BI Tools and Data Flow

http://web.peralta.edu/indev/peralta-business-intelligence-bi-tool

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Business Intelligence

Peralta uses PeopleSoft

OBIEE (Oracle Business Intelligence Enterprise Edition) supports Business Intelligence
Peralta BI Tool

- Web-based
- Enrollment, student, and faculty data
- Finance and HR coming soon

Data Flow

Source (PeopleSoft) → Data Warehouse → Dashboard Reports → Websites Documents
Who Can Use It?

- 50 + site licenses
- Administrators, staff, faculty
- Additional access from campus faculty network
- More site licenses as new modules are added
Output

- Dashboards with tabbed reports
- Query and Mini-Query Tools
- Automated Reporting

Limited Access

- Dashboard views can be restricted to user subgroups
- Same for access to query tools
Dashboards

Tabs
Answers – Subject Areas

Subject Areas
- Enrollment
- Instructors
- Student Groups
- Student Headcount
- Student Outcomes
- Students

Direct Database Request
Create Direct Request
Create a new SQL request that will be sent directly to the database.

Answers - Folders

Shared Folders
- Dashboards
- Dbudd
- ECT
- FTES FTEF Productivity
- hzhang

Assessment Validation
- Basic skills final
  - English 1A 1B 5 success rate with dropout_for college of Alameda
  - English 1A 1B and 5F 09 with dropout_for college of Alameda
  - English 1A tracking down F 09 and S 10 with dropout_for Steve Gerstle
  - English 1A tracking down F 09 and S 10 with dropout_for Steve Gerstle with instruction
  - English 1A tracking down F 09 and S 10 with dropout_for Steve Gerstle without instruction
  - English 1A tracking down F 09 and S 10 with dropout_for Steve Gerstle_ip_test_sample
Basic Skills Query

Basic Skills Result
Mini Query Student Headcount

![Image of Oracle Answers interface for Mini Query Student Headcount]

Mini Query Student Headcount

![Image of Oracle Answers interface for Mini Query Student Headcount with data display]
Mini Query Student Outcomes

ORACLE Answers

Student Outcomes
Columns
- Term
- Campus
- Subject
- Class Nbr
- Gender
- Ethnicity
- Matric Status
- Residency
- Education Level
- Enrollment Status
- Education Goal
- Citizenship
- Fulltime

Dimensions
- Success Rate
- Retention Rate
- Withdraw Rate
- Success
- Retention
- Withdraw
- Crse Completions
- Census Enrollment

Facts

Columns
Click on column names in the selection pane to add them to the request. Once added, you can sort the data.

Display Results
Remove All

Filters
Add filters to the request criteria by holding down the CTRL key and clicking on the criteria pane.

Criteria
Results
Prompts
Advanced

Compound Layout

Title
Add View

Download
Copy

Fail10
Laney
MATH

American Indian/Alaskan Native
63.00%
Asian
74.00%
Black/African American
49.00%
Filipino
55.00%
Hispanic
53.00%
Multiple
55.00%
Other non white
52.00%
Pacific Islander
75.00%
Unknown/NR Respondent
61.00%
White Non Hispanic
68.00%
BI Tool Pros and Cons

**Pros**
- Powerful queries and dashboards
- Automated updates
- Visual interface for quick development

**Cons**
- Expensive to implement
- Complex queries
- Site Licenses costly

Websites

- BI reports posted on Peralta websites
- Static data
- WordPress ideally suited as data repository
WordPress

- Originally developed for blogging
- Open source software: Free, easy to maintain, extensive user support
- Remote ("cloud") hosting

WordPress

- Modular, robust, decentralized
- HTML unnecessary; 10 minutes to create a site
- Multi-site networks
New Paradigm for Multiple Users

- Networks of websites with common theme and structure
- Administrators, faculty, staff maintain their own websites
- Robust, decentralized. Same model as Internet itself

WordPress at Peralta

- 4 Peralta colleges and district offices – 45k students annually
- Laney, Berkeley, Alameda, and District have separate installations
- Each WordPress installation has its own (remote) server
WordPress at Peralta

District – 60 websites, including: Accreditation, Institutional Research, Service Centers, etc.

Laney – 180 websites, including: Departments, programs, faculty, etc.

WordPress at Peralta

Berkeley – 100 websites, including: Departments, programs, faculty, etc.

Alameda – In development
Website Costs

Peralta IT: $0
Local hardware: $0
Software: $0
Webmaster and Tech Support: 1 FTE district wide
Remote hosting: $5k/year/server, includes automated daily backups

Website Costs

Development costs from ground up: $25k + committee
IR Website Success Page

Institutional Research Success by Subject
### Website Pros and Cons

**Pros**
- Decentralized
- Robust
- Easy to maintain
- No HTML
- Publicly available
  - Cloud hosting
- Open source
  - New paradigm

**Cons**
- No automated updates

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### Mail Merge for Data Delivery

- BI supplies annual program review data for each department in each college
- 50 departments in 4 colleges - 200 sets of review data
Mail Merge for Data Delivery

In past: Spreadsheet sent to colleges who copied and pasted data in annual program reviews

Mail Merge automates the process

Master spreadsheet:
Rows = departments
Columns = enrollment, success, faculty data

Master Word document:
Table cells hold data
Mail Merge Output

Mail Merge Output

Mail Merge prints to PDF
Each “letter” is data for a specific department

Departments extract pdf
No need to copy and paste
Mail Merge Output

Mail Merge generates formatted reports for 200 departments: < 1 minute

.3 seconds/report
No manual data entry

Part Time Faculty Evaluations

2500 part-time faculty at Peralta colleges (going back 10 semesters)

Must be evaluated regularly
Part Time Faculty Evaluations

Priority hiring pool depends on teaching frequency and average load

Master spreadsheet has 8 semesters of load data: 20,000 cells

Automated Data Delivery

BI query provides pt faculty by term, with name, campus, department, and load

Excel lookup function populates spreadsheet with new faculty and load data

Other Excel functions provide averages, etc.
Part Time Faculty Evaluations

Data for a new semester:
< 1 hour to process

BI -> Excel
Fully automated
No time-consuming, error-prone, manual data entry