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An Audit Report on

Performance Measures at the Higher Education Coordinating Board

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Report No. 14-008

Performance Measures at the Higher Education Coordinating Board

Overall Conclusion

The Higher Education Coordinating Board (Board) reported reliable results for 10 (91 percent) of 11 key performance measures tested for fiscal year 2012 and the first two quarters of fiscal year 2013. A performance measure result is considered reliable if it is certified or certified with qualification.

Of the 11 performance measures tested, 10 were determined to be certified with qualification. The remaining performance measure was determined to be inaccurate.

It is important to note that many of the performance measures tested rely heavily on data that higher education institutions self-reported to the Board. However, the Board has only limited policies and procedures, such as edit checks and record counts, to verify whether that data is correct or complete. The Board conducts no other verification of the data. Therefore, the results of audit testing are only as reliable as the self-reported data.

Ten key performance measures tested were certified with qualification because, while the reported results were accurate, the controls over data collection and reporting were not adequate to ensure continued accuracy. Those 10 performance measures were:

- Percentage of University Students Graduating in Four Years.
- Percent of Public Two-year Institution Students Graduating in Three Years.
- Number of Students Receiving TEXAS Grants¹.

Background Information

The Higher Education Coordinating Board's (Board) mission is to work with policymakers and education stakeholders to develop and implement a higher education framework focused on initiatives to:

- Dramatically increase the number of postsecondary completions.
- Keep college affordable and accessible for all Texans.
- Align higher education outcomes with current and future workforce needs.

The Board's appropriations totaled \$753.5 million for fiscal year 2012 and \$548.2 million for fiscal year 2013.

Sources: The Board and the General Appropriations Act (82nd Legislature).

¹ The Board reported this performance measure in the Automated Budget and Evaluation System of Texas (ABEST) on a quarterly basis; therefore, auditors tested this performance measure for fiscal year 2012 and the first two quarters of fiscal year 2013.

- Percentage of TEXAS Grant Recipients Who Earn a Baccalaureate Degree within Four Academic Years.
- Dollars Appropriated for Developmental Education.
- Dollars Appropriated for Developmental Education as a Percentage of Lower-division Instruction.
- Number of NHARP² Research Projects Funded.
- Percent Increase in Fall Student Headcount Enrollment since Fall 2000.
- Increase in Fall Student Headcount Enrollment since Fall 2000.
- Percent Increase in Bachelor’s Degrees, Associate’s Degrees, and Certificates Awarded Since Those Awarded Fall 1999 Through Summer 2000.

One key performance measure—Pass Rate on State Certification Exams at Centers for Teaching Education at Texas Association of Developing College Institutions—was inaccurate because (1) the Board did not use the definition of that performance measure specified in the Automated Budget and Evaluation System of Texas (ABEST) to calculate the performance measure result and (2) a portion of the data the Board used to calculate the fiscal year 2012 performance measure was from fiscal year 2011.

Table 1 summarizes the certification results for the 11 key performance measures tested.

Table 1

Performance Measure Results for the Higher Education Coordinating Board (Agency 781)				
Related Objective or Strategy, Classification	Description of Performance Measure	Fiscal Year	Results Reported in ABEST	Results ^a
A, Outcome	Percentage of University Students Graduating in Four Years ^b	2012	29.4%	Certified with Qualification
A, Outcome	Percent of Public Two-year Institution Students Graduating in Three Years ^b	2012	13.3%	Certified with Qualification
B.1.8, Output	Number of Students Receiving TEXAS Grants ^b	2012	76,003	Certified with Qualification
		2013 - First Two Quarters ^c	75,482	Certified with Qualification
B.1.8, Output	Percentage of TEXAS Grant Recipients Who Earn a Baccalaureate Degree within Four Academic Years ^b	2012	16.84%	Certified with Qualification

² This is the Norman Hackerman Advanced Research Program.

Performance Measure Results for the Higher Education Coordinating Board (Agency 781)				
Related Objective or Strategy, Classification	Description of Performance Measure	Fiscal Year	Results Reported in ABEST	Results ^a
E, Outcome	Pass Rate on State Certification Exams at Centers for Teaching Education at Texas Association of Developing College Institutions ^b	2012	59.40%	Inaccurate
A.1.1, Explanatory	Dollars Appropriated for Developmental Education ^b	2012	\$82,236,577	Certified with Qualification
A.1.1, Explanatory	Dollars Appropriated for Developmental Education as a Percentage of Lower-division Instruction ^b	2012	6.16%	Certified With Qualification
C.1.1, Output	Number of NHARP Research Projects Funded	2012	12	Certified with Qualification
A, Outcome	Percent Increase in Fall Student Headcount Enrollment since Fall 2000 ^b	2012	52.30%	Certified with Qualification
A.1.1, Output	Increase in Fall Student Headcount Enrollment since Fall 2000 ^b	2012	532,751	Certified with Qualification
A, Outcome	Percent Increase in Bachelor's Degrees, Associate's Degrees, and Certificates Awarded Since Those Awarded Fall 1999 Through Summer 2000 ^b	2012	60.8%	Certified with Qualification
<p>^a Auditors perform several steps in the certification process for performance measures, including determining the correct results based on data or other information provided by the audited agency. Based on the results of that process, performance measures are designated as either "certified," "certified with qualification," "inaccurate," or "factors prevented certification." Specifically:</p> <ul style="list-style-type: none"> ▪ A performance measure is certified if reported performance is accurate within plus or minus 5 percent of actual performance and if it appears that controls to ensure accuracy are in place for collecting and reporting performance data. ▪ A performance measure is certified with qualification when reported performance appears accurate but the controls over data collection and reporting are not adequate to ensure continued accuracy. A performance measure is also certified with qualification when controls are strong but source documentation is unavailable for testing. A performance measure is also certified with qualification if agency calculation of performance deviated from the measure definition but caused a difference of 5 percent or less between the number reported to ABEST and the correct performance measure result. ▪ A performance measure is inaccurate when the actual performance is not within 5 percent of reported performance, or when there is more than a 5 percent error in the sample of documentation tested. A performance measure is also inaccurate if the agency's calculation deviated from the performance measure definition and caused more than a 5 percent difference between the number reported to ABEST and the correct performance measure result. ▪ A factors prevented certification designation is used if documentation is unavailable and controls are not adequate to ensure accuracy. This designation also will be used when there is a deviation from the measure definition and the auditor cannot determine the correct performance measure result. <p>^b This performance measure relies on data that higher education institutions self-report to the Board.</p> <p>^c The Board reported this performance measure in ABEST on a quarterly basis; therefore, auditors tested this performance measure for fiscal year 2012 and the first two quarters of fiscal year 2013.</p>				

Summary of Management's Response

The Board agrees with the audit findings and recommendations in this report. The Board's detailed management responses are presented immediately following each set of recommendations in the Detailed Results section of this report.

Summary of Information Technology Review

Auditors reviewed selected general and application controls for the information technology systems used to collect and report the Board's performance measure data. Auditors reviewed access, change management, backup and recovery, and application controls governing the processing of data for the primary Educational Data Center (EDC) data collection and SAS reporting systems the Board used to report on the performance of higher education institutions. Additionally, auditors reviewed selected controls for the Board's funding application, Business Management System (BMS), and NHARP system, which it uses to support the reporting of other Board performance measures. Auditors determined that the Board should improve controls over access, change management, and audit trails for the systems reviewed.

The performance measure data auditors reviewed and the Board reported was collected from the educational institutions beginning in September 2006. When possible, auditors reviewed the Board's controls beginning with 2006 through the first two quarters of fiscal year 2013; auditors noted that controls improved over that time period. However, auditors were unable to review other controls, such as access controls, that were in place prior to fiscal year 2013.

Summary of Objectives, Scope, and Methodology

The objectives of the audit were to determine whether the Board:

- Is accurately reporting its performance measures to ABEST.
- Has adequate controls in place over the collection, calculation, and reporting of its performance measures.

The audit scope included 11 key performance measures the Board reported for fiscal year 2012 and the first two quarters of fiscal year 2013.

The audit methodology consisted of auditing reported results for accuracy and adherence to performance measure definitions, evaluating controls over the Board's performance measure calculation processes, testing documentation, assessing the reliability of the data obtained from the Board's information systems that supported performance measure data, and reviewing the data queries that the Board used to extract performance measure information.

Auditors reviewed the reliability of data from the EDC system that was significant to the performance measures tested. Data in the EDC system is certified and submitted by the higher education institutions, but it is not reviewed by the Board; because of that, the EDC system data is only as reliable as the data that institutions submit. Auditors determined that, based on that limitation, the data in the EDC system was sufficiently reliable for the purposes of this audit for 8 of the 11 performance measures tested that rely on EDC system data. The remaining three performance measures used data that auditors determined was sufficiently reliable for the purposes of this audit. Auditors identified weaknesses in the accuracy of some data in the systems audited; however, those weaknesses did not affect the overall reliability of the data.

Auditors communicated other, less significant issues related to the Board's performance measure methodologies and controls over its information technology separately to Board management in writing.

Contents

Detailed Results

Chapter 1	
The Board Should Strengthen Control Processes and Increase Monitoring of Data Related to Its Performance Measures	1
Chapter 2	
The Board Should Improve Controls Specific to Certain Performance Measures Tested.....	5
Chapter 3	
The Board Has Implemented Processes and Strengthened Information Technology Controls to Help Ensure the Integrity of the Data It Collects; However, It Should Make Additional Improvements.....	11

Appendix

Appendix	
Objectives, Scope, and Methodology	14

Detailed Results

Chapter 1

The Board Should Strengthen Control Processes and Increase Monitoring of Data Related to Its Performance Measures

Auditors reviewed 11 of the Higher Education Coordinating Board's (Board) key performance measures. The Board should improve certain controls that affect all performance measures tested. Specifically, the Board should develop documented policies and procedures and conduct and document reviews of performance measure data before it finalizes the results and enters them into the Automated Budget and Evaluation System of Texas (ABEST). The Board also should improve its monitoring and controls over data that higher education institutions submitted electronically to ensure that the data is reliable and accurate for the reporting of the Board's performance measures.

Chapter 1-A

The Board Should Strengthen Certain Controls That Affect All Performance Measures Tested

Policies and Procedures

The Board does not have documented internal policies and procedures for the collection, calculation, and review of its performance measure results. The Board collects data to be used in its performance measures from the higher education institutions through the Educational Data Center (EDC) system using Coordinating Board Management (CBM) reports. While CBM manuals provide guidance on deadlines for reporting that information and definitions and guidance on the data to be reported for each CBM report, those manuals do not guide the Board on how to calculate the performance measures that use that data. In addition, the data that the higher education institutions submit through the EDC system is compiled for the Board's performance measures through the use of queries that produce reports. However, the Board does not have any documented guidance regarding how those queries should be structured. The Board has *Performance Measure Reporting Procedures* for reporting and releasing of performance measure results into ABEST; however, the Board has not updated those procedures since July 2002, even though the Board's processes have changed.

The *Guide to Performance Measure Management* (State Auditor's Office Report No. 12-333, March 2012) (Guide) states that an agency's written policies and procedures should clearly document all steps performed in the collection, calculation, review, and reporting of the performance measure data.

Review of Data

The Board does not have documented reviews of the calculation of its performance measures or documented reviews of the performance measure data entered into ABEST prior to releasing the performance measure result into that system. The Board asserted that it performs informal reviews.

A lack of documented reviews increases the risk that the Board could report inaccurate performance measure results in ABEST. The Guide states that someone other than the individual who performed the performance measure calculations should review the calculations to help ensure that they are consistent with the performance measure definition and free of mathematical errors. The Guide also states that agencies should perform documented reviews of all performance measure data entered into ABEST before they complete the submission of their performance measure results.

Recommendations

The Board should:

- Document in its written policies and procedures all of the steps it performs in the collection, calculation, review, and reporting of performance measure results.
- Perform and document reviews of its calculation of performance measure results.
- Perform and document reviews of the performance measure results it enters into ABEST prior to releasing performance measure results into that system.

Management's Response

The Board agrees that separate documentation in addition to the program documents would strengthen controls and help persons not familiar with the coding understand the procedures and calculations. The Planning and Accountability staff will create documents to outline the policies and procedures for the collection, calculation and review of data required to report the measures. The Board agrees that reviews of the calculation that have been performed need to be documented and records maintained on the review. These corrective actions are the responsibility of the Deputy Assistant Commissioner in Planning and Accountability and will be completed in the fourth quarter of fiscal year 2014.

The Board Has Limited Monitoring and Controls Over the Data It Receives Electronically for Reporting Requirements

Currently, the Board has limited monitoring of the data that is submitted electronically before the Board uses that data for reporting performance measures. Eight of the 11 performance measures tested rely heavily on data that higher education institutions self-reported to the Board through the EDC system. The Board has only limited procedures, such as edit checks and record counts, to verify whether that data is correct or complete.

The Board has implemented some automated controls to help identify inconsistencies in the data, including checking for both data completeness through record counts and data validity through edit checks within the data. Once the higher education institutions submit the data, the Board performs those edit checks to help ensure the completeness and validity of the data and stores the data in the EDC database. Those edit checks help determine whether the report is filled out correctly, but they do not determine whether the information is accurate. If inconsistencies are identified, the Board sends the inconsistencies back to the higher education institution for correction. The higher education institutions then resubmit the corrected data to the Board. When all the inconsistencies are resolved, the higher education institutions are required to certify that the data is correct.

However, the Board does not perform active monitoring to verify the accuracy of the data. That issue was also noted in the Sunset Advisory Commission's 2013 *Final Report with Legislative Action*. In that report, the Sunset Advisory Commission noted that the Board does not have a process to routinely monitor the critical data that higher education institutions in Texas self-report. Senate Bill 215 (83rd Legislature, Regular Session) amended the Texas Education Code to require the Board to "adopt rules to establish an agency-wide, risk-based compliance monitoring function for data reported by institutions of higher education to the Board and used by the Board for funding or policymaking decisions, including data used for formula funding allocations, to ensure the data is reported accurately."

Because of this issue, it should be noted that the performance measures results contained in this report are only as accurate as the self-reported information the higher education institutions submitted.

The Board collects an array of student-related data from 148 higher education institutions and compiles that data into reports to meet the Board's performance measure reporting requirements. That data includes student enrollments, course inventories, class hours and enrollment, student graduations, and financial aid information.

The following performance measures were accurate but were certified with qualification for fiscal year 2012 because of the control weaknesses discussed above:

- Percentage of University Students Graduating in Four Years.
- Percent of Public Two-year Institution Students Graduating in Three Years.
- Percentage of TEXAS Grant Recipients Who Earn a Baccalaureate Degree within Four Academic Years.
- Percent Increase in Bachelor's Degrees, Associate's Degrees, and Certificates Awarded Since Those Awarded Fall 1999 Through Summer 2000.

Recommendation

The Board should develop and document controls over the data that higher education institutions submit.

Management's Response

The Board agrees with the recommendation to better develop and document controls over data submitted by Institutions of Higher Education. Early in FY 13, the Board hired two Compliance Specialists and initiated a formalized compliance monitoring function. Compliance monitoring will continue to review the integrity of the data reported to the Board, and will work closely with Planning and Accountability staff to assess data integrity risk. This corrective action is assigned to the Director, Internal Audit and Compliance, and will be completed in the second quarter of FY 14 when the statutorily mandated negotiated rule making process is completed.

The Board Should Improve Controls Specific to Certain Performance Measures Tested

The Board reported reliable results for fiscal year 2012 and the first two quarters of fiscal year 2013 for 10 (91 percent) of 11 key performance measures tested. A performance measure result is considered reliable if it is certified or certified with qualification. Auditors identified weaknesses in the Board's controls and processes for all 11 performance measures tested.

Number of Students Receiving TEXAS Grants³

This performance measure was certified with qualification for fiscal year 2012 and the first two quarters of fiscal year 2013 because of the control

Results: Certified with Qualification

A performance measure is certified with qualification when reported performance appears accurate but the controls over data collection and reporting are not adequate to ensure continued accuracy. A performance measure also is certified with qualification when controls are strong but source documentation is unavailable for testing. A performance measure also is certified with qualification if agency calculation of performance deviated from the performance measure definition but the deviation caused less than a 5 percent difference between the number reported to ABEST and the correct performance measure result.

weaknesses discussed in Chapter 1. In addition, the fund request forms that are the source documentation for this performance measure did not always support the number of grant recipients the Board reported for fiscal year 2012 and the first two quarters of fiscal year 2013. However, that caused less than a 5 percent difference between the number reported to ABEST and the performance measure results that auditors recalculated. One reason the fund request forms did not always support the total grant recipients the Board reported is that some higher education institutions reported the number of new grant recipients, rather than the cumulative total of grant recipients. Board staff did not detect those errors.

In addition, the Board used the year-end reports in which the higher education institutions certify their cumulative TEXAS grant recipients for the year to report fourth quarter and year-end performance measure results for fiscal year 2012, instead of using the fund request forms that the Board used to report the results for the first three quarters. Because the year-end reports do not always match the fund request forms, the Board adjusts the reported results to match the year-end report. As a result, the Board's certified results do not always match the information in the fund request forms. That may result in the Board reporting incorrect performance measure results in ABEST.

Recommendation

The Board should implement a process to verify whether the information submitted on fund request forms is accurate.

³ The Board reported this performance measure in ABEST on a quarterly basis; therefore, auditors tested this performance measure for fiscal year 2012 and the first two quarters of fiscal year 2013.

Management's Response

The Board agrees with the recommendation. To improve records of the information received through the Funds Request Forms, the Board has implemented a new online system for submitting the forms, starting with requests submitted for the 2013-2014 academic year. The funds request form was changed to request both year-to-date and current-disbursement numbers and a certification statement was added, to be completed by the aid office as the funds request is submitted. The new forms also provide institutions the option of indicating whether a form is an update to a prior form or an original (thus eliminating duplication). These corrective actions are the responsibility of the Director, Grants and Special Programs.

Dollars Appropriated for Developmental Education

Dollars for Developmental Education as a Percentage of Lower-division Instruction

Results: Certified with Qualification

A performance measure is certified with qualification when reported performance appears accurate but the controls over data collection and reporting are not adequate to ensure continued accuracy. A performance measure also is certified with qualification when controls are strong but source documentation is unavailable for testing. A performance measure also is certified with qualification if agency calculation of performance deviated from the performance measure definition but the deviation caused less than a 5 percent difference between the number reported to ABEST and the correct performance measure result.

These two performance measures were certified with qualification for fiscal year 2012 because of the control weaknesses discussed in Chapter 1. In addition, the SAS code and the application that the Board used to gather the data for those two performance measures did not capture all of the required data. Specifically, the SAS code and application did not capture the data related to non-semester-length developmental education reading and writing hours and enrollment information listed in the Board's *Lower-Division Academic Course Guide Manual*. As a result, the performance measure results were understated. However, that error did not cause the Board's reported results in ABEST to differ from the correct results recalculated by auditors by more than 5 percent.

Recommendations

The Board should:

- Update the application it uses to gather data for the Dollars Appropriated for Developmental Education and Dollars for Developmental Education as a Percentage of Lower-division Instruction performance measures to ensure that the application captures all developmental hours.
- Properly design and validate the accuracy and completeness of the SAS code it uses in the performance measure process.

Management's Response

The Board agrees with the recommendation. The SAS program has been modified to include all lower-division and developmental education hours. The results of the programs will be reviewed and the review will be documented. The review of programs to validate accuracy and completeness is the responsibility of the Deputy Assistant Commissioner in Planning and Accountability and the initial review will be completed in the second quarter of fiscal year 2014.

Results: Certified with Qualification

A performance measure is certified with **qualification** when reported performance appears accurate but the controls over data collection and reporting are not adequate to ensure continued accuracy. A performance measure also is certified with qualification when controls are strong but source documentation is unavailable for testing. A performance measure also is certified with qualification if agency calculation of performance deviated from the performance measure definition but the deviation caused less than a 5 percent difference between the number reported to ABEST and the correct performance measure result.

Number of NHARP Research Projects Funded

This performance measure was certified with qualification for fiscal year 2012 because of the control weaknesses discussed in Chapter 1. In addition, the passwords for the Board's Norman Hackerman Advanced Research Program (NHARP) system were not secured as required by Title 1, Texas Administrative Code, Section 202.25. The Guide states that access controls should be implemented to help ensure that only authorized personnel are performing data entry.

The Board's reported results in ABEST for this performance measure were within 5 percent of auditors' recalculated results.

Recommendation

The Board should ensure that NHARP system passwords comply with Title 1, Texas Administrative Code, Section 202.25.

Management's Response

The Board agrees with the NHARP password recommendation. The ISS Director of Application Development & Support will work with the Workforce, Academic Affairs and Research Division to ensure that the NHARP password system brought into compliance with TAC 202 guidelines.

This corrective action is assigned to the Director, Application Development & Support and will be completed in the second quarter of fiscal year 2014.

Percent Increase in Fall Student Headcount Enrollment since Fall 2000

Increase in Fall Student Headcount Enrollment since Fall 2000

Results: Certified with Qualification

A performance measure is certified with **qualification** when reported performance appears accurate but the controls over data collection and reporting are not adequate to ensure continued accuracy. A performance measure also is certified with qualification when controls are strong but source documentation is unavailable for testing. A performance measure also is certified with qualification if agency calculation of performance deviated from the performance measure definition but the deviation caused less than a 5 percent difference between the number reported to ABEST and the correct performance measure result.

These two performance measures were certified with qualification for fiscal year 2012 because of the control weaknesses discussed in Chapter 1. In addition, the methodology the Board used to calculate the performance measures for fiscal year 2012 was not consistent with the performance measure definitions in ABEST. The Board used three different fiscal years to generate the data for both of those performance measures.

The sources of data included:

- Student enrollment information for fiscal year 2012 for public universities; community, technical, and state colleges; medical institutions; and private institutions.
- Student enrollment information for fiscal year 2011 for self-supporting classes in universities.
- Student enrollment information for fiscal year 2010 for career and technical schools.

The performance measure definitions require the Board to use the current year's enrollment data when calculating those two performance measures. The Board should have used fiscal year 2012 data to comply with the definition. However, the Board was unable to comply with the definition because fiscal year 2012 enrollment data was not available for all reporting entities at the time the performance measure was calculated. Instead, the Board's practice was to use the data that was available at the time the performance measure was calculated. Auditors noted that the Board used fiscal year 2010 data to calculate the career school enrollment total when fiscal year 2011 data was available. Career school enrollment increased by 19,756 from fiscal year 2010 to fiscal year 2011.

The purpose of these two performance measures is to track the fall 2000 "Closing the Gap" goal of adding 630,000 more students by 2015. However, the definition as written does not consider any new institutions that may begin reporting data to the Board. As it is currently calculated, the Board's calculation does not provide a consistent comparison for tracking the enrollment increase because not all of the higher education institutions included in the calculations for the reported fiscal year 2012 results were included in the base year (fall 2000) calculations.

The Board's deviations from the ABEST definition did not cause its reported results in ABEST for fiscal year 2012 to deviate by more than 5 percent from auditors' recalculated results.

Recommendations

The Board should:

- Use the most recent enrollment data to calculate the Percent Increase in Fall Student Headcount Enrollment since Fall 2000 and Increase in Fall Student Headcount Enrollment since Fall 2000 performance measures.
- Work with the Legislative Budget Board and the Governor's Office of Budget, Planning, and Policy to update the performance measure definitions with relevant methodology, sources of data, and data limitations so that the definition is consistent with the Board's calculation methodology.

Management's Response

The Board agrees with the recommendation and will use the most recent available data to calculate Fall enrollment measures. The Planning and Accountability staff will work with the LBB to update the measure definition with sources of data available for both the Fall 2000 enrollment and the most recent Fall enrollment. These corrective actions are the responsibility of the Deputy Assistant Commissioner in Planning and Accountability and will be completed in the fourth quarter of fiscal year 2014.

Pass Rate on State Certification Exams at Centers for Teaching Education at Texas Association of Developing College Institutions

Results: Inaccurate

A performance measure is **inaccurate** when the actual performance is 5 percent or greater than the reported performance, or when there is a 5 percent or greater error rate in the sample of documentation tested. A measure also is inaccurate if the agency's calculation deviated from the measure definition and caused a 5 percent or greater difference between the number reported to ABEST and the correct performance measure result.

The Board reported inaccurate results for this performance measure for fiscal year 2012. Specifically, the actual performance as calculated by auditors was 90.6 percent for fiscal year 2012, which differed from the Board's reported results of 59.4 percent.

The Board did not calculate this performance measure in accordance with the ABEST definition. The Board calculated the pass rate percentage for each of the five institutions that report exam results, and then it averaged the percentages for the reported performance measure result. That created a result that did not represent the aggregate pass rate of the participants at all five institutions. As a result, for fiscal year 2012, the Board underreported the pass rate on the state certification exams. Instead, the Board should have calculated the overall pass rate percentage for the five institutions in total. Also, in its

calculations, the Board used fiscal year 2011 data for four of the five higher education institutions, instead of fiscal year 2012 data.

Recommendations

The Board should:

- Calculate the performance measure according to the performance measure definition in ABEST.
- Calculate the performance measure using data for the same fiscal year from all of the higher education institutions included in this performance measure.

Management's Response

The Board agrees with the recommendation to use the most recent available data to calculate the measures and will use the numbers of students taking and passing the exams to calculate the pass rate for all institutions who report. The Planning and Accountability staff will work with the LBB to update the measure definition with sources of data available for the calculation of the measure. These corrective actions are the responsibility of the Deputy Assistant Commissioner in Planning and Accountability and will be completed in the fourth quarter of fiscal year 2014.

The Board Has Implemented Processes and Strengthened Information Technology Controls to Help Ensure the Integrity of the Data It Collects; However, It Should Make Additional Improvements

Auditors reviewed the Board's information technology general controls from September 2006 through March 2013. During that time period, the Board improved its controls to address various weaknesses. Specifically, the Board implemented improved information technology policies and procedures in fiscal year 2012. The Board began performing periodic reviews of access for some of its systems, including the EDC system, in fiscal year 2012. Prior to fiscal year 2102, the Board did not perform periodic reviews.

Some of the data the Board collects from higher education institutions must undergo further processing in order for it to be used for certain performance measures. The Board has designed checks within its processing routines to help identify records that are not processed correctly. Auditors reviewed the logic used to create the performance measure reports and did not identify any significant issues. In addition, the reports generally contained error check routines to help validate that the data was compiled correctly.

However, auditors identified some areas in which the Board should strengthen its controls. Specifically:

- The Board should improve access controls for its database containing higher education institution student data. Neither the Board nor its contractor could identify the individual assigned to one active administrative account for that database. Additionally, one account that belonged to a Board contractor provided access to both the operating system and the EDC server's database. Controls over access are important to help ensure data integrity.
- The Board stored one performance measure report in a location where 27 employees could modify the data in that report. After auditors brought this matter to its attention, the Board reduced the number of staff with that access to four employees.
- The Board had not implemented sufficient controls to detect unauthorized changes to the student information data used in its performance measures. The Board stores some of the student information used in the performance measures audited for years in Board systems before it is needed for reporting. Without adequate controls, that data is at increased risk of inappropriate modification during the time it is being stored. Properly configured, implemented, and reviewed audit trails would help the Board determine whether changes were made to the underlying data, when those changes were made, who made the changes, and what was changed.

- The Board had not conducted an annual test, as required by Title 1, Texas Administrative Code, Section 202.24, within the past three years to restore its database from backups to help ensure that the data can be successfully recovered in a timely manner in the event of an unforeseen event.

Recommendations

The Board should:

- Continue to perform periodic access reviews for its systems.
- Document ownership of all accounts that have access to its systems.
- Implement access controls that provide for proper segregation of duties and limit access rights to the minimum necessary for users to perform job duties.
- Implement processes and controls to help protect student information data from unauthorized changes while in storage.
- Conduct annual tests of the disaster recovery plan to help ensure that in case of an emergency downtime and data loss are minimized.

Management's Response

The Board agrees with the recommendations and has assigned the appropriate corrective actions which are summarized below:

- *Regarding periodic access reviews, the Board will extend its existing quarterly review process to include student database access authorization and access to the related report data storage areas. We will also increase database auditing activities. This corrective action is assigned to the Information Security Officer to be completed in the third quarter of fiscal year 2014.*
- *Regarding the account ownership recommendation, the Board resolved ownership of the database account in question, and reduced access to the performance measure report files. This corrective action was completed in October 2013.*
- *Regarding the segregation of duties recommendation, the Board will implement additional segregation of duties controls specific to database integrity. This corrective action is assigned to the Information Security Officer and is to be completed in the third quarter of fiscal year 2014.*
- *Regarding the protection from unauthorized changes recommendation, the Board will introduce a database audit trail capability to provide*

additional assurance of integrity of performance measure data. The agency's Data Ownership policy will also be updated to address database audit trail requirements for confidential data. This corrective action is assigned to the Information Security Officer and is to be completed in the third quarter of fiscal year 2014.

- *Regarding the disaster recovery testing recommendation, the Board will resume quarterly disaster recovery testing and include, at a minimum, an annual database recovery test for performance measure data. This corrective action is assigned to the Director of Client Relations & Delivery Excellence and is to be completed in the third quarter of fiscal year 2014.*

Appendix

Appendix

Objectives, Scope, and Methodology

Objectives

The objectives of this audit were to determine whether the Higher Education Coordinating Board (Board):

- Is accurately reporting its performance measures to the Automated Budget and Evaluation System of Texas (ABEST).
- Has adequate controls in place over the collection, calculation, and reporting of its performance measures.

Scope

The scope of this audit included 11 key performance measures that the Board reported for fiscal year 2012 (September 1, 2011, through August 31, 2012) and the first two quarters of fiscal year 2013 (September 1, 2012, through February 28, 2013). Those 11 performance measures were:

- Percentage of University Students Graduating in Four Years.
- Percent of Public Two-year Institution Students Graduating in Three Years.
- Number of Students Receiving TEXAS Grants.
- Percentage of TEXAS Grant Recipients Who Earn a Baccalaureate Degree within Four Academic Years.
- Dollars Appropriated for Developmental Education.
- Dollars Appropriated for Developmental Education as a Percentage of Lower-division Instruction.
- Number of NHARP⁴ Research Projects Funded.
- Percent Increase in Fall Student Headcount Enrollment since Fall 2000.
- Increase in Fall Student Headcount Enrollment since Fall 2000.

⁴ This is the Norman Hackerman Advanced Research Program.

- Percent Increase in Bachelor's Degrees, Associate's Degrees, and Certificates Awarded Since Those Awarded Fall 1999 Through Summer 2000.
- Pass Rate on State Certification Exams at Centers for Teaching Education at Texas Association of Developing College Institutions.

Methodology

The audit methodology consisted of auditing reported results for accuracy and adherence to performance measure definitions, evaluating controls over the Board's performance measure calculation processes, testing documentation, assessing the reliability of the data obtained from the Board's information systems that supported the performance measure data, and reviewing the data queries that the Board used to extract performance measure information.

Auditors reviewed the reliability of data from the Education Data Center (EDC) system that was significant to the performance measures tested. Data in the EDC system is certified and submitted by the higher education institutions, but it is not reviewed by the Board; because of that, the EDC system data is only as reliable as the data that institutions submit. Auditors determined that, based on that limitation, the data in the EDC system was sufficiently reliable for the purposes of this audit of 8 of the 11 performance measures tested that rely on EDC system data. Auditors also compared the record counts in the EDC system to SAS record counts to determine data completeness. Auditors also reviewed the SAS code that generated reports to determine whether the data was reliable. Auditors did not test transactions by sampling for the eight performance measures audited that rely on the EDC system. The remaining three performance measures used data that auditors determined was sufficiently reliable for the purposes of this audit. Auditors identified weaknesses in the accuracy of some data in the systems audited; however, those weaknesses did not affect the overall reliability of the data.

For the performance measure Number of Students Receiving Texas Grants, auditors selected a non-statistical random sample of 43 items for testing in fiscal year 2012 and 44 items for testing in the first two quarters of fiscal year 2013. Auditors used representative samples; therefore, the test results from those samples selected can be projected to the entire population. However, because auditors used non-statistical sampling methods, the precision of the projection cannot be calculated.

For the performance measure Number of NHARP Research Projects Funded, auditors reviewed Board meeting agendas, minutes, and grant contracts to determine the reliability of the data for testing and determined that the data was reliable for all 12 projects funded during fiscal year 2012.

For the performance measure Pass Rate on State Certification Exams at Centers for Teacher Education at Texas Association of Developing College

Institutions, auditors obtained summary information for each of the five institutions included in this performance measure calculation and recalculated the pass rate for fiscal year 2012.

Information collected and reviewed included the following:

- Performance measure data within the EDC system that was significant to the performance measures tested.
- NHARP grant data.
- TEXAS Grant fund request forms, vouchers, and year-end certifications.
- Student summary data related to Pass Rate on State Certification Exams at Centers for Teaching Education at Texas Association of Developing College Institutions performance measure.
- Supporting documentation retained in hard-copy and system files.
- Information system reports and programming code.
- Board policies and procedures.

Procedures and tests conducted included the following:

- Interviewing Board staff to gain an understanding of the processes used to calculate performance measures.
- Interviewing Board information technology staff to gain an understanding of the EDC system the Board uses to collect and calculate performance measure information.
- Evaluating the sufficiency of the Board's policies and procedures to determine whether they were adequate to help ensure the correct calculation of the performance measures.
- Auditing performance measure calculations for accuracy and to determine whether the calculations were consistent with the methodology on which the Board, the Legislative Budget Board, and the Governor's Office of Budget, Planning, and Policy agreed.
- Testing documentation to verify the accuracy of reported performance measures and the effectiveness of controls.
- Reviewing system language for the queries used to retrieve, calculate, and report performance measures.
- Performing logical access control testing.

- Assessing performance measure results in one of four categories: certified, certified with qualification, inaccurate, and factors prevented certification. For this audit, a result was considered reliable if it was certified or certified with qualification.

Criteria used included the following:

- *Guide to Performance Measure Management* (State Auditor's Office Report No. 12-333, March 2012).
- ABEST performance measure definitions.
- Title 1, Texas Administrative Code, Chapter 202 – Information Security Standards.
- Board policies and procedures.

Project Information

Audit fieldwork was conducted from April 2013 through August 2013. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The following members of the State Auditor's staff performed the audit:

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Copies of this report have been distributed to the following:

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The Honorable Joe Straus III, Speaker of the House, Joint Chair

The Honorable Jim Pitts, House Appropriations Committee

The Honorable Harvey Hilderbran, House Ways and Means Committee

Office of the Governor

The Honorable Rick Perry, Governor

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