



Strong Corporate Governance
& Internal Controls:

Mitigating Fraud & Abuse in Higher Education with Data Analytics



Introduction

Today's colleges, universities and school districts do far more than educate students. To meet the needs of the student body, faculty and stakeholders, educational institutions often provide a broad range of ancillary services such as food, lodging, medical care and security-related services. Combine this with the ever-growing list of demands on finance plus shrinking budgets, and the result is increased opportunity for fraud, abuse and error.

This booklet details the types of fraud and abuse that educational institutions may be at risk for, and discusses how financial professionals can use data analytics and continuous monitoring to detect and prevent these. A case study is also included, demonstrating the results the Georgia Institute of Technology achieved after implementing solutions from CaseWare Analytics.





Big Ticket Items: Fraud, Revenue Leakage & Non-compliance

The financial, operational, regulatory and reputational risks within the education sector varies by the size of institution. Also, due to the wide range of laws and regulations that apply to them, the risks that colleges and universities face comes in many forms.

Because of their disparate systems and the vast amount of information received from students and faculty each academic year, institutes of higher education can have problems ensuring data integrity. They also have limited ongoing monitoring of transactions to detect fraud and non-compliance. Combine this with employee and faculty turnover, the regular influxes of new students, plus disparate software applications, and it is easy to see why fraud and errors may take considerable time to uncover, investigate and resolve.

Consider the following challenges involving disparate data, data integrity and ongoing monitoring.



Disparate Data and Purchasing Cards

Challenge: Identify duplicate payments between purchasing card merchants and vendors

Like many of us, university and school district employees are often in a rush to make a purchase and may use their purchasing card (P-Card). They then may submit an invoice for the same purchase through the school's ERP system, either forgetting that they used their P-Card and don't require reimbursement, or intentionally committing fraud. This can lead the institution to potentially pay twice for the purchase. Because the P-Card and ERP systems don't "talk" to each other, the double payment may go undetected.

Unauthorized Use of Purchasing Cards

Challenge: P-Cards used for personal purchases

For most universities and colleges, it is policy that corporate P-Cards should not be used for personal purchases, yet many employees sneak small personal expenses and hope they won't get caught. Improper controls and lack of regular auditing of P-Card transactions introduces the risk that the perpetrator will become comfortable with the fraud scheme and will increase the amount of purchases. The 2016 ACFE Report to the Nations cited that expense reimbursements and skimming accounted for 40% of reported fraud schemes, while median loss for expense reimbursement fraud across all industries was \$40,000 and \$53,000 for skimming.¹

¹ ACFE, Report to the Nations on Occupational Fraud and Abuse: 2016 Global Fraud Study. www.acfe.com/rttn2016.aspx



Data Integrity and Financial Aid

Challenge: Identify aid in excess of needs assessment

Analyzing large amounts of data with spreadsheets can lead to formula errors or miscalculations; take what happened to Birmingham-Southern College, for example. Due to errors in calculating financial aid packages, the college provided students with millions of dollars in extra financial aid. As a direct result, the college had to trim its budget by 20%.

Ongoing Monitoring and Payroll

Challenge: Identify multiple paychecks sent to the same bank account or address

Analytics can help colleges and universities detect erroneous, suspicious and fraudulent activities before payments are made.

In the case of employees colluding to commit fraud, ongoing analysis can detect unauthorized changes to employee records or payments sent to similar bank accounts as other employees. Advanced analytics can also exempt false positives such as a married couple who are legitimate employees with the same bank account details.





Personal Leave

Challenge: Correlating allowable leave with time off taken

Without properly documented policies and a way to check whether employees are taking the leave they are entitled to, employees may be taking more time off than they are owed. [One school district](#) found that when they tested the leave taken by 10 employees, two had taken personal leaves days even though they were not entitled to any, one employee was overpaid by \$534 for vacation time accrual, and one employee's daily rate was miscalculated, resulting in thousands being paid for annual leave and sick pay. When looking at hundreds of employees, the potential savings could be substantial.

Procurement

Challenge: Improper bidding process for large purchases

In many jurisdictions, state law requires that a proper competitive bidding process be observed for purchases above a certain threshold. One [school district](#) found itself in trouble after it was discovered that the IT department had been using funds set aside for short-term projects to supplement its staff with full-time subcontractors.

The district had also purchased software products without a proper bidding process, and from a company that was not the approved vendor list.



Consequences

In addition to generating financial losses, fraudulent activity can violate laws as well as regulations governing the school's activity, resulting in reputational damage.

Fraud prevention, detection and investigation within higher education requires the analysis of vast amounts of data. The difference between success and failure hinges on the availability of technology to analyze and integrate data from across the organization and third parties.



The Role of Data Analytics

The return on investment (ROI) associated with analytics software involves a number of components. According to the ACFE, for example, the median length of a fraud scheme is 18 months, with the actual length ranging from 12 months to 36 months, depending on the scheme. Detecting and resolving fraud before these losses mount can increase the ROI of data analytics. In addition, the collaboration between Internal Audit and Operations may lead to insights into the data that may not have been revealed otherwise.



The Role of Data Analytics Continued

Developing “one version of the truth” by combining data from multiple sources is crucial to fraud prevention efforts. However, data often resides within a number of systems that require advanced programming skills to segregate, compile and analyze. The import functionality within analytics software allows finance professionals to centralize data and combine data from third parties—such as P-Card providers—without needing advanced programming skills. Importing data into a centralized database also allows the organization to categorize data based on similar attributes, and uncover anomalies that may help detect fraud and abuse, and unearth data quality issues.



CaseWare Analytics for Higher Education Continued

Continuous monitoring dramatically increases an organization's ability to assess risk and compliance, "do more with less" and to detect fraud. [CaseWare Monitor](#) facilitates continuous controls monitoring by automating the extraction and analysis of data. Once anomalies are detected, automatic alerts are sent to frontline staff with guidelines for resolving the anomaly, which empowers staff to address the problem before it impacts the organization. Continuous monitoring allows colleges and universities to detect fraud immediately—and before the fraudster can inflict significant losses.² In fact, according to the ACFE, continuous monitoring had on average a median loss of \$48,000 and a median of six months to detect the fraud, compared to internal audit, which had a median loss of \$100,000 and a median detection time of 12 months.



² ACFE, Report to the Nations on Occupational Fraud and Abuse: 2016 Global Fraud Study.
<http://www.acfe.com/rttn2016.aspx>

“The real value of using data analytics is that it allows you to see fraud schemes that would be impossible to detect manually.”

Chief Audit Executive, Georgia Tech

Data Analytics in Action

Given the diversity of the services offered, and the considerable pressure on finance to provide more support with limited budgets, consider the following types of analytical techniques, which can be used either during ad hoc data analysis or with continuous controls monitoring. There are a number of areas within an educational institution that may benefit from these analytic tests:

FINANCIAL AID

Identify aid in excess of needs assessments & overpayments

Monitor loan agreements for repayment

Find course withdrawals below full-time course load, without a corresponding reduction in aid

SALARIES & PAYROLL

Identify multiple paychecks to same bank account

Compare check amounts per ledger to electronic bank files

List employees with salary increases greater than a specified percent

Summarize/stratify salaries by department/grade, etc.

Profile employee ages/years of service to assist in forward planning

Summarize and compare costs for special pay, overtime, premium, etc.

Sort employees by name, address and store to identify conflicts-of-interest where managers have relatives working for them

COMPLIANCE

Identify expenditures made outside a grant's effective dates

Identify unaccountable charges (administrative costs) based on grant rules

Identify invalid cost transfers

TUITION BILLING

Compare per-credit-hour amounts invoiced with those approved by board of governors

Compared refund check addresses to employee addresses or drop boxes

Identify missing refund check numbers

Compare refund payments to refund policy

Review students with more than three address changes in academic year

PURCHASING CARD

Duplicate payments between P-Card merchants and accounts payable vendors

Charges at inappropriate merchants (i.e., travel, food, fuel) by MCC code

Split charges to circumvent P-Card limits

Card used by terminated employees and/or employees on leave of absence

Excessive small dollar transactions

Elevated liability – card usage vs. credit limit

TRAVEL & EXPENSE

- Identify frequent travelers and corresponding compliance with travel
- Extract travel over holiday periods for potential personal travel
- Identify excessive expenditures
- Multiple employees requesting reimbursement for the same room
- Refund of airline ticket issued to employee but balance not refunded to company
- Claims for personal car usage and rental car usage for same period

ACCOUNTS PAYABLE

- Reconcile check register to disbursements by vendor invoice
- Summarize invoices by supplier to prove individual balances
- Create activity summaries for suppliers with duplicate products
- Create activity summaries by supplier
- Total posted invoices for the year for accurate vendor rebates
- Evaluate purchasing contract compliance

ACCOUNTS RECEIVABLE

- Profile debtors using Stratification to see how many large debts there are and what proportion of value is in the larger items
- Analyze average sales amount by customer, sales representative, product, region, etc.
- Stratify and summarize customer information to create customer profiles
- Generate summaries by customer, invoice, amounts, products, etc.
- Profile customers' purchasing cycles to improve profitability
- Report and automatically age total receivables in any format

STUDENT AWARDS

- Review student awards claimed, including the size and profile of awards
- Stratify student awards by age and identify any oddities
- Recalculate student awards
- Calculate the length of time it takes to process student awards
- Match names to the payroll database and ensure that no employees are claiming student awards
- Identify any unusually large student awards
- Test for duplicate student awards in a given year



Case Study:
Georgia Tech



Georgia Tech is consistently among the

TOP 10

best public universities in the U.S.

Alumni include U.S. Presidents,

FORTUNE 500

CEOs, & Nobel Peace Prize winners

Georgia Tech employs over

16,000

people on campuses around the world



Challenges

One of the top-ranked public universities in the U.S. with alumni that includes U.S. presidents, Nobel Peace Prize winners, and CEOs of Fortune 500 companies, the Georgia Institute of Technology employs approximately 16,000 staff across its various campuses during its main sessions. In the early 2000s, the university launched its purchasing card (P-Card) program in a bid to reduce costs related to procurement. The P-Cards significantly reduced transaction costs, leading the program to grow tenfold within a decade.

The time and cost savings from allowing employees to make purchases directly didn't come without risks, though. The school and several other state agencies were plagued with large-scale incidents of P-Card fraud, such as employees purchasing gifts and paying off personal loans. A state audit revealed that internal controls had not been adequately monitored to identify and prevent the misuse of the cards.

To address these issues, Georgia Tech hired temporary staff to help manually analyze transactions. It quickly became apparent, however, that even with additional staff working overtime manual analysis was not sufficient to examine every transaction across 2,400 P-Cards.





Why CaseWare Analytics

Georgia Tech chose the CaseWare P-Card Monitoring Solution to deliver results quickly and reduce ramp-up time. Easy to learn and use, CaseWare Analytics' solution did not require staff to have programming language experience, only knowledge of the school's P-Card processes.

The CaseWare P-Card Monitoring Solution also reviews multiple data sources simultaneously, detecting when a card is used by a terminated or vacationing employee, or if there has been duplicate payments between P-Card merchants and accounts payable vendors. In addition, the analytics look for inappropriate or out-of-policy purchases as well as address matches between merchants and employees.



Results

By utilizing CaseWare Analytics' solution, Georgia Tech quickly uncovered more than \$350,000 in fraudulent purchases. Following implementation of the CaseWare P-Card Monitoring Solution, analysis of 100% of the university's 180,000 yearly P-Card transactions—which represents more than \$70 million annually—is now automated. P-Card analytics identify split charges to circumvent card limits while also examining Level III transaction data details to reveal unauthorized card activities. Revenue is now assured, control breakdowns are resolved, and the P-Card program has achieved its compliance objectives.

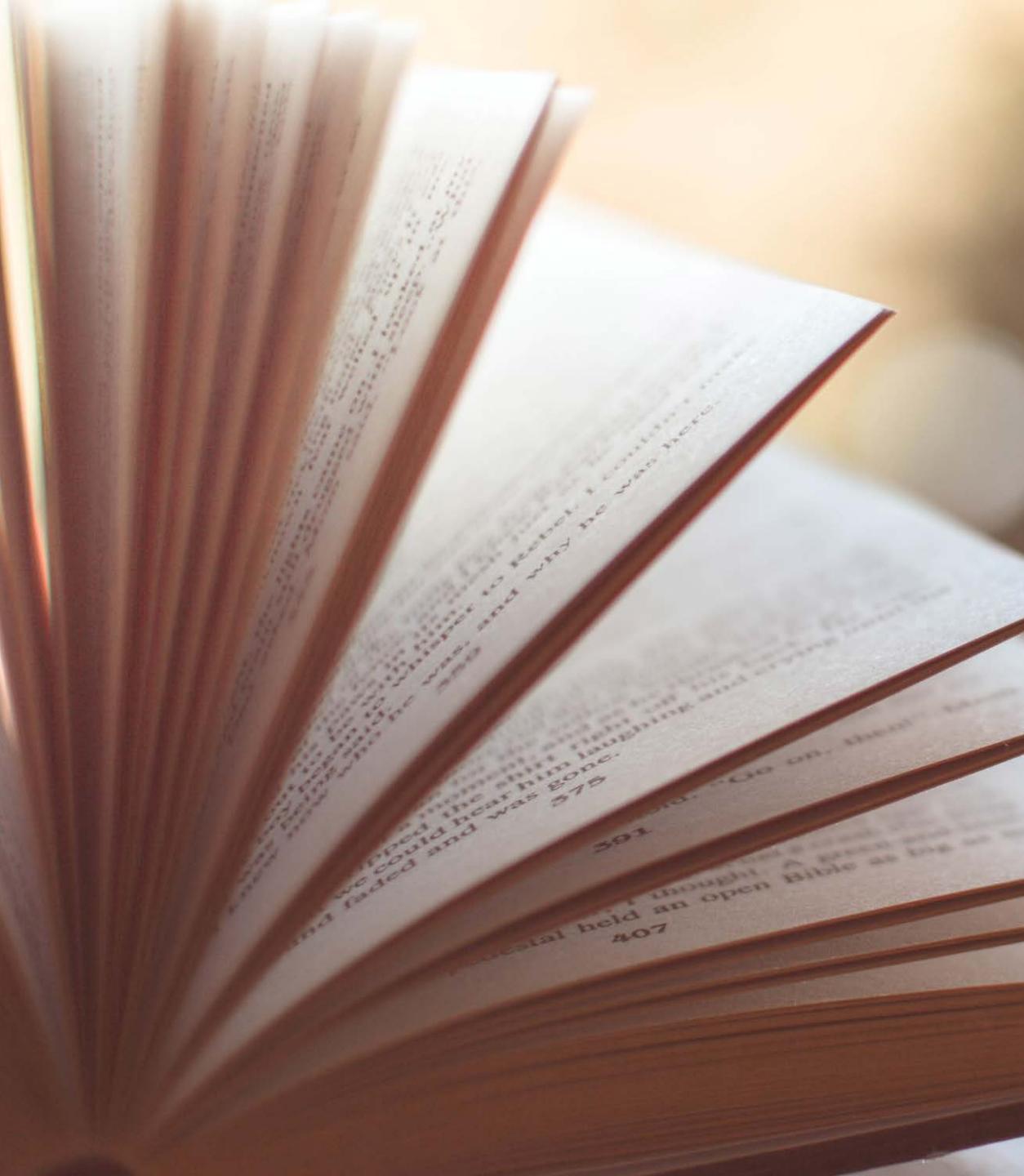
Georgia Tech's internal audit team has gained true independent assurance of the school's P-Cards. Examining Level III data from their card provider offers line item details independent of the P-Card holders' statements, creating a larger window of opportunity to report non-compliant charges and increasing the likelihood of receiving reimbursement.

Because of the great success Georgia Tech's P-Card program has had, the school decided to expand the use of the continuous monitoring platform to the Financial Aid and Grants and Contracts departments.

A black computer mouse is positioned in the lower center of the frame, resting on a light-colored wooden desk. The background is blurred, showing hints of an office environment with a blue chair and some papers.

"With continuous controls monitoring, we can analyze an entire list of monthly transactions in a matter of minutes. We were able to find people that were using two purchasing cards together to circumvent our procurement process. This is something we could have not seen if we were doing this manually."

Georgia Tech



Change for the Better

Given the changes in the scope of services offered by today's colleges and universities, the importance of governance, risk and compliance—and the role data plays in achieving organizational objectives—is more clear than ever. With increasing opportunity and temptation to commit fraud or abuse in this setting, it's wise to be proactive and leverage data analytics and continuous controls monitoring solutions.

To learn more about how CaseWare Analytics' solutions can help your college or university detect and prevent fraud and abuse, visit casewareanalytics.com.



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