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An Audit Report on

Textbook Inventory Accountability at the Texas Education Agency

March 2007
Report No. 07-019



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Overall Conclusion

The Texas Education Agency (Agency) should improve controls to ensure that charter schools and school districts (schools) submit accurate, complete, and timely information regarding textbook inventories into the Educational Materials and Textbook (EMAT) system to prevent the unnecessary purchase of textbooks from textbook depositories. Currently, the EMAT system contains inaccurate and incomplete information about schools' surplus textbook inventories and student enrollment counts, resulting in schools accumulating textbook inventories that exceed the Agency's established textbook surplus quotas. Auditors estimate that the surplus textbook inventory reported in the EMAT system (as of December 2006) is understated by approximately 415,521 textbooks valued at \$18 million.

Although the Agency should improve controls associated with reporting surplus textbook inventories and student enrollment data into the EMAT system, auditors determined that it has implemented processes and controls to strengthen schools' compliance with its textbook purchasing rules and guidelines. However, the effectiveness of these processes and controls is limited by the accuracy, completeness, and timeliness of surplus textbook and enrollment data self-reported by schools to the EMAT system.

Additionally, the Agency does not sufficiently manage EMAT access and security controls. Auditors identified multiple weaknesses in the Agency's management of the EMAT system's user accounts. Without restricting access to the EMAT system, there is a risk of inappropriate modification or deletion of EMAT system data.

The Educational Materials and Textbook (EMAT) System

The EMAT system is the information system used by the Texas Education Agency (Agency), school districts, charter schools, publishers, and freight companies to facilitate the requisition, purchase, payment, and delivery of state-adopted textbooks.

In addition, the EMAT system is used to track textbook inventories, including surplus textbook inventories for schools. Any textbook considered to be surplus is required to be reported as surplus in the EMAT system so it can be made available to another school.

Since the closing of the state textbook depository, the EMAT system has been used to manage the "virtual textbook depository" where each school is responsible for maintaining a part of the State's school textbook inventory. As a result, maintaining complete, accurate, and timely information in the EMAT system is essential to managing the State's school textbook inventory.

Key Points

The Agency does not provide adequate guidance or oversight to schools on calculating surplus inventories.

The Agency does not adequately monitor, review, or verify the information that textbook coordinators enter into the EMAT system. Although the EMAT system collects information on each of the components necessary to calculate surplus inventories in accordance with Title 19, Texas Administrative Code, Chapter 66, the EMAT system does not have the functionality to calculate surplus textbook inventory balances. Instead, the Agency relies on schools to electronically submit self-reported surplus textbook inventory data into the EMAT system.

Schools do not always submit complete and accurate surplus textbook inventories. As a result of the Agency's lack of oversight, it did not identify incomplete and inaccurate textbook inventory counts that textbook coordinators self-reported to the EMAT system. Auditors estimate that the surplus textbook inventory in the EMAT system, as of December 2006, was understated by approximately 415,521 textbooks valued at \$18 million. However, the actual amount of understated surplus textbooks may differ from the auditors' estimate because enrollment counts that schools submit to the EMAT system are not always accurate or complete (see Chapter 1-C). See Table 1 in Appendix 2 for a list of the 40 largest surplus textbook categories according to auditors' calculations.

The Agency does not provide adequate guidance to schools on calculating, reporting, and transferring textbook surpluses. Auditors visited six schools to determine if the textbook surplus inventories reported in the EMAT system reflected actual textbook surplus inventories at the schools and noted the following weaknesses:

- None of the schools' surplus data could be reconciled to inventory records in the EMAT system.
- Four of the schools did not use a standard method for calculating surplus textbook inventories.
- Two of the schools did not identify or report surplus textbooks at all.

Textbook coordinators are not trained to use the EMAT System.

The Agency relies primarily on third parties and an online reference manual to train textbook coordinators. For example, textbook coordinators receive some training on the use of the EMAT system from the Textbook Coordinators Association of Texas and from software vendors. However, textbook coordinators' use of these training resources is voluntary and, according to auditors' survey of textbook coordinators, only 45 percent of respondents elected to attend third-party training sessions.

The Agency does not ensure that schools submit accurate and complete enrollment data to the EMAT system.

The Agency has not developed guidelines or controls to ensure that schools report accurate or complete enrollment counts to the EMAT system. Accurate and complete enrollment data is needed by the Agency to support some of its most critical textbook inventory management decisions. However, schools' self-reported enrollment counts are not verified by the Agency for accuracy or completeness. Auditors identified inaccurate and incomplete enrollment data, including:

- Two schools submitted enrollment counts that overstates enrollment by approximately 14,500 students, representing nearly 23 percent of subjects selected for review.
- Schools did not submit enrollment data for 42 percent of the inventory line items tracked in the EMAT system for the 2006-2007 school year. Schools did not submit some enrollment data because the Agency's automated purchasing process requires schools to enter enrollment data only for the grades and subjects needing additional textbooks.

Accurate enrollment data is critical for the Agency to verify that schools are accurately reporting surplus textbook inventories to the EMAT system and to ensure that schools are ordering textbooks only in amounts that reflect actual student enrollment. Without accurate data, there is a risk that schools may order and obtain unnecessary textbooks.

The Agency has implemented processes and controls to improve schools' compliance with textbook purchasing rules and guidelines, but inaccurate data self-reported by schools limit these controls.

The Agency has implemented processes and controls to improve schools' compliance with its textbook purchasing rules and guidelines. Using these processes, the Agency filled approximately 2,400 (4 percent) of schools' total textbook orders for the 2006-2007 school year with previously purchased textbooks that schools reported as surplus. These processes and controls ensure that:

- Only state-adopted textbooks are purchased.
- Reported surplus textbooks are used to meet schools' textbook orders before new textbooks are purchased.
- Textbook orders do not exceed the State Board of Education's textbook quotas.

However, the effectiveness of these processes and controls is limited by the accuracy, completeness, and timeliness of surplus textbook inventory and student enrollment data self-reported by schools to the EMAT system. (See Chapters 1-A and 1-C.)

The Agency does not ensure that EMAT system data is adequately safeguarded.

The Agency does not sufficiently manage EMAT user accounts. Auditors identified weaknesses associated with the management of user accounts that increase the risk of unauthorized access to the EMAT system, including:

- Multiple EMAT system users sharing the same user ID.
- Active but unused accounts remaining on the EMAT database server.
- Insufficient controls to prevent Agency users from gaining unauthorized access and altering data or initiating transactions.

Insufficient access controls threaten data integrity by allowing individuals access to applications outside their normal job responsibilities and allowing unauthorized individuals to alter data or controls, compromising the Agency's ability to rely on the data in the EMAT system.

Summary of Management's Response

The Agency agrees with the recommendations in this report. The Agency's responses to specific recommendations are included in the Detailed Results section of this report.

Summary of Objective, Scope, and Methodology

The objective of this audit was to determine whether the Agency has controls to ensure accurate, complete, and timely data on school district and charter school textbook inventories in the EMAT system to prevent unnecessary purchases of textbooks from textbook depositories.

The scope of this audit included (1) EMAT system data in December 2006, including textbook inventories, surplus textbook inventory balances, and enrollment counts; (2) physical textbook inventories at charter schools and school districts (schools); and (3) the Agency's automated purchasing process and controls.

The audit methodology included interviewing Agency personnel; analyzing EMAT system data; testing physical textbook inventories at six selected schools; reviewing purchasing processes, policies, and procedures; evaluating automated controls in the EMAT system; and reviewing EMAT system settings and accounts. Auditors also surveyed textbook coordinators at all 1,254 schools in Texas regarding surplus textbook inventories.

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Detailed Results

Chapter 1

The Agency Does Not Ensure Textbook Inventories Recorded in the EMAT System Are Complete and Accurate

As of December 2006, textbook coordinators reported surplus inventories in the Educational Materials and Textbook (EMAT) system totaling 53,948 that the Texas Education Agency (Agency) values at \$2.5 million. However, auditors used additional EMAT data to calculate surplus inventories totaling 469,469, valued at \$20.6 million. The difference between these numbers indicates that charter schools and school districts (schools) may have understated at least \$18 million in surplus inventories. It is important to note that actual surplus textbooks may differ from this estimate because the Agency does not perform timely or complete oversight of the data submitted by the 1,254 schools that currently use the EMAT system and because schools are able to submit inaccurate or incomplete enrollment data.

Chapter 1-A

The Agency Does Not Provide Adequate Guidance or Oversight to Schools on Calculating Surplus Inventories

Texas Administrative Code Definition of Surplus Textbooks

Title 19, Texas Administrative Code, Chapter 66, requires school districts and open-enrollment charter schools to identify surplus instructional materials for any subject area/grade-level based on enrollment.

- For courses in the first year of adoption, textbooks in excess of 110 percent of enrollment shall be considered surplus.
- For courses in the second or later years of adoption, any textbook in excess of 120 percent of enrollment shall be considered surplus.

Schools are not required to report as surplus any textbooks that exceed these definitions but are needed during the next school year. Schools may retain these textbooks if supporting data is submitted to and approved by the Agency. However, auditors determined that the Agency has not received or approved requests to retain surplus textbooks from any schools.

Because the Agency did not adopt any new textbooks for the 2006-2007 school year, all textbook surpluses in this report are calculated using the 120 percent threshold.

The Agency does not adequately monitor, review, or verify the information that textbook coordinators at schools enter into the EMAT system. The Agency previously had a division to audit textbook inventories, but this division no longer exists. Although the EMAT system collects information on each of the components necessary to calculate surplus inventories in accordance with Title 19, Texas Administrative Code, Chapter 66, (see text box) the EMAT system does not have the functionality to calculate surplus textbook inventory balances. Instead, the Agency relies on schools to electronically submit self-reported surplus textbook inventory data into the EMAT system. Additionally, the Agency does not monitor schools' compliance with surplus textbook calculation and reporting requirements.

Schools do not always submit complete or accurate surplus textbook inventories. As a result of the Agency's lack of oversight, it did not identify incomplete and inaccurate textbook surplus counts that textbook coordinators self-reported to

Textbook Coordinators

The textbook coordinator is a position at each school that controls all textbook activity at that school, including:

- Accounting for instructional materials.
- Administration of funds for lost, destroyed, or returned textbooks.
- Maintaining records of textbook distributions and transfers.
- Shipping and receiving textbooks.

the EMAT system. As of December 2006, the EMAT system indicated a total surplus textbook inventory of 53,948 textbooks valued at nearly \$2.5 million. However, auditors used textbook inventory and student enrollment data available in EMAT to calculate a total surplus textbook inventory of 469,469 textbooks valued at over \$20.6 million. See Table 1 in Appendix 2 for a list of the 40 largest surplus textbook categories according to auditors' calculations. The difference between the EMAT reports and auditors' calculation of surplus inventory—415,521 textbooks valued at \$18 million—represents surplus textbooks that schools did not report into the EMAT system. It is important to note that the actual amount of understated surplus textbooks may differ

from auditors' estimate because the enrollment counts that schools submit to the EMAT system are not always accurate or complete. As discussed later in this report, schools did not submit enrollment data for 42 percent of the inventory line items in the EMAT system, and auditors identified instances in which this data was submitted in error. (See Chapter 1-C for additional details on incomplete and inaccurate enrollment data.)

It is important that the Agency maintain accurate textbook surplus inventory because surplus textbooks that schools do not report to the EMAT system are not available to other schools that may need them. The automated purchase process in the EMAT system searches for available surplus textbooks before it purchases new textbooks. As a result of unreported surplus textbooks, the Agency may have completed unnecessary textbooks purchases.

The Agency does not provide adequate guidance to schools on calculating, reporting, and transferring textbook surpluses. The Agency has not developed guidelines or controls to ensure that schools report accurate textbook surplus inventories into the EMAT system. Auditors visited six schools to determine if the textbook surplus inventories reported in the EMAT system reflected actual textbook surplus inventories at the schools as of December 2006. Auditors noted the following weaknesses at these six schools:

- None of the schools' surplus data could be reconciled to inventory records in the EMAT system.
- Four schools did not use a standard method for calculating surplus textbook inventories. Two of these schools did not identify or report surplus textbooks at all:
 - ♦ One school did not count textbooks, had no textbook inventory system, and did not know how to perform the calculation necessary to identify surplus textbooks.

- ♦ One school chose not to submit surplus textbooks to the EMAT system because of the administrative burden of the transaction.
- Auditors identified a total of 4,337 unused textbooks that were in excess of a 20 percent surplus stock and were not reported as surplus to the EMAT system. Although it was not possible to verify all textbook inventories during a school year (most books are assigned to students), there is a high probability that unused books in excess of 20 percent are also in excess of the 120 percent surplus quota defined in Title 19, Texas Administrative Code, Chapter 66.

Four of the schools that auditors visited expressed dissatisfaction with the process of receiving textbooks transferred from other schools. (The two other schools did not enter surplus textbooks into the EMAT system.) These four schools each noted problems when another school refused to complete a transaction in the EMAT system acknowledging that transferred textbooks were received. This also contributes to inaccurate textbook inventories.

The Agency must establish and enforce guidelines for schools' use of surplus textbooks to ensure that it has accurate and complete information on the use of textbooks and that it maximizes the use of textbooks purchased with state funds. Without complete guidance and oversight, schools may continue to submit inaccurate and incomplete surplus textbook information.

Recommendations

The Agency should:

- Require all schools to submit updated surplus textbook inventory counts to the EMAT system by October 1 of each year. The timing of these submissions will help the Agency ensure existing surplus textbook inventories will be available for use by other schools for the majority of each school year.
- Revise its guidelines for schools to ensure that textbook coordinators identify, report, and transfer surplus textbooks.
- Develop and implement a process to monitor schools' submissions of surplus inventory and enrollment data to the EMAT system.
- Periodically calculate surplus inventories at schools, using enrollment and other data within the EMAT system, and use this information to identify and remedy instances in which schools do not submit accurate surplus textbook numbers to the EMAT system.

Management's Response

The Agency agrees with the recommendations. The transition from a central depository to the virtual depository requires textbook coordinators to perform additional tasks within EMAT to ensure surplus inventory data is current.

- *Current 19TAC Chapter 66 rules require districts to report surplus textbook inventory by October 1 each year. The agency will add controls to the EMAT system that would not allow districts to order materials unless their surplus inventory has been updated according to the required timeline. This will require approximately \$50,000 in additional agency resources and will be completed during the 2007-2008 school year.*
- *The agency will provide templates and examples for calculating surplus inventory to assist textbook coordinators in identifying, reporting and transferring surplus books. These tools will be available prior to the start of the 2007-2008 school year. The EMAT system has been revised to send automatic email messages and reminders to the requesting district and the receiving district for each step in the transfer of surplus books.*
- *In order to develop and implement a process to monitor school district surplus and enrollment data, an accountability module should be added to EMAT that would allow a school district to enter updated enrollment data prior to October 1 each year for each course associated with a textbook in the district's inventory. This module would assist the agency in comparing the district's enrollment with the district's declared surplus, on-hand inventory and other data to determine an appropriate quantity range of textbook copies for the district to retain for each multiple list code and thereby identify potential risks if the district has placed an insufficient number of textbooks into surplus. This module would require approximately \$100,000 in development costs.*
- *With the addition of the above module in EMAT, at least five additional systems analysts would be needed to regularly review EMAT data, perform desk audits of enrollment and surplus data reports, identify risks, contact districts, monitor responses and provide necessary management reports. Without the above module and additional staff, the Agency cannot effectively identify and remedy all instances in which schools do not submit accurate surplus textbook numbers to the EMAT system. In the meantime, the Agency will canvas school districts to identify best practices in textbook inventory controls, identification of surplus, and management of enrollment data and develop strategies to assist all districts in these endeavors.*

Textbook Coordinators Are Not Trained to Use the EMAT System

The Agency relies primarily on third parties and on an online reference manual to train textbook coordinators. For example, textbook coordinators receive some training on the use of the EMAT system from the Textbook Coordinators Association of Texas and from software vendors. However, textbook coordinators' use of these training resources is voluntary and, according to auditors' survey of textbook coordinators, only 45 percent of respondents elected to attend third-party training sessions.

Each of the six textbook coordinators at the schools auditors visited indicated they did not receive adequate training on how to use the EMAT system. In addition, auditors surveyed textbook coordinators at all schools on their use of the EMAT system. Of the 378 responses to this survey, only 18 percent received some type of classroom training or online training on how to use the EMAT system.

Agency management believes turnover for the textbook coordinator position is as high as 50 percent, and it is developing additional online training for textbook coordinators to help address training needs. The lack of training combined with the high rate of turnover among textbook coordinators increases the risk that critical information will not be entered into the EMAT system or that critical information will be entered incorrectly.

Recommendations

The Agency should:

- Dedicate resources for training textbook coordinators to use the EMAT system.
- Periodically train textbook coordinators to use the EMAT system.
- Develop a just-in-time training program for newly appointed textbook coordinators.

Management's Response

The Agency agrees with the findings and recommendations. The EMAT system is a complex online ordering and distribution application. High quality, ongoing training to over 1200 textbook coordinators across the state would assist in their understanding and effective use of the EMAT system, especially since the turnover among coordinators is so high each year. Just-in-time training for new coordinators would be beneficial as well.

To provide the necessary training through a comprehensive professional development program, additional staff and resources are required. The development and delivery of hands-on and online training sessions could be outsourced for approximately \$350,000 annually and at least one additional agency FTE would be needed to coordinate and monitor the development and delivery of the training and ensure that regular updates are incorporated to align with the unique aspects of each ordering cycle. If the agency provided the training directly to textbook coordinators, at least 4 additional FTEs would be needed with appropriate administrative and travel budget to support the delivery of training.

With existing agency resources, the following activities are underway:

- *A training session via the TETN videoconferencing system is scheduled for March 2007 to provide information to textbook coordinators prior to the opening of EMAT for orders for the 2007-2008 school year.*
- *Additional regularly scheduled videoconference training will be made available beginning August 2007.*
- *Imbedded online training has been developed and will be available within the EMAT system when it opens in April 2007.*
- *The Textbook Coordinators Manual is being revised and the updated version will be available online prior to the 2007-2008 school year.*
- *A new quick reference guide for newly appointed textbook coordinators is being developed and will be available online prior to the 2007-2008 school year.*

Chapter 1-C

The Agency Does Not Ensure That Schools Submit Accurate and Complete Student Enrollment Data to the EMAT System

The Agency has not developed guidelines or controls to ensure that schools report accurate or complete student enrollment counts to the EMAT system. Accurate enrollment data is needed to support some of the Agency's critical decisions, including:

- Restricting schools' textbook purchases according to the Agency's purchasing quotas and guidelines.
- Determining if schools' inventories include surplus textbooks.
- Identifying schools that grow at the highest rates and, therefore, require more textbooks.

However, schools' self-reported enrollment counts in the EMAT system are not verified by the Agency for accuracy or completeness. Accurate student

enrollment data is critical for the Agency to ensure that schools order textbooks only in amounts that reflect actual student enrollment, as well as to meet the Agency's purchasing quotas for textbooks. Without accurate data, there is a risk that schools may order and obtain unnecessary textbooks.

Schools do not always submit accurate student enrollment counts to the EMAT system. Auditors identified significant discrepancies in the student enrollment counts submitted by two of the six schools visited. For these two schools, the enrollment counts that textbook coordinators entered into the EMAT system overstated enrollment by approximately 14,500, or nearly 23 percent of students in selected subjects.

Schools do not submit complete student enrollment counts to the EMAT system. Schools did not submit student enrollment data for over 42 percent of the inventory line items tracked in the EMAT system for the 2006-2007 school year. Schools did not submit some student enrollment data because the Agency's automated purchasing process requires schools to enter enrollment data only for the grades and subjects needing additional textbooks.

Supplementary student enrollment count information added by the Agency into the EMAT system is not current. At the start of the annual textbook requisition period, the Agency loads additional student enrollment data from the previous school year for kindergarten through 8th grade into the EMAT system, but this additional data is outdated and does not accurately reflect current student enrollment at the schools. Auditors analyzed 13,600 records in the EMAT system for instances in which enrollment data from both sources were submitted. The student enrollment counts submitted by schools were 6 percent greater, a difference of 398,826 total students, than the previous year's enrollment counts loaded by the Agency. This variance indicates that the supplementary student enrollment count information added by the Agency at the start of the annual requisition period does not accurately reflect student enrollment counts at schools at the start of each school year.

If the Agency does not have complete student enrollment data, it will not be able to:

- Verify that schools accurately reported surplus inventories to the EMAT system.
- Ensure that schools ordered only appropriate quantities of new textbooks.

Recommendations

The Agency should dedicate resources to the oversight of school districts, including:

- Require each school to submit complete student enrollment data by October 1 of each school year for all instructional materials in its

inventory. The timing of these submissions will help the Agency ensure existing surplus textbook inventories will be available for use by other schools for the majority of each school year.

- Develop and implement procedures for monitoring enrollment data to ensure that schools submit accurate enrollment counts.

Management's Response

The Agency agrees with the recommendations. However, they have significant impact on agency resources and place additional burden on school districts. See response to IA.

Each year, enrollment data submitted through the PEIMS system is imported into the EMAT system for grades K-8. Districts update enrollment as needed prior to purchasing textbooks in the spring. PEIMS data for high school students provides campus enrollment but districts must enter current enrollment for each of the courses for which they wish to requisition textbooks. The enrollment in these courses fluctuates each semester and could change daily depending on new enrollments or drop/add activity throughout the year. Some courses are not offered each year but every other year or as needed by students.

To require districts to update enrollment in hundreds of courses each year will be a significant additional burden for each school. There are at least 358 multiple list codes for state adopted subject areas as well as additional changes with newly adopted materials. Textbook coordinators would need to obtain the needed data from curriculum coordinators, campus registrars and other district staff at the same time these staff members are involved with all the other activities associated with the start of the school year. Many textbook coordinators have this responsibility in addition to many other roles. Some may be classroom teachers, aides, secretaries, coaches, assistant principals, principals, central office administrators or superintendents. This additional reporting burden would require additional time and resources that are not currently available in most school districts.

To balance this additional burden on school districts, a centralized surplus system housed at a single location along with an annual update of enrollment in EMAT for associated instructional materials in the district's inventory would maximize the use of surplus textbooks and provide additional benefits to school districts and the state.

Central Surplus System

Improved Capabilities: A centralized surplus redistribution facility would consolidate all redistribution, receiving, storage and shipping activities for surplus textbooks statewide. District textbook coordinators would complete

the majority of their work in conjunction with the closing of school in the spring and reopening in the fall. Materials would be collected from students and a physical inventory would be completed during the summer months. Shipment of worn out books, out of adoption materials as well as surplus materials to the depository would take place during the fall. This would allow coordinators to prepare for the receipt of new materials in June and distribute them to each campus in August in preparation for the opening of school.

Benefits: Since this surplus system would be implemented at the state level, large economies of scale would be achieved. Once the central facility became fully operational, we conservatively estimate that the new system would save the state at least \$8,000,000 per year by efficiently redistributing surplus textbooks rather than purchasing new ones. Moreover, the number and complexity of business transactions that would be needed statewide would be minimized. The result would be more timely delivery of textbooks in good condition to Texas students and reduction of costs to local districts.

Costs: We estimate that \$300,000 would be needed to reconfigure EMAT to work with a centralized (physical) redistribution facility. Startup costs for a centralized surplus redistribution facility would be approximately \$762,000 plus possible additional environmental upgrades. Some operating costs could be off-set by sale of recycled materials (pulp).

Costs for Recommendations in Chapter 1

<i>Strategy</i>	<i>FY 07</i>	<i>FY08</i>	<i>FY09 and beyond</i>
<i>Programming changes to EMAT</i>	<i>\$50,000</i>	<i>\$400,000</i>	<i>Maintenance</i>
<i>9 Additional FTEs</i>		<i>\$555,732</i>	<i>\$503,732 annually</i>
<i>Central redistribution facility</i>		<i>\$762,000</i>	<i>\$762,000 annually</i>

The Agency's Processes and Controls Improve Compliance with Textbook Purchasing Rules and Guidelines, But Inaccurate Self-Reported Data Submitted by Schools Limits These Controls

The Agency has implemented processes and controls to improve schools' compliance with its textbook purchasing rules and guidelines. However, the effectiveness of these processes and controls is limited by the accuracy, completeness, and timeliness of enrollment and surplus textbook data self-reported by schools into the EMAT system.

Chapter 2-A

The Agency Has Implemented Processes and Controls to Improve Schools' Compliance with Its Textbook Purchasing Rules and Guidelines

The Agency's textbook purchasing processes and controls ensure that only state-adopted textbooks are purchased. In addition, these processes and controls ensure that (1) reported surplus textbooks are used to meet schools'

textbook orders before new textbooks are purchased and (2) textbook orders do not exceed the State Board of Education's textbook quotas. Using these processes, the Agency filled approximately 2,400 (4 percent) of schools' total textbook orders for the 2006-2007 school year with previously-purchased textbooks that schools reported as surplus.

However, the Agency does not confirm whether schools accurately report surplus textbook counts and student enrollment counts into the EMAT system (see Chapter 1). As a result, the Agency's processes and controls are not effective when schools submit inaccurate and incomplete data.

The Agency relies on the EMAT system to manage the State's textbook inventory and to implement its textbook purchasing rules and guidelines. Through EMAT, the Agency determines schools' textbook eligibility; accepts, reviews, and approves schools' textbook orders; and requires schools to report and transfer surplus textbooks.

Auditors tested selected controls in the EMAT system and determined the controls work as intended to:

- Prevent a school with reported surplus textbooks from ordering the same type of textbooks reported as surplus.
- Ensure that textbooks reported as surplus are transferred to fill another school's order before new textbooks are purchased.

Textbook Eligibility and Quotas

Textbook eligibility for schools is based on three factors:

- The number of students enrolled in a grade and/or subject.
- The number of textbooks from the same multi-list code already assigned to the school based upon the school's annual textbook inventory.
- The statewide quota for the textbook.

A textbook **quota** is the number of textbooks that a school is eligible to purchase for each grade and subject based on its enrollment. The quota is established by the State Board of Education.

- Prevent EMAT users at schools from submitting textbook orders exceeding the textbook quotas established by the State Board of Education.
- Prevent EMAT users at schools from approving textbook orders.
- Prevent a school from ordering textbooks not on the State Board of Education's list of approved and adopted textbooks.

Recommendation

To ensure the effectiveness of its textbook purchasing processes and controls, the Agency should consider implementing the recommendations in Chapter 1 of this report and monitor schools' reporting of surplus textbooks and student enrollment counts.

Management's Response

The Agency agrees with this recommendation and will take the actions outlined in the responses to Chapter 1 to the extent resources are available. The virtual depository system is a disincentive to textbook coordinators. By entering surplus inventory into the system, the coordinator then must monitor the system daily for surplus shipment requests, package the needed materials and arrange pick-up from UPS as well as receive incoming materials and inspect them for usability. Under the central redistribution system that was in place for many years, coordinators completed the majority of their work in conjunction with the closing of school in the spring and reopening in the fall. Materials were collected from students and a physical inventory was completed during the summer months. Shipment of damaged, worn out textbooks, out of adoption materials and surplus materials to the depository would take place during the fall. This allowed coordinators to prepare for the receipt of new materials in June and distribution to each campus in August in preparation for the opening of school. With the virtual depository, additional work is required year round and there is no coordinated process for disposal of worn out textbooks and out of adoption materials. The more materials entered into the virtual depository, the more ongoing work is required during the school year.

In addition to the actions outlined in responses in Chapter 1, the Agency will:

- *Provide guidelines to districts for identifying worn-out books.*
- *Seek proposals for converting worn out books to pulp.*
- *Provide guidelines and options for donation of out of adoption materials according to statute and Chapter 66 rules.*

The Agency Does Not Ensure That EMAT Data Is Adequately Safeguarded

Auditors identified weaknesses in the Agency's management of the EMAT system's user accounts that increase the risk of unauthorized access to the EMAT system. However, auditors did not identify any instances in which data was inappropriately accessed or modified.

The Agency Does Not Sufficiently Manage EMAT User Accounts

Auditors identified weaknesses associated with the Agency's use and management of user accounts that increase the risk of unauthorized access to the EMAT system. These include:

- EMAT user and password information is not always stored in a secure location.
- Multiple EMAT system users share the same user ID and these users have the ability to modify system access controls.
- Active but unused accounts remain on the EMAT database server.
- Not all EMAT users are current Agency employees or current school textbook coordinators. After auditors brought this to the Agency's attention, the Agency asserted that it has revoked this access for terminated employees.
- The EMAT system does not have controls to prevent Agency employees from gaining unauthorized access and altering data or initiating transactions.

Insufficient access controls threaten data integrity by allowing individuals access to applications outside their normal job responsibilities. By not controlling access, an unauthorized individual may alter EMAT system data or controls, and therefore, compromise the Agency's ability to rely on data in that system.

Recommendations

The Agency should ensure:

- Users have unique user IDs and passwords for accessing information resources.
- Users have the ability to access only EMAT functions that are necessary to complete job assignments, including the ability to modify system access.

- User and system passwords are periodically updated and are securely stored.
- All unused and unnecessary accounts are deactivated in a timely manner.

The Agency also should establish a process and controls to immediately revoke access when employees are terminated and when textbook coordinator roles are reassigned.

Management's Response

The Agency agrees with the findings. In regards to the specific recommendations made by the State Auditor's Office in this report, see Agency responses below.

- *All generic accounts will be deactivated by April 2007. TEA has an existing policy that system users cannot share passwords, and user IDs must be associated with an individual unique user. All EMAT accounts will be brought into compliance with this policy.*
- *A review of the EMAT database server's user accounts will be conducted, and unused accounts will be deleted by April 2007.*
- *A review will be conducted of the 10 users who have the ability to modify EMAT system access. Any users whose job assignments do not currently require this EMAT function will have this ability removed by March 2007.*
- *EMAT user and password information will be stored securely and a new policy will be issued by October 2007, requiring EMAT system users to update their passwords every 6 months. It should be noted that these user IDs and passwords are merely a secondary layer of security for the system.*
- *Those users reported by the State Auditor's Office as not current Agency employees or current school textbook coordinators have been deactivated. The Texas Education Agency will work to reinforce its internal account revocation process and notification system.*

Appendices

Appendix 1

Objective, Scope, and Methodology

Objective

The objective of this audit was to determine whether the Texas Education Agency (Agency) has controls to ensure accurate, complete, and timely data on school district and charter school textbook inventories in the Educational Materials and Textbook (EMAT) system to prevent unnecessary purchases of textbooks from textbook depositories.

Scope

The scope of this audit included (1) EMAT system data in December 2006, including textbook inventories, surplus textbook inventory balances, and enrollment counts; (2) physical textbook inventories at charter schools and school districts (schools); and (3) the Agency's automated purchasing process and controls.

Methodology

The audit methodology included interviewing Agency personnel; analyzing EMAT system data; testing physical textbook inventories at six selected schools in Austin, Houston, and San Antonio; reviewing purchasing processes, policies, and procedures; evaluating automated controls in the EMAT system; and reviewing EMAT system settings and accounts. Auditors also surveyed textbook coordinators at all 1,254 schools in Texas regarding surplus textbook inventories.

Information collected and reviewed included the following:

- Agency policies and procedures.
- EMAT system data for textbook inventories and student enrollment.
- EMAT user and employee lists, network maps, and configuration documents.
- Texas Education Agency Security Environment system user lists and configuration documents.
- Public Education Information Management System enrollment data.
- Department of Information Resources penetration test summaries.
- Textbook inventory systems at selected schools in Texas.

- Physical inventories of unused textbooks at selected schools.

Procedures and tests conducted included the following:

- Conducted interviews with key staff from the Agency regarding the management of the EMAT system, purchasing guidelines, internal policies and procedures, and the textbook purchase process.
- Analyzed EMAT system data and controls.
- Reconciled EMAT system data with selected inventories at charter schools and school districts.
- Reviewed inventory systems at selected schools.
- Verified EMAT system users.

Criteria used included the following:

- Texas Education Code, Chapter 31.
- Title 1, Texas Administrative Code, Chapter 202.
- Title 19, Texas Administrative Code, Chapter 66.
- Agency policies and procedures.
- Agency textbook purchasing guidelines.
- Department of Information Resources guidelines.

Project Information

Audit fieldwork was conducted from November 2006 through February 2007. This audit was conducted in accordance with generally accepted government auditing standards. The following members of the State Auditor's Office staff performed the audit:

- Kels Farmer, CISA (Project Manager)
- Juan Sanchez, MPA, CGAP (Assistant Project Manager)
- Michael Boehme
- Michelle DeFrance, MPA
- Katrina Schlue
- Michael Yokie, CISA
- Dennis Ray Bushnell, CPA (Quality Control Reviewer)

- Lisa R. Collier, CPA (Audit Manager)

Surplus Textbooks Not Reported In EMAT

Auditors estimate that, as of December 2006, the size and value of the statewide textbook surplus inventory recorded in the EMAT system is understated by 415,521 textbooks at a value of \$18 million. Table 1 lists the 40 largest groups of underreported surplus textbooks, in terms of value, by grade and subject. These 40 items represent an estimated value of \$12,162,846, or 67 percent, of the total value of auditors' estimate of understated surplus textbooks.

Table 1

Auditor's Estimate of Surplus Textbooks Not Reported in EMAT			
December 2006			
Grade and Subject	Quantity of Understated Surplus Books	Value of Understated Surplus Books	Number of Adopted Materials Included in Surplus^a
Grade 7: Science	13,745	\$748,805	4
Grade 7: Mathematics	15,258	\$611,377	12
Grades 9-12: Biology	9,601	\$598,974	3
Grades 9-12: Literature	10,985	\$559,649	6
Grade 7: Literature/Reading	8,684	\$447,694	6
Grade 1: English, Language Arts, and Reading	4,493	\$404,370	7
Grade 7: English, Language, and Composition	8,606	\$367,609	9
High School: Integrated Physics and Chemistry	6,446	\$362,620	3
High School: World Geography Studies	5,775	\$347,908	4
Grade 5: Mathematics	9,422	\$347,380	7
Grade 7: Texas History and Geography	5,657	\$339,190	4
Grade 6: Science	6,222	\$338,953	4
Grade 6: Literature/Reading	6,265	\$315,424	7
Grade 5: Science	9,026	\$311,397	4
Grade 5: Reading	6,634	\$300,189	4
Grade 3: Reading	5,784	\$289,200	6
Grade 6: Mathematics	7,645	\$283,982	14
Grade 5: English, Language, and Composition	7,436	\$282,531	3
Grade 8: Science	5,099	\$277,769	4
Grade 8: Literature/Reading	5,238	\$269,834	6
Grade 4: Mathematics	7,249	\$267,546	7
Grade 8: Mathematics	6,573	\$264,788	10

**Auditor's Estimate of Surplus Textbooks Not Reported in EMAT
December 2006**

Grade and Subject	Quantity of Understated Surplus Books	Value of Understated Surplus Books	Number of Adopted Materials Included in Surplus ^a
Grade 4: Reading	5,765	\$257,984	4
Grade 2: Reading	4,964	\$248,200	6
High School: Algebra I	5,849	\$245,118	12
High School: United States Government	4,190	\$243,342	3
Grade 6: English, Language, and Composition	5,842	\$237,888	8
Grade 4: Science	7,312	\$233,972	4
High School: Chemistry	4,124	\$224,997	4
Grades 9-12: Literature III	4,195	\$218,961	6
Grade 8: English, Language, and Composition	4,896	\$209,534	9
Grade 4: English, Language, and Composition	6,009	\$208,800	3
Kindergarten: English, Language Arts, and Reading	3,216	\$199,392	5
Grade 3: Science	6,644	\$199,320	4
Grade 6: Social Studies	3,566	\$189,890	6
Grade 1: Spanish Language Arts and Reading	2,102	\$189,180	5
Grades 9-12: Literature II	3,684	\$187,704	6
Grades 9-12: Literature IV	3,529	\$184,215	6
Grade 5: Social Studies	3,887	\$179,774	3
Grade 8: Social Studies	3,070	\$167,386	7
^a Represents the number of textbooks that schools can choose for each grade/subject.			

Source: Auditor analysis of EMAT system data for December 2006

Recent State Auditor's Office Work

Recent SAO Work		
Number	Product Name	Release Date
06-064	An Audit Report on Contract Management at the Texas Education Agency	August 2006
06-036	An Audit Report on Financial Operations at the Texas Education Agency	May 2006
06-025	An Audit Report on Certification of the Permanent School Fund's Bond Guarantee Program for Fiscal Year 2005	March 2006

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