

Chapter 8: Test Security

Overview

The Texas Education Agency (TEA) has always placed a high priority on test security and confidentiality in all aspects of the state's assessment program. From the development of test items to the construction of tests, from the distribution and administration of test materials to the delivery of students' score reports, special care is given to help ensure test security and confidentiality. In addition, TEA takes every allegation of cheating very seriously.

TEA has implemented numerous measures to strengthen test security. It has developed and instituted various administrative procedures to train and support test personnel on ensuring test security and confidentiality. The Student Assessment Division developed the *Test Security Supplement* to help guide districts in implementing these requirements and to foster best practices for maintaining a secure testing program. It also has regularly commissioned independent contractors, field experts, and special task forces to review test security procedures and provide recommendations. This chapter summarizes the history of the test security-related activities in the Texas assessment program and describes enhanced security efforts implemented during the 2007–2008 school year as well as planned security initiatives for the future.

History of Test Security-Related Activities

Administrative Procedures

Test security for the Texas Student Assessment Program has historically been supported by an organized set of test administration documents that provide clear and specific information to testing personnel. In addition to the statutes and administrative rules, which are the foundation for test security-related policies and documentation, TEA produces and continually updates the district and campus testing coordinator manuals and grade-specific test administrator manuals containing detailed information about appropriate test administration procedures. The manuals provide guidelines on how to administer the tests, ensure secure testing environments, and properly store test materials. They also instruct testing personnel about how to report to TEA any confirmed or alleged testing irregularities that may have occurred in the classroom, on campus, or within the school district. Finally, all education personnel with access to secure test materials are required to sign a test security oath for each role they fulfilled during testing. The manuals give specific details on the possible penalties for violating test procedures.

Some of the guidelines outlined in the administrative manuals for promoting confidentiality of testing materials include the following:

- All testing personnel must be trained and sign an oath before handling secure test materials.
- No person may view or discuss the contents of test booklets and other secure documents (unless specifically authorized to do so by the procedures outlined in the test administrator materials) until those tests are released to the public.
- Secure test materials may not be duplicated without permission from TEA.
- Districts are not allowed to retain a copy of any student response document without specific authorization from TEA.
- Test booklet subsection seals shall be broken only by persons authorized by the instructions contained in the administration materials.
- No person may review or discuss student responses during or after test administration.
- No person may change any response or instruct a student to do so.
- Seating charts must be completed for each testing session conducted by the district.

According to the test administration manuals, each person participating in the testing programs is directly responsible for reporting immediately to the district coordinator any violation or suspected violation of test security or confidentiality. Also, testing personnel should contact TEA if they are unclear about what constitutes a testing irregularity or whether an irregularity has occurred. A testing irregularity is any incident that results in a deviation from documented testing procedures. Some examples of testing irregularities provided in test administration manuals include the following:

- Eligible students were not tested.
- A test administrator left a room unmonitored while secure materials and examinees were present.
- A test administrator did not ensure that examinees were not communicating with one another during testing.
- Testing personnel viewed a test before, during, or after it was administered without being specifically authorized to do so by the procedures outlined in the test administrator materials.
- Testing personnel scored a student test, discussed secure test content or student responses, made a copy of secure materials, or tampered with student responses.

TEA regularly monitors and tracks testing irregularities and reviews all incidents reported from districts and campuses.

In addition, administrative products and procedures have been developed to ensure test security on the statewide assessments including the following:

- an internal database to allow agency tracking of reported testing irregularities and to report annually on security violations reported to the state
- a secure resolution process that tracks missing secure test materials after each administration, and provides suggested best practices that districts can implement to ensure the proper handling and return of secure materials
- training materials on test security and test administration procedures for posting to TEA's website

Finally, the administration materials state that any person who violates, solicits another to violate, or assists in the violation of test security or confidentiality, and any person who fails to report such a violation may be penalized under [19 TAC §101.65\(e\)](#). An educator involved with a testing irregularity may be faced with

- restrictions on the issuance, renewal, or holding of a Texas teacher certificate, either indefinitely or for a set term;
- issuance of an inscribed or noninscribed reprimand;
- suspension of a teacher certificate for a set term; or
- revocation or cancellation of a Texas teacher certificate without opportunity for reapplication for a set term or permanently.

Any students involved in a violation of test security may be faced with the invalidation of their test results.

Light Marks Analysis

Since the first operational administration of the Texas Assessment of Knowledge and Skills (TAKS) in 2003 and on administrations of previous Texas state assessments, an analysis of light marks has been performed on all test documents administered in the paper format. Pearson currently has scanning capabilities that allow for the detection of sixteen levels of gray in student responses on scorable documents. During scanning these procedures collect the darkest response for each item and the location of the next darkest response. These multiple shaded responses often, but not always, result from an erasure. Under the assumption that such marks potentially result from an erasure, this information is summarized in the Light Marks Analysis Report.

The Light Marks Analysis Report displays any header group whose average wrong-to-right erasures is greater than three standard deviations above the statewide average for each of the subjects within each grade tested. Each header group represents a testing unit. Districts determine the composition of these header groups by how they complete the "Return Batch Header." Assuming the distribution of the mean wrong-to-right erasures for header groups is normally distributed, fewer than 1 percent of the header groups will be flagged.

Information and descriptive statistics for each flagged header group can be found in the report. The information types and what they represent include the following:

- **County-District**— This six-digit number represents the code for the county and the district number.
- **State Summary**—This line provides the average number (and standard deviation) of wrong-to-right erasures made on this test statewide.
- **Campus**—This line provides the three-digit number and name of the campus.
- **Header Group**—This line provides the name of the header group.
- **# of Students**—This line provides the number of students within the header group.
- **All Items**—This line provides the average number of total erasures for the students in the group.
- **Wrong-to-Right**—This line provides the average number (and percentage) of erasures from incorrect to correct answers. This number may be the primary area of interest in the report.
- **Right-to-Wrong**—This line provides the average number of erasures from correct to incorrect answers.
- **Wrong-to-Wrong**—This line provides the average number of erasures from one incorrect answer choice to another incorrect answer choice.

In addition, statewide statistics for the test are reported, including the average erasures of any type, the average and standard deviation of wrong-to-right erasures, and the average right-to-wrong and wrong-to-wrong erasures.

The Light Marks Analysis Report has two parts. The first part of the report presents the results of header groups ranked by average number of wrong-to-right erasures. The second part of the report, known as the district summary report, presents the same results grouped by county/district code.

It should be stressed that these statistical analyses serve only to identify an extreme number of light marks or erasures. These procedures serve as a screening device and provide no insight into the reason for excessive erasures. A student could, for example, have an extremely high number of erasures if he or she began bubbling on the wrong line and had to erase and re-enter the answers. A student could just be particularly indecisive and second-guess his or her answer selections. By themselves, data from light marks analyses cannot provide evidence of inappropriate testing behaviors.

A sample Light Marks Analysis Report for a TAKS grade 3 mathematics test is provided in [Appendix A](#). All identifying information has been removed to preserve confidentiality.

Test Security Analysis

In 2005, TEA hired Caveon, LLC, a test security firm, to conduct a pilot set of statistical analyses on test security using data from the spring 2005 TAKS administration. The purpose of the analyses was to identify anomalous data in the test administration results that might be suggestive of testing irregularities.

Caveon made several recommendations based on their findings. TEA took action based on these recommendations by disseminating the analysis results to districts and campuses and comparing these results with the irregularity reports TEA had received during the spring 2005 TAKS administration.

Task Force on Test Integrity

In 2006, the Commissioner of Education convened a task force on test integrity. The goal of the task force was to examine the actions taken by TEA during the past school year to strengthen test security in the statewide assessment programs and to provide recommendations to the commissioner and TEA. Ten recommendations resulted from the work of the task force as follows:

- Develop, implement, and evaluate transparent statistical procedures for identifying potential instances of test security violations.
- Assemble a panel of educators and public representatives to review and make recommendations regarding test-related practices and statistical procedures.
- Develop criteria for triggering on-site investigation of districts, a standardized protocol used for on-site investigation, and criteria for referring investigations to the Office of the Inspector General.
- Develop standards and procedures to ensure rapid follow-up and resolution of suspected test security violations.
- Enhance, to the extent allowable by law, avenues for confidential reporting of test security incidents directly to the agency.
- Develop and implement a system of random audits of school districts.
- Develop a model policy on test integrity and test security procedures for dissemination and adoption by local districts.
- Require districts to maintain test security materials and signed security oaths for five years following a test administration.
- Ensure that investigations, sanctions, and corrective actions are conducted in a fair, expeditious, and equitable manner.
- Incorporate a measure of test security into the state's school accountability rating system.

The commissioner accepted all ten recommendations by the task force, with modifications made to four of them. The response to the task force and the modifications made to the four recommendations can be found online at http://www.tea.state.tx.us/student_assessment/atoz/Commissioners_response_to_task_force_recommendations_4_04_3_rh_tagged.pdf. Timelines were set for TEA to act on these recommendations in the coming school years.

In June 2007, the Commissioner of Education announced a comprehensive 14-point prevention and detection plan. The plan demonstrates TEA's dedication to protecting the integrity of the testing program and producing sound test results. The plan can be accessed at http://ritter.tea.state.tx.us/student_assessment/admin/security/14point_Recommendations_and_Timelines.pdf.

Enhanced Security Efforts in 2007–2008

In response to concerns over test security and as follow-up on the recommendations from the task force, TEA has taken the following measures to enhance security for 2007–2008:

- requiring school districts to implement seating charts for use during all state assessment administrations
- asking students in grades 9, 10, and exit level examinees to sign an honor statement
- requiring school districts to report any disciplinary action taken locally against an educator for violating proper test administration procedures
- requiring school districts to report any disciplinary action taken against a student for cheating on a state assessment
- requiring school districts to maintain test security materials, signed security oaths, and seating charts for five years following a test administration
- assigning independent test monitors to campuses based on evidence of testing irregularities and making unannounced visits to additional campuses on test days

The following sections will provide a general overview of each of these security enhancement efforts.

Seating Charts

In 2008, TEA implemented a new policy whereby districts must complete a seating chart for each testing session, including sessions that result from students being moved or relocated for any reason (overflow and/or consolidation of students, original testing areas becoming unsuitable, etc.). Districts were allowed to create seating chart templates that best suited their needs; however, the template was required to include

- the location of the testing session, including the district and campus names, the room designation, and a brief description of the testing area;
- the assessment that was being administered at the location;
- the first and last name(s) of the test administrator(s)/monitor(s) conducting the assessment; and
- the first and last name of each student participating in the assessment, indicated on the chart by the location where the student was seated for testing.

Honor Statements

Students in grades 9 and 10 and exit level examinees were asked to sign an honor statement immediately prior to taking TAKS assessments. To assist in the implementation of this new procedure, TEA drafted sample language that districts could adapt and send to parents prior to 2008 testing. Test administrators were not required to verify that examinees had signed the honor statement, and information was included in the test administration manuals regarding how to address students who refused to sign the statement.

Documenting Testing Irregularities and Reporting of Disciplinary Actions

Despite these efforts to improve test security procedures, testing irregularities are inevitable occurrences, given the size and complexity of the assessment program. TEA recognizes this fact and has made efforts to improve the documentation of these irregularities. TEA has noted the importance of having procedures in place to help ensure that all necessary information is gathered to enable student assessment staff to make a determination about what occurred. TEA has continued to streamline its procedures to help simplify the gathering and reporting of testing irregularities. The *Test Security Supplement* contains a large section on reporting testing irregularities.

The *Test Security Supplement* contains a set of checklists to aid testing coordinators in collecting all the details necessary to file a comprehensive incident report. This information, along with that contained in the *2008 District and Campus Coordinator Manual* and the online instructions for the incident reporting process, will allow coordinators to more easily provide TEA all the necessary information to make a determination about reported testing irregularities. As additional reporting requirements, beginning with the spring 2008 administrations, any disciplinary action taken locally against an educator for violating test administration procedures or against a student for cheating on a state assessment, such as invalidation of the student's test or suspension, must be reported to TEA.

Document Retention

In 2008, TEA began requiring districts to maintain testing irregularity and investigation documentation, inventory and shipping records, signed security oaths for all testing

personnel (with the exception of the district testing coordinator and superintendent/chief administrative officer oaths that are mailed to the state's testing contractor), and seating charts for a period of five years following a test administration.

Oath of Test Security and Confidential Integrity

In 2007, TEA developed a more detailed Oath of Test Security and Confidential Integrity to better reflect the changes implemented through the increased focus on test security. The new oath required administrators to recognize their obligation to actively monitor test administrations and to acknowledge their understanding of the obligations regarding test security as well as the consequences for not following proper procedures, among other things. Furthermore, for 2008 testing, all oaths except those of the superintendent/chief administrative officer were updated to more closely follow the order of events that occur before, during, and after an administration.

Active Monitoring of Test Administrations

During the 2006–2007 school year, more than 950 incidents were reported to the Student Assessment Security Task Force involving monitoring irregularities or situations that potentially could have been corrected during testing. To prevent such incidents, TEA continued to reinforce a policy of encouraging active monitoring. Active monitoring requires test administrators to be actively engaged during testing and places a greater emphasis on moving about the room so they can be more aware of students' actions during an assessment. This topic is discussed in other publications (e.g., the *Test Security Supplement*), and separate sections were devoted to this subject in the *2008 District and Campus Coordinator Manual*. Furthermore, TEA used independent test monitors to conduct unannounced visits to districts and campuses throughout the 2008 testing year.

Planned Future Security Enhancements

TEA enacted many important security enhancements for the 2007–2008 school year and continues to implement the recommendations made in the 14-point test security plan to improve security measures for the Texas Student Assessment Program. As part of TEA's continued commitment to the 14-point test security plan, TEA is considering the implementation of the following initiatives:

- Analyze scrambled blocks of test questions to detect answer copying.
- Develop a transparent method to annually identify statistically irregular patterns of test answers that may indicate cheating to augment many other detection methods already in use.
- Contract with a national expert for independent review and advice on statistical cheating detection.
- Require school districts to provide information that links test administrators to students.

- Add lowering a school district's rating to the list of sanctions for cheating.
- Provide additional information in test administration manuals related to consequences for educators and students if cheating occurs.
- Develop a model policy on test integrity and test security procedures for adoption by local school boards. Ensure that state investigations, sanctions, and corrective actions are conducted in a fair, expeditious, and equitable manner.
- Require test administrators to participate in a standardized online training program that addresses mandatory test security procedures.

The full implementation of these activities is intended to occur over the next several years.

