Characterizing Engagement in an Online Setting

Andy Miller, EdD
Principal Educational Consultant – Blackboard Analytics
Recent EDUCAUSE Quick Poll:

- **Apx 2/3** of respondents reported a moderate-large increase in Student Analytics
- Of those:
  - **78%** sought campus data for academic interventions
  - **66%** sought data on LMS engagement

How do we characterize LMS engagement?

When do we intervene?
Face to Face Experience

Instructors can pick up on non-verbal cues

- **7% Communication is verbal**
- Confused looks/Excited Looks
- ‘Being there is the essence of teaching and learning’ (Druger, 2003, p. 351)
  - Learning occurs within the unforeseen experiences that provide novel insight to a given topic.

How do deliver that personalized learning environment?

How do you bridge the non-verbal 93%?

#BBANALYTICS
Our Approach

Matt Abrahams – Speaking Up Without Freaking Out

– WHAT

– SO WHAT

– NOW WHAT

#BBANALYTICS
Accesses

- Frequency of opening a course
- Max of 1 per session
  - Imagine walking into a f2f course
  - Leaving for a drink of water, then returning

Calculating Last Date of Attendance

Academically related activities do not include activities where a student may be present but not academically engaged, such as:

- living in institutional housing,
- participating in the school's meal plan,
- **logging into an online class without active participation,**
- participating in academic counseling or advisement.
Minutes

• Click in, then log out
• Late policies in F2F courses
• Video Lectures, Reading content, taking exams, etc.
Interactions

• What about students who click in, then walk away
• ‘Clicks’ / Engaging with content
  – Not just random clicks
  – Meaningful clicks = loading content
Engagement With Activity

ACCESSES
• Which item types?
  – Assessment
  – Content
  – Tools
• Which content, specifically?

MINUTES
• How long are exams taking?
• How many minutes are they viewing a 30 min recorded lecture?

INTERACTIONS
• Which item types?
  – Assessment
  – Content
  – Tools
• Which content, specifically?
So What?

**FACULTY**
- Course Design
- Student Success
- Formative Feedback

**ADVISING/COACHING**
- Engagement Benchmarks
- Mental Health Alerts
- Improvement/effectiveness of intervention

**ID/SR ADMINS**
- Course Design
- Faculty Bright Spots
- Resource Deployment
Activity & Grade Scatter Plot

To what extent does increased activity correspond to increased performance?
Activity & Grade Matrix

Interactions by Week of Term

#BBANALYTICS
Time of Day / Day of Week

When do we need IT Support?
When should I offer office hours?

#BBANALYTICS
Week by Week Activity

Instructor

Student

Accesses

Interactions

#BBANALYTICS
Item Usage / Tool Adoption

Key Performance Indicator
Item Usage

Assessment Content
Discussions Tool
Video/URL

#BBANALYTICS
At a Glance Reports

John Aiken Compared to Course Average

<table>
<thead>
<tr>
<th>ITEM COUNT (SAME INSTRUCTION METHOD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM</td>
</tr>
<tr>
<td>Assessment</td>
</tr>
<tr>
<td>Content</td>
</tr>
<tr>
<td>Tool</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% OF ITEMS ACCESSED (SAME INSTRUCTION METHOD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM</td>
</tr>
<tr>
<td>Assessment</td>
</tr>
<tr>
<td>Content</td>
</tr>
<tr>
<td>Tool</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACTIVITY (SAME INSTRUCTION METHOD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM</td>
</tr>
<tr>
<td>Accesses</td>
</tr>
<tr>
<td>Minutes</td>
</tr>
<tr>
<td>Interactions</td>
</tr>
<tr>
<td>Submissions</td>
</tr>
</tbody>
</table>

#BBANALYTICS
At a Glance Reports
Early Alerts & Predictive Analytics

Early-alert systems not only enhance communication between faculty, advisors, and students, but also interrupt disruptive behavior (Hudson, 2005)

Academic advisors contacted students who were reported as having excessive absences

Conversations helped facilitate students’ reentry to class

- Mitigated students’ fear of stigmatization (Hudson, 2005)
- Surprised students that ‘someone cared’ enough to reach out (p. 225)

“simply making students aware that they are at risk of not completing a course motivates them to seek help and change their academic behaviour”

- (Jayaprakash, Moody, Lauría, Regan, & Baron, 2014, p. 12)

#BBANALYTICS
Now What?

For the next week, track the number of ‘who’ and ‘how many’ questions you ask.

Write a list of the reports you need, that are either:

- A: difficult to acquire
- B: time consuming to compile

Consider the impact you could have on students with the time given back to you:

- Data that are easier to access
- Reports that are current and on-demand

What Can You Do Today – that will give you more time tomorrow?

#BBANALYTICS
Where to begin? What to know?

Data Warehouse = like a “pantry”
Organized, Refined, Complex

Data Lake = Farmer’s Market
High quality, ‘raw’ ingredients, flexibility

Data “Diet” - You can’t do a temporary data binge and expect lasting impact. It takes a ‘lifestyle’ change to shift your cultural towards data-informed decision making

If you need an in-house nutritionist/chef...