Unleashing Analytics in the Classroom
http://go.fiu.edu/analytics
High Level Analytics

Course Level Analytics:
- Impact on Course Design
- Impact on Student Success & Performance

Blackboard Analytics

Q&A
What days of the week are the majority of users logging into Blackboard?

A. Early in the week (M/Tu/W)
B. Later in the week (W/Th/F)
C. Weekend (S/Su)
Bb Mobile App (Spring 2015)
Bb Mobile App  (Spring 2014 to Spring 2015)

LOGINS BY DAY OF THE WEEK

Logins

Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday
150000 | 150000 | 150000 | 150000 | 150000 | 150000 | 150000

LOGINS BY HOURS OF THE DAY

Logins

00 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23
60000 | 50000 | 40000 | 30000 | 20000 | 10000 | 0000 | 10000 | 20000 | 30000 | 40000 | 50000 | 60000 | 70000 | 80000 | 90000 | 100000 | 110000 | 120000 | 130000 | 140000 | 150000

Bb Mobile App  (Spring 2014 to Spring 2015)

LOGINS BY PLATFORM

UNIQUE USERS BY PLATFORM
Course Design

First, Consider the Purpose of Measuring Student Engagement.

– Identifying which activities not only engage students but also produce quality analysis, is critical to designing and adapting online courses.

– *What are the patterns of performance you are trying to evaluate?*
Course Design

Patterns of Performance

- When are students logging into my course?
- Which course resources/tools are being used most frequently?
- Which discussions boards generate the most traffic?
- What are the patterns of performance in an online assessment?
- What are some of my opportunities for improvement?
Course Design

When are Students Logging into My Course?

Course Reports
- Course Activity Overview
- Student Overview for Single Course
Course Design

Course Overview

User Activity By Day

<table>
<thead>
<tr>
<th>Day</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>153.94</td>
</tr>
<tr>
<td>Monday</td>
<td>102.75</td>
</tr>
<tr>
<td>Tuesday</td>
<td>53.83</td>
</tr>
<tr>
<td>Wednesday</td>
<td>36.65</td>
</tr>
<tr>
<td>Thursday</td>
<td>40.49</td>
</tr>
<tr>
<td>Friday</td>
<td>31.27</td>
</tr>
<tr>
<td>Saturday</td>
<td>60.49</td>
</tr>
</tbody>
</table>

01/01/2015 - 04/17/2015

Total Time in Course: 479.42
Avg Time Per User: 8.56
Course Design

Student Overview for Single Course

Student Activity by Item in the Course

<table>
<thead>
<tr>
<th>Item Name And Type</th>
<th>Total Time Spent in Hours</th>
<th>Number of Times Accessed</th>
<th>Initial Access Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>3D Modeling Discussion @<a href="mailto:X@example.service_level_label">X@example.service_level_label</a>@X@ Link</td>
<td>0.01</td>
<td>1</td>
<td>Apr 5, 2015 1:11 AM</td>
</tr>
<tr>
<td>Assignment Dropbox Content Folder</td>
<td>0.15</td>
<td>28</td>
<td>Jan 18, 2015 3:53 AM</td>
</tr>
<tr>
<td>Course Content Content Folder</td>
<td>8.36</td>
<td>137</td>
<td>Jan 12, 2015 6:25 PM</td>
</tr>
<tr>
<td>Course Map Blank Page</td>
<td>0.10</td>
<td>6</td>
<td>Jan 18, 2015 3:54 AM</td>
</tr>
<tr>
<td>Discussion: Introduce Yourself @<a href="mailto:X@example.service_level_label">X@example.service_level_label</a>@X@ Link</td>
<td>0.02</td>
<td>1</td>
<td>Jan 18, 2015 5:11 PM</td>
</tr>
<tr>
<td>Final Project Sample Content Folder</td>
<td>0.00</td>
<td>6</td>
<td>Mar 24, 2015 1:45 PM</td>
</tr>
<tr>
<td>Final Project Samples Content Folder</td>
<td>0.00</td>
<td>1</td>
<td>Apr 12, 2015 11:20 PM</td>
</tr>
</tbody>
</table>
Course Design

How does this Information Affect my Course Design?

- Posting Announcements/Messages
- Materials/Resources being Accessed [Homepage]
- Time Allotted for Module Content Completion
California State University identified that the more ‘views’ or visits to the course home page, the higher the final grade. (Whitmer, Fernandes, & Allen, 2012).

What material do you house within your course homepage?
Course Design

Which Course Resources/Tools are Being used Most Frequently?

Course Reports
— Overall Summary of User Activity
Overall Summary of User Activity

<table>
<thead>
<tr>
<th>Area ID</th>
<th>Hits</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glossary</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Portfolios</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Blogs</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>LTI</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Calendar</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Chalk Title Management</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Goals (Instructor View)</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Collaboration</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Content Item</td>
<td>10159</td>
<td>50.13%</td>
</tr>
<tr>
<td>Email</td>
<td>24</td>
<td>0.12%</td>
</tr>
<tr>
<td>course_instructor_tool.name</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Roster</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>course_student_tool.name</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Tools Area</td>
<td>3</td>
<td>0.01%</td>
</tr>
<tr>
<td>Portfolios Homepage</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>date.rover.application.name</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Discussion Board</td>
<td>4121</td>
<td>20.33%</td>
</tr>
<tr>
<td>Flickr Mashup Tool</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>grading.application.name</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Groups</td>
<td>1</td>
<td>0.00%</td>
</tr>
<tr>
<td>i-clicker Instructor Resources</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>i-clicker Student Registration</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>iPeer</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Grade Center</td>
<td>578</td>
<td>2.85%</td>
</tr>
<tr>
<td>internships.plugin.application.name</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Item Analysis</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Journals</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Blackboard Help</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><a href="mailto:X@course.service_level.label">X@course.service_level.label</a>@X@ Messages</td>
<td>3967</td>
<td>19.57%</td>
</tr>
<tr>
<td>Performance Dashboard</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>plugin.application.name</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>resource/x-bb-mobile-assessment.test.list</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>retention.application.name</td>
<td>3</td>
<td>0.01%</td>
</tr>
<tr>
<td>Self and Peer Assessment Tool</td>
<td>0</td>
<td>0.00%</td>
</tr>
</tbody>
</table>
Course Design

How does this Information Affect my Course Design?

- Content Presentation (Tool Modality)
  - Video clips, posted documents, etc.
- Supplemental Resources
- Group Tools
- Student Support Cases
Course Design

Which Discussion Boards Generate the Most Traffic?

Course Reports

—User Activity in Forums
Course Design

User Activity in Forums

<table>
<thead>
<tr>
<th>Forum</th>
<th>Hits</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>3D Modeling Discussion</td>
<td>46</td>
<td>24.34%</td>
</tr>
<tr>
<td>General Forum</td>
<td>15</td>
<td>7.94%</td>
</tr>
<tr>
<td>Introduce Yourself</td>
<td>86</td>
<td>45.50%</td>
</tr>
<tr>
<td>Title Block Discussion</td>
<td>42</td>
<td>22.22%</td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td></td>
</tr>
</tbody>
</table>
Course Design

How does this Information Affect my Course Design?

- Number of views on discussion boards can be an indicator of level of interest of a given topic.
- Hot Topic / In the News
Course Design

What are the Patterns of Performance in an Online Assessment?

Item Analysis
—By Question
A. Filter the question table by question type, discrimination category, and difficulty category.
B. Investigate a specific question by clicking its title and reviewing its Question Details page.
C. Statistics for each question are displayed in the table.
Course Design

How does this Information Affect my Course Design?

- Re-evaluate questions that may be misleading and/or ambiguous
- Pre-work for assessments
- Development of supplemental resources
- Create varied forms of assessment
Course Design

What are Some of My Opportunities for Improvement?

• Enterprise Surveys
  – Enterprise Surveys should be used to collect data on student satisfaction about course items and reflect on the changes based on the collected data.
What are Enterprise Surveys?

- Enterprise surveys are delivered at the system level.
- This system level tool does not replace the course level surveys tool available to instructors in their courses.
- You can send your survey out to multiple sets of recipients and analyze the results.
- Survey results are compared using response periods, which are sets of recipients and a time frame that you specify.
- You can also compare by enrollments, membership, demographics, or by a specific survey question.
Course Design

How does this Information Affect my Course Design?

• Ease of Navigation
• Create actionable items based on feedback (e.g. extra time on exam)
• Are the resources within the course sufficient?
• Is there sufficient peer to peer interaction/collaboration?
• Multimedia preference: Pre-recorded lectures versus live lectures
• Are the course and professor expectations clear?
• Determine what day/time works best for live virtual meetings every week.
Course Design

Sample Questions

My instructor provides clear instructions.

The instructor uses effective teaching methods that enhance my learning.

The instructor uses technology effectively to advance my learning.

The course was well organized.

The syllabus was clear and easy to understand.
Course Design

Instructor Dashboard

Course Tools

Course Reports
You can run several types of Course Reports to view information about course usage and activity. You can view summaries of course usage including which course areas are used most frequently and course access patterns for specific students.

Best Practices:
- Search the list of reports for keywords in the names of the descriptions to find the report that generates the information you need. The following reports are available within Blackboard:
  - All User Activity Inside Content Areas
  - Course Activity Overview
  - Course Coverage Report
  - Course Performance
  - Overall Summary of User Activity
  - Single Course User Participation Report
  - Student Overview for Single Course
  - User Activity in Forums
  - User Activity in Groups
  - Item Analysis

Achievements
You can use the Achievements tool to create opportunities for students to earn recognition for their work.

Best Practices:
- You may designate criteria for issuing achievements to students in the form of both badges and certificates. Such as:
  - Participation and recognition of skills learned.
  - Self-Assessments
  - Module/Topic Completion
  - Peer to peer teaching/mentoring.
  - Soft skills including creativity, collaboration, and teamwork—all qualities not easily measured by standardized testing

Enterprise Surveys
You can use Enterprise Surveys to measure student satisfaction levels, course community engagement, and other attitudes that impact the effectiveness of the course and learning materials.

Best Practices:
- Enterprise Surveys should be used to collect data on student satisfaction about course items and reflect the changes based on the collected data. Such as:
  - Ease of Navigation
  - Create actionable items based on feedback (i.e. extra time on exam)
  - Are the resources within the course sufficient?
  - Is there sufficient peer to peer interaction/collaboration?
  - Multi-media preference: Pre-recorded lectures versus live

Performance Dashboard
The Performance Dashboard provides you with a view into all types of user activity in your course or organization. All users enrolled in your course are listed, including instructors, students, teaching assistants, graders, observers, and guests, with pertinent information about each user's progress and activity.

Best Practices:
Key Question

- How can I identify students who are at risk?
Retention Center

The Retention Center provides an easy way for you to discover which students in your course are at risk. You can communicate with struggling students and help them take immediate action for improvement. You can also keep track of patterns over time. More Help

### Students currently at risk

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>MISSED DEADLINES</th>
<th>GRADES ALERT</th>
<th>ACTIVITY ALERT</th>
<th>ACCESS ALERT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexander Bell</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>William Shakespeare</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Napoleon Bonaparte</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hernando Cortes</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Oliver Cromwell</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>John Dalton</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enrico Fermi</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Robert Frost</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Samuel Gompers</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mikhail Gorbachev</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Students you are monitoring

- **Robert Frost**
  - Last Access: 80 days ago
  - Activity: 71.1% above average
  - Grade: 2.91% above average
  - Missed Deadlines: 0

- **Alexander Bell**
  - Last Access: Never
  - Activity: No Activity in Course
  - Grade: 39.2% below average
  - Missed Deadlines: 0

**Other information you are monitoring**

- **Grades Alert**
  - External Grade is 10% above class average
  - 26 students meeting rule
Retention Center

Students currently at risk

View students not at risk
Retention Center

Students currently at risk

- Missed Deadlines
- Grades
- Course Activity
- Course Access
Retention Center

Retention Status

Julian

Risk Factors

<table>
<thead>
<tr>
<th>MISSED DEADLINES</th>
<th>GRADES ALERT</th>
<th>ACTIVITY ALERT</th>
<th>ACCESS ALERT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 item(s)</td>
<td>82.11% 9.85% above average</td>
<td><strong>45% below average</strong></td>
<td>1 day(s) ago</td>
</tr>
</tbody>
</table>

1 deadline has been missed by more than 0 day(s)

Activity in the last 1 week(s) is 20% below course average

Notification History

No communications yet...

Add a Note
Send Notification

Compose a personalized notification message to one or more users. When you select more than one user to receive a notification, the To: field in the message becomes the name of the course so users are not aware of others who receive the same message. If notifications bounce (were sent to an invalid email address), the sender will receive an email notice. More Help

EMAIL INFORMATION

To
Julian

Additional Recipients (bcc)

From
Gustavo Roque

Subject

Message

Your activity and performance levels have triggered an alert from this course. Please contact your instructor for details.

Path: p

Words: 18
Key Question

- How can I identify my top performers?
Key Question

- How can I identify my top performers?

- Why?
  - Send them kudos for being top performers
  - Ask them to serve as peer mentors
  - Interview them and find out what makes them successful; share with the class
Add Grade Rule

Grade rules are based on a defined score for any grade or calculated column in the Grade Center. Students who score above or below the defined threshold for a specific grade item trigger an alert. Then, you can send an email message to the students and their observers. More Help

* Indicates a required field.

**RULE INFORMATION**

<table>
<thead>
<tr>
<th>Rule Name</th>
<th>Top Performers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule Type</td>
<td>Grade</td>
</tr>
<tr>
<td>Included in Risk Table</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**RULE CRITERIA**

To define the score threshold for a particular Grade Center item, first select the item from the drop-down list. Possible points for the items appear in parentheses.

* Select Grade
  - Monitor Final Grade
  - Monitor Specific Item

* Define Criteria
  - Set Grade Value
  - Use Average Grades

Grade is Above the average grade by a percentage of: 10 %

Click Submit to proceed. Click Cancel to go back.
Retention Center

7 Student(s) Meeting Rule

Grade for Test – Midterm Exam[100] is above 80%

Select students to notify

- Patrick
  - Course Grade: 81%

- Juan
  - Course Grade: 97%

- Elinett
  - Course Grade: 83%

Notify Selected
How do I know if a particular student has been investing time and energy into my class?
Student Activity

- Find out how much time the student is spending in the course
- Evaluation > Course Reports > Student Overview for Single Course
Student Overview

Student Activity by Day

01/01/2015 - 04/17/2015

Sunday: 21.01 Hours
Monday: 0.12 Hours
Tuesday: 11.45 Hours
Wednesday: 3.05 Hours
Thursday: 5.11 Hours
Friday: 6.55 Hours
Saturday: 7.44 Hours

a + d = s²

analytics + design = student success
Course Activity

- Find out how their time spent in the course compares to other students.
- Evaluation > Course Reports > Course Activity Overview
Course Activity Overview

Student Overview (61 Students)

Click on a bar to see activity for the student.

- Acosta, Jorge (10.89 rest)
- Aguilar, Estela (12.63)
- Aiken, Erin (0.11)
- Alvarez, John (6.81)
- Alvarez, Laren (8.73)
- Aquino, Erin (5.46)

Course Average
# Resources

http://go.fiu.edu/analytics

## COURSE REPORTS in BLACKBOARD (A Cheatsheet)

Where to find reports:
- Blackboard > Control Panel > Expand EVALUATION > Click on COURSE REPORTS

<table>
<thead>
<tr>
<th>Report name</th>
<th>What it really should be called</th>
<th>What’s in it?</th>
<th>When to Run Report</th>
</tr>
</thead>
</table>
| **All User Activity inside Content Areas** | Popular Content Report |  • Shows you the most popular content in your course (using hit counts)  
• Student by student information on what content areas they are clicking on  
• A chart that shows what dates(s) have the most activity  
• Student by student information on what day of the month they are accessing the content | Monthly |
| **Course Activity Overview** | Time Spent Report |  • A chart that shows you which day of the week generates the most activity in your course  
• A bar graph showing each student and how their time spent in the course compares to the course average | Monthly |
| **Course Coverage** | Outcomes Report 1 |  • Should only be used if your department is using Blackboard Outcomes Assessment | N/A |
| **Course Performance** | Outcomes Report 2 |  • Should only be used if your department is using Blackboard Outcomes Assessment | N/A |
| **Overall Summary of User Activity** | Blackboard Tools Report |  • A pie chart showing which Blackboard Tools (Announcements, Content Item, Emails, Grade Center, etc.) are most commonly used  
• Student by student information on which Blackboard Tools they are most commonly accessing  
• A chart that shows what dates(s) have the most activity with Blackboard Tools  
• A chart that shows which hours of the day have the most activity with Blackboard Tools  
• A chart that shows which day of the week has the most activity with Blackboard Tools | Monthly |
| **Single Course User Participation** | Test Submissions Report |  • Student by student information on most recent test submissions | As needed |
| **Student Overview for Single Course** | Student Report |  • Report is run for a specific student  
• A chart that shows how much time they spent in the course, broken down by day of the week  
• Total time spent and number of times accessed for each item | As needed |
| **User Activity in Forums** | Discussion Forums Report |  • Pie chart shows you the most popular discussion forum in your course (using hit counts)  
• Pie chart shows you the most popular discussion forum in your course (using # of message count)  
• Student by student information on what discussion forums areas they clicked on  
• A chart that shows you which day of the week generated the most activity for discussion forums  
• Student by student information on what day of the month they accessed discussion forums | As needed |
| **User Activity in Groups** | Groups Report |  • Pie chart shows you the most active group in your course (using hit counts)  
• By group(s)  
• Student by student information on which group they clicked on  
• A chart that shows what dates(s) have the most activity for groups  
• Student by student information on what day of the month they accessed groups | As needed |
Key Questions

- How do I identify students at-risk?
  - Retention Center

- How do I identify my top performers?
  - Retention Center with customized rules

- How do I know if a particular student has been investing time and energy into my class?
  - Course Reports:
    - Student Overview for Single Course
    - Course Activity Overview
Bb Analytics

- More robust reporting & analytics tool
- Interactive reports
- Export to multiple formats (XML, CSV, Excel, TIFF, Word)
Bb Analytics

**Course Analytics**

- **Course At-a-Glance**
  This report compares this course against other courses in the same department.
  > Last Run: Monday, April 20, 2015 6:52:34 PM EDT

- **Activity and Grade Scatter Plot**
  This report plots the distribution of student activity against their grades in this course.
  > Last Run: Monday, April 20, 2015 6:56:20 PM EDT

- **Activity Matrix**
  This report shows a visual representation of student activity in the course.
  > Last Run: Monday, April 20, 2015 6:58:03 PM EDT

- **Course Submission Summary**
  Summary of User Submissions for this Course
  > Last Run: Monday, April 20, 2015 6:59:04 PM EDT