Things to Consider When Building Data Feeds

BlueNotes Global – August 2018
Research 1
Metropolitan area
Division I

~29,000 UG
~10,000 Grad
~14,000 Employees

~6600 courses

>173,000 Evaluations
10 reports/main project
Agenda for Presentation

• What information is needed?
• How Blue uses data
• Evaluation factors
• Report factors
• Logic that may need to be added
• Where and how are the data stored?
• Source tables and how they combine
• Avoiding potential pitfalls
What Information is needed?

- User Contact Information
- Course Information
- User Course Relationships
- User Access Relationships
Why Automate?

• Allows updates regularly
• Reduces burden for BlueAdmin
• Reduces user error
• Allows systems at campus to show the data
Project - How Blue Uses Data for Eval

Course
- Course-ID
- Characteristics
- Dates

Crs-Teacher
- Course-ID
- ID
- Role

Evaluation
- Course Questions
- Instructor Questions (Name)
- TA Questions (Name)

Users
- ID
- Email
- Name
Project - How Blue Uses Data for Invite

Course
- Course-ID
  - Course-ID
    - Course-ID
      - Users
        - ID
          - Email (invitation)
            - Name (piped)
  - Crs-Student
    - Course-ID
      - ID (access to tasks)
  - Crs-Teacher
    - Course-ID
      - ID
        - Role
Reports - How Blue Uses Data

Course
Course-ID
Display info
Characteristics (access, norms, triggers)

Crs-Teacher
Course-ID
ID
Role (trigger, access)

Users
ID
Name (piping)
Email (invitation)
Admin View - How Blue Uses Data

Course
Prefix
Dept
College

Hierarchy
Prefix
Department
College
University

Viewers
Prefix
Department
College
University
ID

Users
ID
Name (piping)
Email (invitation)
Questions?
Evaluation Factors – Data Feed

- How will dates be handled?
  - Logic for dates
  - Dynamic Days
- Will your evaluation have triggers?
  - Teaching role questions
  - College/Dept/etc. specific questions
- Are there filters needed?
  - Cohorts
  - Individual Instruction
Report Factors – Data Feed

- Admin Viewer access
  - Level of access
  - What access granted
- Current organization
  - Hierarchy
  - Ownership
- Future re-orgs
Report Factors – Data Feed Cont.

- Merges
- Comparisons
  - College
  - Department
  - Course Level
- Course information
  - Access for instructors to their TA reports
Questions?
Hierarchy Logic

- Hierarchy Info (College, Dept, Prefix)
- Uses
  - Triggers
  - Access
  - Ownership rules
    - How to decide between multiple owners
    - How many layers do you need for the full cycle
Date Logic

- Include in Feed vs. Filter in Project
- Evaluation Dates

<table>
<thead>
<tr>
<th>Class Duration</th>
<th>Evaluation Duration</th>
<th>Evaluation Start</th>
<th>Evaluation End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 16-week</td>
<td>13 days</td>
<td>11 days before last day of class</td>
<td>1 day after last day of class (Reading Day)</td>
</tr>
<tr>
<td>Fall/Spring classes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 days</td>
<td>1 day</td>
<td>Last day of class</td>
<td>Last day of class</td>
</tr>
<tr>
<td>3-13 days</td>
<td>2 days</td>
<td>2 days before last day of class</td>
<td>1 day before last day of class</td>
</tr>
<tr>
<td>14-29 days</td>
<td>3 days</td>
<td>3 days before last day of class</td>
<td>1 day before last day of class</td>
</tr>
<tr>
<td>30-98 days</td>
<td>5 days</td>
<td>6 days before last day of class</td>
<td>1 day before last day of class</td>
</tr>
<tr>
<td>99+ days</td>
<td>13 days</td>
<td>11 days before last day of class</td>
<td>1 day after last day of class</td>
</tr>
</tbody>
</table>

- Report Release
Merge Logic

• What sections get merged?
  • Lectures vs. Cross-listed vs. other

• Merge information needed
  • Merge ID
  • Merge Name
  • Merge Primary
    • Dual ownership of courses
    • Primary with no students and/or no teacher
Where do you start?

- What tables have the needed pieces?
  - Where are the tables stored?
  - Who has access to the tables?
- What is the format of the data?
- When do the tables load?
- How does Blue want it?
Source Tables Examples

- **Course**
  - Term
  - Title of course
  - Course Information (Prefix, Number, Suffix, Section)
  - Course Characteristics (Individual Study, Lab, etc.)
  - Course links (shared, grouped, cross-listed)
  - Course dates and times
Source Tables Examples

- Course Ownership
  - Term
  - Course Prefix
  - Unit
  - Department
  - College
  - Primary Owner Flag
Source Tables Examples

- Schedule-Student
  - Term
  - Course Information
  - Student ID number
  - Registration Type
Source Tables Examples

- Schedule-Teacher
  - Term
  - Course Information
  - Teacher ID
  - Teacher role in the course
  - Teacher employee info
  - Teacher evaluation flag
Source Tables Examples

- Directory of Students
  - ID number
  - Name info
  - Email
  - Other demographics
    - Any duplication?
Source Tables Examples

- Directory of Employees
  - ID number
  - Name info
  - Email
  - Other demographics
Source Tables Examples

- Evaluation Report Access
  - ID number
  - Access
    - Level (prefix, department, college, university)
    - Area (which prefix, department, etc.)
## Combining Data – Course Feed

<table>
<thead>
<tr>
<th>Course Table</th>
<th>Course-Feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concatenate several to make Blue Crs ID</td>
<td>Course-ID</td>
</tr>
<tr>
<td>Start/End create duration</td>
<td>Trigger Fields</td>
</tr>
<tr>
<td>Duration and start-end create eval dates</td>
<td>Course Dates</td>
</tr>
<tr>
<td>Link section to make Merge info</td>
<td>Evaluation Dates</td>
</tr>
<tr>
<td>Use Merge ID to make merge primary flag</td>
<td>Grades</td>
</tr>
<tr>
<td></td>
<td>Merge Information</td>
</tr>
<tr>
<td></td>
<td>Course Ownership</td>
</tr>
<tr>
<td></td>
<td>Course Type</td>
</tr>
<tr>
<td></td>
<td>Course Level</td>
</tr>
<tr>
<td></td>
<td>Fields for populating reports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Ownership Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Link on Term, and Course Prefix</td>
</tr>
<tr>
<td>Pull in</td>
</tr>
<tr>
<td>- Department</td>
</tr>
<tr>
<td>- College</td>
</tr>
<tr>
<td>- auto populate UMD</td>
</tr>
</tbody>
</table>
## Combining Data – Viewer Feed

<table>
<thead>
<tr>
<th>Viewer Security Table</th>
<th>Report Viewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID number</td>
<td>ID number</td>
</tr>
<tr>
<td>Level of Access</td>
<td>Report Viewer</td>
</tr>
<tr>
<td>Area of Access</td>
<td>All current children</td>
</tr>
</tbody>
</table>

### Course Current Ownership

- Link on Area of Access
- Pull in
  - old prefixes under that area
  - current prefixes under that area
Avoiding Potential Pitfalls

- Use a non-changing ID
- Load all the rows you will need for reporting even if there won’t be an evaluation
- Avoid non-unique codes for entities
- Have plans for organization changes
- Have a plan for non-standard terms
- Test new feeds
Avoiding Potential Pitfalls

- Use consistent understandable names
- Have both codes AND descriptions
- Plan for upgrades and maintenance
- Test new features
- Null column for flagging
- Others?
Final Questions?
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