

Technology Training and Data Needs

Anecdotally, we hear from COM staff and managers the need for technology training of various types and the need for accurate, consistent, high quality data that is readily accessible. The system and processes for assuring the latter are typically referred to as data governance.

In May 2015, as a first means of attempting to better understand the type and extent of these needs, the Planning, Research and Institutional Effectiveness (PRIE) office surveyed classified staff and managers on behalf of the Institutional Data Team. Overall, 77 employees (out of 201) responded from 31 departments across the campus (Table 1). Note that departmental categories are as written in by respondents and therefore may or may not correspond to official titles. After review and discussion, the following results will be further investigated to help focus COM’s training and data governance efforts.

Table 1

Respondents Needing Technology Training			
By Department			
Dept Name	N Responses	Dept Name	N Responses
Arts & Humanities	1	Library	5
Behavioral/Social Sciences Dept	2	M&O	1
College Service	3	Math & Science	1
Community Education, Life Long Learning and International Education	4	Modernization	1
Dental Assisting	2	Office of Instructional Management	2
Distance Education	4	Outreach School Relations	1
English Skills (in the College Skills Division)	4	Performing arts	1
Enrollment Services	6	PRIE	4
EOPS, CARE, CalWORKs and Tutoring	1	Reprographics	2
Fiscal Services	2	SAS	1
Gardening	1	Student Learning/Student Services	1
Health Services	1	Superintendent/President	1
HR	1	Transfer and Career Center	1
IT	8	Unspecified	5
Job Placement & Housing	3	Workforce Development	2
Kinesiology & Athletics	5	Total	77

Technology Training Needs

Of the 77 respondents, 43 requested training in at least one type of technology. All but four requested training on multiple types of technology. The survey specifically asked whether training was needed on the technologies in Table 2 below.

Table 2

Types of Technology Where Training is Needed									
Banner	ARGOS	Pop. Select	Data Dashboard	DegreeWorks	Intranet	Trak	Portal	R-25	SARS
26	23	17	24	10	7	4	10	13	5

As this table shows, training is most needed in using Banner, ARGOS Reports and the Data Dashboard. Banner, as COM’s enterprise system, is used to facilitate operations – from student application, enrollment, course scheduling and financial aid and degree awarding, through recruiting and managing personnel, and tracking and managing College finances. (See Appendix A for specific ways COM employees use Banner). It is the system through which most of COM’s data originates and is stored. Consequently, Banner is used by nearly all COM employees. ARGOS Reports and the Data Dashboard are used specifically to retrieve data from Banner.

Population selection, also commonly needed, is a feature within Banner and other reporting tools that allows groups of students or employees to be selected by specific characteristics. Except for the portal and the intranet, the other applications in the table above are used by a subset of employees due to the applications’ purpose (e.g., Trak for checking students into and out of labs).

In addition to the applications we asked about in the survey, one person requested a tutorial that reviews the common and advanced features of Moodle. Three requested advanced training in the MS Office suite, and one requested training on internet-accessible applications such as Google Docs, Sheets, and Slides.

Other comments about technology training included the need for all new employees to be trained in the basic technologies used at COM for their job, especially Banner. Banner training should be offered on a regular basis during FLEX week, breaks and summer. In addition, COM employees should be more generally knowledgeable of the technology that is available and how to use those applications.

Banner-Specific Training Needs

When asked specifically what they need to learn, some managers and staff said they are new to COM or working on their own or are unsure about what they need to know. As one employee said, “I don’t know what I don’t know.” Others said a general overview and basic information about using the Banner system such as navigating through the screens and shortcuts. Some want quicker, more efficient ways to use Banner or greater functionality. The HR and Fiscal modules were specifically named as was the ability to select specific populations of students. Specific tasks were noted as well, although, particularly in the case of fiscal, some needs may be as much or more about content than the technology. See comments below.

Overview, Functionality & Efficiency

- General Overview and refresher
- It would be nice to a demo of the Banner so I have some knowledge of how the system works.
- I need to know how Banner works (and its limitations) so that way I know what data can and cannot be collected with it.
- a simple guide to commonly used shortcuts would be invaluable; a listing of the modules and simplified guide to how each is best used.
- navigate and be more familiar with screens/tables
- navigate better in Banner, short cuts for next screen, etc.

- quicker more efficient ways to process applications in banner.
- adjustments made easier
- When Banner was launched we were given the basic information we know that Banner has some many more abilities that we are not aware of that probably can help us which will also help students, faculty and staff.

Human Resources-Related

- I would like to be cross trained in the HR Module as we work closely together
- Only new employees to HR require general training. All employees can benefit from reports
- Because the job changes constantly, it's hard to say. One possibility would be how to track personnel evaluations.

Fiscal-Related

- I would like to better understand the fiscal part of banner. How to really read the budget, expenses, deposits etc. I never received training when hired.
- Generate Req's, Look up information on PO's, vendors, budgets, etc.
- I need fiscal training in order to input requisitions and treasury information for Classified senate.
- Better understand reconciliation of accounts

Specific Tasks

- place and remove library fines if possible, so we don't have to send the list to enrollment services whenever student need to remove fines.
- I would like to get some training on the MIS interface for EOPS, CalWORKs, CARE and Foster Youth

Data Needs

As one means of helping us determine where to start with data governance implementation, we asked which data are regularly used in managers' and staff members' daily work and what data supplements their work, such as data that are needed periodically for reporting or other purposes. Forty-four employees specified the data they use on a regular basis and 17 told us which data they need periodically. By far the most commonly used data are course schedule, finance and course enrollment (Table 4).

Some additional items that were written in as "other" are: missing positive attendance hours, TB certifications, 240 cap reports, employee headcount, room reports, faculty load, building maintenance, student notifications and reminders, room scheduling and instructional supply purchases. One respondent noted that R-25 is used for room scheduling but is not always accurate or current.

Table 4

Types of Data or Reports Used Regularly	
Data/Report Type	N
Academic standing	9
Course enrollment	21
Course schedule	25
Educational plans	7
Employees	14
Finance	22
Financial aid	7
Payroll	6
Placement testing	5
Priority enrollment status	9
Student demographics	10
Student headcount enrollment numbers	11
Student population – specific data (EOPS, SAS,	10
WSCH	1

Data that are needed to supplement staff and managers’ work include priority enrollment status and placement testing, student attendance by day of week for event scheduling, student retention and success measures, Moodle data on number of users, logins, etc., classroom utilization and occupancy, athletes cohort, high school seniors enrolled and students from specific high schools, employee earnings and deductions, student demographics for specific subpopulations such as veterans, EOPS, transfer center users, and those with an educational plan, noncredit headcount, information requested by the media, and when classes need to use which computer labs.

Responses included a request for more report options, more robust reporting capabilities, the ability to pull lists of students by characteristics that are not currently available, tracking students through a particular program or process (i.e., matriculation), and the need to “cross reference staffing plans/organizational structure with department organization codes, especially for faculty personnel, because they have no leave approval queues established in Banner.”

Data Access Tools

The two primary means for managers and staff to directly access data at COM are by using ARGOS reports and the Data Dashboard. Both tools extract data from Banner. About two-thirds of respondents answered the questions that asked if they used these tools. Of these employees, 39% said they use ARGOS reports often, 24% use them occasionally, and 37% never use ARGOS reports. (See Table 5 for number of employees using these tools.) The percentage of respondents drops substantially when asked if they “personally” know how to use, create or run ARGOS reports. Approximately one-third of respondents answered the question. Of those, most know how to use and run the reports. Only 7 know how to create the reports. This should be no surprise since doing so requires SQL programming ability.

Table 5

Use of Data Access Tools		
	Yes	No
ARGOS Reports	31	18
Data Dashboard	9	42

Very few managers and staff use the Data Dashboard (Table 5). A large majority of those who do not use the Data Dashboard do not know how to use it. Some said they need training. However, others said they do not use it because it is not needed for their work, it is not part of their responsibilities or using it is assigned to their staff. Some did not know the tool exists or are unfamiliar with its purpose. One respondent said the integrity of the data it produces is not trusted.

Discussion, Conclusion and Recommendations

This report is the first step in systematically examining COM’s technology training and data needs. At this point, it is clear that technology training needs exist across the College, and are especially needed with Banner. COM now has a large portion of new employees and IT is implementing new technologies in a variety of foundational areas that will touch many employees—e.g., the portal, website, Office 365 and cloud-based applications for document management, workflow processes and communication. Such applications and changes may be easy for some, but for most, varying degrees of training are needed (from quick video or in-person demonstrations to repeated, hands-on practice with an instructor). With these new tools, COM’s growing emphasis on the environment and sustainability, and the need for greater efficiency, it may be worthwhile for most employees’ job expectations to include learning and utilizing technology that will facilitate more effective and efficient work flow.

The array of technologies at COM and their uses should be clearly and readily available along with training for employees who need to use specific technologies to perform their work. In addition, as new technologies come online, decisions should be made about the continued use of existing platforms and applications, for example, the intranet. Parts of this platform are not kept up to date, yet some employees will need training as long as it is in use.

To improve the quality, accuracy and integrity of data, employees must be aware of the data cycle and, for many, their role in contributing to solid institutional data. The adage “garbage in, garbage out” applies. Whether a particular type of data exists, depends on whether it is collected and stored. Whether it can be used to facilitate operations or specific research purposes, or for accurate reporting—which can affect funding, depends on how the data are collected, coded and stored. Defining and adhering to policies, practices and programming that guide how data are collected, coded, entered, stored, transformed, accessed and used are necessary to assure data quality and accuracy. For example, processes for assigning new codes (e.g., auditing courses, transportation fee, active/inactive employee status) must be established and followed. Documentation is necessary to assure common definitions and practices are known and can be easily referenced.

Currently there are 1,800 ARGOS reports at COM. Likely, most are not used. However, these need to be pared down to a small set of reports in which the data are consistently defined and extracted according to Chancellor’s Office and/or federal reporting definitions or agreed upon in-house definitions where external definitions do not exist.

Where data needed on a frequent basis are not available directly in Banner, dashboards can be developed for specific purposes or for specific departments. However, this should not occur until the relevant data governance issues and processes noted above have been established. Otherwise,

dashboards would just give better access to potentially inaccurate and inconsistent data. Data inconsistency, however, will likely remain a challenge since COM has no enterprise data warehouse. Instead, all data that can be accessed through Banner, ARGOS and the Data Dashboard are drawn from the transactional system and therefore change frequently. For instance, headcount enrollment for the current semester can be different from day-to-day, even hour-to-hour during the registration period. Anytime a change is made anywhere in the system, the counts will differ and likely we will not know why. Only for previous years is the data relatively steady. One way that this issue is commonly managed when no enterprise data warehouse exists is that offices such as PRIE have a longitudinal data warehouse that includes consistent snapshot-in-time data across many semesters. Official institutional data are produced by that office as a means of assuring consistency. At COM, however, only a rudimentary PRIE warehouse exists and it was recently developed. Additionally, data are inconsistently provided by multiple offices and individuals seemingly by default, rather than having been formally assigned that responsibility. Such designations are a component of effective data governance.

APPENDIX A

Ways COM Employees Use Banner

Fifty-six respondents said they use Banner for one or more of the following purposes (Table 3). Other purposes include leave reporting, schedule, input catalog, classroom and event reservations, faculty load, schedule cross-listings, reports, setup staff profile, TB and DOJ tracking, non-instructional assignments, obtain addresses and phone numbers, requisitions and budget transfers and inquiries, confirm student, staff, faculty ID and contact information, enrollment history, review transcripts, and MIS data entry and reporting.

Purpose for Using Banner	
Modules	N
Financial Aid	7
Fiscal	25
General (e.g., student names, applications)	20
Human Resources (e.g., payroll)	15
Student (e.g., enrollment)	22
Other	15

Staff and managers use Banner to perform a wide variety of tasks. Those specifically named by survey respondents are shown in the table below.

In what ways is Banner used to conduct your work? 40 responses	
→	A/P processing
	Registering students, enrolling students, checking grades, running rosters, looking at student
→	financial aid statuses.
	To look up individual records when auditing information regarding student enrollment and
→	demographic information
→	To manage the budget, requisitions and PO's, students unofficial transcripts, class enrollments
→	Money
→	generate Purchase Orders, report leave
	search awards for students to insure that they are receiving benefits and assist in explaining the
→	application and follow-up process.
→	Student Lookup and Schedule
→	PROD in INB
→	used on a daily bases 7.5 hours a day
→	Relevant to everything we do in HR
→	Purchase orders, invoices, budgetLeave reports
→	Budget and Requisition Purposes
→	document approval (financial)
	Job setup, leave reports, payroll reports, employee information, addresses, salary schedules,
→	certifications, a lot of things I can't recall right now, but that's the general drift.
	All Student Services: applications, registration, grades processing, fees assessment, fee
→	exemptions, academic standing, transcripts, enrollment priorities, add codes
	entering all non instructional assignments, revising schedule and catalog information, manually
→	entering teaching unit information
→	Fiscal Tracking
	for help to notify students of lost & found items, to verify student enrollment and/or grade
→	history,
→	Payroll
→	to create paychecks
→	I use Banner every day for a variety of reasons.
→	same as number 2.
→	Charge students, take payment, look up holds, release holds, look up biographical information.
→	Budgeting, PRs, I ask IT to pull demographic data for me
→	Requisitions, purchase orders and budget tracking.
→	HRIS, Budget/Purchasing
→	this is the time keeping system I use to keep track of employee absences
→	PO's, preparing budget, approving & recording labor time
→	Budget
→	identify student as SAS. Tally contacts for semester for MIS reporting.
→	Budget queries, requisitions, leave reports, leave balances
→	order supplies
→	information on student enrollment, contact info, etc., plus budgeting and expenditures activities
→	Really only use it to check time sheets, leave balances, and such.
	Looking up SAS students to see if they are in class with previous semester notetakers, student
	enrollment/registrations status in order to fill in mandated accommodations, look up class
→	information, etc.
→	Absence reports, budget, student information, etc.
→	get student information
	Looking up student information in Banner Student for conduct and complaint issues. Using Banner
→	Fiscal for budget information and requisitions.
	We are interested in tracking our recruitment efforts once students have completed CCC Apply,
→	as part of the College Success Saturday priority registration effort and overall conversion rates.