the 12th grade.

As shown in Table 5.2, the Class of 2004 was already in the 6th grade when the current California Content Standards for English-Language Arts and Mathematics were adopted. While these students completed five grades before standards for those grades were adopted, it is likely the instruction they did receive covered most of the standards for those grades that were subsequently adopted.

Table 5.2 Timeline of Key Events

Event	Date	Grade in School at Time of Event				
		Class of 2004	Class of 2005	Class of 2006	Class of 2007	Class of 2008
Adoption of State Content Standards	December 1997	6	5	4	3	2
Funds Provided for Adoption of Aligned Textbooks	1998–99	7	6	5	4	3
Identification of Textbooks Aligned to State Content Standards	1999	8	7	6	5	4
Adoption of ELA and Math Frameworks	1999	8	7	6	5	4
Adoption of CAHSEE Blueprints	December 2000	9	8	7	6	5
Adoption of Standards-Aligned Instructional Materials for Math	January 2001	9	8	7	6	5
Enactment of Requirement to Take Algebra	2001	9	8	7	6	5
Adoption of Standards-Aligned Instructional Materials for ELA	January 2002	10	9	8	7	6
Inclusion of CAHSEE Results in Academic Performance Index (API)	Fall 2002	11	10	9	8	7
Web Posting of ELA and Math Teacher Guides	September 2002	11	10	9	8	7
Enactment of Testing Accommodation Regulations	July 2001	11	10	9	8	7
Release of CAHSEE Remediation Guide	December 2002	11	10	9	8	7
Release of CAHSEE Student Guides	Pending	11	10	9	8	7

As indicated in the timeline, the Class of 2006 will have several advantages over the Class of 2004. These include:

- Adoption of aligned textbooks occurred by the time they were in 7th grade, so they were more likely to receive standards-based instruction at the grades targeted by content standards covered on the CAHSEE.
- They were also in the 7th grade when the requirement to take Algebra was enacted, so they had more time to take prerequisite courses before reaching high school.
- High schools were being held accountable for CAHSEE passing rates when these students were in the 9th grade.
- Teacher and Remediation Guides were completed when they were in the 9th grade (compared to 11th grade for the Class of 2004).
- They will have the new Student Study Guides before having to take the CAHSEE in the 10th grade.

Students in the Class of 2008 will have a number of additional advantages, including:

- They went through nearly the entire elementary school curriculum after the California Content Standards were adopted.
- Aligned ELA and mathematics textbooks were identified and, in most districts, adopted for use before these students reached 7th grade.
- High schools will have two years of accountability results that include CAHSEE passing rates before students in the Class of 2008 enter high school.

How Much Improvement is Needed?

While there are no clear standards for minimally acceptable passing rates, rates approaching 90 percent for most students would be a reasonable target for individual schools. This goal might translate into a rate of nearly 95 percent for the state as a whole. In June 2003, the State Board of Education will have an opportunity to consider initial results for the Class of 2005. An important question is how to use that information to estimate what the passing rates could be by the time students in this class reach their senior year.

Figures 5.1 and 5.2 show how cumulative CAHSEE ELA and mathematics passing rates for the Class of 2004 have increased across successive administrations. Another point can be added to each line when results are available for 11th graders who tested in March 2003. There is still considerable white space on the right side of these figures, to be filled in over seven or eight more administrations for the Class of 2004. Without a very significant change, it is unlikely that the passing rate for mathematics (Figure 5.2) will reach 80 percent. Reaching higher levels will require either: (a) initial passing rates by the end of 10th grade that are about 15 points higher than the rate for the Class of 2004 at that point or (b) steeper slopes resulting from more effective remediation for subsequent classes.

Another way of tracking likely progress for subsequent classes is to continue to track changes in factors that have been found to be related to passing rates. For example, how

many students in subsequent classes have completed Algebra by the end of the 9th or 10th grade? How much further will coverage of the content standards increase at both the high school and middle-grade feeder school levels? In addition, will the level and effectiveness of professional development activities related to teaching the content standards increase?

Overall, rather large changes may be needed, and it is unlikely that changes of this magnitude will be realized in a single year. In fact, current budget problems could lead to cutbacks in key programs leading to a decrease rather than an increase in the passing rates.

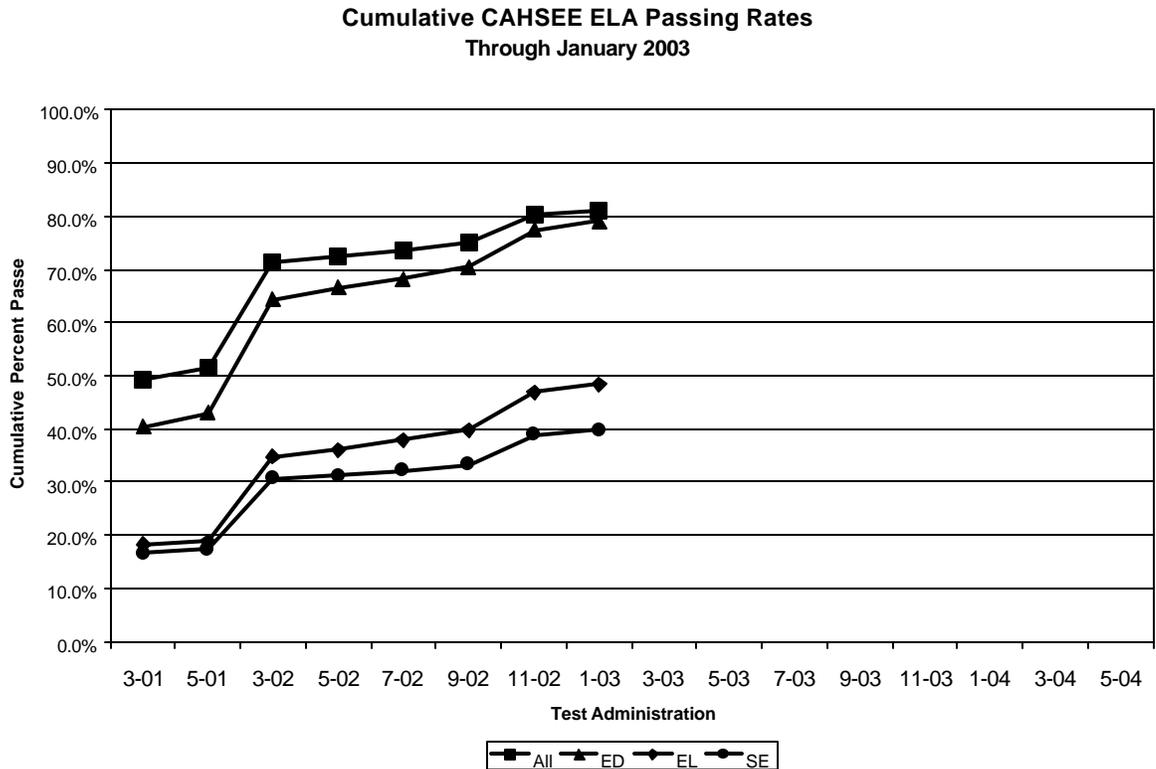


Figure 5.1 Cumulative CAHSEE ELA Passing Rates For All Students (All), Economically Disadvantaged Students (ED), English Learners (EL), and Special Education Students (SE)

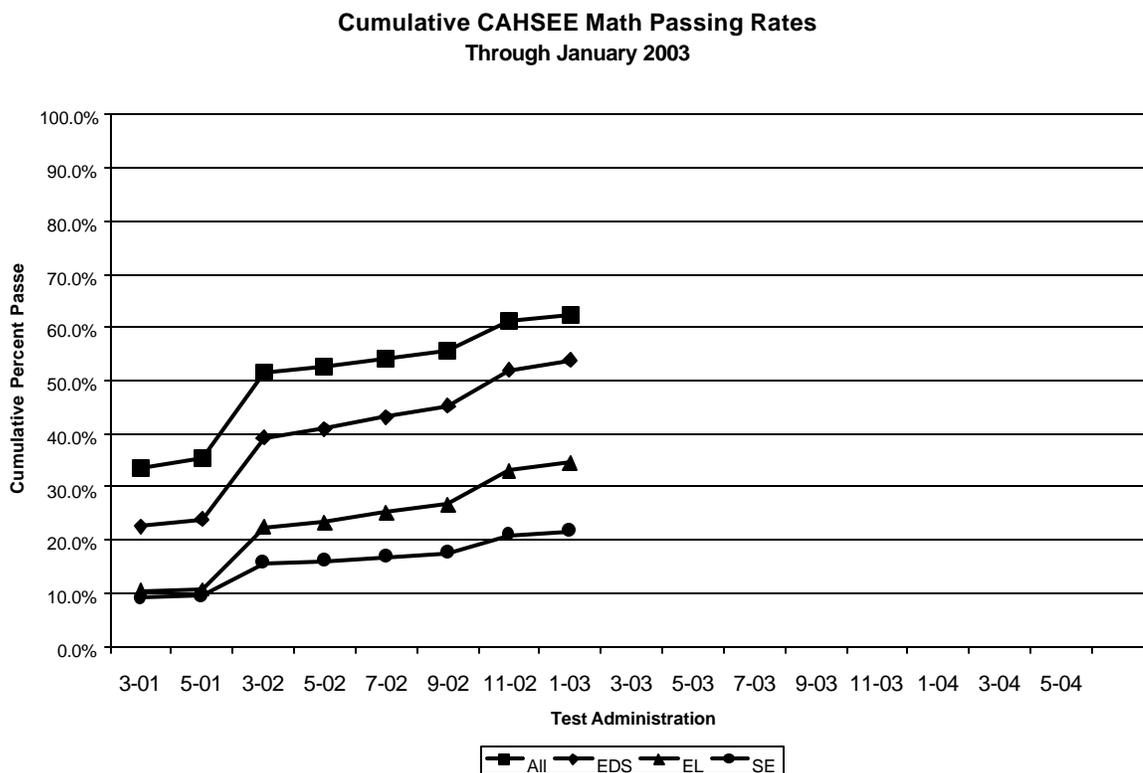


Figure 5.2 Cumulative CAHSEE Mathematics Passing Rates For All Students (All), Economically Disadvantaged Students (ED), English Learners (EL), and Special Education Students (SE)

Summary

There are a number of indications that instruction has improved (and will continue to do so) for students entering high school after the Class of 2004.

- The proportion of students having taken Algebra, or at least pre-algebra, in the middle school is increasing.
- New courses have been added, along with additional professional development for teachers of these courses.
- Textbooks aligned to the standards have been selected and put into use.
- An increased number of remedial courses have been implemented, and teachers have gained more experience in teaching these courses.
- The CAHSEE Study Guide will be available to students in the Class of 2005 after their sophomore year (and to their teachers and parents) and to students in subsequent classes before they take the CAHSEE for the first time as sophomores.

There is no way of knowing with any certainty how much higher the passing rates will be for succeeding classes. Results from the March 2003 administration to the Class of 2005 should be available to the Board in June. These results will provide the first indication of the possible rate of improvement for subsequent classes.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

Introduction

AB 1609 Study Requirements

AB 1609, passed in 2001, required an evaluation of the extent to which the CAHSEE meets standards for development and use for the Class of 2004. The new study reported here examined the test development process and implementation of standards-based instruction as required by AB 1609.

Our review of the test development process was presented in Chapter 2 above. Chapters 3 through 5 of this report describe results and conclusions from the survey of instruction. Information from the survey was supplemented by visits to a smaller sample of schools. Principals and teachers at each site were interviewed to elicit information to confirm and expand on the information obtained through the surveys. Data from the CAHSEE administrations also were used in assessing standards-based instruction. Passing rates were computed for each of the state's 1,843 high schools and used in assessing the effectiveness of standards-based instruction in each high school together with its associated middle and elementary schools.

In this final chapter, we summarize key findings from the study and discuss recommendations for consideration by the State Board of Education as they deliberate whether to continue or defer the CAHSEE requirement.

Main Findings

Test Development

The most widely accepted standards for test development and use were established by joint committees of the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME) and published in *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999). In Chapter 2, we listed all of the standards in this document that are relevant to the CAHSEE. Results from the ongoing evaluation are used to document the extent to which each of the standards is met.

Results of our review of these standards led to the first general finding:

General Finding 1: The development of the CAHSEE meets all of the test standards for use as a graduation requirement.

One particularly important standard is 13.5, which requires that students have adequate opportunity to learn the material covered by tests used to make important decisions about them. As described in the balance of this report, instruction in some schools was not closely aligned to the California Content Standards at the time the Class of 2004 was in grades 7 through 9. However remedial programs, providing additional opportunities to learn

the required material, have been created in nearly all high schools. In the end, the Board and others must decide whether these opportunities are sufficient.

One other Standard, 13.7, requiring that important decisions not be based on a single test score, is also open to some interpretation. Students are allowed multiple opportunities to pass the exam. In addition, the original CAHSEE legislation provides for creation of additional ways that a student might demonstrate mastery of the required skills. Consideration of other ways students might meet the CAHSEE requirement could further strengthen California's case for compliance with this standard.

The focus of the current investigation was on whether the CAHSEE meets standards for use as a high school graduation requirement. There are, of course, other possible or contemplated uses of the CAHSEE score information. These include use of the CAHSEE for school accountability in the state's academic performance index (API), use of the CAHSEE scores together with additional performance level standards to satisfy requirements of the No Child Left Behind legislation, and diagnostic interpretation of subscores and score gains. Further review and documentation would likely be required to verify that these uses of the CAHSEE are in full compliance with the *Standards*. Specific issues with some of these uses are noted in Chapter 2.

Standards-Based Instruction

The Impact of the CAHSEE on Instruction

General Finding 2. The CAHSEE requirement has been a major factor leading to dramatically increased coverage of the California Content Standards at both the high school and middle school level and to development or improvement of courses providing help for students who have difficulty mastering these standards.

Chapter 3 of this report describes the profound impact that the CAHSEE requirement has had on standards-based instruction. At the high school level, coverage of the California Content Standards assessed by the CAHSEE has increased steadily from 1999, when only about 20 percent of the schools reported covering at least three-quarters of the standards, to the current school year, in which more than 80 percent of the schools reported at least 75 percent coverage. Changes to instruction are also indicated by the number of new courses started in the past 3 years, the number of existing courses that have adopted new textbooks in this time period, and the increased alignment of these courses and texts to content standards. Alignment at the middle school has shown similar improvement.

An even more important indication of the impact of the CAHSEE requirement is the number of new remedial or supplemental courses, many specifically targeting students who do not initially pass the CAHSEE. Schools have always worked to help students who did not master important standards the first time around, but the CAHSEE has expanded these efforts very considerably. New programs also include courses designed specifically for English learners and special education students. Principal and teacher interviews suggest that the CAHSEE requirement was a major factor in driving schools to increase alignment and develop programs for students who were not mastering key standards.

Effectiveness of Instruction for the Class of 2004

General Finding 3. Available evidence indicates that many courses of initial instruction and remedial courses have only limited effectiveness in helping students master the required standards.

Chapter 4 of this report presents evidence for the effectiveness of standards-based instruction for the Class of 2004. The general conclusion from these analyses is that instruction throughout the state has not been effective for all students, particularly in mathematics. In half of the state's high schools fewer than 50 percent of the Class of 2004 has passed the mathematics portion of the CAHSEE.

High school passing rates are closely related to the reported coverage of the CAHSEE standards in the high school curriculum. For ELA, 100 percent of schools in the survey where high levels of content coverage were implemented early (just subsequent to passage of the CAHSEE legislation) had passing rates of 75 percent or greater. In comparison, only 59 percent of schools that have not yet implemented high levels of coverage had ELA passing rates this high. For mathematics, the percentage of schools with high passing rates ranged from 100 percent for early implementers down to only 22 percent for schools that have not yet implemented high levels of alignment between curriculum and content standards.

Student Preparation

General Finding 4. Lack of prerequisite skills may prevent many students from receiving the benefits of courses that provide instruction in relevant content standards. Lack of student motivation and lack of strong parental support may play a contributing role in limiting the effectiveness of these courses.

Survey and interview results indicated a major reason that courses were not more effective in helping students master the required standards was inadequate student preparation. Many students participating in both initial and remedial instruction did not have essential prerequisite skills. For supplemental and remedial courses, more than half the teachers reported that most of their students did not yet have prerequisite skills; among teachers of remedial courses targeting special education students, 72 percent gave this response.

A number of other reasons for the limited effectiveness of current instruction were explored in the survey and interviews. Low student attendance and motivation were frequently cited as contributing factors. Students do not always take advantage of remedial activities that are offered, particularly summer programs. Both survey responses and direct evidence for a limited number of courses suggest, however, that only 20 to 30 percent of the students who took these summer courses were able to pass on a subsequent attempt. Many of the interview respondents also stated that the CAHSEE requirement has had some influence on student motivation.

We also investigated the possible impact of teacher qualifications and professional development on the effectiveness of standards-based instruction. There was no clear evidence that teacher qualification was an important factor. Few schools made extensive use of

teachers with emergency credentials and the majority of courses targeting English learners or special education students were taught by teachers who were experienced with these populations. There was some indication that the qualifications of mathematics teachers could be improved. Mathematics teachers had lower rates of participation in professional development targeted to teaching the standards and as many as 25 percent of high school mathematics courses targeting special education students are being taught by teachers without appropriate credentials. In general, however, those who teach courses targeting English learners and special education students have considerable experience with these populations.

Potential Improvements for Subsequent Classes

General Finding 5. Many factors suggest that the effectiveness of standards-based instruction will improve for each succeeding class after the Class of 2004, but the speed with which passing rates will improve is currently unknown.

Recent changes in standards-based instruction offer considerable hope for improved effectiveness for the Class of 2005 and beyond. Coverage of the content standards has increased at both the middle and high school levels. New, aligned textbooks have been introduced to courses at these levels. Teachers are continuing to receive professional development aimed at guiding them in teaching the content standards. The Class of 2004 did not have the advantage of most of these changes when they were in middle school. Efforts to overcome this lack have been of limited effectiveness in many high schools. Students in the Class of 2006 and beyond are receiving considerably more benefit from the adoption of textbooks aligned to the standards and of professional development efforts for teachers.

Potential improvements in the effectiveness of instruction in mathematics are particularly significant. The Algebra requirement was not adopted until students in the Class of 2004 were already in high school. Many students required extensive instruction in prerequisite skills before instruction in Algebra could be effective. Feeder school principals report significant increases in the proportion of students taking some Algebra by the 8th grade. The full scope of the California Content Standards, from elementary through high school, has been implemented for students in more recent classes.

While the potential for improvement in the effectiveness of instruction for subsequent high school classes is great, the rate at which this improvement will lead to increased mastery of the CAHSEE standards is unknown. Current funding issues raise questions as to the extent to which schools will be able to continue to support remedial courses and to provide training and professional development for those who teach these courses. Initial passing rates for the Class of 2005 should be available in June 2003.

Recommendations

The State Board of Education must decide by August 1, 2003 whether to continue to require students in the Class of 2004 to pass the CAHSEE in order to earn a diploma. In reaching a decision on this issue, the Board must weigh competing risks and benefits. A decision to continue the requirement will maintain the momentum for continued

improvements to instruction and signal a commitment to ensuring that all students achieve essential skills. Continuing the requirement will also likely lead to an intensive debate over the adequacy of instructional opportunities and fairness to specific groups within the Class of 2004. Such a debate would take time and resources away from the primary focus on educating students.

The values assigned to potential risks and benefits are matters of public policy, not of science. Therefore, we cannot recommend what the Board's decision should be. Instead, we offer several recommendations, based on findings from the study, for factors to consider in implementing either a decision to continue or a decision to defer the CAHSEE requirement for high school graduation.

Continuing the CAHSEE Requirement

If the requirement is continued, what options might be considered to lessen concerns over fairness stemming from inadequate or unequal opportunities to learn the required standards? Alternatives for increasing the passing rates, providing additional ways of meeting the requirement, and providing alternatives for students who cannot earn a diploma are discussed outlined.

Increasing the Passing Rate

The Board might consider a retroactive lowering of the passing standards for the Class of 2004. For mathematics, the current standard requiring students to answer 55 percent of the questions in the initial test form correctly is already relatively low. It may not be credible to lower this rate very much further.

Another approach might be to reduce the content covered by the CAHSEE, eliminating sections giving current students the most difficulty. This option is also limited, as there are difficult questions for each different content area. In mathematics, for example, it is not just Algebra that gives students difficulty. There are difficult questions in each of the five major content strands. In addition, it would be difficult to change test content retroactively for the Class of 2004.

One other way passing rates might be increased would be to adopt a compensatory approach where achievement above the minimum in one subject could compensate for some deficiency in achievement in the other subject. For example, a total score of 700 could be required rather than requiring students to obtain scores of 350 or higher on each portion of the CAHSEE. The rationale for this approach is that students with exceptional skill in mathematics [English-language arts] might not need as much skill in English-language arts [mathematics] to be successful.

It might be difficult to implement a compensatory approach for the Class of 2004, since many students took the two portions of the exam at different times, and no state-level identification for students exists for linking data. Primary responsibility for determining whether students have passed the CAHSEE would fall to the districts, where retroactive adjustments may be feasible. Table 6.1 shows that the overall passing rate would have increased about 13 percent in the first administration of the CAHSEE (March 2001) where

nearly all students completed both portions. The compensatory approach might more easily be used with subsequent classes that could be required to take both portions in each administration until they passed the entire exam.

Table 6.1 Percent of Students Passing the CAHSEE in March 2003

Student Groups	Percent Passing Under Current Rules*:			Percent with Total > 700
	ELA	Mathematics	Both	
All Students	66%	46%	43%	56%
African Americans	52%	25%	23%	37%
Hispanics	50%	26%	23%	36%
Econ. Disadvantaged	48%	27%	23%	35%
English Learners	31%	18%	12%	20%
Special Education	24%	14%	10%	16%

* Based on students who completed both portions.

Additional Ways of Demonstrating Mastery

The Board might also give further consideration to other ways that students could demonstrate mastery of the content standards. Some states (e.g., Indiana, Massachusetts, Ohio) have policies allowing students who pass (or earn high grades in) relevant courses and complete any required remedial courses to petition for a waiver if they do not pass the graduation exam.

Some states also allow additional forms of assessment, such as evaluation of portfolios of student work, for severely handicapped students unable to take the graduation test. A key difficulty with this approach is making sure that the same high standards are applied to passing criteria for these alternative assessments.

Options for Students Who Cannot Earn a Diploma

Finally, concerns about the CAHSEE could be decreased if there were additional options for recognizing the achievement of students who are unable to meet the required standards. School districts could decide to issue alternate certificates of completion to motivate students who might be unable to reach passing levels and to recognize students who demonstrate commendable effort despite failing to master the standards or who are unable to test successfully. The legislature might consider state-wide options for recognizing levels of achievement below that required for a diploma.

Deferring the CAHSEE Requirement

If the CAHSEE requirement is deferred, the biggest concern will be maintaining momentum for improved instruction in the content standards and the motivation of students to take advantage of this instruction. Options that may be considered include:

- Offering a diploma seal or certificate for students who pass the CAHSEE and/or noting satisfaction of the CAHSEE requirements on high school transcripts.

- Allowing or encouraging districts to include the CAHSEE as part of their own graduation requirements. This option might involve releasing one or more forms of the CAHSEE for district use, if testing beyond the 10th grade is not continued.
- Continuing to use the CAHSEE for school accountability in the Academic Performance Index and in meeting requirements under No Child Left Behind legislation.

The Class of 2005 has now taken the CAHSEE as 10th graders. If the requirement is deferred past the Class of 2006, the Board must decide whether to offer the CAHSEE next year at all. The current Academic Performance Index, used for accountability, and the requirements of the No Child Left Behind act dictate continued administration of the CAHSEE to 10th graders.

We also recommend that California continue to allow students who do not pass the exam in the 10th grade to have subsequent opportunities to take it during the 11th and 12th grades. Such an approach would be essential to continued use for school accountability and would maximize options for use by districts in identifying students who have not mastered the required standards and recognizing those who have.

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