A Report to the

Texas Education Agency

Final Report

Review and Recommendations Related to Test Security

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Final Report

Review and Recommendations Related to Test Security

Executive Summary

As part of its continuing efforts to ensure the validity of scores from the testing programs it administers, the Texas Education Agency (TEA) commissioned a review of various security-related aspects of its testing programs. Four specific tasks comprise the security review: 1) development and analysis of data obtained via a survey of security issues to be collected at the annual Texas Assessment Conference in February 2005; 2) a review of current security procedures in place for agency administered testing programs; 3) an evaluation of the sanctions/penalties that the State of Texas can impose for violations of test security; and 4) a report of findings and recommendations that summarizes the survey data analysis, proposes potential modifications to current security procedures, and evaluates district methodologies for identifying potential test security breaches.

This report is organized into four parts, corresponding to the specific tasks described above. An introductory section provides background on the project. Section One presents a description and summary of results from the administration of the test security survey. Section Two summarizes current security procedures in place at the state and district levels and presents recommendations for possible enhancements. Section Three describes and evaluates current penalties for security violations; recommendations related to sanctions are also presented. Appendices containing various tables, references, and reviewer qualifications appear at the end of this report.

In brief, this review concludes that the TEA is among the leaders in test security procedures for K-12 educational achievement testing programs. However, several comparative weaknesses are also noted. It is recommended that the TEA consider numerous suggestions aimed at enhancing test security including: suggestions focusing on the test development and support materials development stages of testing; suggestions targeting the "in process" window during which tests are administered; and suggestions for additional quality assurance follow-up activities that can occur after student test responses are submitted.

Final Report

Review and Recommendations Related to Test Security

As part of its continuing efforts to ensure the validity of scores from the testing programs it administers, the Texas Education Agency (TEA) commissioned a review of various security-related aspects of its testing programs. Four specific tasks comprise the review: 1) development and analysis of data obtained via a survey of security issues to be collected at the annual Texas Assessment Conference in February 2005; 2) an evaluation of the sanctions/penalties that the State of Texas can impose for violations of test security; 3) a review of current security procedures in place for agency administered testing programs; and 4) a report of findings and recommendations that summarizes the survey data analysis, proposes potential modifications to current security procedures, and evaluates district methodologies for identifying potential test security breaches. This *Final Report* provides a summary of all project activities.

Organization of the Final Report

This report is organized into four parts, corresponding to the specific tasks described previously. In this introductory section, background on the issue of testing integrity is provided; a rationale for the importance of test security is presented; and selected professional guidelines related to protecting the validity of test scores are reproduced. Section One presents a description and summary of results from the administration of the test security survey. Section Two summarizes current security procedures in place at the state and district levels and presents recommendations for possible enhancements. Section Three describes and evaluates current penalties for security violations; recommendations related to sanctions are also presented. Various appendices, including a reference list and reviewer qualifications, appear at the end of this report.

Background

It seems increasingly common that threats to the integrity and validity of testing in K-12 education contexts are being witnessed, particularly as the stakes associated with test performance increase.

Numerous recent research publications and incidents reported in the popular media indicate that inappropriate test behavior (i.e., cheating) by test takers is on the rise (see, e.g., McCabe & Trevino, 1996). For example, a 2004 survey of 24,763 high school students conducted by the Joseph & Edna Josephson Institute of Ethics revealed that 62% of high school students admitted to having cheated on an exam within the past 12 months; 83% admitted copying another student's homework and 35% admitted copying an internet document for a classroom assignment at least once (Josephson Institute, 2004).

At present, however, research and media reports on student cheating appear to be diminishing. In part, this may be due to the fact that bigger (or at least more salient to adults) cheating scandals such as those involving fraudulent corporate earnings reports, unscrupulous investment advisors and others have grabbed the public's attention (see Callahan, 2004). In part, this might also be because copying answers, using crib notes, cutting-and-pasting internet sources to develop a term paper, and the more creative antics of students are so common, so seemingly harmless or amusing, and so expected.

The Emergence of Cheating by Educators

Displacing some of the news stories about and research interest in student cheating is a focus on cheating by educators. Articles in *Education Week* (Hoff, 2000; 2003; Hurst, 2004; Keller, 2001; Manzo, 2005) have documented incidents of educator cheating across the U.S, including, for example, reports that:

* 7 science teachers in a California school district photocopied the *Stanford Achievement Test*, 9th Edition (SAT-9) and taught the content it covered;

* teachers at a Chicago elementary school erased wrong answers on students' test booklets and filled in the correct answers, and filled in answers to questions that students had not attempted;

* 21 teachers and principals in New York state were recently discovered to have reviewed state tests in advance with students, tailored instruction to match specific questions for an upcoming test, improperly scored state tests, distributed answers for test questions, and directed students to change their responses to items during a test administration;

* an analysis by a Dallas newspaper suggested that as many as 400 schools across the state showed improbable test score gains on the Texas Assessment of Knowledge and Skills (TAKS) between 2003 and 2004; a CNN story reported that the administration of the Houston school district planned "to fire six teachers and demote two principals and an assistant principal after finding evidence of cheating on state tests at four schools."

* a report from the state of Nevada indicated that reported incidents of student and teacher cheating on that state's test had increased by over 50 percent from the 2002-2003 to the 2003-04 school year; and

* an investigation of student responses on the Michigan Educational Assessment Program (MEAP) tests suggested that students' written answers to questions on social science, science, and writing tests at 71 Michigan elementary and secondary schools were so similar that they may have been attributable to inappropriate actions on the part of educators.

Research on Prevalence and Predictors of Educator Cheating

Attention by researchers to the problem of educator cheating has also increased. A 2002 study

examined results for Chicago Public Schools on the reading and mathematics sections of the *Iowa Test of Basic Skills* (an accountability measure in that district) for all students in 3rd through 7th grades for the years 1993-2000--yielding an effective sample of approximately 20,000 students per grade per year. The authors derived an index that would be sensitive to unusually large or unsustained score gains and improbable matches in answer strings. The results indicated "over 1,000 separate instances of classroom cheating, representing 4-5 percent of the classrooms [in the district]" (Jacob & Levitt, 2002, p. 42).

Some observers have speculated that the rise in cheating in K-12 is unique to education, and they have attributed the increase in cheating by educators to accountability pressures and external testing mandates such as the *No Child Left Behind Act* (2001). The analysis by Jacob and Levitt concluded that "teacher cheating appears quite responsive to relatively minor changes in incentives" (2002, p. 42) such as those embodied in accountability systems. In the same article that listed the infractions above, the author interviewed some opponents of high-stakes testing who have concluded that:

> "...state accountability rules have increasingly pressured school administrators to prove that their students are learning, often at levels that exceed previous expectations. The main measure has been state- and district-sponsored tests" which have created an "incentive to cheat" (Hoff, 2000, p. 14)

While it is logical to conclude that external accountability pressures certainly have had some unintended negative consequences, those factors alone cannot be entirely culpable for recent increases. Referring to the unique context of licensure and certification testing, Carson (1999) has suggested that the importance associated with test performance assures that controversies (e.g., legal challenges, cheating) are likely to continue. In the context of K-12 education, the problem clearly predates the purported causal factor. The cheating incidents described above predate the passage of the *No Child Left Behind Act* (2001). Three decades ago, long before most state-level or federal accountability mandates were introduced, the problem of educator cheating was already of concern to at least some observers:

"Teachers cheat when they administer standardized tests to students. Not all teachers, not even very many of them; but enough to make cheating a major concern to all of us who use test data for decision making." (Ligon, 1985, p. 1)

Why Cheating Is a Problem

Cheating is a serious problem--and one that should concern all involved in the educational process: students, parents, teachers, administrators, legislators, and policy makers--to the extent that results of cheating introduce negative consequences that affect these groups and society more generally. In addition to a straightforward reason why cheating should be a concern--because it is wrong--there are many other aspects, results, and effects of cheating that are rarely recognized. In addition to the comparatively abstract social consequences of cheating, there are very practical consequences for students, educators, and policy makers.

At a general level, cheating is a broad social concern. Nancy Cole, then-president of Educational Testing Service (ETS) has written about that concern in a *USA Today* article, observing that: "Cheating undermines integrity and fairness at all levels. It leads to weak life performance. It undermines the merit basis of our society. Cheating is an issue that should concern every citizen of this country" (1998, p. A-24). Perhaps the most serious consequence of cheating is the effect it can have on social systems. One intangible but damaging consequence of cheating is the erosion of the respect, trust, sense of community, and even student motivation for learning that can result.

For very practical reasons, cheating is also problematic. A look at a definition of cheating helps illustrate the problems. Cheating can be defined as:

any action that violates the established rules governing the administration of a test or the completion of an assignment; any behavior that gives one person an unfair advantage over others on a test or assignment; or any action that decreases the accuracy of the intended inferences

arising from an examinee's performance on a test or assignment. (adapted from Cizek, 2003, p. 3)

In addition, it is also important to define what is meant by *inferences*, as the notion of inferences is central to modern notions concerning the validity of assessment results (i.e., scores).

According to the professional standards that guide educational and psychological testing, *validity* is the single greatest concern (AERA, APA, NCME, 1999). Validity refers to the accuracy of the inferences that are made based upon test scores. The *inference* is the interpretation, conclusion, or meaning that the test scores are intended to yield; commonly, the intended inferences are about examinees' knowledge, skill, or ability. In nearly all cases, tests are carefully constructed and administered and scored to permit accurate inferences that align with a clearly stated testing purpose.

Unfortunately, in some instances, the inferences one *wants* to make are not always the inferences that *can* be made, and our conclusions about examinees are ambiguous, uncertain, not well supported, or inaccurate.

In only slightly more technical terms, validity is the degree to which the available evidence supports the inferences we wish to make about a test taker based on his or her observed performance. By definition, inferences are based upon a less-than-ideal amount of information, such as in the sample of a student's writing skill obtained via a brief test containing two prompts. In fact, it is a truism about validity that, in all cases, the inferences we can make about examinees' knowledge, skill, or ability are necessarily tentative because we almost never have all of the evidence that would be necessary to proclaim the inference to be a fact. Because it is often too costly or impractical to gather more information, we are forced to accept the fact that inferences *must* be based on samples of behavior. As a result, we are also compelled to admit the necessity of considering the accuracy of our inferences whenever they are based on a (limited) body of available evidence. That is, we must consider validity.

These ideas of validity as accuracy-of-inferences and sufficiency-of-evidence are central to modern

test theory and are the foundation of professionally defensible assessment practice. Any factor that hinders the ability to make accurate inferences from the sample of performance threatens validity and jeopardizes the meaningfulness of conclusions.

In summary: when cheating occurs, inaccurate inferences result. In addition to the obvious consequence of inaccurate information about individual students, cheating also introduces undesirable consequences for schools and schooling systems. It is easy to see how widespread cheating could result in educational administrators or policy makers mistakenly concluding that innovations had been successful in raising student achievement, misclassifying schools or districts for accountability purposes, misinforming the public concerning the relative effectiveness of schools, misappropriating funding to improve achievement, promote equity, or reward accomplishment.

Professional Responsibilities Related to Test Score Validity

In order to safeguard the validity of test score inferences, many state education agencies have developed policies to formalize expectations about test security; to clearly define the types of actions that constitute cheating, and to outline penalties for cheating. [See, for example, Texas Education Code, Chapter 39, Subchapter B, § 39.030 (a)]. Acceptable and unacceptable behaviors are also sometimes codified in states' administrative regulations or statutes. [See, for example, Texas Administrative Code, Title 19, Part 2, Chapter 101, Subchapter C, §101.61, 101.65; 26 TexReg 9088.] A list of specific actions prohibited for Texas test administrations is reproduced in Appendix C. Test publishers usually produce carefully scripted directions for administering their tests and provide clear guidelines regarding behaviors that are permissible and those that are not. [See, for example, *Texas student assessment program: 2005 District and Campus Coordinator Manual* (Texas Education Agency, 2005) and *Texas Assessment of Knowledge and Skills: Test Administrator Manual* (Texas Education Agency, 2004a)].

Assessment specialists, through their professional associations, have also developed professional guidelines to inform test takers and test administrators regarding inappropriate practices. One such source

is the *Code of Fair Testing Practices in Education* (Joint Committee on Testing Practices, 2004). Among its provisions, the *Code* requires that those who develop, administer, score, or use tests should:

* provide clear descriptions of detailed procedures for administering tests in a standardized manner;
* follow established procedures for administering tests in a standardized manner; and
* administer and score tests fairly.

Table 1 reproduces a portion of a document produced by the National Council on Measurement in Education (1995), entitled, the *Code of Professional Responsibilities in Educational Measurement*. That document provides a more detailed listing of the obligations of those who administer or conduct testing programs with respect to test security.

Table 1 - Excerpts from *Code of Professional Responsibilities in Educational Measurement*

Reference	**Responsibility**
4.5	Administer standardized assessments according to prescribed procedures and conditions and notify appropriate persons if any nonstandard or delimiting conditions occur
4.7	Avoid any conditions in the conduct of the assessment that might invalidate the results
4.11	Avoid actions or conditions that would permit or encourage individuals or groups to receive scores that misrepresent their actual levels of attainment
5.2	Ensure the accuracy of the assessment results by conducting reasonable quality control procedures before, during, and after scoring

The most authoritative of the professional guidelines are found in the *Standards for Educational and Psychological Testing* (AERA/APA/NCME, 1999). Table 2 provides a summary of key test-security related provisions of the *Standards.*

Table 2 - Excerpts from the *Standards for Educational and Psychological Testing*

Standard	***Those responsible for testing programs should...***
8.7	inform examinees that it is inappropriate for them to have someone else take the test for them, disclose secure test materials, or engage in any other form of cheating
11.7	protect the security of tests.
13.10	ensure that individuals who administer and score tests are proficient in administration procedures and understand the importance of adhering to directions provided by the test developer.
13.11	ensure that test preparation activities and materials provided to students will not adversely affect the validity of test score inferences.
15.9	maintain the integrity of test results by eliminating practices designed to raise test scores without improving students' real knowledge, skills, or abilities in the area tested.

Conclusions

One overall conclusion of this report is that the TEA has worked to ensure that the spirit of relevant professional guidelines related to test security infuses its assessment programs. One overall recommendation is that the TEA continue to take seriously its responsibility for not only producing tests and assessments of the highest quality, but also ensuring the validity of the results from those measures. In comparison with other states, Texas is unquestionably at the forefront. The TEA has in place many policies and procedures--indeed, to a greater degree than most other states--to ensure that the results of high-stakes assessments can be interpreted with confidence by educators, parents, students, and the citizens of Texas. As will be examined in the following sections of this report, the responsibilities for ensuring the validity of test results extends from the beginning test development efforts to quality control mechanisms instituted during and after operational test administrations.

Section One

Security Issues Survey

In January and early February of 2005, a survey was developed to gather demographic information on key testing personnel in Texas elementary and secondary schools, and to gather perceptions and suggestions from that population regarding test security in K-12 school settings in Texas. A draft of a survey instrument was developed as part of the activities for this project. The final version of the survey was developed with the input of the Texas Education Agency Student Assessment Division and the Pearson Educational Measurement Psychometric Quality Assurance team.

The final version of the survey contained six select-type demographic items, seven select-type items addressing perceptions and procedures related to test security, and six short-response, open-ended items. A copy of the survey appears in Appendix B.

The survey was administered at the annual Texas Assessment Conference held in Austin, Texas on February 8, 2005. A total of 539 surveys were completed.[1] The following section provide various analyses of the survey results.

Descriptive Survey Results

The first portion of the survey collected basic demographic information on respondents. The majority of respondents to the survey were females (87.3%). This percentage is similar to the percentage of educators in the state of Texas who are female (78%). All regions of the state (Education Service Centers) were represented in the sample. However, the sample had substantially higher levels of education than is true of the general educator population, with 88.3% holding a master's or doctoral degree,

[1] Because an accurate number for the total possible respondents cannot be obtained, an accurate percentage response rate cannot be determined.

compared to 23.4% of educators across the state who hold advanced degrees. The sample was also considerably more experienced, with 69.5% of respondents reporting 16 or more years of experience, compared to a state average of approximately 12 years. Regarding primary job setting, the largest percentage of respondents (45.2%) indicated working in a central office position. These latter characteristics of the sample are not surprising, given that those attending the annual Texas Assessment Conference would be more likely to be campus or district administrators or more senior personnel. Table 3 provides a complete summary of the demographic information collected.

Seven select-type items on the survey items addressed Texas educators' perceptions and procedures related to test security. Table 4 provides a summary of responses to these items. Overall, the responses suggest that the respondents overwhelmingly (96.7%) believe the educational personnel in their district are at least somewhat concerned, conscientious, or vigilant about test security; they believe that the educational personnel in their district have at least a good understanding of the fundamentals of test security and penalties for violations (90.8%); they report that educators in their districts who observe a breach of test security would be at least somewhat comfortable in reporting the incident (84.7%); and they believe that such an incident would very likely or almost certainly be reported (77.5%). The most commonly identified person to whom the incident would be reported was the campus or district testing coordinator.

Despite these encouraging percentages, it is also true that 15.3% of respondents indicated that reporting a security breach would be somewhat or very uncomfortable for educators in their districts, and 22.1% indicated at least a moderate degree of doubt that such an incident would be reported. Perhaps more importantly, respondents were nearly equally divided regarding whether someone in their districts regularly reviews test results for possible anomalies (Yes - 56.3%, No or Unsure - 43.7%), and a small minority of respondents indicated that their districts have a formal policy or procedures in place for conducting reviews of test results (Yes - 15.2%, No or Unsure - 84.6%).

Table 3 - Survey Respondents' Demographic Characteristics

Characteristic	Levels	Percent
Sex	Male	12.7
	Female	87.3
Years of school experience	1-5	3.9
	6-10	9.9
	11-15	16.6
	16 +	69.5
Primary job setting	Elementary (pre K-5)	18.3
	Middle School (6-8)	11.6
	High School (9-12)	21.3
	Central Office	45.2
	Other[2]	3.6
Highest Degree	Bachelors	11.2
	Masters	80.6
	Doctorate	7.5
	Other	0.7
Current job role	District testing coordinator	25.4
	Central office administrator	22.4
	Campus testing coordinator	16.6
	Building-level administrator	14.7
	School counselor	14.4
	Regular classroom teacher	4.1
	Special populations teacher	1.5

[2] Includes: ESC, campus support, counselor for district, district support, post-secondary, and district testing coordinator

Characteristic	Levels	Percent
	Other[3]	0.9
Region (ESC)	1 (Edinburgh)	14.2
	2 (Corpus Christi)	4.4
	3 (Victoria)	2.7
	4 (Houston)	14.8
	5 (Beaumont)	1.3
	7 (Kilgore)	8.1
	8 (Mount Pleasant)	1.0
	9 (Wichita Falls)	1.9
	10 (Richardson)	9.2
	11 (Fort Worth)	8.1
	12 (Waco)	3.6
	13 (Austin)	5.1
	14 (Abilene)	1.0
	15 (San Angelo)	1.2
	16 (Amarillo)	3.6
	17 (Lubbock)	5.4
	18 (Midland)	0.2
	19 (El Paso)	1.7
	20 (San Antonio)	8.6

[3] Includes: consultant, curriculum specialist, dean of instruction, campus coordinator, department chair, diagnostician, district data facilitator/coordinator, program evaluation, reading intervention/ manager/ specialist, lead teacher, special education coordinator, teacher facilitator, and testing specialist.

Table 4 - Test Security Perceptions and Procedures

Survey Item Wording	Response	Percent
7. In your opinion, which of the following best describes the **attitude of education personnel in your district toward testing security**?	Very concerned, conscientious, or vigilant	66.4
	Somewhat concerned, conscientious, or vigilant	30.3
	Somewhat unconcerned, lax, or apathetic	3.0
	Very unconcerned, lax, or apathetic	0.2
	Actively or knowingly ignores or rejects testing security	0.2
8. In your opinion, which of the following best describes the degree to which educators in your district **understand their responsibilities for test security and the penalties for security violations**?	Very thorough and detailed	45.6
	Good grasp of the basics	45.2
	Moderate understanding	7.3
	Limited familiarity	1.5
	Very weak understanding or serious misconceptions	0.4
9. Suppose an educator in your district observed or suspected a testing irregularity, anomaly, or test security breach. In general, how **comfortable do you think that person would be in reporting** the concern to the appropriate person?	Very comfortable	44.4
	Somewhat comfortable	40.3
	Somewhat uncomfortable	10.6
	Very uncomfortable	4.7
10. Again, suppose an educator observed or suspected a testing irregularity, anomaly, or test security breach in your district. In general, what would you say is the **likelihood that the concern would be reported**?	Almost certainly WOULD be reported	40.3
	Very likely to be reported	37.2
	Somewhat likely to be reported	14.7
	Somewhat unlikely to be reported	6.3
	Very unlikely to be reported	1.1
	Almost certainly WOULD NOT be reported	0.0
11. If a testing irregularity, anomaly, or test security breach were suspected/reported in your district, **which of the following persons would be responsible** for conducting the initial review?	A teacher	0.9
	A building/campus administrator	31.3
	A district-level administrator	14.1
	A campus or district testing coordinator	51.4

Survey Item Wording	Response	Percent
	Not sure	1.5
	Other[4]	0.8
13. Does someone at your campus or in your district **review your test results** when they arrive for possible anomalies?	Yes	56.3
	No	20.9
	Unsure	22.8
16. If you answered "Yes" to Question 13, **how are the findings reported**?	District	26.7
	Written	19.3
	Verbally	15.0
	Associate/assistant/superintendent	13.3
	Unknown	12.5
	Campus administration/coordinator	9.2
	Principal	4.2
17. If you answered "Yes" to Question 13, **to whom are the findings reported**?	Associate/assistant/superintendent	41.0
	District	15.8
	TEA	13.7
	Campus administration/coordinator	12.2
	Principal	7.2
	Test Coordinator	5.0
	Unknown	5.0
18. Does your district have a **formal policy or procedures for reviewing results** of statewide tests for anomalies, irregularities, or possible violations of test administration guidelines?	Yes	15.2
	No	42.6
	Unsure	42.2

For several of the select-type items summarized above, respondents who answered "Yes" to an item were asked follow-up questions in an open-ended format. One of the items on the survey asked

[4] Includes: "Campus or district testing coordinator, Supt. of accountability, Depends on irregularity, Unless these people were subject of investigation, All of the above."

respondents to indicate up to three methods used in their districts to communicate or ensure that all educators involved with the state testing program understand their test security responsibilities and the penalties for violations. Respondents overwhelming listed test security training as the most common approach with four times as many respondents indicating that approach than the next most common method (meetings); these two methods were followed, in decreasing order of mention, by test security oaths and provision of written documentation.

If respondents answered "Yes" to the item asking whether someone at their campus or district reviews test results for possible anomalies, they were then asked to indicate who performs the review. In descending order of frequency, respondents to this item indicated that the review would be performed by:

* District coordinator or testing coordinator (56.4%)
* Campus administrator or principal (21.4%)
* Director of research, testing, assessment/evaluation (7.7%)
* Superintendent or Assistant Superintendent (5.9%)
* Curriculum team (3.2%)
* Administration (2.2%)
* Central office personnel (2.2%)
* All staff (1.0%)

The same "Yes" responders to this item were also asked to indicate what method is used in their campus or district to review test results for possible anomalies. Respondents indicated that the most commonly used method was a visual review of current and previous results (39%), followed by visual review of current results (30.2%), formal statistical review procedures (9.7%), and "other" methods (2.5%). Nearly one-fifth of the sample (18.6%) responded that they were unsure what method(s) were used. Those who responded "Yes" regarding whether someone at their campus or district reviews test results for possible anomalies were also asked what actions typically resulted from that review. A list of responses to that question is provided in Appendix D1.

Finally, respondents were asked to give their suggestions for one idea they believed would be most effective in enhancing test security and to provide any additional comments or suggestions they might have

relevant to the purposes of the survey. Responses to those two open-ended items are listed in Appendices D2 and D3.

Survey Results - Statistical Analysis

Survey data were also analyzed for possible relationships between variables using the statistical analysis software package SPSS. As appropriate, significance tests were performed using an alpha level of .05. There were 539 cases (i.e., respondent records) used in the analyses. Only limited data clean-up and recoding were necessary, due primarily to small observed frequencies for a few of the variables. For example, due to small cell frequencies for regular classroom teacher (n=28) and special populations teacher (n=10), a new variable was created (Teacher). This variable represented whether or not the respondent was a teacher, regardless of the type of teacher. Visual inspection of the raw data also revealed that a few of the "other" responses to the survey item on job role indicated some of those responses that were types of teachers could also be re-coded as "Teacher." Many of the respondents (n=174) indicated more than one job role, so each sub-part of the question was treated as a separate variable (e.g. whether someone was a teacher or not, as opposed to having mutually exclusive categories for teacher vs. administrator vs. other jobs). Only one respondent indicated that he/she was a school psychologist; because of uncertainty about how to best classify that as teacher/non-teacher, that single case was excluded from some analyses.

New variables were also created for the question about testing attitudes (Question 7). The five original response categories were collapsed into two: "Very concerned, conscientious, or vigilant" and "All other responses." Again, this re-coding was necessary to avoid problems with cross-tab analyses arising from having too few expected and observed frequencies in each cell and to help make the results more easily interpretable.

Findings from the statistical analyses are presented in the following paragraphs. Key findings are highlighted in italics.

Gender. Four cross-tab analyses (i.e., tests of independence of two categorical variables) were conducted to investigate potential relationships between gender and test security measures (testing attitudes, understanding responsibilities for test security, comfort with reporting security breaches, and likelihood of reporting test security breaches). *There were no statistically significant relationships between gender and any of the test security attitude measures.* Complete results are provided in Appendices D4-D7.

Highest Degree. Cross-tab analyses (i.e., tests of independence of two categorical variables) were also conducted to investigate potential relationships between highest degree obtained and test security measures (testing attitudes, understanding responsibilities for test security, comfort with reporting security breaches, and likelihood of reporting test security breaches). The "highest degree obtained" variable was re-coded to ignore the 4 cases categorized as "other" due to problems with small cell sizes. The three categories that remained were BA, MA, or Doctorate. *There were no statistically significant relationships between highest degree obtained and any of the test security measures.* Complete results are provided in Appendices D8-D11.

Job Setting. Four cross-tab analyses were conducted to investigate possible associations between job setting and the test security measures (testing attitudes, understanding responsibilities for test security, comfort with reporting security breaches, and likelihood of reporting test security breaches). For this and subsequent analyses, responses to the "job setting" question were re-coded to exclude 19 cases categorized as "other." The four categories that remained were elementary school, middle school, high school, and central office. *There were no statistically significant relationships between job setting and any of the test security measures.* Complete results are provided in Appendices D12-D15.

District Policies. Four cross-tab analyses were conducted to investigate possible relationships between the four test security measures (testing attitudes, understanding responsibilities for test security,

comfort with reporting security breaches, and likelihood of reporting test security breaches) and whether districts had a policy of reviewing test results for anomalies (yes, no, or unsure). *There were no statistically significant relationships between whether the districts had policies of reviewing test results for anomalies and any of the test security measures*. Complete results are provided in Appendices D16-D19.

Years of Experience. Four cross-tab analyses were conducted to investigate possible relationships between the four measures of test security (testing attitudes, understanding responsibilities for test security, comfort with reporting security breaches, and likelihood of reporting test security breaches) and respondents' years of experience in school-related positions. The "Years of Experience" variable was ordinal and consisted of categories 1-5, 6-10, 11-15, and 16+ years of school-related experience. *There were no statistically significant relationships between years of school-based experience and any of the test security measures.* Complete results are provided in Appendices D20-D23.

Job Roles and Attitude Toward Test Security. Six cross-tab analyses were conducted to assess possible relationships between job roles (teacher, school counselor, building-level administrator, central office administrator, district testing coordinator, campus testing coordinator) and attitude towards testing security. *There was a statistically significant relationship between teachers and non-teachers and the reported attitudes towards testing security. Teachers were significantly* less *likely than non-teachers to report attitudes of educational personnel in the district as being "very concerned, conscientious, or vigilant"* [$x^2(1) = 4.281$, p=.039]. *There was also a statistically significant relationship between whether or not someone was a district testing coordinator and reported attitude towards testing security. District testing coordinators were also significantly* less *likely than non-district testing coordinators to report attitudes of educational personnel in the district as being "very concerned, conscientious, or vigilant"* [$x^2(1) = 6.494$, p=.011]. Relationships between the other four job roles and attitudes towards testing security were not statistically significant. Complete results are provided in Appendices D24-D29.

Job Roles and Understanding Responsibilities for Test Security. Six cross-tab analyses were conducted to assess possible relationships between job roles (teacher, school counselor, building-level administrator, central office administrator, district testing coordinator, campus testing coordinator) and understanding of responsibilities for test security. *None of the relationships between job roles and understanding of responsibilities for test security were statistically significant.* Complete results are provided in Appendices D30-D35.

Job Roles and Comfort Reporting a Test Security Breach. Six cross-tab analyses were conducted to assess possible relationships between job roles (teacher, school counselor, building-level administrator, central office administrator, district testing coordinator, campus testing coordinator) and comfort level in supporting a security breach. *There was a statistically significant association between being a building-level administrator and the perceived comfort level of educators in reporting a possible breach of test security. Those in the role of building-level administrators were* more *likely than others to report that educators would be "very comfortable" reporting a suspected breach of test security* [$x^2(1) = 5.094$, p=.024]. *There was also a statistically significant relationship between being a campus testing coordinator and the perceived comfort level of educators in reporting a threat to test security. Those in the role of campus testing coordinator were significantly* less *likely than other roles to report that educators would be "very comfortable" reporting a suspected security breach* [$x^2(1) = 3.903$, p= .048]. There were no statistically significant relationships between this variable and any of the other job roles. Complete results are provided in Appendices D36-D41.

Job Roles and Likelihood of Reporting a Test Security Breach. Six cross-tab analyses were conducted to assess possible relationships between job roles (teacher, school counselor, building-level administrator, central office administrator, district testing coordinator, campus testing coordinator) and the perceived

likelihood of reporting a suspected test security breach. *There was a statistically significant relationship between whether or not someone was a campus testing coordinator and the perceived likelihood of district educators to report a suspected breach of test security. Those in the role of campus testing coordinator were significantly* less *likely than others to report that a suspected test security breach would "almost certainly" or "very likely" be reported compared to those in other job roles* [$x^2(2) = 7.714$, p= .021]. There were no statistically significant relationships between this variable and any of the other job roles. Complete results are provided in Appendices D42-47.

Section Two

Current Security Procedures

Security procedures currently in place for high-stakes assessments in Texas were also reviewed. Generally, measures taken to promote test security can be grouped into three categories: 1) policies and documentation; 2) procedures followed "in process" (i.e., during test development, preparation, administration, and scoring); and 3) follow-up activities undertaken after test scoring. In the following headings, the elements of each of these categories are described and evaluated. Recommendations for each category are presented separately in three subsections at the end.

Security Policies and Documentation

Security for Texas student assessment programs is supported by an abundance of documentation that provides clear and specific information to test users. A number of illustrative materials were reviewed for this project, including Texas administrative rules and code which provide the foundation for specific test security-related policies and documentation. The TEA (2004a, 2005) also produces district and campus test coordinator manuals and test administrator manuals that contain detailed information on appropriate test administration procedures for dissemination to those in the field. Separate policies and procedures for internal use have also been developed (see TEA, 2004c). Finally, all education personnel who have access to secure test materials are required to sign an oath of test security and confidential integrity either prior to each test administration or annually, depending on their job role.

In addition to these materials, TEA also conducts training sessions for educational personnel. These sessions are intended to highlight changes in testing practices from one year to the next and to maintain focus on appropriate test security procedures. Overall, this review concludes that the policies and documentation are exemplary and would serve as good models. They are well-organized, clear, and

thorough. This review also identified specific areas where improvements may be desirable. Seven specific suggestions for TEA to consider are listed in the companion "Recommendations" subsection in this chapter.

In-Process Procedures

It is apparent that attention to test security pervades test development, administration, and scoring activities for Texas assessments. While under the control of TEA or its testing contractors, all secure test materials are maintained in such a way as to prevent unauthorized access or disclosure prior to or following administration of a test. Particularly noteworthy are in-process procedures implemented during the scoring of open-ended test items which go beyond attention to "unusual patterns or approaches in one or more responses" (i.e., potential cheating) (TEA, 2004c, p. 2), but also include attention to and communicating with appropriate official agencies regarding indications of abuse and other factors related to the health and safety encountered in examinees' responses to those items.

As with the preceding review of policies and documentation, this review found numerous and substantial strengths associated with in-process procedures. Also like the previous subsection, this review will not list in detail such strengths; instead, three specific suggestions for TEA to consider are listed in the companion "Recommendations" subsection later in this chapter.

Follow-up Activities

Follow-up activities are those activities that take place following scoring and reporting of test results. They utilize test data or other sources of information and comprise a variety of quality control processes intended to ensure the integrity of the testing system on an on-going basis.

In contrast to documentation and in-process procedures currently reviewed, follow-up activities conducted by the TEA are comparatively less well-developed and thorough. For example, follow-up on reported test security violations does not appear to be timely or well-documented over time. Analyses that

might be conducted to identify inappropriate alteration of student answer documents (so called "light marks analyses") are performed, although there do not appear to be any well-established procedures for use or interpretation of the results. The TEA recommends that districts conduct investigations following reports of suspected test security violations, but concrete guidance or assistance with conducting such investigations does not appear to be currently available.

In short, the area of follow-up activities would seem to be the most fruitful area for the TEA to invest resources related to enhancing the integrity of results on Texas assessments, and numerous recommendations for enhancing follow-up activities are provided at the end of this section. It should be noted, however, that this review did not gather information on the amount, adequacy, or allocation of currently available resources. It may well be the case, for example, that current allocations do not permit more extensive follow-up activities (or more extensive in-process activities for that matter). Thus, the recommendations for this and the other preceding sections must obviously be evaluated in light of other funding, staffing, and priority considerations.

Recommendations

The following subsections provide recommendations related to the three areas reviewed in this section of the report. Each recommendation is highlighted and followed by a brief explanation or elaboration.

Recommendations Related to Security Policies and Documentation

1) *The TEA should consider developing model test security policies and procedures for local district consideration/adoption.* Currently, the focus of TEA test security policies and documentation appears to be at the state level. Certainly, such an emphasis is necessary and appropriate. However, as test security concerns increase, districts and campuses will likely also

wish to develop their own specific policies and procedures tailored to local needs and contexts. The TEA may be able to assist in those efforts, and to promote homogeneity and rigor in such efforts by developing and disseminating either sample policies and procedures for local consideration, or by identifying key elements that local units should consider when developing their own policies and procedures.

2) *The TEA should consider expanding the specific, context-based examples of inappropriate test administration behaviors provided in its manuals for test administrators and coordinators.* In numerous locations, strict prohibitions are documented and highlighted for those who administer secure tests. In test manuals, the prohibitions are often pulled out into boxes or via other typographic methods used to emphasize their importance. For example, in one location a manual summarizes using a bullet-point listing regarding Writing/English Language Arts testing:

> The test administrator
>
> * *must not* elaborate on the prompt;
>
> * *must not* elaborate on the type of writing required;
>
> * *must not* give examinees an opening and/or closing sentence;
>
> * *must not* give examinees an outline for organizing their composition;
>
> * *must not* give examinees information about how to develop their ideas; and
>
> * *must not* translate the prompt into another language (except sign language). (Texas Education Agency, 2005, p. 111)

Such admonitions may be more effective if elaborated and presented in tandem with other actions that *would* be appropriate. A particularly effective strategy may be to use scenarios or brief vignettes that incorporate hypothetical statements. For example, rather than simply proscribe

elaboration on a prompt, that general guidance could be given. In addition to providing the general guideline, however, in the context of a specific prompt, a pair of examples could be presented illustrating one or more specific, exemplar elaborations that were prohibited and corresponding statements (e.g., responses to examinee questions) related to the same prompt that would be permissible. The exemplars would not purport to be exhaustive but might help operationalize for educators the intent of the proscriptions.

3) *The TEA should consider gathering all of the discrete guidance statements presented in administration guideline manuals into a single location.* As noted previously, there is complete and sound test administration guidance provided in various documents. Within the documents, however, the information is often presented in discrete portions as opposed to a coherent whole. For example, in the *District and Campus Coordinator Manual* (TEA, 2005), separate highlight boxes and bulleted lists with various security-related informational items or guidelines appear in approximately 30 locations throughout the document (see pp. 13, 26, 42, 68, 70, 107, 109, 111, 115, etc.). It may be helpful to consolidate such items into a single location, or to present them in a single location with information relevant to a specific situation repeated in other locations as necessary. A similar strategy may be helpful to illustrate situations such as allowable/ nonallowable accommodations for SDAAII (see TEA, 2005, p. 136) and other contexts.

4) *The TEA should consider developing specific guidance statements related to field tests.* In their current form, with few exceptions, existing documentation does not distinguish between acceptable/unacceptable actions on field tests and operational tests. It may be that such distinctions are unnecessary; that is, the same guidelines apply to both situations. If that is the case, the distinction between the two testing purposes should be noted, an explicit statement that the same guidelines apply should be provided, along with a rationale explaining the reason(s) why

adherence to the guidelines in both situations is important.

If different (though perhaps largely overlapping) guidelines are necessary, both sets should be provided. For example, it is possible that one kind of instructor intervention (say, elaborating a prompt in an impermissible way) would be undesirable on an operational test, while "gaming" the testing system by failing to provide adequate motivation, elaboration of instructions, etc., would be undesirable in a field-testing context.

5) *The TEA should consider enhancing the training provided to test coordinators and/or different models for development and delivery of training.* Currently, TEA provides training in test security using a "training the trainers" dissemination model. In addition, TEA documentation provides some direction for coordinators regarding the training of other educational personnel (see, for example, TEA, 2005, p. 180). However, based primarily on the comments of respondents to the test security survey conducted for this project, the specific aids provided to coordinators and test administrators may be inadequate. It is also noteworthy that many of the suggestions in response to the open-ended survey questions (see Section 1 and Appendices D2 and D3 of this report) indicated that enhanced training--and more of it--was viewed as necessary and desirable by those in the field. The TEA should also consider expanding the frequency, extent, and audiences served by training sessions.

In addition, the review of TEA materials conducted for this project suggests that additional development of materials or elaboration of directions would be helpful. For example, Activity 2 (p. 180) indicates that test coordinators should identify those for whom training is appropriate and should be knowledgeable themselves regarding various topics. Clearly, this provides only limited guidance.

To improve the training materials, the TEA should consider producing sample training session outlines and agendas, check-off sheets listing specific competencies or items to be covered, summative self-tests for participants, and so on. It may be most effective if any such materials were developed in conjunction with test coordinators and educators regularly involved in test administrations.

6) *The TEA should consider integrating certain guidelines with existing checklists.* Currently, TEA provides checklists for district and campus test coordinators (see, e.g., TEA, 2005, p. 176). Along with the items in the checklist, it may be advisable to provide related guidelines. For example, in the document just cited, the first item in the checklist for campus coordinators is "1) Receive and review shipment of materials" (see also, TEA, 2004a, back cover). It may be helpful to immediately follow this item on the checklist with specific indications of how shipments must be handled, what should (or should not) be reviewed, etc., to ensure test security.

7) *The TEA should consider modifying the "Oath of Test Security and Confidential Integrity."* As mentioned previously, those who are involved in test administrations must sign an oath (see TEA, 2004a, p. 101; 2005, pp. 257, 259). The oath form requires only that the document be signed, dated, and the printed name and campus/district information be supplied. The text comprising the form indicates that signatories affirm that they have received training, have read relevant manuals, and understand test security obligations and penalties for violations.

Various modifications of this form may be advisable to further emphasize certain aspects of test security and provide another avenue for communication. As one idea, each of the elements in the text of the form could be elaborated and separated into discrete portions. For example, the statement that signatories are "aware of the range of penalties" (2004a, p.101) could be elaborated

to indicate the actual range of penalties. Each component of the oath could have a separate line for initialing or a box to be checked rather than (or in addition to) a single signature at the end of the form.

Recommendations Related to In-Process Procedures

1) *The TEA should consider expanding the audience solicited for reporting of test irregularities (i.e., potential cheating).* As currently configured, the primary audience serving as an avenue of information about potential test security violations appears to be limited to educators. However, information about potential violations may also be learned from parents, other school personnel, interested members of the public, or students themselves.

2) *The TEA should consider instituting one or more different mechanisms that would facilitate submission of information from the primary audience currently solicited to provide information on potential test security concerns.* One possibility for such a mechanism might be the addition of a link and corresponding web-based form to the TEA web site. The form would allow persons to submit information regarding potential security violations following whatever protocols for confidentiality and anonymity are deemed appropriate.

3) *The TEA should consider broader involvement in on-site auditing of test preparation and administration activities.* Currently, TEA monitoring of actual test administrations is extremely limited (due, perhaps in large measure, to fiscal concerns). However, TEA should consider developing a long-range plan for increasing the quantity and scope of such audits. In particular, the TEA should consider developing a plan that specified: a) the process by which units would be identified for audit; b) a target number (percentage) of site visits during test administration windows and a strategy for ramping up resources and personnel to accomplish the audits; and c)

necessary qualifications, training, and observation protocols for the audits. In addition to developing and implementing a system of such site visits during test administrations, the TEA may wish to expand the scope of audits to include auditing of the time period immediately prior to or following a testing window (to promote understanding of and compliance with established procedures for handling test materials) and training sessions (to ensure quality control, accuracy of information, and so on).

Along these same lines, it is sometimes suggested that, in addition to a system of random (or other configurations for) oversight of test administrations, additional proctoring be instituted. To the extent feasible, it would clearly provide additional accountability to have more that one educator supervising the testing time period for a group of students. Some of those concerned about test security have gone so far as to suggest that the personnel assigned to a group of students *not* be the students' regular classroom teacher. It is the opinion of this reviewer that such a policy probably goes too far, may not be very effective, and may--in some cases--actually be harmful. If instituted at all, such a suggestion should be limited to implementation in the upper grades. It should be avoided in lower grades where the security of the presence of the "homeroom" teacher or other familiar person likely aids in the goal of obtaining accurate achievement information from young students.

Recommendations Related to Follow-Up Activities

1) *The TEA should consider developing and disseminating specific procedures for local districts to follow regarding how suspicions of inappropriate testing behavior should be investigated.* Various TEA-developed materials recommend certain follow-up activities when inappropriate testing behavior is suspected. However, in some cases, not enough specific information is provided to guide such efforts. For example, internal guidelines indicate that "If [a] district

determines that a student is guilty of plagiarism [in preparing a response to an open-ended test item], the score code on the student's writing assessment may be changed...." (TEA, 2004c, p. 2). However, documentation does not appear to exist that would guide districts in how to make such a determination. In addition, the TEA should develop and disseminate procedures for local units regarding methods or approaches that can be used by campus and district educators to review local test results for the potential of invalid results and provide suggestions on how to follow-up on questionable results.

2) *The TEA should consider studying the relative effectiveness of current policy on responsibility for investigating suspected test security violations*. As currently constituted, the first response triggered by an irregularity report (i.e., a suspected test security violation) is an investigation of the report by personnel within the unit. That is, educational personnel within a school or district are charged with gathering information related to the irregularity. In large measure, the unit's report to the TEA provides the basis for the TEA decision to conduct further investigation.

If it can be assumed that suspected test security violations would in most cases result in higher test performance for students or units, it is probably the case that the incentives for personnel within the unit lack strong incentives for vigorously and objectively collecting information in the course of the preliminary investigations. It seems reasonable to conclude that the judged severity of cases and the amount of information eventually wending its way to official at the TEA is to some degree underestimated or underreported.

Rather than relying as heavily on initial investigations by the unit, the TEA should consider developing a "triage" system that would trigger external, independent review in specified situations to be determined by the TEA. The current system of internal preliminary investigation may well

suffice for less serious test security violations, or for technical violations that do not threaten the integrity of test scores.

3) *The TEA should consider developing plans for implementing, documenting, and disseminating information related to post-testing quality control methods designed to identify potential test security problems.* As described previously, follow-up procedures generally utilize test data or other sources of information and comprise a variety of procedures aimed at the goal of continuous improvement in the integrity of the testing system. Many options exist for post-test quality control analysis that could be performed. The TEA should investigate and consider various options and develop standard procedures for implementation and reporting.

As one example, the technology of optical scanning of examinees' answer documents permits what is called a "light marks analysis" or "erasure analysis." Such analyses yield, for each test-taker on each test item, information about the response recorded as the student's official response (indicated by the darkest bubble filled in for an item) and any other response the test-taker may have made for the same item (indicated by the second-darkest bubble filled in for that item). Under the assumption that items for which one darker and one lighter response are recorded are items on which the examinee changed from one answer to another via erasure, analyses can be performed to identify cases in which the number of erasures from a wrong answer to a right answer is either significantly different from, for example, the state average number of erasures for that subject and grade level or, statistically speaking, not likely due to chance or random factors. Such extreme cases can provide evidence supporting, though not confirming, an inference that a student answer document was inappropriately altered.

According to TEA documentation provided for this report, erasure analyses are routinely

conducted by the state's testing contractor (see TEA, nd,b). However, the TEA also indicates that "the only policy with regard to the erasure analysis is that the contractor is required to perform the analyses and provide them to TEA. There are no written procedures with respect to the review of these analyses...." (p. 5). At minimum, the TEA should consider: a) developing written procedures, documentation, and longitudinal monitoring of erasure analyses; b) developing criteria for flagging and follow-up on extreme erasure values within a year, and/or consistently outlying values across academic years; c) providing annual notification to units (campuses, districts) that erasure analyses are conducted each year for each grade and subject tested; and d) providing results of analyses to units (campuses, districts) with information regarding how results are most appropriately interpreted.

In addition, other statistical methods have been developed to detect the possibility of inappropriate educator manipulation of student answer documents or test item responses. Most notably, the novel and fairly well substantiated procedure suggested by Jacob and Levitt (2003) appears to have great promise as a tool for flagging potential cheating. The model proposed by Jabob and Levitt has significant advantages over other models which should not be used, such as simple regression analyses. The latter class of analyses rely only on discrepancy from state averages to flag units as "suspicious." However, by their nature, all regression methods will identify a certain proportion of cases as "outlying" or "suspicious" and a sizeable proportion of cases so identified will be identified incorrectly. The resulting inaccurate identifications have the potential to harm the public's confidence in Texas schools, suggest inappropriate interpretations about the performance of specific units, and degrade morale of professional educators.

Thus, more sophisticated analyses that control for these types of errors as much as possible (see, e.g., Jacob and Levitt, 2003) should be preferred. As with erasure analyses, at minimum, the TEA

should consider: a) adopting for a period of pilot-testing a statistical algorithm for identifying aberrant unit test performance; b) developing written procedures, documentation, and longitudinal monitoring of aberrant performance statistics; c) developing criteria for flagging and follow-up on extreme cases within a year, and/or consistently outlying values across academic years; d) providing annual notification to units (campuses, districts) that statistical analyses are conducted each year for each grade and subject tested; and e) providing results of these analyses to units (campuses, districts) with information regarding how results are most appropriately interpreted.

Regardless of the specific procedures for erasure and/or aberrance analyses eventually decided upon by the TEA for implementation, documentation and annual reporting of those procedures and results should be produced. In addition, the TEA should investigate methods for effectively and accurately communicating the results of the analyses to the public and the profession. One well-known finding related to the use of statistical methods of detecting inappropriate test behavior is that merely the communication that such measures will be used has a deterrent effect. Finally, the TEA should proceed cautiously in developing any documentation and reporting strategies to ensure that inaccurate interpretations or unwarranted inferences about campuses, districts, or individual educators are avoided.

4) *The TEA should consider a self-study of internal staffing and procedures for following up on reported test security violations*. As mentioned previously, the TEA has developed sound procedures and documentation to address reported test security violations. Its Security Task Force (STF) is the unit within the TEA that is charged with monitoring and following up on such reports.

Documentation supplied by TEA in response to requests made for this review (see TEA, 2004b; 2004c; nd,a) suggests, however, that the volume of cases that must be reviewed by the STF may

not be commensurate with current staffing levels. For example, for the most recent academic year for which complete data are available (2003-2004), the STF handled 1,697 cases, only 312 of which were determined to require no further action (NFA) following initial review. As the extent and consequences of testing continue to increase, the volume, seriousness, and turn-around time of cases handled by the STF are also almost certain to increase.

Currently, STF staffing appears to consist of three persons. In addition to the quantitative data on workload, it is noteworthy that at least some of the qualitative responses to the Security Issues Survey (see Section I and Appendix D3, this report) commented on interactions with the STF in a way that suggested understaffing may be contributing to communication problems between the TEA and those in the field. For example, although there were positive comments such as: "I appreciate the help you give us-especially [name withheld]'s dept" there were other comments such as:

* "[Name withheld] has been very unpleasant to deal with and makes calling with questions a chore. It makes one not want to call to avoid talking to her."

* "[Name withheld] is VERY rude to district coordinators on the telephone."

* "A less condescending attitude from TEA. When I have called and spoken with [name withheld], I have had a very negative experience, we need solutions...."

5) *The TEA should consider identifying necessary skills and training for STF staff positions and developing corresponding job descriptions.* For this review, information was sought regarding job qualifications and/or job descriptions for STF personnel. Job descriptions were supplied, listing

the activities and responsibilities of each person (see TEA, nd,a). However, the existence of current job duties obviously differs from a listing of necessary job skills. Because of the complexity and sensitivity of the tasks managed by STF personnel, it would seem desirable if staff assigned to the area had minimal qualifications in testing and analytical methods, training in test security, and training in protection of confidentiality and anonymity, or some combination of these or other prerequisite skills identified by the TEA as relevant to the position As one component of the study of internal staffing and procedures for following up on reported test security violations suggested previously, the TEA may wish to examine the specific prerequisite skills or training necessary for the STF positions, develop supporting documentation, and ensure that all staff are so qualified.

6) *The TEA should consider enhancing data gathering and annual reporting of STF activities.* Analysis of evidence submitted for this review suggests that some important data is currently not collected or is inadequately analyzed or reported. For example, for this review information was requested regarding the number of security concerns reported to the STF, the type of violation suspected, the case disposition, etc. It is not clear that such summary reports are readily available or reported, nor that such summary reports exist for a span of years that would make analysis of test security trends over time possible. Other examples of data and analyses that would likely facilitate the work of the STF would be data on the time and resources required to process each report (i.e., enhanced case logging, tracking, etc.); the average time from initial report to final case disposition (by case type); overall case disposition by type for each (annual) reporting period; the characteristics of cases and supporting information that relate to optimal resolution of cases; the quality and characteristics of effective incident documentation; the characteristics of effective corrective action plans; and so on. In addition to facilitating the work of the STF, annual reporting would again demonstrate the commitment of the TEA to effective prevention of, monitoring of,

and response to inappropriate testing activities and would likely provide an additional small measure toward deterring such activities.

Section Three

Security Violation Responses

The final charge of the independent review was to describe and evaluate the sanctions/penalties that the State of Texas can impose for violations of test security. This aspect of the review posed considerably greater challenges than the other aspects and represents an area for which much additional information is needed.

At one level, it would seem easy to describe potential sanctions or penalties that can be imposed. Reference to Title 19 of the Texas Administrative Code (see Appendix C) indicates that:

> (e) Any person who violates, assists in the violation of, or solicits another to violate or assist in the violation of test security or confidential integrity, and any person who fails to report such a violation are subject to the following penalties:
>
> > (1) placement of restrictions on the issuance, renewal, or holding of a Texas teacher certificate, either indefinitely or for a set term;
> >
> > (2) issuance of an inscribed or non-inscribed reprimand;
> >
> > (3) suspension of a Texas teacher certificate for a set term; or
> >
> > (4) revocation or cancellation of a Texas teacher certificate without opportunity for reapplication for a set term or permanently.

According to the TAC, in addition to penalties for educators, a penalty may also be imposed against a student:

> (f) Any irregularities in test security or confidential integrity may also result in the invalidation of student results.

Given that these penalties are in place, what additional options might the TEA pursue? The following three subsections provide some suggestions.

More Vigorous and Effective Pursuit Under Current Penalties

On the one hand, it appears that the most severe penalties currently in force relate exclusively to certification (for educators) or score invalidation (for students and, by extension, their schools), and the revocation of a certificate or invalidation of test score would appear to be strong measures.

On the other hand, there are reasons that the TEA may want to pursue additional sanctions or, at minimum, review how effectively current procedures are in dissuading personnel from engaging in the types of actions they are intended to deter. For example, of the 1,697 test security violation reports reviewed by the STF for the 2003-2004 academic year, approximately 6 percent were deemed to be credible and serious enough to warrant referral to the State Board for Educator Certification (SBEC). Of those 109 cases, the status of nearly half (n = 42) of them was still described as "pending" as of April 5, 2005 (nearly a year after the close of the reporting cycle). While such an analysis was not prepared for this report, a historical review of cases referred to the SBEC would likely reveal a small proportion of the most serious cases which actually concluded with revocation of a credential. Anecdotal evidence from other states suggests that serious cases are often settled in such a way as to permit early retirement, transfer out of district, or other remedy.

Thus, despite the existence of apparently severe sanctions, it is likely that the effective proportion of serious cases to which severe penalties are applied falls short of the actual number of cases for which such penalties might be appropriate. This situation can have the effect of tempering the deterrent effect that constitutes one rationale for the creation of severe penalties in the first place. The TEA should consider more vigorous prosecution and expeditious resolution of all cases referred to it. In addition, the TEA should monitor and report on case resolution on an annual basis; the TEA should disseminate the results of its monitoring to the public and to the field; and the TEA should consistently advocate for appropriate sanctions in all cases where such penalties are warranted.

Copyright

Existing sanctions address a variety of testing situations in which inappropriate educator actions may be observed. In addition to existing sanctions that can be imposed pursuant to the TAC for these situations, the TEA may wish to consider seeking legal advice regarding possible actions that could be taken in other cases. For example, one such situation involves the inappropriate disclosure, duplication, dissemination, photocopying, or posting on the internet of secure test materials. If the TEA has not already done so, and to the extent possible, copyright should be registered for all secure test materials. Copyright statements, developed with the advice of counsel with expertise in copyright law, should appear on all secure TEA test materials. Such statements might include, among other things, and express prohibition of duplication, transmission, copying, posting on the internet, etc., of the material.

Once copyright is established, the TEA may have additional legal recourse when copyrights are violated, including claims for restitution when test materials (e.g., test items, prompts, reading passages, etc.) developed and pretested at substantial public expense are compromised. If the TEA decides to pursue establishment of copyright, it may also wish to include information in test materials, test administration manuals, training sessions, and other appropriate avenues regarding copyrights and sanctions for violations as an additional deterrence strategy.

Severity of Sanctions

To the extent they are applied consistently, the severity of currently possible sanctions seems appropriate to the test security violations to which they are applied. Based on the open-ended responses to the test security survey administered as part of this project, the TEA may wish to consider investigating two additional aspects of sanctions.

First, stiffer penalties may be required for some infractions. At minimum, as indicated previously, more consistent, rapid, and documented responses to security violations seems warranted. Second, however, some survey respondents indicated that perceptions and concerns exist in the field that educators

who are reported for relatively minor, technical, inconsequential, or inadvertent deviations from test administration guidelines may be subject to inordinately harsh penalties. The TEA may wish to clarify the penalties that would be appropriate for different categories of violations, as opposed to indicating the (wide) range of penalties that can be applied to the wide range of possible infractions. Such clarification would seem, at minimum, to serve TEA well in the area of communicating good will and support for education professionals and may be a small step toward assuaging concerns and anxieties in the current high-stakes testing and accountability environment.

Conclusion

In closing, it must be mentioned that focusing on severity of sanctions as a primary method of addressing test security violations will likely be less effective than other prioritizations. Specifically, the well-worn adage "an ounce of prevention is worth a pound of cure" applies particularly well to concerns about test security violations. To the extent that resources to address security concerns are limited, the TEA should consider enhancements in training, additional STF staffing, use of analytical tools, and improvements in documentation and dissemination of activities as the primary avenues for promoting the integrity and validity of scores on assessments.

Appendix A

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Appendix B

Security Issues Survey

This survey consists of questions about you and about your perceptions of test security in K-12 school settings in Texas. It should take about 5 minutes to complete. Responses will be reported in aggregated, summary fashion without any information. The survey does not require you to provide your identification or that of your district. Please read the questions on the left and mark your answers on the right.

QUESTION	RESPONSE CHOICES
1. Which of the following best describes your current, *primary* **job setting**? (mark only one)	☐ elementary school (pre K-5) ☐ middle school (6-8) ☐ high school (9-12) ☐ central office ☐ other: _____
2. Which of the following best describes your current **job roles or responsibilities**? (check all that apply)	☐ regular classroom teacher ☐ special populations teacher ☐ school psychologist ☐ school counselor ☐ other: _____ ☐ administrator--building level ☐ administrator--central office ☐ district testing coordinator ☐ campus testing coordinator
3. Which of the following describes your **years of school-based experience**?	☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16 or more
4. What is your sex?	☐ Male ☐ Female
5. Which of the following best describes your highest degree?	☐ Bachelor's ☐ Master's ☐ Doctorate ☐ Other
6. In which Education Service Center region do you work?	REGION # ☐☐
7. In your opinion, which of the following best describes the attitude of education personnel in your district toward testing security?	☐ very concerned, conscientious, or vigilant ☐ somewhat concerned, conscientious, or vigilant ☐ somewhat unconcerned, lax, or apathetic ☐ very unconcerned, lax, or apathetic ☐ actively or knowingly ignores or rejects testing security
8. In your opinion, which of the following best describes the degree to which educators in your district understand their responsibilities for test security and the penalties for security violations?	☐ very thorough and detailed ☐ good grasp of the basics ☐ moderate understanding ☐ limited familiarity ☐ very weak understanding or serious misconceptions
9. Suppose an educator in your district observed or suspected a testing irregularity, anomaly, or test security breach. In general, how <u>comfortable</u> do you think that person would be in reporting the concern to the appropriate person?	☐ very comfortable ☐ somewhat comfortable ☐ somewhat uncomfortable ☐ very uncomfortable

10. Again, suppose an educator observed or suspected a testing irregularity, anomaly, or test security breach in your district. In general, what would you say is the <u>likelihood</u> that the concern would be reported?	☐ almost certainly WOULD be reported ☐ very likely to be reported ☐ somewhat likely to be reported ☐ somewhat unlikely to be reported ☐ very unlikely to be reported ☐ almost certainly would NOT be reported
11. If a testing irregularity, anomaly, or test security breach were suspected/reported in your district, which of the following persons would be responsible for conducting the initial review?	☐ a teacher ☐ a building/campus administrator ☐ a district-level administrator ☐ a campus or district testing coordinator ☐ not sure ☐ other:_____
12. Using brief phrases, please indicate up to three primary methods used in your district to communicate/ensure that all educators involved with state testing understand both their test security responsibilities and the penalties for violations.	Method 1: _____ _____ Method 2: _____ _____ Method 3 : _____ _____
13. Does someone at your campus or in your district review your test **results** when they arrive for possible anomalies?	☐ no If no, SKIP to Question 18 ☐ yes If yes, who reviews them:_____ ☐ unsure
14. If you answered "Yes" to Question 13, what method is used to review test results for anomalies?	☐ visual review of current results ☐ visual review of current and previous results ☐ formal statistical review procedures ☐ unsure ☐ other:_____ _____
15. If you answered "Yes" to Question 13, what actions typically result?	
16. If you answered "Yes" to Question 13, how are the findings reported?	
17. If you answered "Yes" to Question 14, to whom are the results reported?	
18. Does your district have a formal policy or procedures for reviewing results of statewide tests for anomalies, irregularities, or possible violations of test administration guidelines?	☐ no ☐ yes ☐ unsure
19. If you answered "Yes" to Question 13, are you willing to provide documentation of the policy or procedures so that TEA can assemble and disseminate this information?	☐ no ☐ yes If yes, please write your contact information: Your Name:_____ District Name: _____ Work Phone Number:_____ E-mail: _____ Other Number: _____

20. Suppose you could implement one idea that you believe would be most effective in enhancing test security. On the line below, please briefly describe that idea.	Idea:_____
21. If you have any other comments about test security or related topics, please write them in the space to the right.	Comments:_____

Enjoy the Conference!

Appendix C

Texas Administrative Code, Title 19, Part 2, Chapter 101, Subchapter C, §101.65

Penalties for Violation of Test Security or Confidential Integrity

(a) Violation of security or confidential integrity of any test required by the Texas Education Code (TEC), Chapter 39, Subchapter B, shall be prohibited.

(b) A person who engages in conduct prohibited by this section may be subject to sanction of credentials.

(c) Charter school test administrators are not required to be certified; however, any irregularity in the administration of any test required by the TEC, Chapter 39, Subchapter B, would cause the charter itself to come under review by the commissioner of education for possible sanctions or revocation, as provided under the TEC, §12.115(a)(4).

(d) Procedures for maintaining the security and confidential integrity of a test shall be specified in the appropriate test administration materials. Conduct that violates the security and confidential integrity of a test is defined as any departure from the test administration procedures established by the commissioner of education. Conduct of this nature may include the following acts and omissions:

(1) duplicating secure examination materials;

(2) disclosing the contents of any portion of a secure test;

(3) providing, suggesting, or indicating to an examinee a response or answer to a secure test item or prompt;

(4) changing or altering a response or answer of an examinee to a secure test item or prompt;

(5) aiding or assisting an examinee with a response or answer to a secure test item or prompt;

(6) encouraging or assisting an individual to engage in the conduct described in paragraphs (1)-(5) of this subsection; or

(7) failing to report to an appropriate authority that an individual has engaged in conduct outlined in paragraphs (1)-(6) of this subsection.

(e) Any person who violates, assists in the violation of, or solicits another to violate or assist in the violation of test security or confidential integrity, and any person who fails to report such a violation are subject to the following penalties:

(1) placement of restrictions on the issuance, renewal, or holding of a Texas teacher certificate, either indefinitely or for a set term;

(2) issuance of an inscribed or non-inscribed reprimand;

(3) suspension of a Texas teacher certificate for a set term; or

(4) revocation or cancellation of a Texas teacher certificate without opportunity for reapplication for a set term or permanently.

(f) Any irregularities in test security or confidential integrity may also result in the invalidation of student results.

(g) The superintendent and campus principal of each school district and chief administrative officer of each charter school and any private school administering the tests as allowed under the TEC, §39.033, shall develop procedures to ensure the security and confidential integrity of the tests specified in the TEC, Chapter 39, Subchapter B, and shall be responsible for notifying the Texas Education Agency in writing of conduct that violates the security or confidential integrity of a test administered under the TEC, Chapter 39, Subchapter B. Failure to report can subject the person responsible to the applicable penalties specified in this section.

Appendix D1

Responses to Open-Ended Survey Items

Question: If you answered "Yes" to Question 13 ("Does someone at your campus or in your district review your test results for possible anomalies when the results arrive?"), what actions typically result?

Responses:

- A question might be asked of campus personnel.
- Address anomalies with campus
- All anomalies require a written letter of explanation.
- An administrative discussion is held, and then the campus principal and coordinator are questioned.
- Analyze findings and interview campus personnel
- Anomalies are discussed with the campus administration.
- Any questions that arise from review are discussed with campus personnel.
- Appeal
- Appeal to state
- Appeal, letter, TEA
- Appeals are filed, if appropriate
- Awareness
- Because of no direction of prior current year, there is a disparity; no action has been taken.
- An informal investigation is begun.
- Attendees of administrative meeting are briefed about the problems.
- Call campuses and discuss problems
- Call TEA
- Call TEA or Pearson
- Call to district coordinator
- Call the district coordinator for an explanation
- Campus administrator discusses concerns with the district administrator; decide who contacts state
- Campus analysis and individual analysis are used to locate patterns
- Campus and district goals are developed
- Campus coordinator reviews submitted material and results
- Campus review and data planning
- Campus write-up, district write-ups, and reports to TEA
- Update information
- Tutorial classes are changed
- Committee meeting
- Communicate irregularities to appropriate personnel
- Compare to previews for unusual changes and double-check lower score and high score areas
- Compare to previous years; compare to benchmarks
- Results are compared with previous data and discussions are held; student data is also compared.
- Concerns are brought to the superintendent.
- Confer with performance/accountability coordinator; confer with program director of area in question
- Confer with campus test coordinator, performance accountability coordinator, and program director
- Conference with teacher and building administration; documentation of incident
- Contact Pearson, TEA, and campus TAKS coordinator to check on campus testing anomalies, etc.

- Corrections are made
- Corrective action
- Corrective action
- Data accountability coordinator is directly involved.
- Delve further into it before contacting state
- Discrepancies are reported immediately
- Determine what happened and what needs to be done
- Discuss with the district campus administration
- Discuss with administration
- Discuss with campus personnel
- Discuss with principal and campus coordinator
- Discuss possible anomalies with testing director
- Discussion
- Discussion between principal and assistant superintendent for curriculum
- Discussions evolve about what caused change.
- Discussions with campus level administration/test administration
- District coordinator
- District coordinator contacts TEA and Pearson
- District coordinator reports to TEA for review
- District report
- Document and get all information needed
- Do not know
- E-mail review the week of the test
- Every teacher and administrator is trained
- Every teacher/administrator is in-serviced on results
- Every teacher/administrator is trained
- Results are examined with central administration personnel and building-level personnel
- Few abnormalities were found
- Few, if any, anomalies were found
- Follow up campus investigations
- Anomaly is investigated further and includes the district coordinator and campus administrator
- Anomaly is investigated further and then a request is sent to TEA and Pearson for changes in reported data
- Has not happened yet
- Have not had an issue to date
- Have not found decipherable anomalies
- Have not had any anomalies
- If a problem is found, it is shared with the campus administrator, and training is put into place where needed.
- If anomaly is suspected, the campus is interviewed.
- Concerns about anomalies are brought to the attention of the principal and superintendent.
- We investigate errors by comparing them to those from previous years and ask the district coordinator to investigate.
- If we found something, we would call the principal, talk to the associate superintendent, and review the results.
- Informal report
- Information is given to campus administrators, teachers, parents, and students.
- Internal investigation at campus and district level

- Internal reports
- Investigate anomalies
- Investigate anomalies
- Investigate anomalies
- Investigate anomalies if reported
- Investigate anomalies at campus by central district staff
- Investigations
- It would probably be reported to the district coordinator in charge and superintendent.
- Letter of reprimand or other types of punishments
- Letters to TEA
- Look at which new programs or methods were put in place and look for explanations
- Meet with administrators and teachers
- Meet with campus administrator and review documentation of campus
- Meet with assistant superintendent and then principal
- Meet with district coordinator and conduct a formal investigation
- Meet, as needed, with campus principal and testing coordinator
- Meetings and investigations
- More in-depth analysis
- Name, Social Security number, date-of-birth anomalies are corrected. Training is provided to prevent similar mistakes in the future.
- Never happened
- No action has resulted because we have not found anomalies.
- No anomalies ever found
- No anomalies have been discovered
- No anomalies have been found
- No anomalies have been found
- No change
- No need to review; nothing unusual found so far
- No problems
- No problems in past
- No more problems to date
- None
- No serious anomalies at this time
- None found
- None have occurred
- None needed up to this point
- None needed up to this point
- None required as of this date
- None so far
- No anomalies noted.
- Not sure
- Not sure
- Not sure
- The results are given to the district coordinator for review and explanation.
- People have lost their jobs because the wrong PEIMS information was reported or bubbled in.
- The principal handles the results.
- The principal meets with the superintendent to discuss the results.
- The principals are contacted and interviewed.

- Question which methods could be used to improve results
- Teachers and administrators are questioned if necessary; then TEA is questioned.
- Questioning and interviews have never had to go further.
- Referral to elementary or assistant superintendent
- Referral to superintendent, who notifies TEA about possible anomalies; campus principal and superintendent begin formal investigation.
- Repeals if necessary after investigations
- Report to assistant superintendent
- Report to assistant superintendent of curriculum
- Report to assistant superintendent of curriculum
- Report to campus administrator
- Report to campus coordinator and district coordinator, who contacts TEA
- Report to district campus coordinator
- Report to district test coordinator and review testing documentation
- Report to superintendent and testing coordinator
- Report to superintendent; review results with campus administrator
- Report to that campus and its district supervisors
- Report anomalies if any are found
- Reported to TEA in May of 2004; still waiting for solution
- Report results to TEA
- Results are usually correct
- Results have been O.K.
- Results typically align
- Review direct questions
- Review district and campus coordinator request for rescoring
- Review new programs, teachers, or other changes that might explain differences
- Review records (for example, number of documents submitted); report numbers
- Review with campus and administrative teams (we have not noted any problems)
- Review with campus administration and campus coordinator
- Review curriculum and instruction
- Scores improve in all areas
- Seek out reasons for anomalies
- Send letter to TEA with write-up
- Several people, such as the district administrator, will review, confer, and concur
- Share information with campus administration and teachers, make priorities, and set staff development targets to address weak areas
- Share results with campuses
- So far, everything has been what was expected.
- So far, there have not been any anomalies.
- Students do not finish bubbling in information or bubble in too much information.
- Study and analyze, and then compare council with recommendation for improvement
- Talk with administrators
- TEA found a writing essay that was copied from another student. The test was given a score of "other," the students involved were counseled, and their parents were notified.
- TEA is called
- Teacher in-service training is held
- The test coordinator reviews all tests
- Testing coordinators contact the campus to confirm information and then call TEA if necessary.

- The need has not arisen for an investigation.
- The anomalies are noted and discussed to determine how to rectify them.
- The district office is notified about anything unusual.
- The results are reviewed by the vice principal.
- Unknown
- Unknown
- Unsure
- Unsure
- Unsure
- Unsure
- Unusual trends would be brought to the assistant superintendent's attention.
- Usually scores look correct.
- Actions vary; warnings depend on TEA
- Verbal notification
- Very few anomalies have been found. They are typically a result of the score code being applied incorrectly.
- A visual review is done and AEISIT (a software program used to produce reports of scores) is run.
- We are a small school and have not had problems with reports.
- We can send results out to campuses if the results are O.K. If there is a problem, we call Pearson.
- We have been fortunate not to have discrepancies.
- We have found no questionable data.
- We have not found any anomalies.
- We have not pursued results beyond the review stage because we felt the results were legitimate.
- We have had no real concerns.
- We give a write-up to TEA; person investigated
- Writing scores
- Zeros, missing scores, and PID errors are identified.

Appendix D2

Responses to Open-Ended Survey Items

Survey Item #20: Suppose you could implement one idea that you believe would be most effective in enhancing test security. Please briefly describe that idea.

Responses:

- Add a security tab in the manual with more specifics, add PowerPoint to modules, and provide a video of how to deal with security issues.
- Have two adults in each testing area (but who could afford that?). Providing two booklets for each subject would keep teachers and students from looking ahead.
- A less condescending attitude from TEA. When I have called and spoken with [name withheld], I have had a very negative experience. We need solutions. Not everything that happens needs to be viewed as an irregularity.
- Develop a plan to make sure that monitoring procedures are in place.
- Create a staff development day solely dedicated to testing; training should provide examples of actual cases and consequences and how they directly affected students.
- Create a standard video or computer training session for all staff.
- Provide a testing coordinator for each campus once campus reaches 500 students.
- Enable administrators to "scan" test (secure) materials when assigned to them so there is no question about who has which materials. This should also apply to returning materials.
- Provide activities regarding security that teachers can work on.
- Add a line for the test administrator name on the front of the test booklet.
- Provide additional monitors.
- Add personnel support from local education agencies.
- Provide additional training.
- Provide adequate facilities to accommodate the large number of students being tested.
- Administrator and superintendent need more involvement in training.
- Administrators from other campuses should monitor testing on campuses other than their own.
- Administrators need to be outside personnel who do not have a stake in the results, similar to taxes or CPA testing.
- All campuses should have secure locked storage. Currently they use my locked closet.
- Always have more than one administrator per classroom.
- Be more specific in manual about what is NOT permitted; an FAQ could work. Provide scenarios and how to handle them.
- Begin a date review to identify anomalies. This could be a required system developed or implemented by the state.
- Ensure that test administrators understand completely the need for security and the ethics concerned with testing.
- Provide better scripting for staff development to increase level of concern.
- Provide better training about procedures and consequences.
- Provide better training and education for the test administrators. They do not realize the seriousness of securing those documents while the class is at lunch or on breaks.
- Help administrators understand which irregularities should be reported to TEA.
- Require the teacher to box the tests and have the teacher seal the box before completed tests are returned.
- Provide briefs for teachers rather than multipage text manuals.

- Bring tests to campus administration.
- Provide a camera or sound in every testing room and require close monitoring by supervisors.
- Provide a camera in the classroom.
- Cell phones should be collected in each class and placed in front of the room before a test is begun. Teachers should have a seating chart to note where students sit.
- Central office personnel should be assigned to a campus throughout testing.
- Central office personnel should be assigned to individual campuses to help with the monitoring of assessments.
- Classroom teachers should not test their own students.
- Provide a PowerPoint presentation on test security to be used across the state.
- Provide PowerPoint training by TEA for training on computers.
- Communicate with all involved and responsible for administering the test.
- Computer testing would be great! Please continue with this study.
- Because of concerns about cell phone use by students, we should collect belongings from the students, particularly cell phones. Seating charts with names and identification numbers should be used.
- To address concerns regarding the use of dictionaries on ELA, we should seal the revising and editing portion and then allow students to use the dictionary. AP does this reseal policy.
- Continue providing training materials provided by TEA; continuity is needed.
- Continue to emphasize the requirement for maintaining test security from the administration setting level to the district coordinator level.
- Continue training the central office to monitor during all tests.
- Provide a report on the measure analysis. Problems we deal with are highly stressed teachers, some consultants, and high stakes for accountability and students.
- Use different forms for all test levels.
- District investigation boards need to be set up.
- District personnel should administer tests in a group setting with teachers serving as monitors.
- Districts should impose random monitoring of test sites.
- District testing staff must realize the importance of testing security.
- Do away with ratings system for schools to lessen the desire to reach recommended and exemplary schools.
- Do not attach monetary incentives to testing.
- Do not allow teachers to test their own students.
- Do not add lots of testing procedures (99.9% of the administrative personnel should not be punished for a few people).
- Do not make the test mandatory; instead make it reward based (rewards such as grants so kids can go on educational field trips).
- Educate! Educate! Educate! Stress the importance of education.
- Eliminate requirement not to discuss an assessment after the assessment; this requirement is nearly impossible to enforce.
- Eliminate the requirement not to discuss the test after all tests have been submitted.
- Emphasize the oath.
- Expand training follow-up and continuing support for top administrators.
- Explain the regulations and impact of the test to all of those who may be involved in test administration.
- Explain how cheating affects other schools, students, and the validity of test results.
- Explain what happens when an irregularity is reported and include information such as who is responsible for conducting the investigation and formally writing the plan.
- Provide extensive training and accountability for test coordinators (district).

- Provide an FAQ document on security issues.
- Allow fewer students in a testing room.
- First year for me.
- Get the training manuals to us earlier so we can do more thorough training. We usually have only one hour two to four days before testing.
- Give teachers a written copy of the oath signed and have a monitor or proctor in each room.
- Security is good on the front end, but we need swifter penalties for violations. Some think nothing happens, anyway.
- Provide a guideline for what constitutes a testing breach of security.
- Document all students who have not completed testing so that when students are moved to a different room, security is ensured and tests are not lost.
- Have a monitor in each classroom with the teacher.
- Mandate all training for personnel on a campus.
- Someone other than the teacher should administer the assessment.
- Students should certify at the end that no anomalies occurred.
- Have TEA send its staff to schools that are testing.
- Do not allow teachers to test their own students.
- Make assistant principals responsible for all state testing.
- Provide a testing coordinator with thorough training for each campus and provide procedures at the campus level for testing.
- Have outside test administrators similar to the N.A.E.P. administer the exams.
- Allow the district coordinator to address all new teachers on security at the yearly new teacher in-service as well as address all teachers at the district-level in-service.
- Graphing calculators must be cleared to default.
- Test security is working.
- Our district has good test security measures.
- Test administration training and signing the oath is adequate. Most administrators understand it.
- Require all campuses to count through the shrink-wrap before it goes to campuses. Train in September and in December.
- Incidents should be reported to someone other than the district testing coordinator because that person filters the incidents and only reports the major violations. In some instances, some of the minor acts need to be reported.
- Short of requiring independent monitoring of all classrooms, current procedures are sufficient.
- Current procedures are adequate.
- Irregularities are mistakes made by campus personnel, not attempts to cheat.
- Test administrator manuals should be sent earlier to allow for better and more comprehensive training.
- If teachers and principals know that test irregularities will be looked at, there will be fewer problems. The superintendents need to address this in their districts.
- Stress the importance of security to test administration.
- Important errors are caused by the volume of tests and are not fraudulent. Errors will vary proportionally to the volume of tests.
- Increase break-time requirements for teachers; allow teachers to volunteer for positions requiring high security.
- Increase monitoring efforts by state and district staff, review the principal oath to the district, integrate training of campus test administrators, and require principals to monitor the test administration.
- Inform the teachers and make sure teachers are following the procedures.
- Ensure that all district test coordinators are trained, beginning at the top with the superintendent.

- It seems that teachers and principals take too much ownership and lose their objectivity on test administration. The staff at one school should administer the test at another school.
- Security starts with the administrator and his or her philosophy and ethics.
- Keep classroom doors open during testing for easy, quick monitoring by campus administrators and testing coordinators.
- Limit the number of teachers and other personnel involved in the testing; perhaps online testing will help.
- Lock down the test materials preparation room.
- Mail oaths. Teachers would take it more seriously if they had to send their oath to the state or even to the region service center.
- Make sure campus principals understand the importance of security. They set the tone for that campus.
- Make sure your test coordinators have the same values the principal has.
- TEA personnel should handle the many forms teachers and administrators have to track and keep up with. Field tests are an additional burden. Pearson owns TEA.
- Materials should be sent over in one box per school with no overlapping for return. A district-level person should review returned boxes to ensure that all materials are there.
- Classes should be monitored by a certified teacher who does not teach those students.
- A monitor should be in the room with the test administrator.
- A monitor should be in every classroom to maintain security.
- Monitoring teams should be at each testing site throughout day of testing.
- Monitors should not be connected to the school system. Districts could swap personnel.
- Monitors should be assigned to pick up test booklets immediately after the administration, and booklets should be packaged at a central location with monitoring.
- Monitors in classrooms during testing would help the urge to "help out" on testing.
- Provide objective monitors to campuses to check on test security and procedures and to catch campuses doing well.
- Monitors should be placed in classrooms, and principals should do walk-throughs during testing. Constant monitoring is necessary.
- Monitors should be assigned to all test rooms. Test administrators should be classroom teachers. Monitors should distribute materials.
- Require more classroom visits by the campus coordinator, building administrators, and central administrator during testing.
- Provide more monitoring at all levels.
- Provide more monitoring of the testing process.
- Offer more teacher training and promote understanding of testing. The public thinks we just teach the test.
- Ensure that teachers understand the significance of test security. The teachers sign an oath without seeing the oath's importance.
- More time is needed for teacher training. Training materials are needed earlier in the year.
- More training for teachers, more time to train more, and more administrative support are necessary. Have administrators, not counselors, run the tests.
- Offer more training for teachers.
- More vigilant monitoring of test administrators on the campus is needed.
- Ms. [name withheld] has been very unpleasant to deal with and makes calling with questions a chore. It makes one not want to call to avoid talking to her.
- No changes in the current system are needed. Principals need to oversee the current system and be responsible.
- Copying essays should not be allowed at all.

- Require administrators to take an oath after the administration to reiterate that they are not aware of violations.
- One person should have access to the test in the district with an alternative person. The test should be distributed to schools one hour before testing starts.
- Require online testing instead of paper.
- Online testing prevents answer sheet tampering and booklet security breaches.
- Offer online testing where fewer personnel are involved.
- During testing, allow only students who are testing on campus. Then only students and test administrators are there, and all the attention is on them.
- Open classroom doors during training.
- Organizations involving principals must help testing coordinators with this issue.
- Allow outside test monitors to randomly visit campuses and talk with staff.
- Penalties are not sufficient. Positive appeals to professionalism and what is best for students are necessary. This needs to be stated and shared in direct language.
- Penalties are needed for all violations, but much less drastic than the ones that are currently used (i.e., private reprimands to local school boards or superintendent).
- Place cameras in all classrooms.
- Post a PSA-type announcement on district websites and home pages of school websites as constant reminders to staff.
- Precoded test booklets and better labels to separate sections (like those used for SDAA and field tests) are needed.
- Principals must become more involved.
- Provide adequate facilities to minimize transportation of materials.
- Radically reduce the complexity of test administration procedures. Teachers don't take time to thoroughly review before an administration to the degree that campus and district coordinators do.
- Reduce the level of pressure placed on schools to provide the resources that are needed to educate each child to the level to be successful on the test.
- Require administrators to attend trainings for testing.
- Require outside monitors at the campus level. The TEA staff always gives me different answers every time I call with a problem.
- Required educational service center training for new educators.
- Review security breach ramifications in teacher education programs.
- Scrap the previewing test (LAT). Have monitors on every campus.
- Provide a script of training for test administration in a manual so that all schools train on the same rules.
- Seal all sides of each test; test the grade levels on different days (for example, only ninth grade on Tuesday, tenth grade on Wednesday).
- Provide a separate third-grade answer document or specify which areas of the third-grade test booklet must not contain student work in order for the booklet answer to scan correctly.
- Share information at administration meeting.
- Make a short, simple checklist to disseminate security guidelines to all involved in test administration.
- Test administrators should not have ties to the school or testing.
- Limit the number of people who handle the materials.
- Teachers who are chosen to be test administrators need to understand the seriousness of security.
- Require new teachers to attend special training sessions.
- The state must design a policy for reviewing the results of statewide tests for anomalies, irregularities, or possible violations of test administration guidelines.
- Require all school personnel to watch a video created by the state about testing security.

- Stop accountability ratings and identify improvement.
- Stop focusing on the test and focus on proper education for the students.
- Impose stricter sanctions.
- Implement systematic monitoring.
- TEA can contract supervisors to monitor test security.
- TEA should develop PowerPoint presentation of test security for training.
- Teachers need to understand their responsibility and the repercussions of their responsibility. Even though we have extensive detailed training and teachers know the campus and district coordinator, they must take the responsibility very seriously.
- Teachers should attend training off campus or outside of their district to learn about high stakes in testing.
- Teachers should not test their own students. However, when outsiders administer, students' insecurity and apathy may have a negative impact on testing.
- Test on different days for different grades; do not test all students at the same time because there is not enough staff.
- Test monitors on testing days.
- Test security has not been a problem in our district.
- Test security information should be required to be documented in the teacher/staff handbook.
- The testing coordinator at the district level needs to train their staff for security procedures.
- The testing department does a wonderful job.
- Create a testing division that would appoint regional administrators to monitor testing at the campus level (not district level).
- Testing materials should never be in the hands of a single individual. They should always be handled by two people.
- Provide testing proctors for the classroom.
- Testing should be in closed rooms, and students should be seated in alphabetical order, not in large lecture rooms.
- Testing should take place in a central area.
- The test administrator should sign an oath that is included in the testing packets, not just the one overall oath.
- There are so many test dates and so much SDAA II test date confusion that there will be more chances for errors.
- Harsh penalties inhibit some educators from reporting concerns.
- The shortened time frame for return tests is adding so much pressure that making more mistakes is possible. Stress results in decreased security.
- The statewide PowerPoint presentation for training is helpful.
- The test booklet ID number should be written on each page of the test booklet.
- The test is too long. When students change rooms or monitors, more opportunities for security breaches arise.
- Too many tests are given at the same time. The number of test administrators and proctors is reduced, thus eliminating the amount of staff available. Test different grades on different days.
- Train and over-train.
- Train not only test personnel but also all campus employees (instructional personnel) on procedures and security.
- Training must be done by one person who is knowledgeable and would assure that training is consistent.
- Require training for all responsible parties.
- Establish uniformity in training procedures across campuses throughout the state; send a strong, clear message about expectations.

- Create a video with security testing breach scenarios and booklets that demonstrate scenarios, especially examples of oral administrations.
- Show videos to demonstrate to teachers the proper way to monitor.
- Suggest ways to check results from anomalies.
- We are doing all we can do to provide good security.
- We have testing in “pods” in which one person monitors security over a few teachers at a time.
- We place two certified teachers in each room to ensure that no security is breached.
- We would like more visits by TEA personnel to campus. They need to be more visible.
- We wish we could just trust the integrity of everyone involved.

Appendix D3

Responses to Open-Ended Survey Items

Survey Item #21: "If you have any other comments about test security or related topics, please write them in the space to the right."

Responses:

- Do not test SDAA II and TAKS at the same time! Not enough personnel to have proctor and administrator in room to monitor each class.
- An ACO administrator is assigned to each campus during testing.
- Administrators should be in charge of materials.
- After tests are released to the public, the phrase "Released by TEA" should appear across each page of both the online and hard-copy documents.
- Also, students now regularly have cell phones and other communication devices. We make an issue of this to the students, but there is such a risk no matter what.
- As the test calendar and schedule get more complex, we are more likely to make errors in test procedures.
- As the testing calendar becomes more complex, more mistakes will happen. We are only human!
- Balance of security and teacher stress—teachers are stressed with student performance and know they are all viewed as potential cheaters. Let's emphasize the positive and reduce the stress.
- [Name withheld] is *very* rude to district coordinators on the telephone.
- Campuses need to prepare students so that no one feels the need to cheat.
- Add a checklist for formal review of testing anomalies.
- Communication to all staff in the district is the key.
- I am concerned about online testing.
- Do not always get letter back from TEA with final list of reported irregularities. Need this.
- Do not test SDAA II at the same time as TAKS. Not enough personnel to assure test security while administering test.
- Don't add more "stuff" please.
- Even with consistent training, it is a concern that teachers who feel pressure might take it upon themselves to breach security.
- For online tests, do not give districts the address until test day.
- Give us examples of what needs to be reported or what can be handled at the district level.
- Go online as soon as possible to reduce possible security breaches.
- Great idea to have training modules standardized and available online. They are a great tool!
- Having teachers administer the test—especially the high-stakes testing—is like having a wolf in the henhouse. Too much temptation. Coming up with a system to have a contracted professional group administer TAKS would solve this problem. A system like SAT, etc.
- Help. We need a separate third-grade answer document. Our kids can handle it. They do so on benchmarks and on campus assessments. This is the only area of concern we have. Our kids show their work on the tests, and many times their work goes into the third-grade bubble area. Help.
- How can we make teachers (administrators) realize that they must *read the manual*?
- Could the e-mail be used as a modification?

- I believe more direction needs to be given as to what constitutes a "true reportable" irregularity, what needs to be kept as district documentation, and what needs to be reported to TEA.
- I believe our district is very vigilant in self-monitoring our campuses.
- I have been discussing test security with all groups—principals, test coordinators, and teachers—on a regular basis, not just at the TAKS training.
- I have worked as a test coordinator at both elementary and high school levels. Secondary teachers don't appear to take security and following instructions seriously enough. Part of the problem is that the campus principal does not take it seriously enough.
- I move my teachers from their regular classrooms—computers are not allowed to be turned on.
- I suggest you share more information about SBEC cases and the specifics and consequences.
- I think one of our best defenses was the list of actual infractions given out at the ESC training in December.
- I truly believe the problem is not as pervasive as the media says it is.
- I would like some guidance in how to analyze anomalies; for example, what are the appropriate statistics to use? I appreciate the help you give us, especially [name withheld]'s department.
- I would like to have more information on how to review test results for possible security issues. Where could I go for information on this?
- It all boils down to the character of each individual, which is almost impossible to predict or plan. This is unfortunate.
- It's a shame that we have to worry about this issue. One idea that may be feasible is to require test administrators to administer tests only to students that they are not directly teaching. For example, have a certified reading teacher administer the math exam and vice versa.
- Like any other profession, you cannot legislate professionalism. It has to be encouraged by establishing a professional environment.
- Monitors will be responsible for collecting materials.
- More knowledge and information should be created on the importance of test security and appropriate central office assessment staff. There should be mandatory central office staff test monitoring.
- More training on oral administrations.
- More trainings!
- Much more needs to be provided at the campus level—more literature, etc.
- My biggest concern is that a teacher will forget a rule and then apply it incorrectly.
- Need district and campus administrators to back up campus coordinator in training regarding district philosophy and state law.
- Need guide resolutions of irregularities submitted to TEA.
- Need more information on security breaches. What repercussions to districts, schools, or personnel ensued? Statistical analysis doesn't take into account variables such as an inexperienced teacher, events that impact performance such as the death of classmates, long-term teacher absences, a change in curriculum or programs, etc.—instead there are automatic assumptions of cheating. TEA becomes our enemy. Whose integrity should be questioned when judgments are made to all facts explored?
- Salaries should never be directly linked to test results.
- Testing online will avoid security problems.
- People need to understand what is at stake.
- People will always find a way to cheat. The penalty must be great for even the smallest infraction. For example, the loss of certification.
- Please attempt to provide as much specific information as possible.

- Please do not increase paperwork. The current methods are working. More paperwork will complicate an already complicated system.
- Please do not punish the 99.9% of districts that are doing the correct thing just because a few are not.
- Please emphasize the large percentage that are doing things right.
- Principals set the tone for the attitude toward testing in their buildings. Principals must be trained just like testing coordinators.
- Provide clear guidelines for monitors to follow so that they know what to look for.
- Provide full test days and not an abbreviated schedule at the secondary level.
- Providing testing days in their entirety, not abbreviated days, lessens the probability of compromising test security.
- Quicker response from state after report of services interaction has been received by TEA.
- Reduce the number of tests.
- Regional trainings are not good. They were pitiful this year, other than the part done by [name withheld]. Her part was great.
- Reported to TEA and what can be handled internally with documentation.
- SDAA II secure manuals should have the security and confidential integrity and procedures in a separate book for test administrators to use and read.
- Simplify the instructions for ELA and writing that have two SEA sections.
- Sometimes people report a breach of security in order to ruin someone for revenge—to get rid of them. Such allegations can kill a person's career.
- Superintendents and principals need to attend training.
- TEA is too slow to respond.
- TEA needs to publish a set of "scenarios" with questions posed as concrete examples that trainers can review with their staff in training sessions. These scenarios should be based on data from incident reports.
- Teachers (test administrators) are not taking it seriously, regardless of training.
- Teachers and administrators have the highest sense of ethical responsibility. I would hate to see this issue resulting in teachers being considered "guilty until proven innocent."
- Teachers don't understand about validity or reliability issues. Even though they teach the subject area, they are not to discuss or change answers.
- Teachers should not be in the position of security monitor. A separate monitor should be present and responsible for test security.
- Test in a place away from classroom.
- Test security is really overwhelming. Teachers sometimes don't use their brains when it comes to test security. It's as if they are so stunned that they can't think clearly.
- Test security procedures currently in place are adequate. The type of breaches being reported have more to do with educator ethics or the lack of. I believe this is an administrative issue and not one that requires additional responsibility on classroom teachers or campus-level test coordinators.
- The SDAA II testing calendar is so confusing that it encourages errors. The manual is confusing in some areas. Don't provide answer documents that you don't want students to bubble. It just creates errors.
- Testing days are *not* days for teachers to catch up on grading, reading, newspaper, etc.
- Texas Education Telecommunication Network training across state could be very helpful in this area. Model good procedures.
- Thank you for your continued support under the stringent testing circumstances we are now in.
- The attitude of district testing coordinators, counselors, and principals actually sets the tone.

- The building principals need to be more responsible for the security problems on their campuses, too. Many use offhand approach—i.e., "it is the test coordinator's problem." It appears O.K. for TEA not to know, but when school personnel don't know, we are penalized.
- The mistakes are made because of the large numbers of students being tested and the complexity of the current testing system.
- The paraprofessional assisting with organizing material needs to also sign a security oath.
- There is a problem regarding small districts having limited personnel to do the testing in addition to their "full plate" of regular responsibilities. We have no assistants of any type. Help! Also, there is little turnaround time with regard to receiving and shipping materials. We can't get one shipped before another is delivered. This creates more room for error.
- The system is so large that misinformation spreads more quickly than a juicy rumor.
- Threatening the loss of one's teaching certificate sends the wrong leadership message.
- There have been many changes and expansions to the testing at the high school level. The teachers there are the most taxed and are unwilling to accept changes. They have been testing forever and think they know it all.
- There needs to be a balance between test security and security paranoia for teachers. The teachers are under so much stress not only from the testing but also from the additional responsibility of reporting peers.
- There is just no way to alter a person's integrity as long as he or she is human. As long as humans handle tests, there will be some cheating.
- This will be a growing concern as the stakes continue to rise. Also, if monetary incentives are included by the legislature, there will be even more cause for concern.
- There are too many tests in too short of a time frame.
- There is too much focus on accountability vs. student improvement.
- Tracking secure materials in large districts that have very small staff is like herding cats. The volume is overwhelming to handle without the chance of something being misplaced. Imagine 63,000 test booklets and three to four people in central trying to keep track of all of it. Increasing the staff is not an option. Online testing would eliminate that.
- Would like training in how to review results for anomalies.
- Training paraprofessionals and staff on prohibited actions, such as asking students how they did. We have a large number of American Sign Language students. Teachers have already reported incidences of cheating on classroom tests.
- Have two administrators in a room at all times. At least one of them should be certified.
- Have two test administrators in each room during testing.
- Ultimately, all test security is reliant upon the integrity of the test administrator.
- There is an unbelievable amount of responsibility for campus-level coordinators, given the myriad testing opportunities in place. The work is still being done by the same person who alone handled TAAS on many campuses. This is in addition to his or her usual responsibilities. Do campus principals even understand how much more extensive this has become?
- Advice to beginning teachers: Use common sense and don't be paranoid.
- We have heard over and over again that test security breaches are a training issue. (I don't mean outright cheating.) It is not a training issue. Most teachers are not as conscientious as they should be; they are so swamped that they pay minimal attention to the myriad details. Also, campus test coordinators are not always who they should be.
- We have solid information regarding legal policy, manuals, etc. The key is uniformity of training and communication about expectations. This is a *moral* issue. Those who choose to cheat are going to do so despite expectations unless they decide that the consequences are too high. *Most* people abide by the expectations in order to benefit students.

- We need a way to decrease the "parameters" on security yet also ensure that all procedures are followed correctly.
- We never get any feedback from the security office when we report security breaches. We still have teachers wringing their hands over self-reported incidents. There is *never* closure on anything.
- We warn test administrators of possible sanctions and disciplinary action. In some cases, the penalties do not seem to fit the "crime."
- What do we do with students who come to us from those districts that are in the media and are way below grade level?
- When violations occur and are reported, penalize those teachers, administrators, etc. TEA does a great job working with districts and handling these situations. The breakdown comes when the violations are reported to the State Board of Education. If a violation is serious enough to be sent to the State Board of Education, it is serious enough to sanction that educator's credentials severely. The term "probated suspension" does nothing to the educator. The result destroys morale and gives the message that nothing will be done to the educator who violates testing security (by helping his or her students on the test, for example).
- When you are dealing with large numbers of people, there is always an issue of someone not being honest.
- With the change in policy regarding in-district transfers, it seems it would open the door for shifting kids around. Everybody would move lower-performing students one school to the left.
- You need an e-mail address for campuses for anyone wanting to submit information directly to the agency.

Appendix D4 – Relationships between Gender and Testing Attitudes

			Gender		
			Male	Female	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	44	309	353
		Expected Count	45.1	307.9	353.0
		% within Testing attitudes	12.5%	87.5%	100.0%
		% within Gender	64.7%	66.6%	66.4%
		% of Total	8.3%	58.1%	66.4%
	All other responses	Count	24	155	179
		Expected Count	22.9	156.1	179.0
		% within Testing attitudes	13.4%	86.6%	100.0%
		% within Gender	35.3%	33.4%	33.6%
		% of Total	4.5%	29.1%	33.6%
Total		Count	68	464	532
		Expected Count	68.0	464.0	532.0
		% within Testing attitudes	12.8%	87.2%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	12.8%	87.2%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.095 [b]	1	.758		
Continuity Correction [a]	.029	1	.865		
Likelihood Ratio	.094	1	.759		
Fisher's Exact Test				.784	.428
Linear-by-Linear Association	.095	1	.758		
N of Valid Cases	532				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 22.88.

Appendix D5 – Relationships between Gender and Understanding of Test Security Responsibilities

			Gender		
			Male	Female	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	32	211	243
		Expected Count	31.2	211.8	243.0
		% within Understanding responsibilities for test security	13.2%	86.8%	100.0%
		% within Gender	47.1%	45.7%	45.8%
		% of Total	6.0%	39.8%	45.8%
	All other responses	Count	36	251	287
		Expected Count	36.8	250.2	287.0
		% within Understanding responsibilities for test security	12.5%	87.5%	100.0%
		% within Gender	52.9%	54.3%	54.2%
		% of Total	6.8%	47.4%	54.2%
Total		Count	68	462	530
		Expected Count	68.0	462.0	530.0
		% within Understanding responsibilities for test security	12.8%	87.2%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	12.8%	87.2%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.046[b]	1	.830		
Continuity Correction[a]	.007	1	.933		
Likelihood Ratio	.046	1	.830		
Fisher's Exact Test				.896	.465
Linear-by-Linear Association	.046	1	.830		
N of Valid Cases	530				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 31.18.

Appendix D6 – Relationships between Gender and Comfort Reporting Test Security Breach

			Gender		Total
			Male	Female	
Comfort with reporting security breach	Very comfortable	Count	26	210	236
		Expected Count	30.1	205.9	236.0
		% within Comfort with reporting security breach	11.0%	89.0%	100.0%
		% within Gender	38.2%	45.2%	44.3%
		% of Total	4.9%	39.4%	44.3%
	All other responses	Count	42	255	297
		Expected Count	37.9	259.1	297.0
		% within Comfort with reporting security breach	14.1%	85.9%	100.0%
		% within Gender	61.8%	54.8%	55.7%
		% of Total	7.9%	47.8%	55.7%
Total		Count	68	465	533
		Expected Count	68.0	465.0	533.0
		% within Comfort with reporting security breach	12.8%	87.2%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	12.8%	87.2%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.153[b]	1	.283		
Continuity Correction[a]	.890	1	.346		
Likelihood Ratio	1.165	1	.280		
Fisher's Exact Test				.299	.173
Linear-by-Linear Association	1.151	1	.283		
N of Valid Cases	533				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 30.11.

Appendix D7 – Relationships between Gender and Likelihood of Reporting Test Security Breach

			Gender		
			Male	Female	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	28	188	216
		Expected Count	27.6	188.4	216.0
		% within Likelihood of reporting test security breach	13.0%	87.0%	100.0%
		% within Gender	41.2%	40.4%	40.5%
		% of Total	5.3%	35.3%	40.5%
	Very likely to be reported	Count	30	168	198
		Expected Count	25.3	172.7	198.0
		% within Likelihood of reporting test security breach	15.2%	84.8%	100.0%
		% within Gender	44.1%	36.1%	37.1%
		% of Total	5.6%	31.5%	37.1%
	All other responses	Count	10	109	119
		Expected Count	15.2	103.8	119.0
		% within Likelihood of reporting test security breach	8.4%	91.6%	100.0%
		% within Gender	14.7%	23.4%	22.3%
		% of Total	1.9%	20.5%	22.3%
Total		Count	68	465	533
		Expected Count	68.0	465.0	533.0
		% within Likelihood of reporting test security breach	12.8%	87.2%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	12.8%	87.2%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.055[a]	2	.217
Likelihood Ratio	3.246	2	.197
Linear-by-Linear Association	.894	1	.344
N of Valid Cases	533		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.18.

Appendix D8 – Relationships between Highest Degree and Testing Attitudes

			Highest degree (BA, MA or PhD)			
			Bachelor's	Master's	Doctorate	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	32	294	28	354
		Expected Count	39.4	287.9	26.7	354.0
		% within Testing attitudes	9.0%	83.1%	7.9%	100.0%
		% within Highest degree (BA, MA or PhD)	54.2%	68.2%	70.0%	66.8%
		% of Total	6.0%	55.5%	5.3%	66.8%
	All other responses	Count	27	137	12	176
		Expected Count	19.6	143.1	13.3	176.0
		% within Testing attitudes	15.3%	77.8%	6.8%	100.0%
		% within Highest degree (BA, MA or PhD)	45.8%	31.8%	30.0%	33.2%
		% of Total	5.1%	25.8%	2.3%	33.2%
Total		Count	59	431	40	530
		Expected Count	59.0	431.0	40.0	530.0
		% within Testing attitudes	11.1%	81.3%	7.5%	100.0%
		% within Highest degree (BA, MA or PhD)	100.0%	100.0%	100.0%	100.0%
		% of Total	11.1%	81.3%	7.5%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.771[a]	2	.092
Likelihood Ratio	4.575	2	.102
Linear-by-Linear Association	3.457	1	.063
N of Valid Cases	530		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.28.

Appendix D9 – Relationships between Highest Degree and Understanding Test Security Responsibilities

			Highest degree (BA, MA or PhD)			
			Bachelor's	Master's	Doctorate	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	27	191	23	241
		Expected Count	26.9	195.8	18.3	241.0
		% within Understanding responsibilities for test security	11.2%	79.3%	9.5%	100.0%
		% within Highest degree (BA, MA or PhD)	45.8%	44.5%	57.5%	45.6%
		% of Total	5.1%	36.2%	4.4%	45.6%
	All other responses	Count	32	238	17	287
		Expected Count	32.1	233.2	21.7	287.0
		% within Understanding responsibilities for test security	11.1%	82.9%	5.9%	100.0%
		% within Highest degree (BA, MA or PhD)	54.2%	55.5%	42.5%	54.4%
		% of Total	6.1%	45.1%	3.2%	54.4%
Total		Count	59	429	40	528
		Expected Count	59.0	429.0	40.0	528.0
		% within Understanding responsibilities for test security	11.2%	81.3%	7.6%	100.0%
		% within Highest degree (BA, MA or PhD)	100.0%	100.0%	100.0%	100.0%
		% of Total	11.2%	81.3%	7.6%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.484[a]	2	.289
Likelihood Ratio	2.475	2	.290
Linear-by-Linear Association	.893	1	.345
N of Valid Cases	528		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.26.

Appendix D10 – Relationships between Highest Degree and Comfort Reporting Security Breach

			Highest degree (BA, MA or PhD)			
			Bachelor's	Master's	Doctorate	Total
Comfort with reporting security breach	Very comfortable	Count	25	193	17	235
		Expected Count	26.6	190.7	17.7	235.0
		% within Comfort with reporting security breach	10.6%	82.1%	7.2%	100.0%
		% within Highest degree (BA, MA or PhD)	41.7%	44.8%	42.5%	44.3%
		% of Total	4.7%	36.3%	3.2%	44.3%
	All other responses	Count	35	238	23	296
		Expected Count	33.4	240.3	22.3	296.0
		% within Comfort with reporting security breach	11.8%	80.4%	7.8%	100.0%
		% within Highest degree (BA, MA or PhD)	58.3%	55.2%	57.5%	55.7%
		% of Total	6.6%	44.8%	4.3%	55.7%
Total		Count	60	431	40	531
		Expected Count	60.0	431.0	40.0	531.0
		% within Comfort with reporting security breach	11.3%	81.2%	7.5%	100.0%
		% within Highest degree (BA, MA or PhD)	100.0%	100.0%	100.0%	100.0%
		% of Total	11.3%	81.2%	7.5%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.261 [a]	2	.878
Likelihood Ratio	.262	2	.877
Linear-by-Linear Association	.030	1	.864
N of Valid Cases	531		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.70.

Appendix D11 – Relationships between Highest Degree and Likelihood of Reporting Security Breach

			Highest degree (BA, MA or PhD)			
			Bachelor's	Master's	Doctorate	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	25	174	17	216
		Expected Count	24.4	175.3	16.3	216.0
		% within Likelihood of reporting test security breach	11.6%	80.6%	7.9%	100.0%
		% within Highest degree (BA, MA or PhD)	41.7%	40.4%	42.5%	40.7%
		% of Total	4.7%	32.8%	3.2%	40.7%
	Very likely to be reported	Count	19	160	18	197
		Expected Count	22.3	159.9	14.8	197.0
		% within Likelihood of reporting test security breach	9.6%	81.2%	9.1%	100.0%
		% within Highest degree (BA, MA or PhD)	31.7%	37.1%	45.0%	37.1%
		% of Total	3.6%	30.1%	3.4%	37.1%
	All other responses	Count	16	97	5	118
		Expected Count	13.3	95.8	8.9	118.0
		% within Likelihood of reporting test security breach	13.6%	82.2%	4.2%	100.0%
		% within Highest degree (BA, MA or PhD)	26.7%	22.5%	12.5%	22.2%
		% of Total	3.0%	18.3%	.9%	22.2%
Total		Count	60	431	40	531
		Expected Count	60.0	431.0	40.0	531.0
		% within Likelihood of reporting test security breach	11.3%	81.2%	7.5%	100.0%
		% within Highest degree (BA, MA or PhD)	100.0%	100.0%	100.0%	100.0%
		% of Total	11.3%	81.2%	7.5%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.458[a]	4	.484
Likelihood Ratio	3.729	4	.444
Linear-by-Linear Association	.757	1	.384
N of Valid Cases	531		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.89.

Appendix D12 – Relationships between Job Setting and Testing Attitudes

			Job setting				
			Elementary school (pre K-5)	Middle school (6-8)	High school (9-12)	Central office	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	76	39	72	157	344
		Expected Count	65.5	40.7	76.1	161.6	344.0
		% within Testing attitudes	22.1%	11.3%	20.9%	45.6%	100.0%
		% within Job setting	77.6%	63.9%	63.2%	64.9%	66.8%
		% of Total	14.8%	7.6%	14.0%	30.5%	66.8%
	All other responses	Count	22	22	42	85	171
		Expected Count	32.5	20.3	37.9	80.4	171.0
		% within Testing attitudes	12.9%	12.9%	24.6%	49.7%	100.0%
		% within Job setting	22.4%	36.1%	36.8%	35.1%	33.2%
		% of Total	4.3%	4.3%	8.2%	16.5%	33.2%
Total		Count	98	61	114	242	515
		Expected Count	98.0	61.0	114.0	242.0	515.0
		% within Testing attitudes	19.0%	11.8%	22.1%	47.0%	100.0%
		% within Job setting	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	19.0%	11.8%	22.1%	47.0%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.419[a]	3	.093
Likelihood Ratio	6.759	3	.080
Linear-by-Linear Association	3.726	1	.054
N of Valid Cases	515		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.25.

Appendix D13 – Relationships between Job Setting and Understanding Responsibilities for Test Security

			Job setting				
			Elementary school (pre K-5)	Middle school (6-8)	High school (9-12)	Central office	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	54	25	53	105	237
		Expected Count	45.3	28.2	51.7	111.8	237.0
		% within Understanding responsibilities for test security	22.8%	10.5%	22.4%	44.3%	100.0%
		% within Job setting	55.1%	41.0%	47.3%	43.4%	46.2%
		% of Total	10.5%	4.9%	10.3%	20.5%	46.2%
	All other responses	Count	44	36	59	137	276
		Expected Count	52.7	32.8	60.3	130.2	276.0
		% within Understanding responsibilities for test security	15.9%	13.0%	21.4%	49.6%	100.0%
		% within Job setting	44.9%	59.0%	52.7%	56.6%	53.8%
		% of Total	8.6%	7.0%	11.5%	26.7%	53.8%
Total		Count	98	61	112	242	513
		Expected Count	98.0	61.0	112.0	242.0	513.0
		% within Understanding responsibilities for test security	19.1%	11.9%	21.8%	47.2%	100.0%
		% within Job setting	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	19.1%	11.9%	21.8%	47.2%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.619[a]	3	.202
Likelihood Ratio	4.614	3	.202
Linear-by-Linear Association	2.567	1	.109
N of Valid Cases	513		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 28.18.

Appendix D14 – Relationships between Job Setting and Comfort Reporting Test Security Breach

			Job setting				
			Elementary school (pre K-5)	Middle school (6-8)	High school (9-12)	Central office	Total
Comfort with reporting security breach	Very comfortable	Count	38	30	51	113	232
		Expected Count	44.1	27.9	51.3	108.8	232.0
		% within Comfort with reporting security breach	16.4%	12.9%	22.0%	48.7%	100.0%
		% within Job setting	38.8%	48.4%	44.7%	46.7%	45.0%
		% of Total	7.4%	5.8%	9.9%	21.9%	45.0%
	All other responses	Count	60	32	63	129	284
		Expected Count	53.9	34.1	62.7	133.2	284.0
		% within Comfort with reporting security breach	21.1%	11.3%	22.2%	45.4%	100.0%
		% within Job setting	61.2%	51.6%	55.3%	53.3%	55.0%
		% of Total	11.6%	6.2%	12.2%	25.0%	55.0%
Total		Count	98	62	114	242	516
		Expected Count	98.0	62.0	114.0	242.0	516.0
		% within Comfort with reporting security breach	19.0%	12.0%	22.1%	46.9%	100.0%
		% within Job setting	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	19.0%	12.0%	22.1%	46.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.105[a]	3	.551
Likelihood Ratio	2.121	3	.548
Linear-by-Linear Association	1.168	1	.280
N of Valid Cases	516		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 27.88.

Appendix D15 – Relationships between Job Setting and Likelihood of Reporting Security Breach

			Job setting				
			Elementary school (pre K-5)	Middle school (6-8)	High school (9-12)	Central office	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	33	26	44	110	213
		Expected Count	40.5	25.6	47.1	99.9	213.0
		% within Likelihood of reporting test security breach	15.5%	12.2%	20.7%	51.6%	100.0%
		% within Job setting	33.7%	41.9%	38.6%	45.5%	41.3%
		% of Total	6.4%	5.0%	8.5%	21.3%	41.3%
	Very likely to be reported	Count	41	22	42	88	193
		Expected Count	36.7	23.2	42.6	90.5	193.0
		% within Likelihood of reporting test security breach	21.2%	11.4%	21.8%	45.6%	100.0%
		% within Job setting	41.8%	35.5%	36.8%	36.4%	37.4%
		% of Total	7.9%	4.3%	8.1%	17.1%	37.4%
	All other responses	Count	24	14	28	44	110
		Expected Count	20.9	13.2	24.3	51.6	110.0
		% within Likelihood of reporting test security breach	21.8%	12.7%	25.5%	40.0%	100.0%
		% within Job setting	24.5%	22.6%	24.6%	18.2%	21.3%
		% of Total	4.7%	2.7%	5.4%	8.5%	21.3%
Total		Count	98	62	114	242	516
		Expected Count	98.0	62.0	114.0	242.0	516.0
		% within Likelihood of reporting test security breach	19.0%	12.0%	22.1%	46.9%	100.0%
		% within Job setting	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	19.0%	12.0%	22.1%	46.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.444[a]	6	.488
Likelihood Ratio	5.502	6	.481
Linear-by-Linear Association	3.761	1	.052
N of Valid Cases	516		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.22.

Appendix D16 – Relationships between District Policy on Test Review and Testing Attitudes

			Review results for anomalies			
			No	Yes	Unsure	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	71	202	71	344
		Expected Count	72.1	194.5	77.4	344.0
		% within Testing attitudes	20.6%	58.7%	20.6%	100.0%
		% within Review results for anomalies	65.1%	68.7%	60.7%	66.2%
		% of Total	13.7%	38.8%	13.7%	66.2%
	All other responses	Count	38	92	46	176
		Expected Count	36.9	99.5	39.6	176.0
		% within Testing attitudes	21.6%	52.3%	26.1%	100.0%
		% within Review results for anomalies	34.9%	31.3%	39.3%	33.8%
		% of Total	7.3%	17.7%	8.8%	33.8%
Total		Count	109	294	117	520
		Expected Count	109.0	294.0	117.0	520.0
		% within Testing attitudes	21.0%	56.5%	22.5%	100.0%
		% within Review results for anomalies	100.0%	100.0%	100.0%	100.0%
		% of Total	21.0%	56.5%	22.5%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.470[a]	2	.291
Likelihood Ratio	2.445	2	.295
Linear-by-Linear Association	.553	1	.457
N of Valid Cases	520		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 36.89.

Appendix D17 – Relationships between District Policy on Test Review and Understanding of Test Security Responsibilities

			Review results for anomalies			
			No	Yes	Unsure	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	50	129	56	235
		Expected Count	49.4	132.5	53.1	235.0
		% within Understanding responsibilities for test security	21.3%	54.9%	23.8%	100.0%
		% within Review results for anomalies	45.9%	44.2%	47.9%	45.4%
		% of Total	9.7%	24.9%	10.8%	45.4%
	All other responses	Count	59	163	61	283
		Expected Count	59.6	159.5	63.9	283.0
		% within Understanding responsibilities for test security	20.8%	57.6%	21.6%	100.0%
		% within Review results for anomalies	54.1%	55.8%	52.1%	54.6%
		% of Total	11.4%	31.5%	11.8%	54.6%
Total		Count	109	292	117	518
		Expected Count	109.0	292.0	117.0	518.0
		% within Understanding responsibilities for test security	21.0%	56.4%	22.6%	100.0%
		% within Review results for anomalies	100.0%	100.0%	100.0%	100.0%
		% of Total	21.0%	56.4%	22.6%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.472[a]	2	.790
Likelihood Ratio	.471	2	.790
Linear-by-Linear Association	.100	1	.752
N of Valid Cases	518		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 49.45.

Appendix D18 – Relationships between District Policy on Test Review and Comfort Reporting Test Security Breach

			Review results for anomalies			
			No	Yes	Unsure	Total
Comfort with reporting security breach	Very comfortable	Count	50	140	42	232
		Expected Count	48.5	130.9	52.5	232.0
		% within Comfort with reporting security breach	21.6%	60.3%	18.1%	100.0%
		% within Review results for anomalies	45.9%	47.6%	35.6%	44.5%
		% of Total	9.6%	26.9%	8.1%	44.5%
	All other responses	Count	59	154	76	289
		Expected Count	60.5	163.1	65.5	289.0
		% within Comfort with reporting security breach	20.4%	53.3%	26.3%	100.0%
		% within Review results for anomalies	54.1%	52.4%	64.4%	55.5%
		% of Total	11.3%	29.6%	14.6%	55.5%
Total		Count	109	294	118	521
		Expected Count	109.0	294.0	118.0	521.0
		% within Comfort with reporting security breach	20.9%	56.4%	22.6%	100.0%
		% within Review results for anomalies	100.0%	100.0%	100.0%	100.0%
		% of Total	20.9%	56.4%	22.6%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.031[a]	2	.081
Likelihood Ratio	5.099	2	.078
Linear-by-Linear Association	2.568	1	.109
N of Valid Cases	521		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 48.54.

Appendix D19 – Relationships between District Policy on Test Review and Likelihood of Reporting Test Security Breach

			Review results for anomalies			
			No	Yes	Unsure	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	41	129	39	209
		Expected Count	43.7	117.9	47.3	209.0
		% within Likelihood of reporting test security breach	19.6%	61.7%	18.7%	100.0%
		% within Review results for anomalies	37.6%	43.9%	33.1%	40.1%
		% of Total	7.9%	24.8%	7.5%	40.1%
	Very likely to be reported	Count	43	106	47	196
		Expected Count	41.0	110.6	44.4	196.0
		% within Likelihood of reporting test security breach	21.9%	54.1%	24.0%	100.0%
		% within Review results for anomalies	39.4%	36.1%	39.8%	37.6%
		% of Total	8.3%	20.3%	9.0%	37.6%
	All other responses	Count	25	59	32	116
		Expected Count	24.3	65.5	26.3	116.0
		% within Likelihood of reporting test security breach	21.6%	50.9%	27.6%	100.0%
		% within Review results for anomalies	22.9%	20.1%	27.1%	22.3%
		% of Total	4.8%	11.3%	6.1%	22.3%
Total		Count	109	294	118	521
		Expected Count	109.0	294.0	118.0	521.0
		% within Likelihood of reporting test security breach	20.9%	56.4%	22.6%	100.0%
		% within Review results for anomalies	100.0%	100.0%	100.0%	100.0%
		% of Total	20.9%	56.4%	22.6%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.025[a]	4	.285
Likelihood Ratio	5.030	4	.284
Linear-by-Linear Association	.836	1	.360
N of Valid Cases	521		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.27.

Appendix D20 – Relationships between Years of Experience and Testing Attitudes

			Years of school-based experience				
			1-5 years	6-10 years	11-15 years	16 or more years	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	10	35	55	255	355
		Expected Count	12.7	35.3	59.3	247.8	355.0
		% within Testing attitudes	2.8%	9.9%	15.5%	71.8%	100.0%
		% within Years of school-based experience	52.6%	66.0%	61.8%	68.5%	66.6%
		% of Total	1.9%	6.6%	10.3%	47.8%	66.6%
	All other responses	Count	9	18	34	117	178
		Expected Count	6.3	17.7	29.7	124.2	178.0
		% within Testing attitudes	5.1%	10.1%	19.1%	65.7%	100.0%
		% within Years of school-based experience	47.4%	34.0%	38.2%	31.5%	33.4%
		% of Total	1.7%	3.4%	6.4%	22.0%	33.4%
Total		Count	19	53	89	372	533
		Expected Count	19.0	53.0	89.0	372.0	533.0
		% within Testing attitudes	3.6%	9.9%	16.7%	69.8%	100.0%
		% within Years of school-based experience	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	3.6%	9.9%	16.7%	69.8%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.232[a]	3	.357
Likelihood Ratio	3.133	3	.372
Linear-by-Linear Association	2.097	1	.148
N of Valid Cases	533		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.35.

Appendix D21 – Relationships between Years of Experience and Understanding of Test Security Responsibilities

			Years of school-based experience				
			1-5 years	6-10 years	11-15 years	16 or more years	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	5	20	39	179	243
		Expected Count	8.7	24.3	40.3	169.8	243.0
		% within Understanding responsibilities for test security	2.1%	8.2%	16.0%	73.7%	100.0%
		% within Years of school-based experience	26.3%	37.7%	44.3%	48.2%	45.8%
		% of Total	.9%	3.8%	7.3%	33.7%	45.8%
	All other responses	Count	14	33	49	192	288
		Expected Count	10.3	28.7	47.7	201.2	288.0
		% within Understanding responsibilities for test security	4.9%	11.5%	17.0%	66.7%	100.0%
		% within Years of school-based experience	73.7%	62.3%	55.7%	51.8%	54.2%
		% of Total	2.6%	6.2%	9.2%	36.2%	54.2%
Total		Count	19	53	88	371	531
		Expected Count	19.0	53.0	88.0	371.0	531.0
		% within Understanding responsibilities for test security	3.6%	10.0%	16.6%	69.9%	100.0%
		% within Years of school-based experience	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	3.6%	10.0%	16.6%	69.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.268[a]	3	.153
Likelihood Ratio	5.437	3	.142
Linear-by-Linear Association	4.968	1	.026
N of Valid Cases	531		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.69.

Appendix D22 – Relationships between Years of Experience and Comfort Reporting Test Security Breach

			Years of school-based experience				
			1-5 years	6-10 years	11-15 years	16 or more years	Total
Comfort with reporting security breach	Very comfortable	Count	8	22	30	178	238
		Expected Count	8.9	23.6	39.7	165.8	238.0
		% within Comfort with reporting security breach	3.4%	9.2%	12.6%	74.8%	100.0%
		% within Years of school-based experience	40.0%	41.5%	33.7%	47.8%	44.6%
		% of Total	1.5%	4.1%	5.6%	33.3%	44.6%
	All other responses	Count	12	31	59	194	296
		Expected Count	11.1	29.4	49.3	206.2	296.0
		% within Comfort with reporting security breach	4.1%	10.5%	19.9%	65.5%	100.0%
		% within Years of school-based experience	60.0%	58.5%	66.3%	52.2%	55.4%
		% of Total	2.2%	5.8%	11.0%	36.3%	55.4%
Total		Count	20	53	89	372	534
		Expected Count	20.0	53.0	89.0	372.0	534.0
		% within Comfort with reporting security breach	3.7%	9.9%	16.7%	69.7%	100.0%
		% within Years of school-based experience	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	3.7%	9.9%	16.7%	69.7%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.240[a]	3	.101
Likelihood Ratio	6.342	3	.096
Linear-by-Linear Association	2.755	1	.097
N of Valid Cases	534		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.91.

Appendix D23 – Relationships between Years of Experience and Likelihood of Reporting Test Security Breach

			Years of school-based experience				
			1-5 years	6-10 years	11-15 years	16 or more years	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	7	22	24	164	217
		Expected Count	8.1	21.5	36.2	151.2	217.0
		% within Likelihood of reporting test security breach	3.2%	10.1%	11.1%	75.6%	100.0%
		% within Years of school-based experience	35.0%	41.5%	27.0%	44.1%	40.6%
		% of Total	1.3%	4.1%	4.5%	30.7%	40.6%
	Very likely to be reported	Count	9	21	37	131	198
		Expected Count	7.4	19.7	33.0	137.9	198.0
		% within Likelihood of reporting test security breach	4.5%	10.6%	18.7%	66.2%	100.0%
		% within Years of school-based experience	45.0%	39.6%	41.6%	35.2%	37.1%
		% of Total	1.7%	3.9%	6.9%	24.5%	37.1%
	All other responses	Count	4	10	28	77	119
		Expected Count	4.5	11.8	19.8	82.9	119.0
		% within Likelihood of reporting test security breach	3.4%	8.4%	23.5%	64.7%	100.0%
		% within Years of school-based experience	20.0%	18.9%	31.5%	20.7%	22.3%
		% of Total	.7%	1.9%	5.2%	14.4%	22.3%
Total		Count	20	53	89	372	534
		Expected Count	20.0	53.0	89.0	372.0	534.0
		% within Likelihood of reporting test security breach	3.7%	9.9%	16.7%	69.7%	100.0%
		% within Years of school-based experience	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	3.7%	9.9%	16.7%	69.7%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.720[a]	6	.097
Likelihood Ratio	10.860	6	.093
Linear-by-Linear Association	1.478	1	.224
N of Valid Cases	534		

a. 1 cells (8.3%) have expected count less than 5. The minimum expected count is 4.46.

Appendix D24 – Relationships between Job Roles and Testing Attitudes: Teachers

			Teacher		
			Not a teacher	Teacher	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	335	20	355
		Expected Count	329.1	25.9	355.0
		% within Testing attitudes	94.4%	5.6%	100.0%
		% within Teacher	67.5%	51.3%	66.4%
		% of Total	62.6%	3.7%	66.4%
	All other responses	Count	161	19	180
		Expected Count	166.9	13.1	180.0
		% within Testing attitudes	89.4%	10.6%	100.0%
		% within Teacher	32.5%	48.7%	33.6%
		% of Total	30.1%	3.6%	33.6%
Total		Count	496	39	535
		Expected Count	496.0	39.0	535.0
		% within Testing attitudes	92.7%	7.3%	100.0%
		% within Teacher	100.0%	100.0%	100.0%
		% of Total	92.7%	7.3%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.281[b]	1	.039		
Continuity Correction[a]	3.584	1	.058		
Likelihood Ratio	4.074	1	.044		
Fisher's Exact Test				.052	.031
Linear-by-Linear Association	4.273	1	.039		
N of Valid Cases	535				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13. 12.

Appendix D25 – Relationships between Job Roles and Testing Attitudes: School Counselors

			School Counselor		
			Not a school counselor	School counselor	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	293	62	355
		Expected Count	289.3	65.7	355.0
		% within Testing attitudes	82.5%	17.5%	100.0%
		% within School Counselor	67.2%	62.6%	66.4%
		% of Total	54.8%	11.6%	66.4%
	All other responses	Count	143	37	180
		Expected Count	146.7	33.3	180.0
		% within Testing attitudes	79.4%	20.6%	100.0%
		% within School Counselor	32.8%	37.4%	33.6%
		% of Total	26.7%	6.9%	33.6%
Total		Count	436	99	535
		Expected Count	436.0	99.0	535.0
		% within Testing attitudes	81.5%	18.5%	100.0%
		% within School Counselor	100.0%	100.0%	100.0%
		% of Total	81.5%	18.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.757[b]	1	.384		
Continuity Correction[a]	.566	1	.452		
Likelihood Ratio	.747	1	.387		
Fisher's Exact Test				.410	.225
Linear-by-Linear Association	.755	1	.385		
N of Valid Cases	535				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 33. 31.

Appendix D26 – Relationships between Job Roles and Testing Attitudes: Building Administrators

			Administrator-- Bldg level		
			Not a building-level administrator	Building-level administrator	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	281	74	355
		Expected Count	288.0	67.0	355.0
		% within Testing attitudes	79.2%	20.8%	100.0%
		% within Administrator-- Bldg level	64.7%	73.3%	66.4%
		% of Total	52.5%	13.8%	66.4%
	All other responses	Count	153	27	180
		Expected Count	146.0	34.0	180.0
		% within Testing attitudes	85.0%	15.0%	100.0%
		% within Administrator-- Bldg level	35.3%	26.7%	33.6%
		% of Total	28.6%	5.0%	33.6%
Total		Count	434	101	535
		Expected Count	434.0	101.0	535.0
		% within Testing attitudes	81.1%	18.9%	100.0%
		% within Administrator-- Bldg level	100.0%	100.0%	100.0%
		% of Total	81.1%	18.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.665[b]	1	.103		
Continuity Correction[a]	2.297	1	.130		
Likelihood Ratio	2.746	1	.097		
Fisher's Exact Test				.128	.063
Linear-by-Linear Association	2.660	1	.103		
N of Valid Cases	535				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 33.98.

Appendix D27 – Relationships between Job Roles and Testing Attitudes: Central Office Administrators

			Administrator-- Central		
			Not a central administrator	Central administrator	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	257	97	354
		Expected Count	252.6	101.4	354.0
		% within Testing attitudes	72.6%	27.4%	100.0%
		% within Administrator-- Central	67.5%	63.4%	66.3%
		% of Total	48.1%	18.2%	66.3%
	All other responses	Count	124	56	180
		Expected Count	128.4	51.6	180.0
		% within Testing attitudes	68.9%	31.1%	100.0%
		% within Administrator-- Central	32.5%	36.6%	33.7%
		% of Total	23.2%	10.5%	33.7%
Total		Count	381	153	534
		Expected Count	381.0	153.0	534.0
		% within Testing attitudes	71.3%	28.7%	100.0%
		% within Administrator-- Central	100.0%	100.0%	100.0%
		% of Total	71.3%	28.7%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.803[b]	1	.370		
Continuity Correction[a]	.632	1	.427		
Likelihood Ratio	.797	1	.372		
Fisher's Exact Test				.418	.213
Linear-by-Linear Association	.802	1	.371		
N of Valid Cases	534				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 51.57.

Appendix D28 – Relationships between Job Roles and Testing Attitudes: Testing Coordinators

			District testing coordinator		
			Not a district testing coordinator	District testing coordinator	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	253	102	355
		Expected Count	240.0	115.0	355.0
		% within Testing attitudes	71.3%	28.7%	100.0%
		% within District testing coordinator	70.1%	59.0%	66.5%
		% of Total	47.4%	19.1%	66.5%
	All other responses	Count	108	71	179
		Expected Count	121.0	58.0	179.0
		% within Testing attitudes	60.3%	39.7%	100.0%
		% within District testing coordinator	29.9%	41.0%	33.5%
		% of Total	20.2%	13.3%	33.5%
Total		Count	361	173	534
		Expected Count	361.0	173.0	534.0
		% within Testing attitudes	67.6%	32.4%	100.0%
		% within District testing coordinator	100.0%	100.0%	100.0%
		% of Total	67.6%	32.4%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.494[b]	1	.011		
Continuity Correction[a]	6.004	1	.014		
Likelihood Ratio	6.397	1	.011		
Fisher's Exact Test				.014	.007
Linear-by-Linear Association	6.482	1	.011		
N of Valid Cases	534				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 57.99.

Appendix D29 – Relationships between Job Roles and Testing Attitudes: Campus Testing Coordinator

			Campus testing coordinator		
			Not a campus testing coordinator	Campus testing coordinator	Total
Testing attitudes	Very concerned, conscientious, or vigilant	Count	280	74	354
		Expected Count	279.1	74.9	354.0
		% within Testing attitudes	79.1%	20.9%	100.0%
		% within Campus testing coordinator	66.5%	65.5%	66.3%
		% of Total	52.4%	13.9%	66.3%
	All other responses	Count	141	39	180
		Expected Count	141.9	38.1	180.0
		% within Testing attitudes	78.3%	21.7%	100.0%
		% within Campus testing coordinator	33.5%	34.5%	33.7%
		% of Total	26.4%	7.3%	33.7%
Total		Count	421	113	534
		Expected Count	421.0	113.0	534.0
		% within Testing attitudes	78.8%	21.2%	100.0%
		% within Campus testing coordinator	100.0%	100.0%	100.0%
		% of Total	78.8%	21.2%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.042[b]	1	.838		
Continuity Correction[a]	.008	1	.927		
Likelihood Ratio	.041	1	.839		
Fisher's Exact Test				.824	.461
Linear-by-Linear Association	.042	1	.839		
N of Valid Cases	534				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 38.09.

Appendix D30 – Relationships between Job Roles and Understanding of Responsibilities for Test Security: Teachers

			Teacher		
			Not a teacher	Teacher	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	224	20	244
		Expected Count	226.1	17.9	244.0
		% within Understanding responsibilities for test security	91.8%	8.2%	100.0%
		% within Teacher	45.3%	51.3%	45.8%
		% of Total	42.0%	3.8%	45.8%
	All other responses	Count	270	19	289
		Expected Count	267.9	21.1	289.0
		% within Understanding responsibilities for test security	93.4%	6.6%	100.0%
		% within Teacher	54.7%	48.7%	54.2%
		% of Total	50.7%	3.6%	54.2%
Total		Count	494	39	533
		Expected Count	494.0	39.0	533.0
		% within Understanding responsibilities for test security	92.7%	7.3%	100.0%
		% within Teacher	100.0%	100.0%	100.0%
		% of Total	92.7%	7.3%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.513[b]	1	.474		
Continuity Correction[a]	.302	1	.583		
Likelihood Ratio	.511	1	.474		
Fisher's Exact Test				.507	.291
Linear-by-Linear Association	.512	1	.474		
N of Valid Cases	533				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.85.

Appendix D31 – Relationships between Job Roles and Understanding of Responsibilities for Test Security: School Counselors

			School Counselor		
			Not a school counselor	School counselor	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	198	46	244
		Expected Count	199.6	44.4	244.0
		% within Understanding responsibilities for test security	81.1%	18.9%	100.0%
		% within School Counselor	45.4%	47.4%	45.8%
		% of Total	37.1%	8.6%	45.8%
	All other responses	Count	238	51	289
		Expected Count	236.4	52.6	289.0
		% within Understanding responsibilities for test security	82.4%	17.6%	100.0%
		% within School Counselor	54.6%	52.6%	54.2%
		% of Total	44.7%	9.6%	54.2%
Total		Count	436	97	533
		Expected Count	436.0	97.0	533.0
		% within Understanding responsibilities for test security	81.8%	18.2%	100.0%
		% within School Counselor	100.0%	100.0%	100.0%
		% of Total	81.8%	18.2%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.129[b]	1	.719		
Continuity Correction[a]	.061	1	.805		
Likelihood Ratio	.129	1	.720		
Fisher's Exact Test				.736	.402
Linear-by-Linear Association	.129	1	.720		
N of Valid Cases	533				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 44.41.

Appendix D32 – Relationships between Job Roles and Understanding of Responsibilities for Test Security: Building-Level Administrators

			Administrator-- Bldg level		
			Not a building-level administrator	Building-level administrator	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	194	50	244
		Expected Count	197.8	46.2	244.0
		% within Understanding responsibilities for test security	79.5%	20.5%	100.0%
		% within Administrator-- Bldg level	44.9%	49.5%	45.8%
		% of Total	36.4%	9.4%	45.8%
	All other responses	Count	238	51	289
		Expected Count	234.2	54.8	289.0
		% within Understanding responsibilities for test security	82.4%	17.6%	100.0%
		% within Administrator-- Bldg level	55.1%	50.5%	54.2%
		% of Total	44.7%	9.6%	54.2%
Total		Count	432	101	533
		Expected Count	432.0	101.0	533.0
		% within Understanding responsibilities for test security	81.1%	18.9%	100.0%
		% within Administrator-- Bldg level	100.0%	100.0%	100.0%
		% of Total	81.1%	18.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.697[b]	1	.404		
Continuity Correction[a]	.524	1	.469		
Likelihood Ratio	.695	1	.404		
Fisher's Exact Test				.438	.234
Linear-by-Linear Association	.696	1	.404		
N of Valid Cases	533				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 46. 24.

Appendix D33 – Relationships between Job Roles and Understanding of Responsibilities for Test Security: Central Office Administrators

			Administrator-- Central		
			Not a central administrator	Central administrator	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	177	67	244
		Expected Count	173.8	70.2	244.0
		% within Understanding responsibilities for test security	72.5%	27.5%	100.0%
		% within Administrator--Central	46.7%	43.8%	45.9%
		% of Total	33.3%	12.6%	45.9%
	All other responses	Count	202	86	288
		Expected Count	205.2	82.8	288.0
		% within Understanding responsibilities for test security	70.1%	29.9%	100.0%
		% within Administrator--Central	53.3%	56.2%	54.1%
		% of Total	38.0%	16.2%	54.1%
Total		Count	379	153	532
		Expected Count	379.0	153.0	532.0
		% within Understanding responsibilities for test security	71.2%	28.8%	100.0%
		% within Administrator--Central	100.0%	100.0%	100.0%
		% of Total	71.2%	28.8%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.372[b]	1	.542		
Continuity Correction[a]	.264	1	.607		
Likelihood Ratio	.373	1	.542		
Fisher's Exact Test				.565	.304
Linear-by-Linear Association	.371	1	.542		
N of Valid Cases	532				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 70.17.

Appendix D34 – Relationships between Job Roles and Understanding of Responsibilities for Test Security: District Testing Coordinators

			District testing coordinator		
			Not a district testing coordinator	District testing coordinator	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	175	69	244
		Expected Count	165.1	78.9	244.0
		% within Understanding responsibilities for test security	71.7%	28.3%	100.0%
		% within District testing coordinator	48.6%	40.1%	45.9%
		% of Total	32.9%	13.0%	45.9%
	All other responses	Count	185	103	288
		Expected Count	194.9	93.1	288.0
		% within Understanding responsibilities for test security	64.2%	35.8%	100.0%
		% within District testing coordinator	51.4%	59.9%	54.1%
		% of Total	34.8%	19.4%	54.1%
Total		Count	360	172	532
		Expected Count	360.0	172.0	532.0
		% within Understanding responsibilities for test security	67.7%	32.3%	100.0%
		% within District testing coordinator	100.0%	100.0%	100.0%
		% of Total	67.7%	32.3%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.383[b]	1	.066		
Continuity Correction[a]	3.049	1	.081		
Likelihood Ratio	3.400	1	.065		
Fisher's Exact Test				.077	.040
Linear-by-Linear Association	3.376	1	.066		
N of Valid Cases	532				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 78.89.

Appendix D35 – Relationships between Job Roles and Understanding of Responsibilities for Test Security: Campus Testing Coordinators

			Campus testing coordinato		
			Not a campus testing coordinator	Campus testing coordinator	Total
Understanding responsibilities for test security	Very thorough and detailed	Count	201	42	243
		Expected Count	192.3	50.7	243.0
		% within Understanding responsibilities for test security	82.7%	17.3%	100.0%
		% within Campus testing coordinator	47.7%	37.8%	45.7%
		% of Total	37.8%	7.9%	45.7%
	All other responses	Count	220	69	289
		Expected Count	228.7	60.3	289.0
		% within Understanding responsibilities for test security	76.1%	23.9%	100.0%
		% within Campus testing coordinator	52.3%	62.2%	54.3%
		% of Total	41.4%	13.0%	54.3%
Total		Count	421	111	532
		Expected Count	421.0	111.0	532.0
		% within Understanding responsibilities for test security	79.1%	20.9%	100.0%
		% within Campus testing coordinator	100.0%	100.0%	100.0%
		% of Total	79.1%	20.9%	100.0%

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.474[b]	1	.062		
Continuity Correction[a]	3.086	1	.079		
Likelihood Ratio	3.509	1	.061		
Fisher's Exact Test				.069	.039
Linear-by-Linear Association	3.467	1	.063		
N of Valid Cases	532				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 50. 70.

Appendix D36 – Relationships between Job Roles and Likelihood of Reporting Test Security Breach: Teachers

			Teacher		
			Not a teacher	Teacher	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	207	10	217
		Expected Count	200.8	16.2	217.0
		% within Likelihood of reporting test security breach	95.4%	4.6%	100.0%
		% within Teacher	41.7%	25.0%	40.5%
		% of Total	38.6%	1.9%	40.5%
	Very likely to be reported	Count	181	19	200
		Expected Count	185.1	14.9	200.0
		% within Likelihood of reporting test security breach	90.5%	9.5%	100.0%
		% within Teacher	36.5%	47.5%	37.3%
		% of Total	33.8%	3.5%	37.3%
	All other responses	Count	108	11	119
		Expected Count	110.1	8.9	119.0
		% within Likelihood of reporting test security breach	90.8%	9.2%	100.0%
		% within Teacher	21.8%	27.5%	22.2%
		% of Total	20.1%	2.1%	22.2%
Total		Count	496	40	536
		Expected Count	496.0	40.0	536.0
		% within Likelihood of reporting test security breach	92.5%	7.5%	100.0%
		% within Teacher	100.0%	100.0%	100.0%
		% of Total	92.5%	7.5%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.309[a]	2	.116
Likelihood Ratio	4.560	2	.102
Linear-by-Linear Association	3.140	1	.076
N of Valid Cases	536		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.88.

Appendix D37 – Relationships between Job Roles and Likelihood of Reporting Test Security Breach: School Counselors

			School Counselor		
			Not a school counselor	School counselor	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	177	40	217
		Expected Count	176.9	40.1	217.0
		% within Likelihood of reporting test security breach	81.6%	18.4%	100.0%
		% within School Counselor	40.5%	40.4%	40.5%
		% of Total	33.0%	7.5%	40.5%
	Very likely to be reported	Count	170	30	200
		Expected Count	163.1	36.9	200.0
		% within Likelihood of reporting test security breach	85.0%	15.0%	100.0%
		% within School Counselor	38.9%	30.3%	37.3%
		% of Total	31.7%	5.6%	37.3%
	All other responses	Count	90	29	119
		Expected Count	97.0	22.0	119.0
		% within Likelihood of reporting test security breach	75.6%	24.4%	100.0%
		% within School Counselor	20.6%	29.3%	22.2%
		% of Total	16.8%	5.4%	22.2%
Total		Count	437	99	536
		Expected Count	437.0	99.0	536.0
		% within Likelihood of reporting test security breach	81.5%	18.5%	100.0%
		% within School Counselor	100.0%	100.0%	100.0%
		% of Total	81.5%	18.5%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.350[a]	2	.114
Likelihood Ratio	4.242	2	.120
Linear-by-Linear Association	1.051	1	.305
N of Valid Cases	536		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 21.98.

Appendix D38 – Relationships between Job Roles and Likelihood of Reporting Test Security Breach: Building-Level Administrators

			Administrator-- Bldg level		
			Not a building-level administrator	Building-level administrator	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	174	43	217
		Expected Count	176.1	40.9	217.0
		% within Likelihood of reporting test security breach	80.2%	19.8%	100.0%
		% within Administrator-- Bldg level	40.0%	42.6%	40.5%
		% of Total	32.5%	8.0%	40.5%
	Very likely to be reported	Count	157	43	200
		Expected Count	162.3	37.7	200.0
		% within Likelihood of reporting test security breach	78.5%	21.5%	100.0%
		% within Administrator-- Bldg level	36.1%	42.6%	37.3%
		% of Total	29.3%	8.0%	37.3%
	All other responses	Count	104	15	119
		Expected Count	96.6	22.4	119.0
		% within Likelihood of reporting test security breach	87.4%	12.6%	100.0%
		% within Administrator-- Bldg level	23.9%	14.9%	22.2%
		% of Total	19.4%	2.8%	22.2%
Total		Count	435	101	536
		Expected Count	435.0	101.0	536.0
		% within Likelihood of reporting test security breach	81.2%	18.8%	100.0%
		% within Administrator-- Bldg level	100.0%	100.0%	100.0%
		% of Total	81.2%	18.8%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.085[a]	2	.130
Likelihood Ratio	4.366	2	.113
Linear-by-Linear Association	1.865	1	.172
N of Valid Cases	536		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 22.42.

Appendix D39 – Relationships between Job Roles and Likelihood of Reporting Test Security Breach: Central Office Administrators

			Administrator-- Central		
			Not a central administrator	Central administrator	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	148	69	217
		Expected Count	154.9	62.1	217.0
		% within Likelihood of reporting test security breach	68.2%	31.8%	100.0%
		% within Administrator-- Central	38.7%	45.1%	40.6%
		% of Total	27.7%	12.9%	40.6%
	Very likely to be reported	Count	150	50	200
		Expected Count	142.8	57.2	200.0
		% within Likelihood of reporting test security breach	75.0%	25.0%	100.0%
		% within Administrator-- Central	39.3%	32.7%	37.4%
		% of Total	28.0%	9.3%	37.4%
	All other responses	Count	84	34	118
		Expected Count	84.3	33.7	118.0
		% within Likelihood of reporting test security breach	71.2%	28.8%	100.0%
		% within Administrator-- Central	22.0%	22.2%	22.1%
		% of Total	15.7%	6.4%	22.1%
Total		Count	382	153	535
		Expected Count	382.0	153.0	535.0
		% within Likelihood of reporting test security breach	71.4%	28.6%	100.0%
		% within Administrator-- Central	100.0%	100.0%	100.0%
		% of Total	71.4%	28.6%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.358[a]	2	.308
Likelihood Ratio	2.370	2	.306
Linear-by-Linear Association	.690	1	.406
N of Valid Cases	535		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 33.75.

Appendix D40 – Relationships between Job Roles and Likelihood of Reporting Test Security Breach: District Testing Coordinators

			District testing coordinator		
			Not a district testing coordinator	District testing coordinator	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	142	75	217
		Expected Count	146.8	70.2	217.0
		% within Likelihood of reporting test security breach	65.4%	34.6%	100.0%
		% within District testing coordinator	39.2%	43.4%	40.6%
		% of Total	26.5%	14.0%	40.6%
	Very likely to be reported	Count	137	62	199
		Expected Count	134.7	64.3	199.0
		% within Likelihood of reporting test security breach	68.8%	31.2%	100.0%
		% within District testing coordinator	37.8%	35.8%	37.2%
		% of Total	25.6%	11.6%	37.2%
	All other responses	Count	83	36	119
		Expected Count	80.5	38.5	119.0
		% within Likelihood of reporting test security breach	69.7%	30.3%	100.0%
		% within District testing coordinator	22.9%	20.8%	22.2%
		% of Total	15.5%	6.7%	22.2%
Total		Count	362	173	535
		Expected Count	362.0	173.0	535.0
		% within Likelihood of reporting test security breach	67.7%	32.3%	100.0%
		% within District testing coordinator	100.0%	100.0%	100.0%
		% of Total	67.7%	32.3%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.854 [a]	2	.652
Likelihood Ratio	.852	2	.653
Linear-by-Linear Association	.767	1	.381
N of Valid Cases	535		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 38.48.

Appendix D41 – Relationships between Job Roles and Likelihood of Reporting Test Security Breach: Campus Testing Coordinators

			Campus testing coordinator		
			Not a campus testing coordinator	Campus testing coordinator	Total
Likelihood of reporting test security breach	Almost certainly would be reported	Count	177	39	216
		Expected Count	170.4	45.6	216.0
		% within Likelihood of reporting test security breach	81.9%	18.1%	100.0%
		% within Campus testing coordinator	41.9%	34.5%	40.4%
		% of Total	33.1%	7.3%	40.4%
	Very likely to be reported	Count	162	38	200
		Expected Count	157.8	42.2	200.0
		% within Likelihood of reporting test security breach	81.0%	19.0%	100.0%
		% within Campus testing coordinator	38.4%	33.6%	37.4%
		% of Total	30.3%	7.1%	37.4%
	All other responses	Count	83	36	119
		Expected Count	93.9	25.1	119.0
		% within Likelihood of reporting test security breach	69.7%	30.3%	100.0%
		% within Campus testing coordinator	19.7%	31.9%	22.2%
		% of Total	15.5%	6.7%	22.2%
Total		Count	422	113	535
		Expected Count	422.0	113.0	535.0
		% within Likelihood of reporting test security breach	78.9%	21.1%	100.0%
		% within Campus testing coordinator	100.0%	100.0%	100.0%
		% of Total	78.9%	21.1%	100.0%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.714[a]	2	.021
Likelihood Ratio	7.266	2	.026
Linear-by-Linear Association	5.772	1	.016
N of Valid Cases	535		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 25.13.

Appendix E

Reviewer Qualifications / Biographical Statement

Gregory J. Cizek, PhD

Dr. Cizek is Professor of Educational Measurement and Evaluation at the University of North Carolina at Chapel Hill, where he teaches courses in applied psychometrics, statistics, and research methods. His research interests include setting performance standards (i.e., cut scores) on tests, cheating and test security, testing policy, and classroom assessment. He is the author of over 250 journal articles, book chapters, conference papers, and other publications. His work has been published in journals such as *Educational Researcher, Educational Assessment, Review of Educational Research, Journal of Educational Measurement, Educational Measurement: Issues and Practice, Educational Policy, Phi Delta Kaplan*, *Education Week* and elsewhere. He is a contributor to the *Handbook of Classroom Assessment* (Academic Press, 1998); editor and contributor to the *Handbook of Educational Policy* (Academic Press, 1999) and *Setting Performance Standards: Concepts, Methods, and Perspectives* (Lawrence Erlbaum, 2001); and author of *Filling in the Blanks* (Fordham Foundation, 1999), *Cheating on Tests: How to Do It, Detect It, and Prevent It* (Lawrence Erlbaum, 1999), *Detecting and Preventing Classroom Cheating: Promoting Integrity in Educational Assessment* (Corwin Press, 2003), and *Addressing Test Anxiety in a High Stakes Environment* (with S. Burg, Corwin Press, 2005). He provides expert consultation at the state and national level on testing programs and policy, and he has served as an expert witness in a federal court case involving allegations of cheating on a medical specialty examination.

Dr. Cizek received his PhD in Measurement, Evaluation, and Research Design from Michigan State University. He has managed national licensure and certification testing programs for American College Testing (ACT) in Iowa City, Iowa and served as a test development specialist for the Michigan Educational Assessment Program (MEAP). Previously, he was an elementary school teacher for 5 years in

Michigan, and professor of educational research and measurement at the University of Toledo (OH). From 1997-1999, he was elected to and served as vice-president of a local board of education in Ohio.