

Using Student Analytics to Provide State Reporting

Mike Glasser

Office of Institutional Research
University of Maryland – Baltimore County

Agenda

- Introduction
- Versioning
- Selection
- Custom Fields
- Data Cleaning
- Output
- Questions

UMBC

University of Maryland - Baltimore County

- Located in suburban Baltimore County, between Baltimore, MD and Washington, DC
- One of the three public research campuses in the University of Maryland System
- 10K undergraduate and 2K graduate students
- 2,200 Employees; 715 full-time faculty
- PeopleSoft, SQL Server 2008 R2
- 9 Pan-Am chess championships

“Official” Reporting

- Who
 - Federal (IPEDS)
 - Maryland Higher Education Commission (MHEC)
 - University System of Maryland (USM)
 - Campus
- What
 - Applications
 - Enrollments
 - Credit Hours / FTE
 - Degrees

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Versioning

- Blackboard Analytics (BbA) methodology
- DimVersion
- “10th Day” Freeze
- Summer/Winter Admits
- Change Freeze Key
- Special Version
- Degrees

BbA Methodology

- Copy of “Current Snapshot”
- Administrative page
 - Select different Version
 - Future scheduling

Version:

Student Records Term to Copy:

- Winter 2012
- Spring 2012**
- Summer 2012
- Fall 2012
- Winter 2013
- Spring 2013

Select the date for the Version to Load:
(Note: The time will default to the normal load time)

May 2012						
≤						≥
Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9

DimVersion

Versionkey	Description
-1	Unknown
1	Current Snapshot
3	End of Term Census
4	Begin Term Census
7	Day -5
8	Day 1
9	Day 5
10	Day 25
11	POTENTIAL Begin Term Census
13	End of Year Degree Census
14	Begin Special Term Census
15	Advanced Registration

“10th Day” Freeze

- “Begin Term Census”
 - Delivered
 - Official Freeze at end of schedule adjustment
 - Fall and Spring only
- “Potential Begin Term Census”
 - New VersionKey
 - Update to “Begin Term Census”
 - Avoids version availability until valid

Summer / Winter Admits

- Summer Admits
 - Treated as Fall admits
 - Frozen in Summer and Fall
 - Need to know both
 - Winter treated as Spring
- New field: Reporting Admit Term

Key	Admit Term	Key	Rptg Admit Term
100	Summer 2011	101	Fall 2011
101	Fall 2011	101	Fall 2011

Change Freeze Key

RptgAdmitTermKey vs TermKey

- HEA.SnapshotFinal procedure
 - Modified INSERT and DELETE statements
 - Fields based on Term being processed
 - FactApplications only

Special Version

- Freeze at end of Summer schedule adjustment
 - VersionKey 4, AdmitTerm Summer 2011
- Fall freeze includes Summer
 - VersionKey 4, AdmitTerm Summer 2011
- “Begin Special Term Census”
 - New VersionKey
 - Avoids duplicate TermKey in Version

Degrees

“End of Year Degree Census”

- Freeze degrees in August 2011
 - Summer 2010, Fall 2010, Spring 2011
- Manual freeze
 - copy Version 1 to 13 (New VersionKey)
 - DimTerm.Academic Year = ‘2011’
- FactDegreeAwards
 - One record per degree
- FactDegreePlans (New table)
 - One record per major per degree

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Selection of Official Records

New Dimensions

- Official Application
- Official Enrolled
- Official Subject
- Official Degree Plan

Official Application

- Exclude
 - Readmit/Reinstate
 - Continuing Education
 - Previously Enrolled at “Student Level”
 - Term Only
 - Intercampus
- One Record Per Student
 - Enrolled with application
 - Program Status (admit over applied)
 - Education Level (PhD over Masters)

Official Enrolled

- Include
 - Enrolled
 - Official Major
 - Primary StudentTerm (UG & Grad)
- Exclude
 - Continuing Education
 - Taking only Audit courses
 - Taking only “Place holder” courses

Official Subject

- Reporting Credit Hours and FTE
- Custom table of Subject attributes
- Excludes
 - “Place holder” courses
 - Study Abroad
 - Grad Assistant
 - Practicum
 - Intercampus
 - Remedial Subjects

Official Degree Plan

- New table : [FactDegreePlans](#)
- Include
 - Awarded
 - Valid HEGIS/CIP Code
 - Major/Certificate only
- Exclude
 - Previously Awarded
 - Secondary Plan for Graduate students
 - Duplicates
 - Mixed degree level

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Custom Fields

- GenderIPEDS
- Ethnicity / Multiple Ethnicities
- FTE
- App Enrolled Official
- App Student Level
- Degree Sought MHEC
- Other Custom Fields

GenderIPEDS

- Handling “Unknown” Gender
- Based on Student ID
- Even = “Male – Assigned”

SourceKey	Description	AltDescription
1	Male	Male
2	Female	Female
3	Male	Male - Assigned
4	Female	Female - Assigned

Ethnicity

- DimEthnicity
 - DimStudent.CurrentEthnicity
- DimIPEDSEthnicity
 - DimStudent.CurrentEthnicity
 - DimStudent.CurrentCitizenship
 - Added EthnicityCodeIPEDS
 - Added EthnicURMCount

Multiple Ethnicities

Single Answer

- Helper table created
 - Single ethnicity per person
 - Source for CurrentEthnicity
- Any Hispanic = Hispanic
- More than one non-Hispanic = “Two or More”
- “MULTI” ethnicity created in load

Multiple Ethnicities

Multiple Answers

- DimEthnicities
 - New static dimension (128 combos)
 - Allows for multiple ethnicities
 - Indicator for each ethnicity
- SourceKey
 - AMIND-ASIAN-BLACK-HISPA-NSPEC-PACIF-WHITE**
 - ASIAN-BLACK-HISPA---**
 - WHITE**

FTE

- Delivered
 - FactStudentTerm
 - 'FTE Divisor - Undergraduate' (12)
 - 'FTE Divisor - Non-Undergraduate' (9)
- Customization
 - FactRegistration
 - Course Level
 - Thesis course
 - Masters/Doctoral student

App Enrolled Official

Is student officially enrolled in Fall/Spring with this Application?

- Trying to sync Applicant file indicating enrolled with the Enrollment file indicating new
- Case: UG applies for Grad, stays UG
- New field in FactApplications, but set in PreLoad FactStudentTerm
- Must be Officially Enrolled in Rptg Admit Term
- Admissions Application Number must match

App Student Level

- Student Level
 - Undergrad
 - Masters
 - Doctorate
- Student Level New
 - Previous Enrollment at Student Level
- Student Level Status
 - Report to State combination of two variables

Degree Sought MHEC

- State codes for degree objective
- Attribute associated with each Plan
- Dimension attributes
 - Current MHEC code
 - Code for Enrollment file Prior to 2009
 - Code for Degree file Prior to 2009
- Separate code for “Bachelors 2nd Major”

Other Custom Fields

- New Status Official
 - New/Continuing, Freshmen/Transfer
- First Time Status MHEC
- Geographic Origin Official
 - Time of application
 - County, State, International
- DimResidency.Residency MHEC
- Instruction Mode
- Room Scheduled By

Campus Reporting

Plan (Major) = “BIOL BS”

- Plan Objective
 - Bachelors
- Reporting Plan
 - “BIOL”
 - UG/Grad Indicators
- Plan Reporting Org
 - BIOL and MOCB to “Biological Sciences”
- Plan Reporting College

Plan Attributes

- Custom setup table
- Reporting Organization rollup
- Degree Sought MHEC
- Online Plan indicator
- Second Campus indicator
- Continuing Ed indicator
- STEM indicator

Slowly Changing Dimension

Plan Attributes History

- Reporting Org rollup changes over time
- Setup table has Begin and End Term
- DimPlanAttributes
 - Latest record for each Plan
 - Lookup by SourceKey
- DimPlanAttributesHistory
 - All records
 - Lookup by SourceKey AND Term between Begin and End Term

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Data Cleaning

- Clean it in the transaction system
 - Daily reports for Data Quality
- “Unknown” values (key = -1)
- Create fake records
 - Bad majors
 - “Two or More” Ethnicity
- New fields
 - GenderIPEDS
 - App Enrolled Official

Output

- Extract files to State
 - SAS
 - Selection using proper Version
 - Selection using “Official” fields
- Campus reports
 - Any reporting tool
 - Same selection criteria
 - Same fields

Recap

- Versioning
 - New Versions
 - Change selection key
 - Manual freezes
- Selection
 - “Official” indicators
- Custom Fields
 - PeopleSoft shortcomings
 - “State” requirements
- Current and Frozen data together

Wrap Up

Any Questions?

Mike Glasser

University of Maryland - Baltimore County

mglasser@umbc.edu

(410) 455-3577

Source code is available upon request