

MEMORANDUM

TO: Dr. Ralph Wilcox, Provost & Executive Vice President of Academic Affairs

Dr. Terry Chisolm, Vice Provost for Strategic Planning, Performance &

Accountability

FROM: Virginia L. Kalil, CIA, CISA, CFE, CRISC

Executive Director/Chief Internal Auditor

DATE: February 13, 2020

SUBJECT: 20-010 Performance-Based Funding Data Integrity Audit

USF System Audit (Audit) performed an audit of the internal controls that ensure the completeness, accuracy, and timeliness of data submissions to the Board of Governors (BOG). These data submissions are relied upon by the board in preparing the measures used in the performance-based funding (PBF) process. This audit also provides an objective basis of support for the President and Board of Trustees (BOT) Chair to sign the representations included in the Data Integrity Certification to be filed with the BOG by March 2, 2020. This project is part of the approved 2019-2020 Work Plan.

The PBF measures are based on data submitted through the State University Database System (SUDS) utilizing a state-wide data submission process for BOG files. For additional information on data files included in this audit, see <u>Appendix A</u>.

Audit's overall conclusion was that there was an <u>adequate system of internal controls</u> in place to meet our audit objectives, assuming corrective actions are taken timely to address one medium-priority risk communicated separately in our management letter related to Metric Nine-percent of bachelor's degrees awarded without excess hours. **No impact to the performance measures was identified.**

	OVERALL CONCLUSION							
	Adequate System of Internal Control	Findings indicate that, as a whole, controls are adequate. Identified risks, if any, were low-priority requiring timely management attention within 90 days.						
\boxtimes	Adequate System of Internal Control – with reservations	Medium-priority risks are present requiring urgent management attention within 60 days.						
	Inadequate System of Internal Control	High-priority risks are present requiring immediate management attention within 30 days.						

We received outstanding cooperation throughout this audit. Please contact us at (813) 974-2705 if you have any questions.

cc: President Steven C. Currall, USF System

Chair Jordan Zimmerman, USF Board of Trustees

David Lechner, Senior Vice President, Business and Financial Strategy

Dr. Charles Lockwood, Senior Vice President, USF Health

Dr. Karen Holbrook, Regional Chancellor, USF Sarasota-Manatee

Dr. Martin Tadlock, Regional Chancellor, USF St. Petersburg

Dr. Paul Dosal, Vice President for Student Affairs and Student Success

Nick Trivunovich, Vice President, Business and Finance and Chief Financial Officer

Sidney Fernandes, Vice President, Information Technology and Chief Information Officer

Dr. Paul Atchley, Dean of Undergraduate Studies and Sr. Associate Vice President, Student Affairs and Student Success

Billie Jo Hamilton, Associate Vice President, Enrollment Planning & Management

Masha Galchenko Director, University Budgets, Analytics and Data Administration Dr.

Dr. Glen Besterfield, Dean of Admissions and Associate Vice President, Student Affairs and Student Success

BACKGROUND

In 2014, the Board of Governors (BOG) implemented the Performance-Based Funding (PBF) Model which includes 10 metrics intended to evaluate Florida institutions on a range of issues (e.g., graduation and retention rates, average student costs). Eight of the metrics are common to all institutions, while the remaining two vary by institution and focus on areas of improvement or the specific mission of the university.

The metric calculations are based on data submitted through the State University Database System (SUDS) utilizing a state-wide data submission process for BOG files. In order to ensure the integrity of the data being submitted to the BOG to support the calculation of the metrics, USF has established specific file generation, review, certification, and submission processes.

File Generation Process

USF utilizes an automated process, Application Manager, to extract data files from the original systems of record and reformat and redefine data to meet the BOG data definition standards. The only data file that can be impacted outside the Application Manager process is the Hours to Degree submission. (See Hours to Degree File Generation Process below.)

This Application Manager process includes the following key controls:

- ✓ The Application Manager jobs can only be launched by authorized Data Stewards. In addition, individuals responsible for the collection and validation of the data have no ability to modify the Application Manager jobs.
- ✓ The Retention File generated by the BOG is downloaded from the BOG SUDS portal to HubMart by Resource Management & Analysis (RMA). The Data Stewards and Subcertifiers cannot change the files.
- ✓ Corrections are made to the original systems of record and the Application Manager job is re-run until the file is free of material errors.
- ✓ Any changes to the data derivations, data elements, or table layouts in the Application Manager jobs are tightly controlled by RMA and Information Technology (IT) utilizing a formal change management process.
- ✓ There are IT controls designed to ensure that changes to the Application Manager jobs are approved via the standard USF change management process and that access to BOG submission-related data at rest or in transit is appropriately controlled.

Hours to Degree File Generation Process

The Hours to Degree file submission has two primary tables: 1) Hours to Degree (HTD) that contains information regarding the students and the degrees issued and 2) Courses to Degree (CTD) that includes information regarding the courses taken and utilization of the courses to degree. The HTD file is derived based on data in HubMart (Degrees_Submitted_Vw) and data from the student records system, OASIS (Online Access Student Information System)-a Banner product. The CTD file is generated from a combination of OASIS data and data obtained from the degree certification and advising system (DegreeWorks).

While an Application Manager process is used to create the HTD file, the process utilizes a series of complex scripts to select the population, normalize the data fields to meet BOG data definition standards, and populate course attributes used by the BOG to identify excess hours exemptions. This includes deriving whether courses are "used to degree" or "not used to degree" from DegreeWorks.

The systematically-identified HTD population and CTD file are loaded into two custom Banner reporting tables for validation. Any necessary corrections are made manually by the Data Steward utilizing custom Banner forms.

BOG File Review and Certification Process

USF utilizes a formal review process managed by RMA for all BOG file submissions. The review and certification process includes the following key controls:

- ✓ Data Stewards, Sub-certifiers and Executive Reviewers who had operational and/or administrative responsibility for the institutional data are assigned key roles and responsibilities. The <u>RMA website</u> defines each of these roles.
- ✓ A central repository (DocMart) contains detailed information regarding data elements for each BOG SUDS file.
- ✓ A secured file storage location (HubMart) provides read-only access and functionality to the data collected and extracted into the Data Warehouse from transactional source systems in order to allow Data Stewards and Sub-certifiers to review and validate data.
- ✓ A formal sub-certification and executive review process is in place to ensure that institutional data submitted to the BOG accurately reflects the data contained in the primary systems of record. No BOG file is submitted to the BOG by the Data Administrator until the Executive Reviewer(s) approves the file.
- ✓ A formal process for requesting and approving resubmissions includes a second executive review process.

BOG File Submission Process

Once all data integrity steps are performed and the file is ready for upload to the SUDS portal, a secure transmission process is used by RMA to ensure data cannot be changed prior to submission.

Key controls within this process include:

- ✓ A dedicated transfer server is used to transmit the BOG SUDS files. Only RMA and IT server administrators have access to the transfer server.
- ✓ Only RMA staff can upload a file from the transfer server to SUDS, edit submissions, generate available reports, or generate reports with re-editing.
- ✓ Only the Data Administrator and Back-up administrator can submit the final BOG file.

SCOPE AND OBJECTIVES

Our audit focused on the internal controls established by the USF System as of September 30, 2019 to ensure the completeness, accuracy, and timeliness of data submissions to the BOG, which support the PBF measures.

The primary objectives of our audit were to:

- Determine whether the processes and internal controls established by the university ensure
 the completeness, accuracy, and timeliness of data submissions to the BOG which support
 the PBF measures.
- Provide an objective basis of support for the President and BOT Chair to sign the representations included in the Performance-Based Funding Data Integrity Certification, which will be submitted to the BOT and filed with the BOG by March 2, 2020.

The scope and objectives of the audit were set jointly and agreed to by the President, BOT Chair, the BOT Audit & Compliance Committee Chair, and the university's Chief Audit Executive. USF System Audit (Audit) followed its standard risk assessment, audit program, and reporting protocols.

PROCEDURES PERFORMED

We followed a disciplined, systematic approach using the *International Standards for the Professional Practice of Internal Auditing*. The information system components of the audit were performed in accordance with the *ISACA (Information Systems Audit and Control Association) Standards and Guidelines*. The COSO (Committee of Sponsoring Organizations of the Treadway Commission) and COBIT (Control Objectives for Information and Related Technologies) Control Frameworks were used to assess control structure effectiveness.

For term-based submissions, testing of the control processes was performed on the files covering the period Summer 2018 through Spring 2019. For files submitted annually, the current year file was selected for testing if available by November 15, 2019. Our testing focused on the tables and data elements in the files which were utilized by the BOG to compute the performance measure. For additional information on the files included in this review see <u>Appendix A.</u>

Minimum audit guidelines were established by the BOG in year one which outlined eight key objectives. Although not required, these key objectives have been incorporated into the audit each subsequent year:

- 1. Verify the Data Administrator has been appointed by the university president and PBF responsibilities incorporated into their job duties.
- 2. Validate that processes and internal controls in place are designed to ensure completeness, accuracy, and timeliness of data submissions.
- 3. Determine whether policies, procedures, and desk manuals are adequate to ensure integrity of submissions.
- 4. Evaluate the adequacy of system access controls.
- 5. Verify data accuracy through sample testing of key files and data elements.

- 6. Assess the consistency of Data Administrator's certification of data submissions.
- 7. Confirm the consistency of data submissions with the BOG data definitions (files and data elements).
- 8. Evaluate the necessity and authorization of data resubmissions.

In year one, a comprehensive review (Audit 15-010) of processes and controls was conducted followed by a risk assessment. In each subsequent year, system process documentation was updated to reflect any material changes that took place; a new risk assessment was performed based on the updated system documentation and processes; and a new work plan was developed based on the updated risk assessment. Fraud-related risks, including the availability and appetite to manipulate data to produce more favorable results, was included as part of the risk assessment.

This year's audit included:

- 1. Identifying and evaluating any changes to key processes used by the Data Administrator and data owners/custodians to ensure the completeness, accuracy, and timeliness of data submissions to the BOG. This includes verifying new controls put in place to resolve deficiencies identified in the prior year's audit and identifying changes in key personnel performing these processes.
- 2. Reviewing 2019 BOG SUDS workshop proceedings, metric definitions, benchmarks, and other key documents to identify any changes to the BOG PBF metrics and data definitions used for the BOG PBF metrics.
- 3. Reviewing all requests to modify data elements and/or file submission processes to ensure they followed the standard change management process and are consistent with BOG expectations.
- 4. Reviewing the Data Administrator's data resubmissions to the BOG from January 1, 2019 to December 31, 2019 to ensure these resubmissions were both necessary and authorized, as well as evaluating that controls were in place to minimize the need for data resubmissions and were functioning as designed.
- 5. Updating the prior year risk assessment and fraud risk assessment to reflect changes identified.
- 6. Tracing samples from the Retention (RET), Student Instructional File (SIF), SIF Degrees Awarded (SIFD), and Student Financial Aid (SFA) BOG files to OASIS (Online Access Student Information System), the system of record. The integrity of these files collectively impact metrics one through ten.
- 7. Verifying accuracy, completeness, and consistency with BOG expectations of the data submitted to the BOG for Measure Nine Percent of Bachelor's Degrees without Excess Hours, via the Hours to Degree (HTD) file.

PRIOR AUDIT PROJECTS

In FY 2018-2019, an audit of the controls established by the university to ensure the completeness, accuracy, and timeliness of data submissions to the BOG which supported the PBF metrics (Audit 19-010, issued February 4, 2019) was performed. As of February 4, 2019, one of the two medium-priority risk recommendations were reported as in progress. As of the date of this report, all recommendations have been reported by management as implemented.

Audit verified the new controls in place were effectively mitigating the risks identified.

CONCLUSION

Audit's overall conclusion was that there was an adequate system of internal controls in place to meet our audit objectives, assuming corrective actions are taken timely to address one medium-priority risk communicated separately in our management letter related to Metric Nine-percent of bachelor's degrees awarded without excess hours. **No impact to the performance measures was identified.**

APPENDIX A PERFORMANCE MEASURES DATA SOURCES

Measure	Description	BOG File	Data Used/Created by the BOG
One	Percent of bachelor's graduates employed full-	SIFD	National Student Clearing house,
	time in or continuing their education in the U.S.		Florida Education and Training
	one year after graduation		Placement Information Program
Two	Median wages of bachelor's graduates employed	SIFD	Unemployment Insurance wage
	full-time one year after graduation		data
Three	Net Cost to Student	SIF, SFA,	College Board national average
		HTD	book cost
Four	Four year FTIC graduation rate	SIFP, SIF,	BOG created Cohort and
		SIFD,	Retention File
		Retention	
		Cohort	
		Change File	
Five	Academic progress rate	SIF	BOG created Cohort
Six	Bachelor's degrees awarded within programs of	SIFD	
	strategic emphasis		
Seven	University access rate	SFA, SIF	
Eight	Graduate degrees awarded within programs of	SIFD	
	strategic emphasis		
Nine	Percent of bachelor's degrees without excess	HTD	
	hours		
Ten ¹	Six-year FTIC graduation rate	SIFP, SIF,	BOG created Cohort and
	-	SIFD,	Retention File
		Retention	
		Cohort	
		Change File	

¹Metric replaces number of post-doctoral appointees for 2020 cycle.

BOG FILES REVIEWED

Submission	System of Record	Table	Submission Reviewed		
Hours to Degree (HTD)	OASIS,	Hours to Degree	2018-2019		
	DegreeWorks	Courses to Degree			
Student Financial Aid (SFA)	OASIS	Financial Aid Awards	2018-2019		
Student Instructional File -	OASIS	Degrees Awarded	Summer 2018,		
Degree (SIFD)			Fall 2018,		
			Spring 2019		
Student Instructional File (SIF)	OASIS, GEMS	Person Demographics	Summer 2018,		
		Enrollments	Fall 2018,		
			Spring 2019		
Retention File (RET)	BOG	Retention Cohort	2017-2018		
		Change			



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Dr. Terry Chisolm, Vice Provost for Strategic Planning, Performance &

Virginia Kalil

Accountability

FROM: Virginia Kalil, CIA, CISA, CFE, CRISC

Executive Director/Chief Internal Auditor

DATE: February 13, 2020

SUBJECT: 20-010 Management Letter – Performance-Based Funding Data Integrity Audit

USF System Audit (Audit) performed an audit of the University's processes and internal controls that ensure the completeness, accuracy, and timeliness of data submissions to the Board of Governors (BOG). These data submissions are relied upon by the board in preparing the measures used in the performance-based funding process. An audit report was issued on February 13, 2020, which defined the scope and results of our audit.

Based on the review, Audit concluded there was an adequate system of internal controls in place to meet the audit objectives, assuming timely corrective actions are taken for the one medium-priority risk included in this Management Letter.

As audit reports are focused only on high-priority risks, this medium-priority risk was not addressed in our audit report. Urgent management attention is required within 60 days. The medium-priority risk identified for management attention related to Measure Nine, percent of bachelor's degrees awarded without excess hours.

The risks identified had no impact on the performance metrics.

Within 10 business days, please provide your actions planned and expected implementation dates within the Team Central Follow-Up System for those recommendations not marked as resolved.

Please contact us at (813) 974-2705 if you have any questions.

cc: President Steven C. Currall, USF System

Chair Jordan Zimmerman, USF Board of Trustees

David Lechner, Senior Vice President, Business and Financial Strategy

Dr. Charles Lockwood, Senior Vice President, USF Health

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MEDIUM PRIORITY RISKS

STATUS

1. Additional emphasis is needed to ensure repeated course work is properly identified in Banner and Degree work.

In Progress

Hours to Degree (HTD) Courses to Degree (CTD) logic relies on a course attribute which is placed on the course in Banner ("REPT"). Audit identified an issue where repeated course work, ineligible for use toward degree, was reflected as used toward degree in the CTD file.

The CTD Credit Hour Usage Indicator (<u>BOG Element 01489</u>) (usage indicator) is a code used to indicate whether a course was used toward a student's degree requirements or to meet the foreign language requirement. The usage indicator is set to "D" if the hours were used toward degree.

Repeated course work for which a passing grade is received cannot be flagged as used toward degree unless the course has been approved as a repeatable course or an exception has been approved. If the course is not a repeatable course the course instance with the lowest grade is assigned a course attribute ("REPT") in OASIS to prevent DegreeWorks and the HTD CTD Logic from using the repeated course toward a degree requirement.

Of the 455,673 records in the CTD file, contained within the HTD submission, only 4,706 had the "REPT" course attribute applied. Since the "REPT" course attribute can be manually or systematically applied, Audit performed a reasonableness review of students who had two or more courses with the same prefix and suffix which had a usage indicator of "D" (used toward degree) in order to verify that the CTD logic was correctly handling duplicate course work.

During the review, Audit identified 18 instances where a non-repeatable course was used toward a degree. None of these repeated courses identified by Audit had the "REPT" course attribute assigned to the course in OASIS. In five of the 18 instances the repeat course work was not properly identified in DegreeWorks and the CTD logic accurately reflected the system of record which contained the error. For the remaining thirteen instances, the CTD usage indicator did not match the system of record. The root cause of the difference was as follows:

- For six students, the HTD CTD logic intentional coded the non-repeatable courses as "used for degree" to meet the minimum hours required for the degree.
- For seven students, the HTD CTD logic selected the course as used toward degree in error since the course had not been flagged as a repeated course in OASIS. A new report designed to identify duplicate course errors was implemented in June 2019 but these students were not included on the report since they had already graduated. This report should identify these exceptions in the future.

Audit verified that the errors identified had no impact on the student's excess hours computation. Failure to properly identify and code repeated course work in Banner

MEDIUM PRIORITY RISKS						STATUS	
and/or DegreeWorks increased the probability that repeated coursework will be improperly coded by the HTD CTD Logic.							
Recommendation: The Office of the Registrar, in coordination with Information Technology and Undergraduate Studies, should:							
1. Reinforce appropriate best practices related to the utilization of repeated coursework toward degree in DegreeWorks including ensuring that DegreeWorks is properly applying non-repeatable course work toward degree and that documentation of any approvals to use previously excluded coursework toward degree is maintained within DegreeWorks.							
2. Continue the recently implemented anomaly report process to identify repeated coursework which has not been properly identified to ensure that the "REPT" attribute is applied to the course which cannot be utilized toward degree without an exception. This will ensure that the CTD logic works properly.							
Management Attention Required:		Immediate	\boxtimes	Urgent		Timely	
Resources/Effort Required: ☐ Significant ☐ Moderate ☐ Minimal							
Management's Response:							
Undergraduate Studies has already coordinated with the Office of the Registrar to identify process improvements and/or approaches to ensuring best practices to ensure the REPT course attribute is accurately applied. These improvements will be implemented no later than May 30, 2020.							
The Office of the Registrar will continue our collaboration with Information Technology to ensure REPT error checking report logic remains sound, ensuring the efficacy of the tool.							
Estimated Completion Date: May 30, 2020							



Data Integrity Certification March 2020

Uı	iversity Name: University of South Florida			
tne	STRUCTIONS: Please respond "Yes" or "No" for each representation below. representation you are making to the Board of Governors. Modify representated the findings.	Expla ions to	in any	"No" responses to ensure clarity of the control
	Data Integrity Certification Representat	tions	THE .	
	Representations	Yes	No	Comment / Reference
1.	I am responsible for establishing and maintaining, and have established and			
	maintained, effective internal controls and monitoring over my university's			
	collection and reporting of data submitted to the Board of Governors Office			
	which will be used by the Board of Governors in Performance Based Funding			
	decision-making and Preeminence or Emerging Preeminence Status.			
2.	These internal controls and monitoring activities include, but are not limited			
	to, reliable processes, controls, and procedures designed to ensure that data		_	
	required in reports filed with my Board of Trustees and the Board of			
	Governors are recorded, processed, summarized, and reported in a manner			
	which ensures its accuracy and completeness.			
3.	In accordance with Board of Governors Regulation 1.001(3)(f), my Board of	×		
	Trustees has required that I maintain an effective information system to			
	provide accurate, timely, and cost-effective information about the university,			
	and shall require that all data and reporting requirements of the Board of			
	Governors are met.			
4.	In accordance with Board of Governors Regulation 3.007, my university shall	×		
	provide accurate data to the Board of Governors Office.	_	_	
5.	In accordance with Board of Governors Regulation 3.007, I have appointed a	X		
	Data Administrator to certify and manage the submission of data to the		_	
	Board of Governors Office			

Data Integrity Certification

	Data Integrity Certification Representations						
	Representations	Yes	No	Comment / Reference			
6.	In accordance with Board of Governors Regulation 3.007, I have tasked my	\boxtimes					
	Data Administrator to ensure the data file (prior to submission) is consistent						
	with the criteria established by the Board of Governors Data Committee. The						
	due diligence includes performing tests on the file using applications,			*3			
	processes, and data definitions provided by the Board Office.						
7.	When critical errors have been identified, through the processes identified in	×					
	item #6, a written explanation of the critical errors was included with the file		:				
	submission.						
8.	In accordance with Board of Governors Regulation 3.007, my Data	×					
	Administrator has submitted data files to the Board of Governors Office in						
	accordance with the specified schedule.						
9.	In accordance with Board of Governors Regulation 3.007, my Data	×					
	Administrator electronically certifies data submissions in the State University						
	Data System by acknowledging the following statement, "Ready to submit:						
	Pressing Submit for Approval represents electronic certification of this data						
	per Board of Governors Regulation 3.007."						
10.	. I am responsible for taking timely and appropriate preventive/ corrective	☒					
	actions for deficiencies noted through reviews, audits, and investigations.	1					
11.	. I recognize that Board of Governors' and statutory requirements for the use						
	of data related to the Performance Based Funding initiative and Preeminence						
	or Emerging Preeminence-status consideration will drive university policy						
	on a wide range of university operations - from admissions through			-			
	graduation. I certify that university policy changes and decisions impacting						
	data used for these purposes have been made to bring the university's		İ				
	operations and practices in line with State University System Strategic Plan						
	goals and have not been made for the purposes of artificially inflating the						
	related metrics.						

Data Integrity Certification

Data Integrity Certification Representations					
Representations	Yes	No	Comment / Reference		
12. I certify that I agreed to the scope of work for the Performance Based	×				
Funding Data Integrity Audit and the Preeminence or Emerging					
Preeminence Data Integrity Audit (if applicable) conducted by my chief audit					
executive.					
13. In accordance with section 1001.706, Florida Statutes, I certify that the audit	Ø				
conducted verified that the data submitted pursuant to sections 1001.7065					
and 1001.92, Florida Statutes [regarding Preeminence and Performance					
based Funding, respectively], complies with the data definitions established					
by the Board of Governors.					
Data Integrity Certification Representations,	Signal	tures			
I certify that all information provided as part of the Board of Governors Data Integrity Certification for Performance Based Funding and Preeminence or Emerging Preeminence status (if applicable) is true and correct to the best of my knowledge; and I understand that any unsubstantiated, false, misleading, or withheld information relating to these statements render this certification void. My signature below acknowledges that I have read and understand these statements. I certify that this information will be reported to the board of trustees and the Board of Governors. Certification: Date 2 Februar, 2020 Steven C. Currall, President					
I certify that this Board of Governors Data Integrity Certification for Performance Based Funding and Preeminence or Emerging Preeminence status (if applicable) has been approved by the university board of trustees and is true and correct to the best of my knowledge. Certification: Date Date					