

# Chapter 4 Texas Assessment of Knowledge and Skills (TAKS), TAKS (Accommodated), and Linguistically Accommodated Testing (LAT)

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## Overview

### TAKS

In 1999 the 76<sup>th</sup> Texas Legislature enacted Senate Bill 103, mandating implementation of a new statewide testing program. The new testing requirements, subsequently named the Texas Assessment of Knowledge and Skills (TAKS), were implemented in spring 2003. By law, all eligible Texas public school students are assessed with TAKS in mathematics in grades 3–10 and exit level; reading in grades 3–9; writing in grades 4 and 7; English language arts in grades 10 and exit level; science in grades 5, 8, 10, and exit level; and social studies in grades 8, 10, and exit level.

The TAKS test is designed to measure the extent to which a student has learned and is able to apply the defined knowledge and skills at each tested grade level. Every TAKS test is directly aligned to the Texas Essential Knowledge and Skills (TEKS).



## Spanish TAKS

Spanish-version assessments are designed to evaluate the academic skills of English language learners (ELLs), also referred to as limited English proficient (LEP) students, who receive academic instruction in Spanish while they learn English. In 1999 the 76<sup>th</sup> Texas Legislature enacted legislation mandating the inclusion of Spanish-version tests for grades 3–6 in the new state assessment program.

In 2009 the 81<sup>st</sup> Texas Legislature eliminated the grade 6 Spanish version of TAKS, effective in the 2009–2010 school year. The TAKS testing program now includes Spanish versions of the TAKS tests administered at grades 3–5, including grades 3–5 reading, grades 3–5 mathematics, grade 4 writing, and grade 5 science. The English and Spanish versions of TAKS assess the same test objectives and TEKS student expectations.

## TAKS (Accommodated)

TAKS includes a form called TAKS (Accommodated) for students receiving special education services who meet the eligibility requirements for specific accommodations. This is a general assessment based on the same grade-level academic achievement standards as TAKS. The TAKS (Accommodated) form includes format changes (larger font, fewer items per page) and contains no embedded field-test items. TAKS (Accommodated) is available for all English- and Spanish-version TAKS tests, including retest opportunities for Student Success Initiative (SSI) grades and subjects. Retest opportunities for students taking TAKS (Accommodated) exit level assessments are also offered.

## Linguistically Accommodated Testing (LAT)

LAT is an assessment process for eligible immigrant ELLs who are granted a LEP exemption under state law but are required to be assessed in certain grades and subjects under federal law. The LAT process enables eligible immigrant ELLs to be assessed with linguistic accommodations that help them better understand the language used on the tests.

LAT administrations are available for

- grades 3–8 reading and grade 10 English language arts (ELA)
- grades 3–8 and 10 mathematics
- grades 5, 8, and 10 science

LAT administrations are available for LEP-exempt ELLs in these grades and subjects, including LEP-exempt ELLs receiving special education services for whom TAKS, including TAKS (Accommodated), and TAKS–Modified (TAKS–M) are appropriate. Spanish-version LAT forms are available in grades 3–5 for TAKS, including TAKS (Accommodated).



State regulations that went into effect in the 2009–2010 school year extended LAT testing provisions to a small number of students determined to be unschooled ELL asylees and refugees who are beyond the LEP exemption or exit level LEP postponement period.

The *Language Proficiency Assessment Committee Decision-Making Process for the Texas Assessment Program Manual* outlines LAT testing provisions. This manual is available at <http://www.tea.state.tx.us/student.assessment/ell>.

The required assessments by grade level for TAKS, TAKS (Accommodated), and LAT are illustrated in Table 3.

**Table 3.** 2009–2010 TAKS Assessments

2009–2010 TAKS Assessments	
Grade	Test Administration
Grade 3 (English and Spanish)	Mathematics and Reading
Grade 4 (English and Spanish)	Writing, Mathematics, and Reading
Grade 5 (English and Spanish)	Mathematics, Reading, and Science
Grade 6	Mathematics and Reading
Grade 7	Writing, Mathematics, and Reading
Grade 8	Mathematics, Reading, Science, and Social Studies
Grade 9	Mathematics and Reading
Grade 3–8 and 10	LAT Mathematics and Reading/English Language Arts
Grade 5, 8, and 10	LAT Science
Grade 10	English Language Arts, Mathematics, Science, and Social Studies
Exit Level	English Language Arts, Mathematics, Science, and Social Studies

## Testing Requirements for Graduation

The exit level assessments are a major component of the TAKS testing program. To be eligible to receive a diploma from a Texas public high school, a student is required to pass a total of four subject-area tests: English language arts, mathematics, science, and social studies.

The law further specifies that certain content must be assessed on the exit level tests.

- The English language arts test must include English III and writing.
- The mathematics test must include Algebra I and geometry.
- The science test must include biology and integrated physics and chemistry.
- The social studies test must include early American and U.S. history.



The exit level tests assess a student's level of academic preparation for graduation from high school as well as his or her readiness to enroll in an institution of higher education. To address these requirements, the Texas Higher Education Coordinating Board (THECB) established a Higher Education Readiness Standard for exit level TAKS English language arts and mathematics in spring 2004.

## Test Development

Maintaining a student assessment system of the highest quality involves completing a set of tasks that must be executed during the test development process. The procedures described in [chapter 2](#) outline the test development process for the TAKS program. The Texas Education Agency (TEA) relies heavily on input from educators and assessment specialists to ensure an equitable and accurate measure of learning for Texas public school students.

Detailed information regarding each step of the test development process is in [chapter 2](#).

## Item Development Approach for Spanish TAKS

The Spanish versions of TAKS include items that originate in Spanish and transadapted items—that is, items translated from English and adapted as necessary to ensure cultural and linguistic accessibility.

- Items and passages for writing assessments originate in Spanish due to differences in English and Spanish grammar, mechanics, and usage.
- The approach for reading assessments has gradually shifted from transadaptation to passages and items that originate in Spanish.
- Mathematics and science items are transadapted.

Pearson and Tri-Lin work with TEA staff and Texas educators to develop the test materials. Bilingual educators review all transadapted and independently developed test items before and after field testing in accordance with the educator review process used for TAKS tests as described in [chapter 2](#).

## Spanish-English TAKS Alignment

Alignment of the English and Spanish TAKS tests is reinforced by the following:

- The development and review processes for the English and Spanish tests are parallel, in that
  - item reviews for English and Spanish include judgments related to each item's alignment to the TEKS content standards, and
  - field-test data reviews for English and Spanish items include technical training so that committees choose only psychometrically sound items to be added to the item banks.



- Item writing and review processes for transadapted items are implemented to ensure linguistic and cultural appropriateness in each language and the same interpretations of grade-level performance expectations.
- The blueprints for the English and Spanish tests are the same, including the number of items assessing each objective and the number of items on the tests as a whole.
- In selecting items for the English and Spanish tests, the test constructors collaborate and adhere to the same test-construction guidelines for the range of item content and cognitive complexity.
- TEA and contractor staff responsible for Spanish TAKS development participate in annual item-review meetings held for new English test items. The involvement of staff from both the English and Spanish TAKS development teams in discussions about how best to assess the TEKS maintains the strong alignment between the English and Spanish tests.
- Parallel English and Spanish test specifications are published in information booklets written for each grade and subject.

Additionally, when the standards for TAKS were established in 2002, standard-setting panels reviewed both the English and Spanish transadapted tests with the goal of establishing comparable achievement standards.

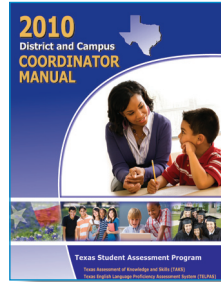
## Training

Test administration procedures must be followed exactly so that all individuals eligible for testing have an equal opportunity to demonstrate their academic achievement. To meet this goal, TEA develops and provides instruction to train all testing personnel across the state on test administration procedures. Each year preparation for test administration begins with a training session for testing coordinators and other personnel from each of the 20 regional education service centers (ESCs) as well as district testing coordinators from some of the state's largest districts. Using information and materials provided in the TEA training session, the ESC regional testing coordinators train the district coordinators in their respective regions. District coordinators train campus testing coordinators, who are responsible for training any personnel participating in the assessment program.

For each test administration in the 2009–2010 school year, ESC personnel and district coordinators were provided a district testing coordinator packet containing the information and materials necessary for overseeing test administrations, including coordinator and test administrator manuals that provided an overview of the statewide testing program. Separate packets and manuals were provided for TAKS, including TAKS (Accommodated), TAKS–M, and Texas English Language Proficiency Assessment System (TELPAS).



## District and Campus Coordinator Manual



The *2010 District and Campus Coordinator Manual* explains the responsibilities of district and campus testing coordinators for the TAKS, including TAKS (Accommodated), TAKS–M, and TELPAS testing programs. This manual encompasses preparation and administration procedures for each program for the 2010 calendar year. Separate test administrator manuals and field-test administrator manuals are distributed to districts prior to the first administration for each grade.

## Test Administrations

### Overview

During the 2009–2010 school year, the English-version TAKS, including TAKS (Accommodated), was administered to approximately 2,996,000 students; the Spanish-version TAKS, including TAKS (Accommodated), to approximately 68,000 students; and TAKS -Modified (TAKS–M) to approximately 150,000 students.

Districts administered the TAKS, including TAKS (Accommodated), tests to eligible examinees as indicated below.

### FALL 2009

October: ELA, mathematics, science, and social studies retests at exit level (online and paper)

### SPRING/SUMMER 2010

March/April: Writing at grades 4 and 7 (English) and grade 4 (Spanish version)

Reading at grades 5, 8, and 9 (English) and grade 5 (Spanish version)

ELA at grade 10 and exit level

ELA, mathematics, science, and social studies retests at exit level (online and paper)

April/May: Mathematics at grades 3–10 and exit level (English) and grades 3–5 (Spanish version)

Mathematics at grades 3–8 and 10 (LAT) and grades 3–5 (LAT Spanish)

Reading at grades 3, 4, 6, and 7 (English)

Reading at grades 3–8 (LAT) and grades 3–5 (LAT Spanish)

Reading retests at grades 5 and 8 (English) and grade 5 (Spanish version)

ELA at grade 10 (LAT)

Science at grades 5, 8, 10 and exit level and grade 5 (Spanish version)

Science at grades 5, 8, and 10 (LAT) and grade 5 (LAT Spanish)

Social studies at grades 8, 10, and exit level



ELA, mathematics, science, and social studies retests at exit level (online and paper)

Mathematics retests at grades 5 and 8 (English) and grade 5 (Spanish version)

June/July: Reading retests at grades 5 and 8 (English) and grade 5 (Spanish version)

Mathematics retests at grades 5 and 8 (English) and grade 5 (Spanish version)

ELA, mathematics, science, and social studies retests at exit level (online and paper)

## Make-up Testing

### BACKGROUND

In 2003 TEA received numerous requests from district superintendents to institute make-up testing. Participation requirements for making adequate yearly progress (AYP) under the federal No Child Left Behind Act (NCLB) are stringent at 95%. These requirements are particularly challenging to meet at the high school level, but middle and elementary schools are also affected. Although other changes, such as a refinement of the definition for participation rate that takes into account small numbers, did in part address superintendents' concerns, there was still a strong desire for make-up testing.

### SPRING 2010 MAKE-UP TESTING

For the 2009–2010 school year, make-up tests were allowed for the TAKS, including TAKS (Accommodated), subject-area tests and grade levels that were included in the calculation of AYP. Major features of the 2010 make-up test policy include the following:

- The tests involved were those included in the AYP calculation: reading at grades 3–8, ELA at grade 10, and mathematics at grades 3–8 and grade 10. Spanish-version tests were also included.
- A separate test form for the grade 10 ELA make-up test was administered on an assigned day (March 5, 2010).
- The regular testing schedule was maintained, with districts allowed to give make-up tests during the remainder of the week, including Saturday, only to those students who were absent on the regularly scheduled test administration day.
- No make-up tests were allowed for the writing, science, and social studies tests, or for any subject-area test at grade 9 and exit level.

## Out-of-District Testing

For the summer TAKS assessments (grades 5 and 8 reading and mathematics, and all subjects at exit level), students who are unable to retest at their home district's designated test site may test out of district. Enrolled out-of-district students are required to complete the out-of-district registration form, and exit level students must also present picture identification. For example, a student from Houston who spends



the summer in Dallas and who wants to test in Dallas is required to register to test out-of-district. Out-of-district testing also applies to students who are part of the Texas Tech or University of Texas high school programs.

A campus or district must accommodate the request of an out-of-district student to participate in the third administration of an SSI test (reading and mathematics in grades 5 and 8 in 2009–2010) if that campus or district is testing one or more local students on the applicable test and if the student has registered in advance for out-of-district testing.

## **Out-of-School Testing**

Individuals who have completed all graduation requirements but have not passed all four exit level TAKS tests (or, if applicable, the TAKS tests required of students for whom TAAS was the graduation requirement) and who are no longer enrolled in a district may retake the appropriate test(s) each time they are administered. Districts are required to publicize the designated dates, the precise location(s) and times of testing, and the actions that out-of-school individuals interested in retesting must take to ensure access to the testing areas and to testing materials.

A district may select out-of-school testing site(s) within the district or collaborate with an ESC or neighboring district to test out-of-school examinees at an alternate testing site. Districts are provided with registration packets so that individuals who are no longer enrolled in school may register for the exit level test. Out-of-school examinees may register online or by mail. Registered individuals receive an admission letter informing them of the date, time, and location of testing. Districts may accept walk-in examinees, as long as the examinee can provide proper identification. Test results are mailed to the individual and to the district from which the examinee is eligible to receive a diploma.

## **Testing Accommodations**

### **Overview**

Accommodations are practices and procedures that provide equitable access to grade-level curriculum during instruction and assessment. This includes general education students with special needs, ELLs who are eligible for linguistic accommodations, as well as students with disabilities who receive special education services. Accommodations do not reduce learning expectations. Therefore, their use should not replace the teaching of subject-specific knowledge and skills as outlined in the state curriculum for each grade. Certain accommodations may be more useful or appropriate than others depending on the subject assessed, age of the student, and degree of the student's special needs. Not all accommodations appropriate for instructional use may be appropriate for use on a standardized assessment.





Accommodations are provided on an individual basis and take into consideration the needs of each student. It is neither appropriate nor effective to provide “one size fits all” accommodations to students. For example, one student with a visual impairment might use large-print instructional materials while another would benefit from a magnification device. In most cases, accommodations are unique to a student and should not be provided to an entire group of students, such as those in the same class or disability category.

## Accommodations Categories

Accommodations are categorized in four ways: presentation (P), response (R), setting (S), and timing and scheduling (T). Linguistic accommodations specific to the second language learning needs of ELLs are addressed in the next section.

- Presentation accommodations allow students to access information in alternate formats other than regular print. These alternate modes of access may include auditory, multi-sensory, tactile, and visual modes.
- Response accommodations allow students to complete activities, assignments, and assessments using methods other than paper-and-pencil or machine-scorable responses. Response accommodations may also include allowing students to solve or organize problems using some type of supplemental aid.
- Setting accommodations change the location in which a test or assignment is given or the conditions of the assessment setting.
- Timing and scheduling accommodations increase the standard length of time to complete an assignment or assessment or possibly change the way the time is organized.

## Linguistic Accommodations

LAT was instituted to meet NCLB requirements for including exempted recent immigrant LEP students in federally required assessments and AYP accountability measures. LAT administrations were implemented in spring 2005 for mathematics, spring 2007 for reading/English language arts, and spring 2008 for science.

The federal ELL assessment requirements differ slightly for mathematics and science versus reading/ELA. All LEP-exempt recent immigrants are required to participate in LAT administrations of mathematics and science in AYP grades. For reading/ELA, however, first-year LEP-exempt immigrants take just the reading component of TELPAS. All other LEP-exempt recent immigrants must take LAT reading/ELA assessments in AYP grades.

The linguistic accommodations used in the LAT process are categorized according to whether they provide indirect or direct linguistic support. Indirect support accommodations are built into the test administration procedures for all LAT students. The indirect support accommodations for LAT administrations of mathematics, science,



and reading/ELA tests include clarification of test directions and breaks at the request of the student. In addition, students participating in LAT reading/ELA administrations are assessed over two days.

Allowable accommodations providing direct linguistic support for LAT mathematics and science assessments include linguistic simplification, reading assistance, bilingual dictionaries, bilingual glossaries, oral translation, and use of Spanish-version and English-version tests side by side. Secure LAT linguistic simplification guides are provided to test administrators for use with the linguistic simplification accommodation for TAKS, including TAKS (Accommodated). These guides provide suggested linguistic simplifications and delineate which subject-area terms may not be simplified. The accommodations made during LAT administrations must not include explanations, definitions, pictures, gestures, or examples related to mathematical or scientific terminology, concepts, or skills assessed because such assistance would invalidate the test results.

Allowable accommodations providing direct linguistic support for LAT reading/ELA include bilingual dictionaries, English dictionaries, reading aloud a word or phrase, reading aloud the entire test item, oral translation of a word or phrase, and clarification of a word or phrase. During LAT reading/ELA administrations students must not be provided any direct or indirect assistance or reinforcement that identifies or aids in the identification of the correct response to a test item.

Decisions concerning accommodations that provide direct linguistic support must be made and documented by the language proficiency assessment committee (LPAC). In the case of an ELL receiving special education services, decisions are made by the student's admission, review, and dismissal (ARD) committee in conjunction with the LPAC. The decisions must be based on the individual needs of the student and whether the accommodation is used routinely in instruction and testing.

In addition to linguistic accommodations, students taking LAT administrations may be eligible to receive accommodations related to a disability or other special need.

More information about LAT accommodations is available in the [Grades 3–8 and 10 Linguistically Accommodated Testing \(LAT\) Test Administrator Manual](#). More information about exemption eligibility criteria is available in the [LPAC Decision-Making Process for the Texas Assessment Program](#) manual.



## Dyslexia Accommodations—TAKS Reading

In spring 2004 a series of studies was conducted to evaluate the effectiveness of a group of accommodations on the TAKS reading tests for elementary students who had been identified with dyslexia. This study focused on the following three accommodations that might benefit dyslexic students on the TAKS reading tests:

- orally reading all proper nouns associated with each passage before students began individual reading,
- orally reading all questions and answer choices to students, and
- extending the testing time over a two-day period.

These three accommodations were “bundled,” meaning they were provided together. The purpose of the study was not to determine which accommodation was most effective. Instead, the study was designed to determine whether the bundled accommodations allowed students who have been identified with dyslexia or who have difficulty reading words in isolation to demonstrate their best reading performance without invalidating the test as an accurate measure of reading comprehension. The three bundled accommodations were first available in spring 2006 for eligible students in grades 3, 4, and 5. These accommodations were used to administer both English- and Spanish-version TAKS reading tests, including all three SSI tests at grades 3 and 5.

In spring 2006 an additional study was conducted to evaluate the effectiveness of the bundled accommodations on the reading/ELA TAKS tests for older students with dyslexia. Study results supported extending the bundled accommodations (including the administration over two days) to students in middle school who show clear evidence of decoding problems. Study results were not clear and indicated that more research is needed on accommodations for high school students. Refer to Appendix 7 in the [2005–2006 Technical Digest](#) for more information about the study.

Beginning in spring 2007, the three bundled accommodations were available for eligible students in grades 6, 7, and 8, as well as students in grades 3, 4, and 5.

## Oral Administration

Oral administration is an accommodation in which test questions and answer choices for mathematics, science, and/or social studies tests may be read aloud or signed to eligible students taking TAKS, including TAKS (Accommodated), or TAKS–M. Additional information regarding oral administration, including eligibility requirements, is in the [2009–2010 Accommodations Manual](#).

## Students with Visual Impairments

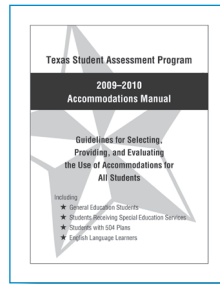
Large-print test booklets are available for all TAKS, including LAT, TAKS (Accommodated), and TAKS–M operational administrations.



Braille test booklets are available for TAKS, TAKS (Accommodated), and TAKS–M operational administrations. Test administrators receive specific instructions for testing visually impaired students with large-print or braille test booklets. Districts are instructed to indicate on the answer document whether a student used a large-print or braille version of a test.

Large-print and braille test booklets are not available for field-test administrations.

## Accommodations Manual



More information about testing accommodations for the Texas assessment program is available in the [\*2009–2010 Accommodations Manual\*](#).

## Educational Materials Required for Testing—TAKS, TAKS (Accommodated), and TAKS–M

### DICTIONARIES AND THESAURUSES

English-language dictionaries and thesauruses must be provided to students for

- the written composition portion of the grade 7 writing test,
- the entire grade 9 reading test, and
- the reading and written composition portion of the grade 10 and 11/exit level ELA tests.

There must be at least one dictionary for every five students; it is also recommended that there be one thesaurus for every five students, if possible. Students may also use a combination dictionary/thesaurus. An English as a second language (ESL) dictionary, which uses simple English and pictures to define words, may be provided for ELLs. A dictionary or thesaurus may not be used on the revising and editing section of either the TAKS grade 7 writing test or the TAKS ELA tests. The grade 7 writing test and the ELA tests contain two sealed sections; the first section contains the written composition portion (TAKS grade 7) or the written composition and reading portion (TAKS grades 10 and exit level), and the second sealed section contains the revising and editing portion. After students complete the first sealed section, the test administrator collects the student's dictionary and thesaurus. The student then may break the seal on the second sealed section and begin the revising and editing portion of the test.



## CALCULATORS

For the mathematics tests at grades 9, 10, and 11/exit level, districts must provide each student with a graphing calculator for the entire administration. Students may use their own calculators instead of those provided by the district. Any kind of graphing calculator may be used except one with a typewriter-style keypad (known as QWERTY) or one that includes a computer algebra system (CAS). All types of memory, including standard memory, RAM, ROM, and flash ROM, must be cleared to factory default both before and after testing. In addition, any programs or applications must be removed or disabled prior to the test administration.

Calculators may also be used on the science tests at grade 10 and 11/exit level. Students must have access to four-function, scientific, or graphing calculators. Again, students may use their own calculators instead of those provided by the district. There must be at least one calculator for every five students. If students share a calculator, the memory must be cleared after each student uses it. The guidelines for kinds of graphing calculators, clearing of memory, and removal of programs and applications for the science tests are the same as those listed for mathematics.

## Online Testing

### THE ONLINE TEST DELIVERY SYSTEM

The online testing described in this section was delivered using Pearson's eMeasurement system. This system provides secure online tools for authoring, delivering, and reporting results of tests; meets the stringent security requirements of the Texas assessment program; and protects the integrity of test items and student data.

The eMeasurement system enables test administrators to control:

- which test will be administered,
- when it will be administered,
- the number of testing sessions, and
- which students will be assigned to each session.

Using eMeasurement's *Test Session Management* screen, a test administrator may monitor each student's current status while the test is in progress.

Further information about the eMeasurement system, including an overview of the system, information on delivery and reporting, and a list of frequently asked questions, is available on [Pearson's Texas State Assessments website](#).



## TAKS Exit Level

In addition to paper administrations, in 2009–2010 the TAKS exit level retests were offered online as live administrations in English language arts, mathematics, social studies, and science. Participation in the online administrations was voluntary and districts could register at the district, campus, student, and subject levels. Table 4 gives information about the scope of the live online TAKS administrations.

**Table 4.** 2009–2010 TAKS Online Test Administrations

2009–2010 TAKS Online Test Administrations					
Grade	Subjects	Test Date(s)	Districts	Campuses	Tests Delivered
Exit Level	English Language Arts	October 20, 2009	100	154	3,062
Exit Level	Mathematics	October 21, 2009	107	163	6,054
Exit Level	Science	October 22, 2009	109	164	5,162
Exit Level	Social Studies	October 23, 2009	99	151	2,494
Exit Level	English Language Arts	March 3, 2010	73	109	1,149
Exit Level	Mathematics	March 4, 2010	83	122	2,945
Exit Level	Science	March 5, 2010	79	118	2,490
Exit Level	Social Studies	March 1, 2010	70	104	1,033
Exit Level	English Language Arts	April 27, 2010	53	75	585
Exit Level	Mathematics	April 28, 2010	63	92	1,797
Exit Level	Science	April 29, 2010	67	99	1,466
Exit Level	Social Studies	April 30, 2010	46	62	334
Exit Level	English Language Arts	July 13, 2010	82	142	2,437
Exit Level	Mathematics	July 14, 2010	83	142	4,327
Exit Level	Science	July 15, 2010	107	137	3,448
Exit Level	Social Studies	July 16, 2010	68	119	1,128

For each live TAKS administration, the online and paper versions of the tests included identical items. Comparability studies had been conducted to determine if the paper and online results were comparable and did not advantage or disadvantage students who tested in either mode. Because a decrease in the number of students participating in the TAKS exit level retests online has been observed in recent administrations, addressing comparability with small sample size was discussed with the Texas Technical Advisory Committee (TTAC) at the February 2010 meeting. One of the recommendations from the TTAC was to develop a policy decision rather than continuing to conduct comparability studies following each administration. Based on the recommendation from the TTAC, TEA made a policy decision on a subject-by-subject basis.



Information from past comparability studies were used to inform the decision. For ELA, the cut scores on the raw-to-scale score conversion table for students taking the retest online should be changed such that the online met standard cut is one point easier and the commended cut is one point more difficult than those on the paper raw-to-scale score conversion table. For mathematics, the cut scores should be changed such that both the met standard and commended cuts for online will be one point easier than the corresponding cut for paper. For science and social studies, the paper score conversion tables should be used for students testing online. This decision has been applied to all TAKS exit level online test administrations starting with the April 2010 exit level retest administration.

## Student Success Initiative

The Student Success Initiative (SSI) includes three initiatives that provide a system of academic support to help ensure achievement on grade level in reading and mathematics so every student can succeed in school. The SSI incorporates a grade advancement component adopted by the Texas Legislature in 1999. In the 2009–2010 school year, the law tied promotion to performance on state-mandated assessments in reading and mathematics at grades 5 and 8. The law applies to students who take TAKS, TAKS (Accommodated), and TAKS–M tests in English or Spanish. The law does not apply to ELLs who are exempt on the basis of limited English proficiency and qualify for a LAT administration.

Students must be allowed at least three testing opportunities to pass a test under the SSI grade advancement requirements. Except as follows, a student may advance to the next grade level only by passing these tests. If a student has not passed after three opportunities and a parent submits an appeal, the student may be promoted by unanimous decision of a grade placement committee (GPC), consisting of the principal or the principal's designee, the student's parent or guardian, and the student's teacher for the subject area tested. The GPC may advance a student only if it determines that he or she is likely to perform at grade level by the end of the next year after accelerated instruction.

The academic support provided under the SSI takes many forms. Students who are identified as being at risk of failing an SSI assessment must receive extra instruction prior to the first test administration. Students who do not pass an SSI assessment must be provided additional instruction before each subsequent testing opportunity.

## The Grade Placement Committee

In accordance with TEC, §28.0211, which governs the Student Success Initiative (SSI), the superintendent of each school district and chief administrative officer of each charter school shall establish procedures for convening a GPC for each student who fails to demonstrate proficiency on the second administration of a test required for grade advancement. Decisions by the GPC are made on an individual student basis to ensure the most effective way to support the student's academic achievement on grade level. For more information on SSI, see [chapter 4](#).



**ROLE AND MEMBERSHIP**

The GPC shall be composed of the following members:

- the principal or principal's designee
- the student's parent(s) or guardian(s)
- the student's teacher(s) of the subject of the grade advancement test(s) on which the student has failed to demonstrate proficiency

If a parent, guardian, or designee is unable to attend a meeting, the district may use other methods to ensure parent participation, including individual and conference telephone calls. The district may designate an individual to act on behalf of the student in place of a parent, guardian, or designee if no such person can be located. A surrogate parent named to act on behalf of a student with a disability may be considered a parent.

If the teacher is unavailable, the principal shall designate a certified professional educator who is most familiar with the student in the subject area to serve on the GPC.

The district may accept a parent's or guardian's written designation of another individual to serve on the GPC for all purposes. Parents may also have other individuals present to assist them in the decision-making process. Local policy for involvement of other members should be reviewed. The district may accept a parent's or guardian's written and signed waiver of participation in the GPC and designation of the remaining members of the GPC as the decision-making entity for all purposes.

**STUDENTS RECEIVING SPECIAL EDUCATION SERVICES**

The SSI also applies to students who receive special education services, whether they take TAKS, TAKS (Accommodated), or TAKS–M. The grade advancement requirements differ depending on which assessment the student takes.

For students receiving special education services, the admission, review, and dismissal (ARD) committee serves as the grade placement committee. The ARD committee is responsible for determining grade placement and accelerated instruction. All accelerated instruction must be documented in the student's individualized education program (IEP).

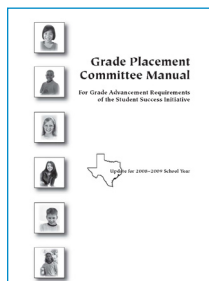
The [\*ARD Committee Decision-Making Process for the Texas Student Assessment Program\*](#) includes sections on SSI requirements.





## ELLs

For an ELL student who has not met SSI requirements, the LPAC should make recommendations to the GPC. These recommendations should be recorded in the minutes of the GPC meeting. If an ELL student also receives special education services, the LPAC should make recommendations to the ARD committee, which serves as the GPC.



More information about SSI requirements for TAKS, including TAKS (Accommodated), is available in the [2009–2010 Grade Placement Committee Manual](#).

## Scores and Reports

The variety of reports available for each assessment instrument in the TAKS program are described in this section.

### Description of Scores

For a detailed description of how test scores are derived, refer to [chapter 2](#).

#### RAW SCORE

The raw score is the number of items answered correctly on a subject-area test (for example, TAKS grade 4 reading). By itself the raw score has limited utility; it can be interpreted only in reference to the total number of items on a subject-area test, and raw scores should not be compared across tests or administrations. The raw score is provided for all English- and Spanish-version TAKS tests, including TAKS (Accommodated).

#### SCALE SCORE

A scale score is a conversion of the raw score onto a “scale” that is common to all test forms for that assessment. Scale scores allow direct comparisons of student performance between specific sets of test questions from different test administrations.

### Report Formats

Two types of reports are provided for the various testing programs: standard and optional. Standard reports are provided automatically to districts. Information contained in standard reports is sufficient to satisfy mandatory reporting requirements. To receive optional reports, which present student performance data in additional



formats and, in some instances, in greater detail, a district must have completed the Optional Reports Order Form and returned it with the scorable materials. Generally districts are required to pay a nominal fee for each optional report requested.

Reports that include “Confidential” in the title contain student-level results. These reports are available for authorized users. All other reports present test results in an aggregated format and are considered public information.

## Standard Reports

Districts received the standard reports described below for TAKS and TAKS (Accommodated) in 2009–2010. For complete information about the types of standard reports available, including sample reports graphics, refer to the [2009–2010 Interpreting Assessment Reports](#).

### CONFIDENTIAL STUDENT REPORT

A separate Confidential Student Report (CSR) is provided for each student for whom a TAKS answer document or online record was submitted. Test results are shown for each subject area tested for that grade. Information from this report is useful when reporting test results to students and parents. Results of a student taking one or more subjects with TAKS, including TAKS (Accommodated), and one or more subjects with TAKS–M is combined onto the same CSR. LAT information is included in these reports.

### CONFIDENTIAL STUDENT REPORT—TEXAS PROJECTION MEASURE

A separate Confidential Student Report—Texas Projection Measure is provided for each student for whom an answer document was submitted for a TPM-eligible test. Results of a student taking one or more subjects with TAKS, including TAKS (Accommodated), and one or more subjects with TAKS–M will be combined onto the same CSR–TPM. Students in grades 3, 5, 6, 8, and 9 taking all subjects in TAKS–M will NOT receive a CSR–TPM. Situations where students will not receive a projection include taking TAKS reading in English and TAKS mathematics in Spanish, not taking all tests needed for a projection, or taking TAKS for one subject and TAKS–Modified (TAKS–M) for another subject.

### CONFIDENTIAL STUDENT LABEL

An adhesive student label is provided for each student for whom a TAKS answer document or online record was submitted. Test results are shown for each subject tested, and these labels should be placed on the individual student’s permanent record. LAT information is included in these labels.

**CONFIDENTIAL LIST OF STUDENTS' RESULTS**

The Confidential List of Students' Results is available for each grade tested at each campus and lists every student for whom a TAKS answer document or online record was submitted. This report provides each student's Met Standard and Commended Performance results for each subject area tested. LAT information is included in these reports.

**CONFIDENTIAL CAMPUS ROSTER (ALL STUDENTS)**

The Confidential Campus Roster (All Students) is available for each grade tested at each campus and lists every student for whom a TAKS answer document or online record was submitted. This report provides detailed student-level results for each subject area tested. Rosters are provided for TAKS English and TAKS Spanish. LAT information is included in these reports.

**CONFIDENTIAL CAMPUS ROSTER (STUDENTS NOT MEETING STANDARD)**

This Confidential Campus Roster (Students Not Meeting Standards) is provided for each grade tested at each campus and for each subject area, and lists every student who did not meet the passing standard in that subject area. Students whose answer documents were marked "ABSENT" or "OTHER" are also included on this roster. Students taking the reading/ELA, mathematics, or science tests with linguistic accommodations who did not meet the passing standard are not included on this roster.

**CUMULATIVE SUMMARY REPORT**

A TAKS Cumulative Summary Report is provided for each district and campus for grades 5 and 8 reading and mathematics following both the second and third administrations of the year. This report is only provided for TAKS. At grade 5, English and Spanish results are reported together.

The reading reports are divided into three or four sections: April Cohort, May Results for Students in April Cohort, June Results for Students in April Cohort, and Cumulative. The mathematics report is organized in a parallel fashion. For convenience, only the reading report is explicitly described here.

The first section of the reading reports, the April Cohort, provides the results for all students tested in April. These results will correspond to the information reported on the TAKS Summary Reports that were sent to districts following the April administration.

The second section, May Results for Students in April Cohort, represents the May results (the second administration) for students who were in the April cohort. The third section, June results for Students in April Cohort, represents the June results (the third administration) for students who were in the April Cohort.

The Cumulative section of the reports combines the results for all students tested in April and students in the April cohort who were tested in May and/or June.



The April results for a student who moves to a different district after the April administration will be included in the cumulative results for the original district and campus. This student will not be included in the district and campus cumulative reports where the student tested in May.

The April results for a student who moves to another campus within the same district prior to the May administration are still included in the cumulative results for the original campus. In the district report, this student is also included in the May Results for Students in April Cohort section.

Students are grouped in each demographic category based on the data submitted on the April answer document. The May results for students in the April cohort are included only if the student identification information on the May answer document matches the information submitted in April.

Students who move to a campus from another Texas public school following the April administration will be subject to the SSI requirements but will not be included in the cumulative pass rate results for that campus.

#### **SUMMARY REPORT**

A Summary Report is provided for each grade tested at each district and campus and contains aggregated information about every student for whom a TAKS answer document was submitted. These reports have two sections: Test Performance, which describes objective-level and summary results for each subject area tested; and Group Performance, which describes summary results of the performance of each demographic group for each subject area tested. The “All Students Not In Special Education” report combines students coded as not in special education and students for whom no information was provided as to special education status. Test results of students taking the make-up form of the grade 10 English language arts test and students taking braille versions of all subject tests are not included in the objective-level data in this report. Results of students taking the reading/ELA, mathematics, or science tests with linguistic accommodations are also not included.

#### **DEMOGRAPHIC PERFORMANCE SUMMARY REPORT**

A Demographic Performance Summary, which contains aggregated information about every student tested, is provided for each TAKS grade and subject area tested at each district and campus. This report describes results of the overall and objective level performance for each demographic or program group. Separate summary reports will be generated for English- and Spanish-version tests. Three standard Demographic Performance Summary reports are available: “All Students,” “All Students Not In Special Education,” and “Special Education Students.” The “All Students Not In Special Education” report combines students coded as not in special education and students for whom no information was provided as to special education status. Test results of students taking the make-up form of the grade 10 English language arts test



and students taking braille versions of all subject tests are not included in the objective-level data in this report. Results of students taking the reading/ELA, mathematics, or science tests with linguistic accommodations are also not included. Results of students taking braille versions (all subjects) are not included in this report.

#### **WRITTEN PERFORMANCE SUMMARY REPORT**

The TAKS Written Performance Summary Report is provided for each district and campus and shows the number and percentages of students receiving each rating for the written composition and the short answer responses. The number of papers in each analytic category is also listed. Written compositions with a rating greater than 1 are not scored analytically. At grade 4, separate summary reports will be generated for English- and Spanish-version tests. Three standard Written Performance Summary Reports are provided: “All Students,” “Special Education Students,” and “All Students Not in Special Education.” The “All Students Not in Special Education” report combines students coded as not in special education and students for whom no information was provided as to special education status. Test results of students taking the make-up form of the grade 10 English language arts test and students taking braille versions of all subject tests are not included in the objective-level data in this report. Results of students taking the grade 10 English language arts test with linguistic accommodations are not included.

#### **TEXAS PROJECTION MEASURE SUMMARY REPORT**

This report provides cumulative results for each TPM-eligible test. This information is provided at the district and campus level.

#### **PRELIMINARY CONFIDENTIAL CAMPUS ROSTER**

These rosters will provide early results for the March and October exit level retests and will show individual student performance data for mathematics, science, and social studies. Two standard Preliminary Confidential Campus Rosters are provided: “All Students,” and “All Students Not Meeting Standard.” Preliminary rosters are accessible online approximately three weeks after the test administration.

### **Optional Reports**

Optional reports are similar to standard reports in that they contain summaries of student performance information; however, the information is presented in different formats and often in greater detail. To receive optional reports, a district must have completed a TAKS Optional Reports Order Form and returned it with the scorable materials. Districts are required to pay a nominal fee for each optional report requested, with the exception of the Electronic Individual Student Record File and the Optional Confidential Student Item Analysis Report, which are free of charge. The reports described below are available to districts as optional reports.



### **ELECTRONIC INDIVIDUAL STUDENT RECORD FILE (CONFIDENTIAL)**

This file contains individual data records for each student for whom an answer document was submitted. The student record includes identification and demographic data as well as subject-area scores. Objective-level data are included.

### **ELECTRONIC DISTRICT AND CAMPUS SUMMARY DATA FILE**

This file contains the data from the TAKS district and campus summaries. Data for each subject area, including objective-level information, are provided. Summary data are provided for all students, all students not in special education, special education students, limited English proficient (LEP) students, and non-LEP students.

### **OPTIONAL SUMMARY REPORTS**

This file is available for each grade tested at each campus or district and contains aggregate information about every student for whom an answer document or online record was submitted. Two optional summary reports are provided: Limited English Proficient Students, and Non-Limited English Proficient Students. Test results of students taking the make-up form of the grade 10 English language arts test and students taking braille versions of all subject tests are not included in the objective-level and written composition results of the reports. Results of students taking the reading/ELA, mathematics, or science tests with linguistic accommodations are also not included.

### **OPTIONAL CONFIDENTIAL CAMPUS ROSTER**

This report contains information about each grade tested at each campus and lists every student for whom an answer document or online record was submitted. This report provides detailed student-level results for each subject area tested. Unlike the standard Confidential Campus Roster—All Students, which includes results for every student for whom an answer document was submitted, the Optional Confidential Campus Roster provides separate reports for various demographic and program groups.

- All Students Not in Special Education
- Special Education Students
- Economically Disadvantaged Students
- Title I, Part A Program Students—Schoolwide Program Participants
- Title I, Part A Program Students—Targeted Assistance Participants
- Title I, Part A Program Students—Homeless Participants at Non-Title I Schools
- Migrant Students
- Limited English Proficient Students



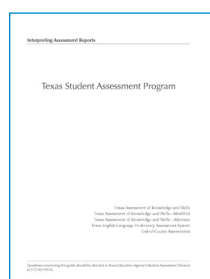
- Non-Limited English Proficient Students, Monitored 1st Year
- Non-Limited English Proficient Students, Monitored 2nd Year
- Bilingual Program Students—Transitional Bilingual/Early Exit
- Bilingual Program Students—Transitional Bilingual/Late Exit
- Bilingual Program Students—Dual Language Immersion/Two-Way
- Bilingual Program Students—Dual Language Immersion/One-Way
- ESL Program Students—Content-Based
- ESL Program Students—Pull-Out–Gifted/Talented Program Students
- At-Risk Students
- Career Tech Students—Elective (grades 7–11)
- Career Tech Students—Coherent Sequence (grades 7–11)
- Career Tech Students—Tech Prep (grades 7–11)
- Students Tested with Linguistic Accommodations in One or More Subjects (grades 3–8, 10)

#### **OPTIONAL ENGLISH AND SPANISH PERFORMANCE SUMMARY**

This report shows the combined results of English and Spanish testers (grades 3–5) by subject. Only the “All Students” category will be provided. This information is provided at the district and campus level.

#### **OPTIONAL CUMULATIVE SUMMARY REPORT**

This report shows the cumulative pass rates following TAKS exit level retest administrations by subject, all tests taken, and all four tests. This information is provided at the district and campus level. The April 2009 Cohort includes all examinees for whom a TAKS, including TAKS (Accommodated), answer document was submitted in April 2009, including examinees tested and examinees who were coded as Absent, LEP-Exempt, or Other. Examinees who have an answer document submitted for the first time in an administration following the April 2009 administration will NOT be included in this report.



For more information refer to the TEA publication *Interpreting Assessment Reports*.





## Parent Brochures

To assist districts with the task of helping parents understand their child's TAKS test results, TEA's Student Assessment Division produces a series of brochures titled *Understanding the Confidential Student Report—A Guide for Parents*. Each grade-level brochure provides a brief summary of the TAKS program, explains a sample CSR so parents can understand their child's test report, and gives a brief summary of each TAKS test objective for each subject area tested. The brochures, developed in both English and Spanish, are provided to districts each spring for distribution with individual student TAKS performance results. A flyer for parents explaining the LAT process is available in English and Spanish on [TEA's Student Assessment Division website](#).

## Standard Setting

Standard setting is the process of relating levels of test performance directly to what students are expected to learn as expressed in the statewide curriculum by establishing cut scores that define performance categories like "Met Standard" and "Commended Performance." Through the standard-setting process, cut scores (or the number of questions a student must answer correctly) are determined to reflect the level of performance a student must demonstrate to match the performance level descriptors for each TAKS test. The performance standards for TAKS were originally set in 2002 and in 2005 for grade 8 science.

When a set of performance standards has been adopted for an assessment, the standards apply as long as they are judged to be appropriate for defining student performance levels on the assessment. It is recommended that performance standards be reviewed when a change occurs in the assessment program. Senate Bill 1031 (section 39.036) required TEA to develop a vertical scale for assessing student progress beginning with the 2008–2009 school year for reading and mathematics at grades 3–8. A vertical scale would allow a direct comparison of student test scores across grade levels within a subject (e.g., reading) for the first time with the TAKS assessment. With this change, a standards review was needed to determine if the performance standards across grade levels still made sense when viewed on a vertical scale.

Once the vertical scale had been developed, in October 2008, TEA convened several panels of educators to evaluate the appropriateness of the performance standards on the vertical scale for reading and mathematics at grades 3–8 and to recommend changes to those performance standards (which had originally been set in 2002). The panels recommended changes to the performance standards for certain grades in reading and mathematics so that the standards



reflected an appropriate increase in expectations for student performance from grade to grade without lowering student performance expectations. The panels' recommended changes to the performance standards went into effect in spring 2010.

The vertical scale score for Met Standard and Commended Performance is a different number for each grade and subject. For both TAKS reading and mathematics, these numbers increase from grade to grade. Tables 5 and 6 list the vertical scale scores on TAKS English reading and mathematics and TAKS Spanish reading and mathematics needed to meet the passing standard and to achieve commended performance for 2010. The scale scores shown in bold type in the following tables indicate where the standards review committees recommended an increase in the performance standards.





**Table 5.** Current Performance Standards for 2010 for  
TAKS English Reading and Mathematics

<b>Current Performance Standards for 2010 TAKS English Reading and Mathematics</b>			
		<b>Standards for 2010</b>	
<b>Grade</b>	<b>Subject</b>	<b>Met Standard</b>	<b>Commended</b>
3	Reading	483	659
4	Reading	554	725
5	Reading	620	763
6	Reading	<b>644</b>	<b>797</b>
7	Reading	670	829
8	Reading	<b>700</b>	<b>850</b>
3	Math	500	640
4	Math	554	698
5	Math	603	<b>738</b>
6	Math	637	<b>783</b>
7	Math	670	823
8	Math	700	<b>850</b>

**Table 6.** Current Performance Standards for 2010 for  
TAKS Spanish Reading and Mathematics

<b>Current Performance Standards for 2010 TAKS Spanish Reading and Mathematics</b>			
		<b>Standards for 2010</b>	
<b>Grade</b>	<b>Subject</b>	<b>Met Standard</b>	<b>Commended</b>
3	Reading	503	657
4	Reading	555	694
5	Reading	623	744
3	Math	<b>503</b>	649
4	Math	<b>555</b>	<b>692</b>
5	Math	627	755



## Scaling

Scaling is the statistical procedure used to make test scores easier to interpret and compare across test administrations by placing raw scores on a common scoring metric. As with many of the other programs in the Texas assessment program, the TAKS assessment program uses the Rasch Partial-Credit Model (RPCM) to place test items on the same scale across administrations for a given TAKS assessment. Once performance standards have been set for an assessment, its initial scale is then transformed to a more user-friendly metric to facilitate interpretation of the test scores. Details of the RPCM scaling method used in Texas are provided in [chapter 3](#).

## Scale Score

Vertical scale scores allow for the direct comparisons of student scores across years. Student increases in vertical scale scores provide information on the year-to-year growth of students. Horizontal scale scores allow direct comparisons of student performance between specific sets of test questions from different test administrations but not across grades.

## Vertical Scale Score

In 2007 the 80th Texas Legislature enacted a law requiring a vertical scale for the TAKS reading and mathematics assessments in grades 3–8. Vertical scale scores were first reported in spring 2009.

The vertical scale for TAKS English and Spanish both have a potential score range from approximately 0 to 1000. The vertical scale score for Met Standard and Commended Performance is a different number for each grade and subject. For both TAKS reading and mathematics, these numbers increase from grade to grade.

The vertical scale scores can be computed through a linear transformation of the underlying Rasch proficiency estimate. The linear transformation is as follows:

$$VS_j = (j + LC_v) * A1 + A2$$

where  $VS_j$  is the vertical scale score for student  $j$ ,  $j$  is the Rasch partial credit model proficiency level estimate for student  $j$ ,  $LC_v$  refers to the vertical scale linking constant, and  $A1$  and  $A2$  refer to the vertical scale transformation constants provided in Tables 7 and 8.



**Table 7.** Vertical Scale Score Transformation Constants  
for the 2010 TAKS English Tests

Vertical Scale Score Transformation Constants for the 2010 TAKS English Tests				
Grade	English	T1	T2	LC <sub>v</sub>
3	Reading	73.92659	597.37462	-2.4015
3	Math	68.40735	666.89084	-3.3488
4	Reading	73.92659	597.37462	-1.3896
4	Math	68.40735	666.89084	-2.5249
5	Reading	73.92659	597.37462	-0.6213
5	Math	68.40735	666.89084	-1.8814
6	Reading	73.92659	597.37462	-0.4384
6	Math	68.40735	666.89084	-1.0841
7	Reading	73.92659	597.37462	0.0052
7	Math	68.40735	666.89084	-0.3490
8	Reading	73.92659	597.37462	0
8	Math	68.40735	666.89084	0

**Table 8.** Vertical Scale Score Transformation Constants  
for the 2010 TAKS Spanish Tests

Vertical Scale Score Transformation Constants for the 2010 TAKS Spanish Tests				
Grade	Spanish	T1	T2	LC <sub>v</sub>
3	Reading	76.28649	608.96702	-2.0994
3	Math	81.67977	568.85605	-1.9624
4	Reading	76.28649	608.96702	-1.2738
4	Math	81.67977	568.85605	-1.3734
5	Reading	76.28649	608.96702	-0.5101
5	Math	81.67977	568.85605	-0.2585

These linear transformations were applied to the resulting Rasch student proficiency (ability) estimates at each total score point, yielding the final [raw score to scale score conversion tables](#). The resulting TAKS vertical scale score system has a range of approximately 0 to 1000.

Additional information about the [vertical scale](#) is available online.



## Horizontal Scale Score

In the 2009–2010 school year, the horizontal scale scores for the subjects other than English TAKS reading and mathematics assessments in grades 3–8 and Spanish TAKS reading and mathematics assessments in grades 3–5 were derived using scale score transformation constants as was done in prior years. The SBOE established the performance standards for most TAKS tests independently at each grade level and test content area in November 2002. Using the procedures described in the technical overview, a unique scale transformation was then developed in each grade and content area so that the resulting set of scale scores would have the panel-recommended Met Standard performance level cut set at a scale score of 2100 and the panel-recommended Commended Performance level cut set at a scale score of 2400. The linear transformation of the underlying Rasch proficiency level estimate is as follows:

$$SS_j = (j \times T1) + T2$$

where  $SS_j$  is the scale score for student  $j$ ,  $j$  is the Rasch partial credit model proficiency level estimate for student  $j$ , and  $T1$  and  $T2$  are scale score transformation constants that establish the scale score system so that a scale score of 2100 is the cut score for the Met Standard performance level, and a scale score of 2400 is the cut score for the Commended Performance level. Values for  $T1$  and  $T2$  are provided in Tables 9 and 10 for English and Spanish TAKS assessments, respectively.

**Table 9.** Horizontal Scale Score Transformation Constants for the 2010 TAKS English Tests

Horizontal Scale Score Transformation Constants for the 2010 TAKS English Tests			
Grade	English	T1	T2
4	Writing	110.88114	1981.33501
5	Science	187.96992	1832.51880
7	Writing	135.59322	2002.82034
8	Social Studies	145.41929	2085.16723
9	Reading	123.21847	1944.27650
9	Mathematics	184.61538	2009.90769
10	ELA	97.06539	1983.74478
10	Mathematics	141.04372	2038.64598
10	Science	160.42781	1996.84492
10	Social Studies	145.20813	2046.85382
11	ELA	113.48162	2017.62369
11	Mathematics	140.58107	2064.71415
11	Science	129.47777	2070.86750
11	Social Studies	126.47555	2093.29680

**Table 10.** Horizontal Scale Score Transformation Constants for the 2010 TAKS Spanish Tests

Horizontal Scale Score Linking Constants for the 2010 TAKS Spanish Tests			
Grade	Spanish	T1	T2
4	Writing	151.04980	1998.90237
5	Science	189.27455	1841.07256

These linear transformations were applied to the resulting Rasch student proficiency (ability) estimates at each total score point, yielding the final [raw score to scale score conversion tables](#). The resulting TAKS horizontal scale score system has a range of approximately 1000–3200.



## TAKS Results for Individual Students

TAKS, including TAKS (Accommodated), scale scores indicate whether a student has met the passing standard or met minimum expectations and how far the student's achievement is above or below the passing standard. All enrolled students failing to meet the standard or minimum expectations on one or more subject-area tests must be offered accelerated instruction. If a student has been administered a TAKS test (grade 5 or 8 reading and mathematics, and exit level) at least twice, both scale scores can be used to gauge the student's relative achievement gains or losses over the year. In this way, parents and students can see whether the student's performance is improving over time.

Appendix B provides [scale distributions and statistics](#) as well as [mean p-values by objective and subject area](#) for TAKS assessments. The mean p-value is calculated by taking the mean raw score and dividing it by the number of items the mean score is based on, then times 100.

Test results can also be used to compare the performance of an individual student with the performance of a demographic group, a program group, or an entire campus or district at a particular grade level. For example, the scores for a Hispanic student in a gifted and talented program could be compared with the average scores of Hispanic students, gifted and talented students, all the students on a campus, or any combination of these aggregations at that grade level. Other scores can provide information about a student's relative strengths or weaknesses in core academic areas. For example, objective-level data can identify areas in which a student may be having difficulty. This identification can help campuses plan the most effective instructional intervention. Finally, individual student test scores may be used in conjunction with other performance indicators to assist in making placement decisions. However, all decisions regarding placement and educational planning for a student should incorporate as much of the student's test performance data as possible.

With a vertical scale, a student's scale score in one grade can be compared to the student's scale score in another grade as long as the scores are in the same language and subject. The changes in the student's vertical scale scores show the academic progress the student has made over time. For example, to meet the passing standard on the English TAKS grade 5 mathematics test, a student's vertical scale score would need to be at least 603. If a student's vertical scale score on this test is E-585, he would not meet the grade 5 passing standard in mathematics. However, if the next year this same student's vertical scale score on the grade 6 mathematics test is E-664, he would meet the passing standard, since the vertical scale score needed to meet the standard in grade 6 is 637. This means that the student made progress greater than typical progress from grade 5 to grade 6 in mathematics, if typical progress is defined as growth from one passing standard cut score to the next across grades. Comparing this student's vertical scale score in mathematics from one year to the next helps his school and parents monitor his progress so that they can provide him with the ongoing instruction and support he needs to be academically successful.



## Groups of Students

Test results can be used to evaluate the performance of a group over time. Average scale scores and the percentage of students meeting the standard/meeting minimum expectations can be analyzed across administrations within the same grade and subject area to give insight into whether student performance is improving across years. For example, the average scale score for students who receive special education services taking the TAKS grade 4 writing test can be compared for spring 2006 and spring 2007 if the same performance standard is used (for example, the panel-recommended standard).

Test scores can be used to compare the performance of different demographic or program groups. TAKS and TAKS (Accommodated) scores can be analyzed within the same subject area of any single administration to determine which demographic or program group had the highest average scale score, the lowest percentage meeting the standard, the highest percentage achieving commended performance, etc. Other scores can be used to help evaluate the academic performances of demographic or program groups in core academic areas. For example, objective-level data can help campuses and districts identify areas of potential academic weakness for a group of students. This same methodology can be applied to an entire campus or district. Test results for groups of students may be used when evaluating instruction or programs requiring average-score or year-to-year comparisons. Because the tests are designed to measure content areas within the required state curriculum, considering test results by subject area and by objective may be helpful when evaluating curriculum and instruction.

Generalizations from test results can be made to the specific content domain represented by the objective or set of objectives being measured on the test. However, because each test measures a finite set of skills with a limited set of items, any generalizations about student achievement derived solely from a particular test should be made cautiously and with full reference to the fact that the conclusions were based only on that test. All instruction and program evaluations should include as much information as possible to provide a more complete picture of performance. In addition, all test scores can be compared with regional and statewide performance within the same subject area for any administration.

## Equating

### Overview

Used in conjunction with the scaling process, equating is the process that “balances” the slight difficulty differences across test forms and administrations to place the scores onto a common scale. By using sophisticated statistical methods, TEA “equates” the results of different tests, enabling the comparison





of scale scores across test forms and testing administrations. In the 2009–2010 school year, Texas conducted equating activities including post-equating, pre-equating, field-test equating, and comparability analyses.

### **Pre-Equating**

The pre-equating process is one in which a newly developed test form is linked, before it is administered, to a set of items that appeared previously on one or more test forms. In this way, the difficulty level of the newly developed form can be determined through this link prior to its administration, and the anticipated raw scores that correspond to scale scores at performance standards can be identified. In general, pre-equating is conducted for retest and LAT forms. Because the retest population and LAT population are not representative of the general population, a pre-equated scoring table is used for newly developed forms for retest administrations and LAT administrations. Refer to technical details and procedures in [chapter 3](#) for a detailed description of the pre-equating process.

### **Post-Equating**

The post-equating phase of the TAKS tests used conventional common-item/non-equivalent groups equating procedures as described in the technical details and procedures in [chapter 3](#). In general, post-equating is conducted for the primary forms.

The samples used for post-equating TAKS English multiple-choice-only assessments were typically in excess of 100,000 students per grade and subject and were representative of the TAKS population. The samples used for post-equating TAKS Spanish assessments included nearly the entire population of test takers each year because, compared to TAKS English versions, these assessments were administered to relatively few students. For tests consisting of short-answer and/or essay items, essentially the entire student population was used in equating tests, such as the ELA and writing assessments.

### **Field-Test Equating**

To replenish the item bank as new tests are created each year, newly developed items must be field-tested and equated to the scale of the original form as discussed in the technical details and procedures in [chapter 3](#). The types of field-test equating for TAKS include both embedded designs and stand-alone designs.

When possible, embedded field-test designs are performed in order to obtain stable student responses because students do not know which items are field-test items and which are live items. In the 2009–2010 school year, field-test equating was conducted for TAKS (English and Spanish) multiple-choice-only assessments through an embedded field-test design.

Stand-alone field testing refers to the field testing of items separately from an operational administration of an assessment. In 2010, a stand-alone field test was conducted for grades 10 and 11 English language arts. An external anchor common



items equating design was used for the stand-alone field tests. The base-test items from the operational test form acted as the external common items because the same students took both the base test and a field-test form.

## Comparability Analyses

When the same test is administered in paper and online modes, studies have been conducted to determine whether the test scores and item statistics for both delivery modes are comparable or whether adjustments are warranted. From October 2009 to July 2010, the TAKS exit level retest administration was given in both online and paper modes. TAKS comparability study analyses were conducted for the October 2009 and March 2010 administrations for which sufficient numbers of students took the retests online. These study analyses focused mainly on whether students taking the test online or on paper could be scored with the same conversion table or whether the scoring should differ for students taking the assessment online or on paper. Based on the comparability analysis results, a separate conversion table was used for the following administrations:

- October 2009: TAKS exit level ELA online retest
- March 2010: TAKS exit level ELA, mathematics, and social studies online retest

Starting with the April 2010 exit level retest administration, a TEA policy decision has been applied to all TAKS exit level online test administrations due to the number of students participating in the TAKS exit level retests online being insufficient for comparability analyses. Information from past comparability studies were used to inform the decision. Details are available in the [“TAKS Exit Level”](#) section in this chapter.

## Reliability

The concept of reliability is based on the idea that repeated administrations of the same test should generate consistent results about student performance. Reliability is a critical technical characteristic of any measurement instrument, because unreliable instruments cannot be interpreted in a valid way. During the 2009–2010 school year, reliability estimates for TAKS assessments were conducted through internal consistency, classical standard error of measurement, conditional standard error of measurement, and classification accuracy.

## Internal Consistency

Internal consistency is a measure of the consistency with which students respond to the items within a test. Refer to [chapter 3](#) for detailed information about internal consistency. For tests involving dichotomously scored (multiple-choice) items, the Kuder-Richardson Formula 20 (KR20) was used to calculate



the reliability estimates; and for tests involving a combination of dichotomous and a polytomous (extended response) items, the stratified coefficient alpha was used to calculate the reliability estimates. As a general rule, reliability coefficients from 0.70 to 0.79 are considered adequate, 0.80 to 0.89 are considered good, and above 0.90 are considered excellent. However, appropriate levels of reliability depend on how an assessment is being used. For the 2009–2010 school year, most internal consistency reliabilities are in the high 0.80s to low 0.90s range, with reliabilities for TAKS assessments ranging from 0.85 to 0.90. Nunnally and Bernstein (1994) have recommended a minimum internal consistency estimate of 0.80 for group-level interpretations and a 0.90 for individual-level score interpretations.

Internal consistency estimates across grades and subjects were found to be of a similarly high level, with no noticeable increases or decreases across subjects or grades. For the different student groups, estimates were found to be similar; for grade 9 mathematics, for example, the reliability for the total group was 0.92, for female only was 0.92, for male only was 0.93, for African American only was 0.91, for Asian only was 0.93, for Hispanic only was 0.91, for Native American only was 0.93, and for white only was 0.92. Since internal consistency estimates typically decrease as the number of test questions decrease, internal consistency estimates at the objective level often ranged from low 0.50s to high 0.80s, indicating that interpretations of student objective-level scores are not as reliable as those from the full assessment. Lower reliabilities may result from very few items such as the mathematics objective “Probability and Statistics,” which generally had four items. In addition, lower reliabilities may occur for objectives with small student groups. Therefore, interpretations of these objective-level scores are encouraged to be made taking the lower reliability into account. [Appendix B](#) presents the internal consistency estimates for all TAKS content areas and objectives.

### **Classical Standard Error of Measurement**

Classical standard error of measurement (SEM) provides a reliability estimate for a test score. The SEM represents the amount of variance in a test score resulting from factors other than achievement. The SEM is helpful for quantifying the margin of uncertainty that occurs on every test. For example, factors such as chance error, differential testing conditions, and imperfect test reliability can cause a student’s observed score (the score achieved on a test) to fluctuate above or below his or her true score (the true proficiency of the student). For the 2009–2010 school year, SEM values were approximately between 2 to 3 raw score points across grades/subjects. [Appendix B](#) provides SEM values for all TAKS subject areas and objectives and for major demographic groups.

### **Conditional Standard Error of Measurement**

It is important to note that the SEM index provides only an estimate of the average test score error for all students regardless of their individual proficiency levels. Individual score-level SEMs are commonly referred to as conditional standard error of measurement (CSEM). Conditional standard error of measurement (CSEM) provides a reliability estimate at each score point on a test. CSEM provides an estimate of the



average test score measurement error conditional on the proficiency estimate or scale score estimate. For the 2009–2010 school year, CSEM values were approximately 20 to 27 scale score points in the middle of most score ranges for the vertical scale scores. CSEM values were approximately 31 to 60 scale score points in the middle of most score ranges from the horizontal scale scores. [Appendix B](#) provides CSEM values for all primary TAKS administrations.

## Classification Accuracy

Classification accuracy provides an estimate of the accuracy of student classifications into performance categories based on current test results. Refer to [chapter 3](#) for detailed information about classification accuracy. The classification accuracy results for TAKS indicated there were similar classification accuracy rates across languages within a subject. Classification accuracy rates for TAKS (2009–2010 school year) range from 77.7 to 93.6%. [Appendix B](#) provides classification accuracy rates for each TAKS grade and subject by language.

Classification accuracy is discussed in detail in [chapter 3](#).

## Validity

Validity refers to the extent to which the test measures what it is intended to measure. Validity in the Texas assessment program is concerned with the general question of whether or not test scores will help educators to make appropriate judgments about student performance. Validity evidence for an assessment can come from a variety of sources including test content, the response process, the internal structure, relationships with other variables, and the consequences of testing. Texas collects validity evidence annually to support the various uses of TAKS scores. Texas follows national standards of best practice to continue to build its body of validity evidence for the TAKS tests. The sections that follow describe how these types of validity evidence were collected for the TAKS assessments in 2009–2010.

### Evidence Based on Test Content

Validity evidence based on test content refers to evidence of the relationship between tested content and the construct the test is intended to measure. The TAKS test scores are designed for making inferences about students' knowledge and understanding of the TEKS. Validity evidence supporting TAKS test content comes from two sources, the established test development process followed in developing the TAKS assessments and documentation of expert judgments about the relationship between parts of the TAKS test and the test construct. The following activities took place during the 2009–2010 school year to contribute additional content validity evidence for the TAKS assessments.



For TAKS, test results are used to make inferences about students' knowledge and understanding of the TEKS. Standards-referenced assessments, such as TAKS, are based on an extensive definition of the content they assess. Test validity is therefore content based and tied directly to the statewide curriculum. To achieve the highest level of content validity, the process of aligning TAKS to the curriculum was carefully approached and included review by numerous committees of Texas educators.

When TAKS was designed as the standards-referenced general assessment to measure the TEKS, advisory committees consisting of educators from school districts across the state were formed for each subject area at each grade level. Teachers, test development specialists, and TEA staff members worked together in these committees to identify the TEKS student expectations that were important to assess and to develop test objectives, item development guidelines, and test-item types. In addition, committees met to review and edit TAKS items for content and bias and to review field-test data.

The item writers as well as reviewers for each stage of development verified the alignment of test items with the objectives to ensure that the items measure appropriate content. The sequential stages of item development and item review provide many opportunities for Texas educators to offer suggestions for improving or eliminating items and to offer insights into the interpretation of the statewide curriculum.

Detailed information regarding the item and test development process is in [chapter 2](#).

## **Evidence Based on Response Processes**

Response processes refer to the cognitive behaviors required to respond to a test item. Texas collects evidence supporting that the way in which students respond to test questions on the TAKS assessments supports the accurate measurement of the construct. Student response processes on the TAKS assessments differ due to item type and administration mode.

### **ITEM TYPES**

Four types of responses are required by students across the TAKS, including multiple-choice questions on all assessments, gridded-response questions on mathematics and science assessments, short constructed-response questions on grade 9 reading and ELA assessments, and essays on ELA and writing assessments. Texas gathers theoretical and empirical evidence supporting that the way in which students respond to these types of questions does not add construct-irrelevant variance. In addition, Texas gathers evidence to show that the response processes do not advantage or disadvantage one or more student groups.

The evidence Texas gathers comes from several sources. When item types were initially considered for inclusion in TAKS assessments, the item types were pilot tested. Once item types are determined to be appropriate for TAKS, evidence about student responses is gathered annually through educator and expert review and analyses of



individual student responses to these items based on field testing. Each year educator review of the item content involves educators' evaluation that the content assessed by the item is appropriately assessed with the planned item type and judgments that students will be able to accurately demonstrate their knowledge of the construct by responding to each item in its planned format. When items are field-tested, data are gathered about students' responses to items and the statistical information, such as item difficulty, item point-biserial correlations, and differential item functioning, are evaluated taking item type into consideration.

#### **ADMINISTRATION MODE**

Students are given the option to take the TAKS exit level retests on paper or online. Evidence is therefore needed to show that the paper and online response processes lead to score interpretations that are comparable. Texas conducts comparability studies on the TAKS exit level retests when sufficient numbers of students take the retests online. In these studies, Texas conducts analyses to evaluate comparability of interpretations at the test level and at the item level. Score adjustments are made when evidence suggests that students' responses on paper and online are not comparable. The adjusted scores account for differences in student responses across administration mode. During the 2009–2010 school year, five comparability studies were conducted for the October 2009 and March 2010 administrations. Refer to the TAKS ["Comparability Analyses"](#) section for more information on the comparability studies conducted in the 2009–2010 school year.

### **Evidence Based on Internal Structure**

Texas collects evidence that shows the relationship among test questions and test objectives to demonstrate that the parts of a test conform to the test construct. Texas conducts annual internal consistency studies to gather evidence based on internal structure. In addition, Texas conducted studies to examine the structural comparability of the English and Spanish versions of TAKS tests. Evidence based on the internal structure of the TAKS gathered in the 2009–2010 school year to support internal consistency and structural comparability is summarized below.

#### **INTERNAL CONSISTENCY RELIABILITY**

The internal consistency of TAKS tests is evaluated each year using KR20 for tests with dichotomously scored test questions (i.e., multiple choice and gridded response items) only. For TAKS tests with a combination of multiple choice and constructed response type questions (e.g., English language arts and reading TAKS), internal consistency is calculated using the stratified coefficient alpha. Internal consistency estimates are evaluated for all students and for reported student groups including female students, male students, African American students, Asian students, Hispanic students, Native American





students, and white students. Estimates are made for the full test as well as for each objective within a content area. As noted in the “[Reliability](#)” section of this chapter, most internal consistency reliabilities for TAKS when all students were included are in the high 0.80s to low 0.90s range (1.0 being perfectly reliable), with reliabilities for TAKS assessments ranging from 0.87 to 0.90. Nunnally and Bernstein (1994) have recommended a minimum internal consistency estimate of 0.80 for group level interpretations and a 0.90 for individual-level score interpretations.

#### **STRUCTURAL COMPARABILITY**

In addition to the test development evidence supporting the content comparability between the English and Spanish versions of the TAKS assessments, validity studies have been conducted to evaluate the structural comparability between the two language versions of TAKS. Pearson conducted the studies to examine the measurement equivalence between the English and Spanish versions of TAKS tests in reading and mathematics in 2007 and grade 5 science in 2008, respectively. The studies provided the evidence of the structural comparability at the objective level between the English and Spanish versions of TAKS tests for reading, mathematics, and science. The results of these studies are within expectations considering the content comparability between the two language versions of TAKS tests.

### **Evidence Based on Relationships to Other Variables**

Another source of validity evidence is the relationship between test performance and performance on some other measure, sometimes called criterion-related validity. By comparing TAKS performance to performance on external measures, evidence can support that the empirical relationships found from the comparisons are consistent with the relationships expected at the level of the construct underlying the proposed test interpretations. Texas conducted various studies in 2009–2010 to investigate student performance on TAKS compared with student performance on external measures.

#### **GRADE CORRELATION STUDY**

Since 2005, Pearson has conducted the grade correlation study annually to compare the pass/fail rates of Texas students on the TAKS tests with their passing credit/not passing credit rates in their past related courses. These studies provided one source of evidence of the test-criterion relationships. During the 2009–2010 school year, the most recent grade correlation study compared the passing rates of students on their 2009 TAKS grade 10 English language arts test with their passing rate for the English II course. Only those students who had both TAKS and course data available were considered for comparison. Results indicated that 82% of students who pass the TAKS test also pass their related courses. Seven percent of students passed the TAKS test but did not pass their related course; 9% of students passed their related course but did not pass the TAKS tests; and 3% of students failed to pass the TAKS test or their related courses. For more details on the study, refer to the “[Grade Correlation Study](#)” report on TEA’s Student Assessment Division website.



## **Evidence Based on Consequences of Testing**

Another method to provide validity evidence is by documenting the intended and unintended consequences of administering an assessment. Validity evidence that shows the TAKS assessment is having a positive impact on student learning and instruction was collected through educator surveys during 2008–2009 school year.

Pearson worked with TEA to develop and implement a plan to formally document the evidence of the intended and unintended consequences (consequential validity) of the TAKS assessment. As part of the plan, educator surveys were developed and administered to Texas educator groups in the 2008–2009 school year. Educators generally agreed that TAKS supports efforts to drive improvement in student achievement in the assessed subjects and grades. The majority of surveyed educators agreed that students who do not pass a TAKS test are provided additional instruction and academic support. Further, the surveyed educators generally agreed that TAKS provides additional information to parents about their child's academic achievement and progress. The majority of educators who participated in the survey stated that teachers gain a more thorough understanding of the assessed TEKS student expectations and agreed that test results can be used as a gauge of district and campus accountability.

Evidence of the consequential validity of the LAT process for eligible ELLs was gathered through a voluntary survey in spring 2010. District testing coordinators, campus testing coordinators, bilingual/ESL coordinators, and teachers were administered the survey. The results of the survey support that the LAT process enables eligible immigrant ELLs to be assessed with linguistics accommodations that help them better understand the language used on the tests.

## **Performance Assessments Used On TAKS and TAKS (Accommodated)**

The TAKS, including TAKS (Accommodated), writing tests at grade 4 (English and Spanish versions) and grade 7, as well as the ELA tests at grade 10 and exit level, include a written composition component. Short-answer questions are included on the grade 9 reading test and the ELA tests at grade 10 and exit level.

Detailed information regarding performance assessments and the processes to score them is available in [chapter 2](#).




**SCORE RELIABILITY AND VALIDITY INFORMATION: TAKS, TAKS (ACCOMMODATED)**

Throughout the years, TEA has reported on the reliability and validity of the performance task scoring process. Reliability has been expressed in terms of reader agreement and correlation between first and second readings. Validity has been assessed via validity packets composed of responses selected and examined by TEA staff.

The following two tables summarize reader agreement rates (reliability) by grade and results of the use of validity packets by grade through the spring 2010 operational administration. Reader agreement rate is expressed in terms of absolute agreement (the first reader's score equals the second reader's score). Validity is expressed in terms of perfect agreement between the score assigned by a given reader and the "true" score assigned by TEA.

**Table 11.** Summary of Scorer Agreement (Reliability) for 2010 TAKS and TAKS (Accommodated)

Grade	Number of Responses Read	Agreement Rate (%) After 2 Readings	Number of Third Readings	Agreement Rate (%) After 3 Readings
4 (English)	326,934	64.0%	117,504	97.7%
4 (Spanish)	23,065	68.0%	7387	98.3%
7	333,102	64.0%	121,001	98.0%
9	1,097,235	76.2%	260,714	99.7%
10 WC*	327,249	66.6%	109,442	98.3%
10 SA*	926,445	73.9%	241,885	98.9%
11WC*	280,997	65.3%	97,350	98.4%
11 SA*	843,042	73.0%	227,500	99.3%

\*SA refers to short answer. WC refers to written composition.

**Table 12.** Summary of Validity Packet Results for 2010 TAKS and TAKS (Accommodated)

Grade	Agreement Rate (%)
4 (English)	76%
4 (Spanish)	81%
7	79%
9	94%
10 WC*	83%
10 SA*	90%
11WC*	77%
11 SA*	91%

\*SA refers to short answer. WC refers to written composition.



Student response scores are based on the score that has been agreed upon independently by at least two of three readers. Only a fourth reader, limited to senior scoring staff, can determine the final score when a response has been given discrepant scores by three independent readers.

## Measures of Student Progress

Student growth and projection measures track a student's performance across time. Growth measures track student performance from grade to grade, whereas projection measures use current student performance to predict future performance. Student progress within the TAKS assessment program is measured using a projection measure known as the Texas Projection Measure (TPM). The TPM was implemented for TAKS, TAKS (Accommodated), and LAT versions of TAKS for the first time in 2009. The TPM was developed to meet House Bill 1, Senate Bill 1031, and House Bill 3 legislative requirements for a measure of annual improvement in student achievement. The TPM uses a multi-level regression-based projection model that estimates whether a student is likely to pass the TAKS assessments at a future grade. This measure is based on 1) the student's current performance on TAKS, 2) the student's previous-year performance in the subject of interest, and 3) the TAKS scores of all the students on the campus that the student attends.

Changes to the TPM introduced in 2010 include:

1. Whenever possible, students had projections based on the past two years of TAKS performance within the projection subject of interest in addition to the off-subject and campus mean predictors.
2. The two-year model was implemented for grades 4–10 in reading/ English language arts and mathematics, but not for writing, science, or social studies.
3. Students who did not have sufficient data for the two-year model received projections based on the single-year TPM.
4. The two year model was used for both English and Spanish TAKS versions whenever feasible, as long as all predictor scores were in one language.

Another modification to the TPM in 2010 involved the development of a “cross-language” model for students who took Spanish TAKS reading and writing (if applicable) and English TAKS mathematics. A cross-language model for grade 5 science could not be reported because there were insufficient numbers of students to develop a reliable equation. The cross-language model always projects to English TAKS versions. For example, grade 4 cross-language reading projected to grade 5 English reading using the following predictors: grade 4 Spanish reading, grade 4 English mathematics, and the grade 4 English campus mean.

The cross-language TPM was implemented for grades 3–5 reading and mathematics, and grade 4 writing.



For a full description of the process used to develop the TPM, refer to [“Procedures for Developing the Texas Projection Measure Equations”](#) on TEA’s Student Assessment website.

For the 2009–2010 school year, the subjects, grades, and language versions for which TPM was reported are shown in Table 13.

**Table 13.** Subjects, Grades, and Language Versions Reported for 2010 TPM

Subject	Projection to Grade	Projection from Grades	Language
Reading/ELA and Mathematics	5	3, 4	English, Spanish
	8	5, 6, 7	English
	11	8, 9, 10	English
Science	8	5	English
	11	8, 10	English
Social Studies	11	8, 10	English
Writing	7	4	English

For more information on the specific TPM equations developed for each subject, grade, and language, requirements for students to obtain TPM projections, and steps to calculate a TPM score, refer to [“Calculating Projections with the Texas Projection Measure”](#) on TEA’s Student Assessment website.

As part of the growth proposal to the United States Department of Education (USDE), TEA agreed to conduct annual evaluations of the projection accuracy of the TPM with respect to all students, student groups, and different subjects. Therefore, after reporting TPM for the first time, Texas evaluated model features so that the implementation of TPM in 2010 was informed by empirical data. Features for evaluation included projection accuracy, use of the model with Spanish and cross-language testers, and inclusion of prior-year scores as predictors.



Pearson evaluated the projection accuracy of the 2009 TPM by comparing the projections with the observed 2010 scores. Results indicated that the projection accuracy was high across grades, subjects, and student groups, as presented in Table 14. TEA will continue to evaluate the projection accuracy for applicable grades in 2011 once performance data are available.

**Table 14.** English TAKS Classification Accuracy for the TPM from 2009 to 2010

Grade/Subject	Group	N	Total Projection Accuracy		Accurate Classifications		Misclassifications*	
			Accurate Projections	Inaccurate Projections	Met Standard	Did Not Meet Standard	Met Standard	Did Not Meet Standard
Grade 4 to Grade 5 Reading	All Students	295293 (100.00)	265204 (89.81)	30089 (10.19)	248494 (84.15)	16710 (5.66)	8166 (2.77)	21923 (7.42)
Grade 4 to Grade 5 Mathematics	All Students	295595 (100.00)	268225 (90.74)	27370 (9.26)	253311 (85.70)	14914 (5.04)	5054 (1.71)	22316 (7.55)
Grade 7 to Grade 8 Reading	All Students	297861 (100.00)	278795 (93.60)	19066 (6.40)	267826 (89.92)	10969 (3.68)	4930 (1.66)	14136 (4.75)
Grade 7 to Grade 8 Mathematics	All Students	297647 (100.00)	261107 (87.72)	36540 (12.28)	231080 (77.64)	30027 (10.09)	12277 (4.12)	24263 (8.15)
Grade 10 to Grade 11 English Language Arts	All Students	246434 (100.00)	235805 (95.69)	10629 (4.31)	232056 (94.17)	3749 (1.52)	1115 (0.45)	9514 (3.86)
Grade 10 to Grade 11 Mathematics	All Students	245023 (100.00)	221511 (90.40)	23512 (9.60)	204855 (83.61)	16656 (6.80)	17392 (7.10)	6120 (2.50)
Grade 10 to Grade 11 Social Studies	All Students	241382 (100.00)	237893 (98.55)	3489 (1.45)	237368 (98.34)	525 (0.22)	530 (0.22)	2959 (1.23)
Grade 10 to Grade 11 Science	All Students	243130 (100.00)	223328 (91.86)	19802 (8.14)	211185 (86.86)	12143 (4.99)	15037 (6.18)	4765 (1.96)

\* Met Standard within the misclassifications column indicates that the student was incorrectly classified by the TPM as Did Not Meet Standard when in fact they did. Did Not Meet Standard within the Misclassifications column indicates that the student was incorrectly classified by the TPM as Met Standard when in fact they did not.

Documents containing information about the TPM are available at the [TPM page](#) on TEA's Student Assessment Division website. These documents include the proposal to the USDE to incorporate TPM projections toward calculations of AYP in 2009 and beyond, information on the development and use of the TPM equations, and documents to address frequently asked questions.



## Sampling

Sampling is a procedure to select a smaller number of observations (in this case, Texas students) that are representative of the entire body of Texas students. The results from well-drawn samples allow TEA to estimate characteristics of the larger population of Texas.

Sampling plays a critical role in the research and annual development activities necessary to support the Texas assessment program. The assessment program affects all students (or the population of students) in Texas. A sample is a group of students smaller than the population that can be used to represent the overall population. Through the careful selection of student samples, TEA is able to gather reliable information about student performance on its tests while minimizing campus and district participation. In particular, sampling is used in the Texas assessment program for: 1) testing that is part of a research study and 2) stand-alone field tests. In the 2009–2010 school year, sampling was conducted for the TAKS assessment program for stand-alone field testing for grade 10 ELA and grade 11 ELA.

### TAKS Field-Test Sampling Process

The TAKS stand-alone field test used a stratified sampling design in which the campus was the sampling unit, but student was the observation unit. Each campus was classified into one of three strata based on its campus size, or estimated student count for the field test. The estimated student counts for each campus were based on the number of students who tested in spring 2009 for grade 10 ELA and grade 11 ELA.

TEA initiated a sampling model in spring 2006 that provided a “relief year” to campuses so that each campus would have a minimum of one in every five years during which it would not be asked to participate in TAKS stand-alone field testing. This “relief year” process implemented originally for TAKS was extended to include the EOC field tests such that campuses that had participated in either the TAKS or EOC stand-alone field testing for the previous four years were exempted from selection in the 2010 TAKS stand-alone field tests. Samples for the stand-alone field tests for EOC were being selected for 2010 field testing at the same time as the TAKS samples. Sampling for TAKS and EOC was coordinated across programs in order to reduce campus testing burden.

In addition to the “relief year” process, the following factors were considered in determining each TAKS field-test sample for 2010:

- The sample was chosen to be representative of the overall population of Texas high school students taking the TAKS tests in terms of ethnic composition and campus size.
- The sample was selected to include a minimum of 280 students per form from each major ethnic and gender subgroup (i.e., African American, Hispanic, white, male, and female groups).
- Each campus in a sample was required to test all students at a particular grade.

- To reduce the district and campus field-testing burden, eligibility criteria were used to eliminate the following campuses from the sample:
  - campuses with fewer than 15 students eligible to participate in a particular test
  - campuses that had been Academically Unacceptable (i.e., failed to meet the state standards) for 3 or more years
  - campuses that had failed to meet Adequate Yearly Progress (AYP) for 5 or more years
  - campuses that are part of the Juvenile Justice Alternative Education Program (JJAEP), Disciplinary Alternative Education Programs (DAEP), or Texas Youth Commission (TYC)

The process for selecting campuses to be included in each TAKS field-test sample was as follows:

1. All eligible campuses were divided into three even-sized strata based on campus enrollment. If a number of campuses of equal enrollment appeared around the threshold between strata, the placement in the upper or lower strata was done randomly.
2. Campuses were sorted randomly within each stratum.
3. One campus was randomly selected from each stratum into the sample in ascending and descending order of strata (e.g., 3-2-1-1-2-3-3-2-1-...). For example, the first campus was chosen from stratum 3, the second campus from stratum 2, the third campus from stratum 1, the fourth campus from stratum 1, the fifth campus from stratum 2, etc. Thus, one campus was selected from one stratum first before moving to the next stratum.
4. The number of students in the sample was evaluated relative to the target total number of students after the campus had been selected. Step 3 was repeated until the target number of students was reached.
5. A “fit index” was calculated for the resulting sample of campuses. This index indicated how well the selected campuses reflected the demographic breakdown of the students in each grade.
6. Steps 1 to 5 (from dividing campuses into three strata to calculating the fit index) were repeated up to 1,000 times. Any sample for which the fit index indicated that the sample was within 3 percent of the target demographic breakdown was reviewed by a psychometrician, who selected a final sample using professional judgment.
7. Once the final sample was determined, it was regenerated using the appropriate random number seed so that additional detailed descriptive statistics for this sample could be generated.



The final sample was determined after evaluating four key elements: fit to statewide ethnic percentages, number of campuses, number of students, and distribution of campus enrollment strata within the sample. Additionally, campuses were not assigned to more than four EOC and TAKS field tests. A summary of the number of campuses and students selected for the 2010 TAKS field tests is provided in Table 15.

**Table 15.** Sampling Summary for 2010 TAKS Stand-Alone Field Tests

<b>TAKS Assessment</b>	<b>Number of Sampled Campuses</b>	<b>Number of Expected Students at the Time of Sampling</b>
Grade 10 ELA	368	71,329
Grade 11 ELA	515	98,976
<b>Total</b>	<b>883</b>	<b>170,305</b>

