AUDITOR GENERAL
WILLIAM O. MONROE, CPA

UNIVERSITY OF CENTRAL FLORIDA

FINANCIAL AID MODULE IMPLEMENTATION AND SELECTED POST-IMPLEMENTATION ISSUES

Information Technology Audit

SUMMARY

Our audit focused on management controls related to the implementation of the PeopleSoft financial aid module at the University of Central Florida (University) during the period January 1999 through December 2002 and selected University actions taken from September 1997. The financial aid module is a part of the PeopleSoft Student Administration system. The University has also implemented the PeopleSoft Human Resources and Financials systems.

Certain deficiencies were noted in the University's implementation controls and in the management of certain post-implementation issues. Specifically, these deficiencies included:

Finding No. 1: Staffing problems existed in the implementation project, resulting in cost overruns and time delays.

Finding No. 2: The University's implementation of the financial aid module contributed to significant delays in the Fall 2002 financial aid disbursements.

Finding No. 3: Contrary to the University's policies and procedures, written functional user approval/acceptance of program changes was not always obtained.

Finding No. 4: Improvements were needed in certain security controls protecting the financial aid system.

BACKGROUND

PeopleSoft Deliverables – On September 16, 1997, the University signed a contract with PeopleSoft, Inc., for the right to use the PeopleSoft Student Administration and Human Resources systems. The contract included nine days of installation support to be used within six months. The portions of the Student Administration software licensed to the University included financial aid, admissions, student records, student financials, academic advisement, and campus community. The portions of the Human Resources software licensed to the University included human resources, payroll, benefits, and time and labor.

Additionally, the contract provided for 334 student class/days of training. The contract noted that the license fees offered reflected a special reduction in recognition of the fact that the licensee would be the first university in Florida using PeopleSoft's Student Administration software.

The Student Administration and Human Resources software was installed at the University in January 1998. The individual Student Administration modules were implemented at various dates, with the financial aid module becoming operational in February 2002.

In December 2001, the University signed a separate contract with PeopleSoft for a license to use the PeopleSoft Financials software. The Financials system was implemented at the University on July 1, 2003.

Total Project Expenditures – Through April 2003, the University had spent approximately $20,178,000 on the PeopleSoft implementation project, for items such as software license fees and maintenance, equipment, consulting fees, conferences and training, payroll of employees assigned to the project, and administrative support.

PeopleSoft Maintenance – Each year, the University pays software maintenance fees. Per the PeopleSoft contracts, the formula for the software license and maintenance fees is based on the number of students enrolled at all University campuses for the Student Administration system, the

number of employees for the Human Resources system, and the size of the University's gross budget for the Financials system.

Finding No. 1:
Project Staffing

When new application software is acquired and implemented, close liaison with users is necessary to ensure that the design specifications for the new system meet user requirements.

Under the terms and conditions of State of Florida term contract number 973-504-96-1 titled *"Consultant Services – IT (IBM)"*, the University and International Business Machines (IBM) signed a Statement of Work for Project Support Services, dated October 15, 1997, for the PeopleSoft Student Administration and Human Resources implementation project, with estimated costs of $3,000,000 plus travel and living expenses. The Statement of Work contained the project scope, key assumptions, IBM responsibilities, University responsibilities, deliverables, an estimated schedule of October 20, 1997, through June 30, 1999, completion criteria, and charges information.

Pursuant to the Statement of Work, the successful completion of the implementation depended on the commitment and participation of University management and personnel, with IBM's performance predicated upon certain responsibilities being fulfilled by the University. These responsibilities included the University providing up to 15 full-time project participants to the project team having the technical skills necessary to participate on the Student and Human Resources teams, attending applicable PeopleSoft classroom training and, for those who attended fit analysis sessions, being authorized to approve table content. Fit analysis is the process of determining the extent to which the software to be implemented will support the entity's business processes. Fit gaps represent the necessity of changes to either the business processes or the software itself.

Our audit disclosed the following conditions:

➢ During fiscal year 1997-98, only 13.1 full-time equivalent employees were assigned to the project. While 27 employees worked on the project, only 4 were assigned full-time. All of the 4 were Computer Services staff; no one was assigned full-time from user departments.

➢ During fiscal year 1998-99, although 18.2 full-time equivalent employees were assigned to the project, only 6 of the 28 employees who worked on the project were assigned full-time. All of the 6 were Computer Services staff; no one was assigned full-time from user departments.

➢ According to IBM Contract Status Report #5, covering the period February 28 through March 20, 1998, IBM technical consulting resources originally scheduled on the project at that time had been indefinitely delayed at the request of the University. According to the University's Project Administrator, because the fit gap sessions had not been completed (partly due to a shortage of University functional staff on the project and delays in getting UCF staff trained on the new software), they requested that IBM technical consulting resources originally scheduled for that time be delayed. Although fit gap sessions were subsequently held for other portions of the PeopleSoft software, the fit gap sessions for the financial aid module were not begun until June 1999.

The Statement of Work estimated that the ending date for IBM's assistance to the University in the implementation of the PeopleSoft Student Administration and Human Resources systems would be June 30, 1999. The University's project management intended for the implementation of the Student Administration and Human Resources systems to be completed by that date in advance of the arrival of the Year 2000. However, the University's project management estimated, in response to our audit inquiry, that the project was only 50 percent completed by then. The actual implementation dates were as follows: October 1999 for Admissions (part of the Student Administration system); December 2000 for the Human Resources system; and Fall 2001 for the remaining Student Administration modules.

While the Statement of Work estimated that the total charges for the consulting services necessary to implement the PeopleSoft Student Administration and Human Resources systems would be $3,000,000, incurred at a rate of $200 per hour, plus approximately $600,000 for reimbursable expenses, according to records maintained by the University's Controller, over $7,000,000 had been spent (through February 15, 2002) on consulting fees for the implementation of these systems.

Our review of various IBM and University status reports disclosed the following difficulties:

- ➢ Because the University initiated the implementation project with a new release (version 7.0) of PeopleSoft software, finding appropriate staff, including consultants, with in-depth knowledge was difficult.
- ➢ University recruiting and retention of skilled staff at State salary levels was a major obstacle.
- ➢ Providing release time for functional users to work on the project was difficult because many of them were sharing regular duties with their project responsibilities. Because the individual departments did not give up their staff to work full-time on the project, there was a shortage of functional staff to participate in fit gap sessions, attend training seminars, and work closely with consultants to keep the project on schedule.
- ➢ Six University project members, including the Registrar, left the University during the project.

The staffing shortages may have contributed to project slippage, which resulted in cost overruns and time delays.

Recommendation: In future implementation projects of this nature, the University should commit sufficient resources to ensure that the project time and cost budget can be met. This commitment should include the monitoring of progress on the project and the provision of adequate staffing.

Finding No. 2:
Delays in Financial Aid Disbursements

As previously discussed in this report, the financial aid module became operational in February 2002. Fall 2002 was the first semester for which financial aid was processed through the new system.

For the Fall 2002 semester, only 57 percent of the University's Fall student financial aid loans and grants were disbursed during the first month of classes. Per University management, the distribution of a significant amount of financial aid was delayed, due in part to post-implementation changes made to the financial aid module to accommodate e-mail notifications to students in lieu of standard postal notification of required documentation. Reminders to students of required documents did not go out as early as in previous years. Consequently, some students did not timely provide the required documents to the Financial Aid office.

We also noted that there were instances of delays of several days in processing such documentation after it was received in the Financial Aid office. Management attributed this

delay to adaptation to new processes related to the implementation of the financial aid module. We noted that, for the Fall 2003 semester, approximately 76 percent of the financial aid was disbursed in the first month of classes.

Late disbursement of financial aid may cause some students to withdraw from classes due to the inability to pay tuition and living expenses. In a future audit, we may evaluate the University's continued progress in improving the timeliness of financial aid disbursements.

Finding No. 3:
Approval of Program Changes

Control over the quality of an application system is improved through appropriate user testing and approval of changes to the system before the changes are moved into production.

According to University *SOP 211 - PeopleSoft Systems Development Lifecycle*, after a modification is moved to the user test database, a functional user works with the programmer/analyst to fine tune it and coordinates testing within his or her department and with any other departments affected by the modification. The programmer/analyst makes any additional changes in the development database and has the updated modification moved to the user test database again for testing. This cycle continues until the functional user signs off on the modification for the move to production by sending a production move request for the project to the security/change control coordinator.

University *SOP 212 - Maintenance Process for PeopleSoft Patches* provides for a patch review team consisting of representatives from each module of the system, typically functional module leads or their designees. The patch review team members are responsible for running test scripts and testing all critical functions related to their specific modules. The representatives for all modules are to sign off that they have tested the system with the new patches and their processes work properly.

However, we noted instances where changes to application programs were implemented without proper documentation of user review and approval. We tested 5 of 30 changes made to the financial aid module by University staff and one patch implementation, which were moved into production between September and December 2002. Two of the five University-initiated changes were not formally

approved by users. While users from some of the functional areas approved the patch before it was applied to the production system, the University could not provide the approvals from other functional areas that may have been affected.

When program changes and patches are not approved by users prior to implementation, the risk exists that unauthorized or erroneous program changes that do not meet the needs of the users could be placed into the production environment without timely detection.

Recommendation: The University should consistently follow its PeopleSoft systems development and maintenance procedures.

Finding No. 4:
IT Risk Management and Security Controls

Security controls are intended to protect the integrity, confidentiality, and availability of information systems data and resources.

During our audit, we identified deficiencies in the University's IT risk management practices and in certain security control features implemented by the University. Specific details of these deficiencies are not disclosed in this report to avoid the possibility of compromising financial aid module information. However, the appropriate University personnel have been notified of the deficiencies.

Recommendation: The University should enhance its IT risk management practices and implement the appropriate security control features to strengthen the controls over financial aid system resources.

SCOPE, OBJECTIVES, AND METHODOLOGY

The scope of this audit focused on evaluating selected management controls relating to the implementation of the financial aid module at the University during the period January 1999 through December 2002 and selected University actions taken from September 1997. Our objectives were to determine the effectiveness of the University's implementation procedures and the status of selected post-implementation issues.

To meet our audit objectives, we reviewed applicable Florida Statutes, administrative rules, and auditing literature; interviewed appropriate University personnel; obtained an understanding of management controls relating to the financial aid module implementation; documented control processes and procedures; and performed various other audit procedures to test selected controls related to the financial aid module implementation.

AUTHORITY

Pursuant to the provisions of Section 11.45, Florida Statutes, I have directed that this report be prepared to present the results of our information technology audit.

William O. Monroe

William O. Monroe, CPA
Auditor General

UNIVERSITY'S RESPONSE

In a response letter dated January 14, 2004, the President generally concurred with our audit findings and recommendations. The President's response can be viewed in its entirety on the Auditor General Web site.

University of
Central
Florida

January 14, 2004

William O. Monroe
Auditor General
State of Florida
G74 Claude Pepper Building
111 West Madison Street
Tallahassee, FL 32399-1450

Dear Mr. Monroe:

Enclosed are the responses to the Auditor General's Information Technology Audit of the Financial Aid Module Implementation.

If you have any questions about the responses, please call Inspector General Barbara Ratti at 407-823-2889.

Cordially yours,

John C. Hitt
President

JCH/ab

PROJECT STAFFING

Finding No. 1:

In future implementation projects of this nature, the university should commit sufficient resources to ensure that the project time and cost budget can be met. This commitment should include the monitoring of progress on the project and the provision of adequate staffing.

Response:

We agree. The follow-on PeopleSoft Financials project began in July 2002 and concluded July 1, 2003—on time and on budget.

Implementation Date: ___July 1, 2003___

Responsible Auditee: Dr. Joel Hartman
                            Vice Provost

Signature: _Joel Hartman_   **Date:** _1/13/04_

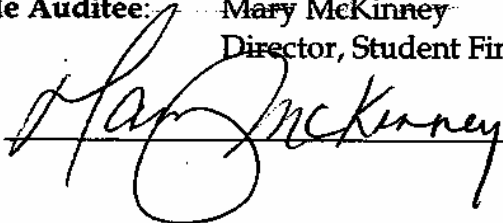<u>DELAYS IN FINANCIAL AID DISBURSEMENTS</u>

Finding No. 2:

The university's implementation of the financial aid module contributed to significant delays in the fall 2002 financial aid disbursements.

Comment:

Student notification changed from mail to email and resulted in a delay in students turning in documents. This added to the normal delays experienced in the implementation of the project. Ninety five percent of students with complete files were completed timely.

Responsible Auditee: Mary McKinney
Director, Student Financial Assistance

Signature: _McKinney_   **Date:** 1/8/04

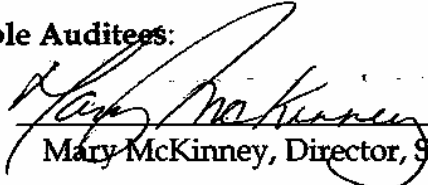## APPROVAL OF PROGRAM CHANGES

Finding No. 3

The university should consistently follow its PeopleSoft systems development and maintenance procedures.

Response:

UCF Standard Operating Procedure (SOP) 211 requires that a functional representative sign off to indicate approval of program changes before they are moved into production. In addition, UCF SOP 212 requires that functional representatives from each affected module approve PeopleSoft delivered patches after they have been tested and before they are moved to production. Any exceptions must be approved by project management before any action can be taken. Approved exceptions must be entered into the system by the project manager as a functional approval with a reason why normal functional approval was not possible. This will ensure any moves of new or modified code into production show documented approval. Technical personnel who are authorized to move program changes and patches into production have been provided with copies of SOP 211 and SOP 212, along with a management memorandum requiring that they review and adhere to these Standard Operating Procedures.
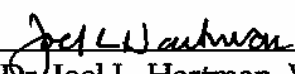
Implementation Date: 01/19/2004

Responsible Auditees:

Signature: _____   Date: 1/13/04
Mary McKinney, Director, Student Financial Assistance

Signature: _____   Date: 1/13/04
Tim Larson, Associate Director, Computer Services

Response approved by:

Signature: _____   Date: 1/13/04
Dr. Joel L. Hartman, Vice Provost

University of Central Florida
Response to Auditor General Financial Aid
Module Implementation Audit Recommendations

IT RISK MANAGEMENT AND SECURITY CONTROLS

Finding No. 4:

The university should enhance its IT risk management practices and implement the appropriate security control features to strengthen the controls over financial aid system resources.

Response:

The university has implemented the risk management and security control actions detailed in the management letter accompanying the audit report. To avoid the possibility of compromising financial aid or other administrative information, the university's detailed response to this finding has been provided separately.

Implementation Date: January 1, 2004

Responsible Auditee: Dr. Joel L. Hartman
Vice Provost

Signature: _Joel L Hartman_   **Date:** 1|13|04