A New Technique to Increase Efficiency and Consistency in Faculty Reporting

Monday, October 8, 2018
9:30am – 10:15am
Hampton Roads Ballroom VII
Welcome!

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Outline

• UCF Facts
• Challenge
• Old vs. New Process
• Data Dictionary
• Demonstration
• Future Improvements
• Q&A
Large metropolitan university
Orlando, FL
Over 66,000 students and 12,000 employees
UCF Knights
Highest Research Activity Carnegie Foundation
Scale X Excellence = Impact
Faculty Dashboard
Challenge

**Problem** – Missing piece of the puzzle

- Existing dashboards focused only on student data
- Faculty data was not self-serving and required ad hoc reports
- Employee dataset needed to be replaced
  - Limited to Fall term
  - Refresh once per year
- Same ad hoc requests over and over each term
  - Waste time recreating same variables in new project
- Data existed in separate tables
Solution – Balance the scale

- Create one updated source table – *Faculty/Staff*
- Add fields based on our most common data requests
- Table should have all historical terms, relevant information
- Create public Tableau report for anyone to view this data
Common Faculty Data Requests
Original Process

Steps
1. Run the PeopleSoft query
2. Save the data file
3. Upload into SAS Enterprise Guide
4. Manipulate in SAS Enterprise Guide
5. Calculate fields
6. Create report
7. Send to requestor
8. Provide support
Building the Table

- Run PeopleSoft queries
  - Created by Human Resources
  - Active employees
  - Snapshots from 2002 onward
    - Fall as of November 1
    - Spring as of March 1
    - Summer A as of June 1
    - Summer B as of July 15

- Import and compile Excel files
- Communicate with HR to learn about the variables

A SQL query walks up to two tables in a restaurant and asks: “Mind if I join you?”
Calculated Fields

• 9-month Equivalent Salary
  • Goal: Compare 9-month and 12-month faculty

• Faculty Rank
  • Goal: Report on groupings
  • Based on Jobcodes
  • Simple case statement

• Years Since Most Recent Hire
  • Goal: Approximate years at UCF
  • Problem – hire and rehire dates
  • Calculated only for non-hourly employees

• Newly-hired faculty
  • Defined as having been hired within the previous year
Data Dictionary

• Share with those not involved in the creation process
  • Document definitions for each field
  • Include formulas for all calculated fields

• Collaborate with HR to confirm definitions of fields

• Fields that are similar
  • 5 different fields for salary

• Located in shared drive

<table>
<thead>
<tr>
<th>Field</th>
<th>Type, Length, Format</th>
<th>Definition</th>
<th>Sample Value(s)</th>
<th>Notes &amp; Logic</th>
</tr>
</thead>
<tbody>
<tr>
<td>IKM_Ethnic_Group</td>
<td>Character 13 $CHAR13</td>
<td>Ethnic group that pulls in International</td>
<td>Am. Ind, Asian, Black, Hawaii/Pac, Hispanic, International, Multi-racial, Not Specif, White</td>
<td>Overrides Ethnic_Group if International, pulls in Ethnic_Group if not (International status derived from EEO table information) when t1.intl.Flag in(&quot;Yes&quot;) then &quot;International&quot;</td>
</tr>
<tr>
<td>Budgeted_Week</td>
<td>Numeric 8 $BEST12.</td>
<td>Number of weeks employee works in a year, used to calculate salary</td>
<td>52.2</td>
<td>Most employees have 52.2; 9 month employees have either 39 or 43.5.</td>
</tr>
<tr>
<td>Princ_Place_of_Emp</td>
<td>Character 10 $CHAR10</td>
<td>Campus location where employee spends majority of time/duties</td>
<td>Main, Cocoa, Daytona, Palm Bay, Lake Mary</td>
<td>Note that locations have changed over the years.</td>
</tr>
</tbody>
</table>
Considerations

• Difference: Original dataset and new Faculty/Staff table
  • Approved HR retroactive changes in PeopleSoft are captured
  • May not match any previous reporting using original dataset

• Data gets messier the further back we go
  • 7-digit to 8-digit home department numbers
  • Creation/elimination of different employee types
  • College/department reorganization

• Leading zeroes dropping off
  • Employee IDs
  • CIP codes
Benefits of Table

- Increased efficiency
  - More people can easily process a faculty data request
  - Most required fields live together in the same table

- Ensured consistency
  - Fields are calculated within the dataset rather than for each and every project separately
  - Dozens of old projects which used to come from static files could be reassigned to the new Faculty/Staff table
  - Table is stored in SAS library available to multiple users for consistent reporting

- Automated update process
  - Changes to the table were applied historically then added to our update stored process to apply moving forward
Dashboard

- **Tableau** visualization
  - Including only faculty data right now
- Public website access
  - Does not include personally identifiable information
- Decrease time spent creating reports
- Allow stakeholders to learn and gain insight from the data in a more interactive way
  - Users can take ownership of the data
  - Spurs creative thinking
Sample Data Request

Dean Knight needs the number of newly-hired Assistant Professors within the College of Arts and Humanities for a meeting ASAP!
Future Improvements

- Add staff profile to Tableau
  - Almost complete!

- Add faculty retention
  - Complex to create cohorts

- Career progression, promotion

- Trends over time
  - Reorgs
Flags for Faculty Reporting

• Each reporting agency has different definitions of the types of faculty included in their dataset

  • IPEDS
  • AAUP
  • CUPA
  • Academic Analytics
  • Common Data Set
Audience Q & A
Thank You!