

Contextualizing Student Feedback

Mashing Up Course Evaluations and Learning
Interaction Data to Make Student Feedback More
Meaningful

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A Little Background:

Course Evaluations at Berkeley are **Decentralized**:

- Multiple evaluation projects
- Multiple online eval platforms
- Multiple formats
- Run by multiple people

Campus
Evaluation
Project

Business
Public Health
Extension
Engineering

Old-School
Departments

The
Self-Sustainers

The Third
Parties

Explorance

Paper

In-House

Qualtrics, Survey Monkey

A Little More Background

Student responses are *varied*:

- Departments (and faculty) have lots of autonomy
- Two mandatory questions:
 - Instructor effectiveness
 - Course effectiveness
- Beyond that, departments pick the questions on their evaluations

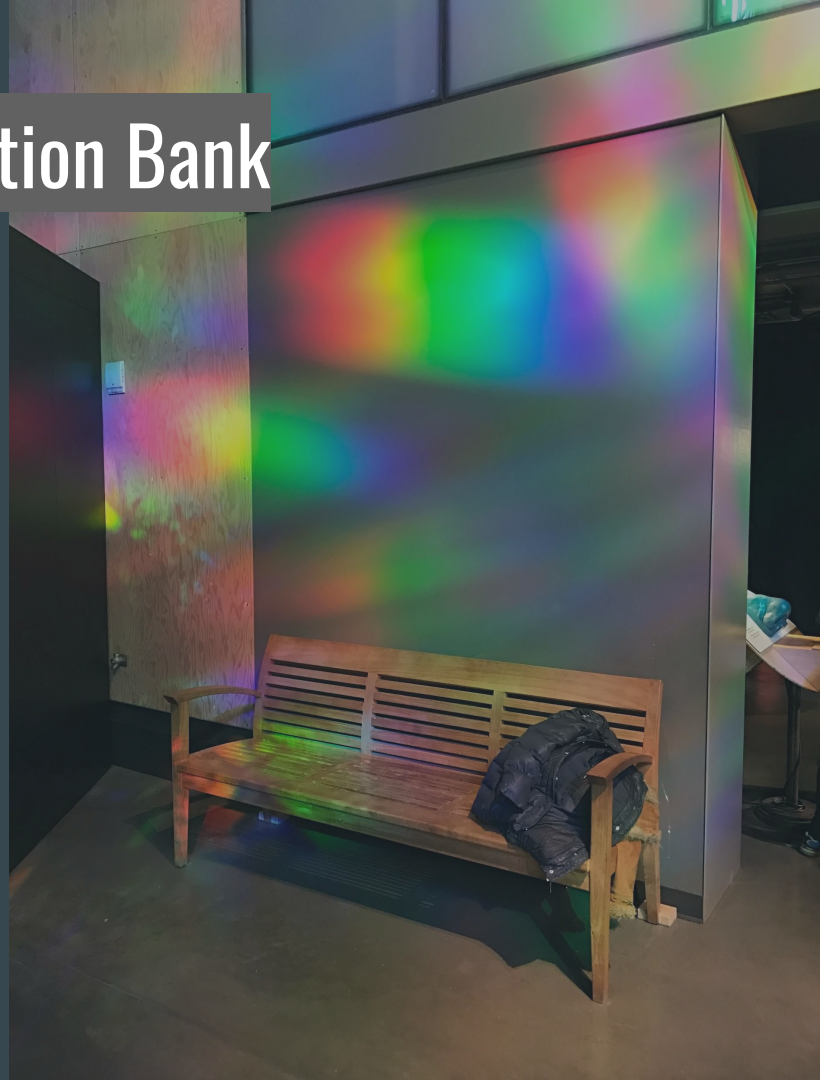


Instigation & Overview

- Course evals are the primary opportunity to get *direct, measurable* feedback
 - Informs how instructors iterate their teaching
 - Iterating a course takes semesters or *years*
 - Evaluation reports are tricky to interpret
- Valuable analytics/data are going unused
 - Instructors may not know the data is available
 - Instructors may not know when real-time data is useful
 - Data fatigue
- Students aren't great at evaluating their own learning

Using Data to Benchmark our Question Bank

Which common evaluation questions can be contextualized with data we record?



How Do We Define Learning Interaction Data?

Any record of a student interacting with learning material

- Viewing an LMS page
- Submitting an assignment
- Watching a video
- Making a discussion post

What About On-Ground Courses?

A student's digital footprint may be an adequate representation of the learning experience for a fully-online class

What if my class doesn't center around the LMS or other digital tools?

Our Data Sources

A great deal of analytical information is captured throughout the run of a course:

- *Aggregate and anonymous analytics*
- *LMS interactions, learning analytics, third-party analytics*
- *Course evaluations*

An end of course report is a document collecting this (and other relevant) information in a standardized manner with the goal of centralizing and contextualizing those pieces of data.

Who is this Report For?

Instructors?

Students?

What are Others Doing?

Outreach

Analytic Dashboards

The Report

1. Aggregate Analytics: Page views
 - By day, by hour
 - Time spent on course site
2. Learning Analytics: Discussion activity
 - Aggregate activity
 - Most active contributors
 - Other data/Third party analytics
3. Qualitative Data: Course Evaluations



Three Examples

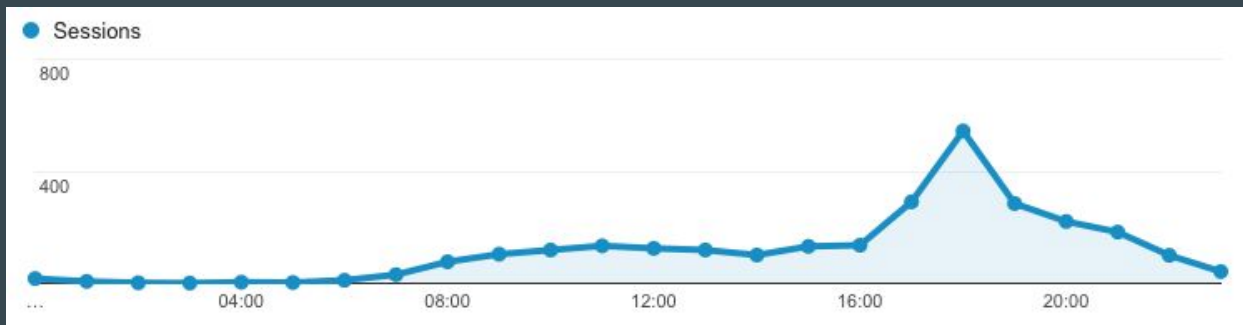
1. The course was effectively organized
2. The instructor encouraged student questions and participation
3. The course made effective use of learning materials (e.g. readings, multimedia)

The course was effectively organized

Daily access info



Hourly access info



1. Organization > user flow

How easily were students able to navigate the Canvas site for [Course Name]?

Students may have found some aspects of this course site challenging to navigate. Students in this course took more time, clicks and backtracking to reach commonly used resources than in other UW Canvas courses. Consider streamlining and restructuring navigation in future courses to enable students to find resources more efficiently.

Your course scored lower than most UW courses for **Submissions**. It is recommended that you consider organizing future courses differently to help students to find content in these areas more easily.



How was this result calculated?

The result shown in the gauge to the left draws upon three measures: the number of clicks it took students to reach key Canvas features in your course, the amount of time it took students to reach those features, and the amount of "backtracking" they did along the way. Backtracking refers to the frequency with which students retraced their steps, returning to pages they had already visited in the same session. Taken together, these three measures can give you insight into how students navigated your course.

The result shown in the gauge reflects how students' interactions with your course compared to that of all other UW courses active in Canvas in the same quarter. It is intended to provide you with feedback solely on course navigation and organization as described by our three measures, not teaching and learning or any other aspects of a successful online learning experience.

The gauges below show how your course compared to other UW courses on each of the three measures:



Abigail Evans

Can analytics improve instructional design?

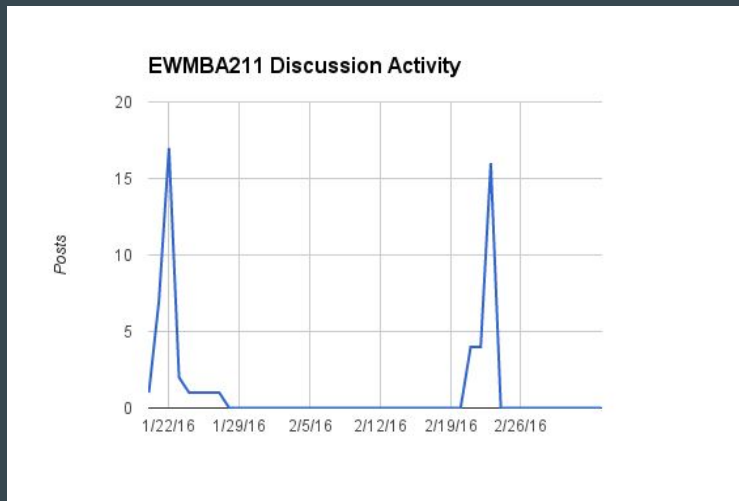
<https://www.youtube.com/watch?v=TZcOb6Z0lko>


The instructor encouraged student questions and participation

Discussion Activity Dashboard

Created by Martin Hawksey

<http://tinyurl.com/CanvasDiscussionReports>



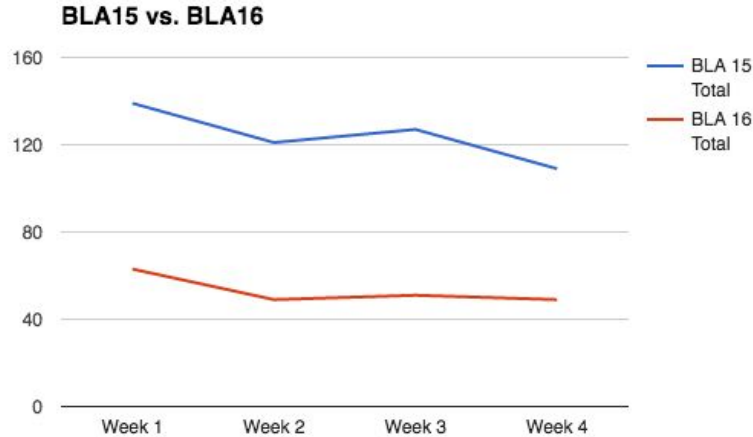
Top Posters	No.	Volume	Activity
ANKIT 	9		
ROBERT 	5		
KIMIA 	4		

The Course Made Effective Use of Learning Materials

“Attendance”

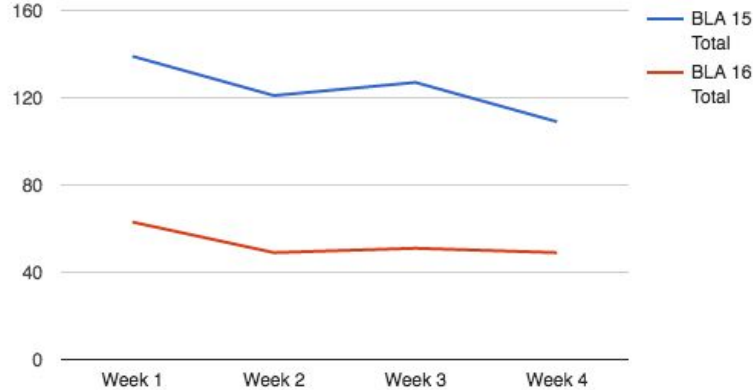
Media playback analytics

Other logs related to LTI or other tools used

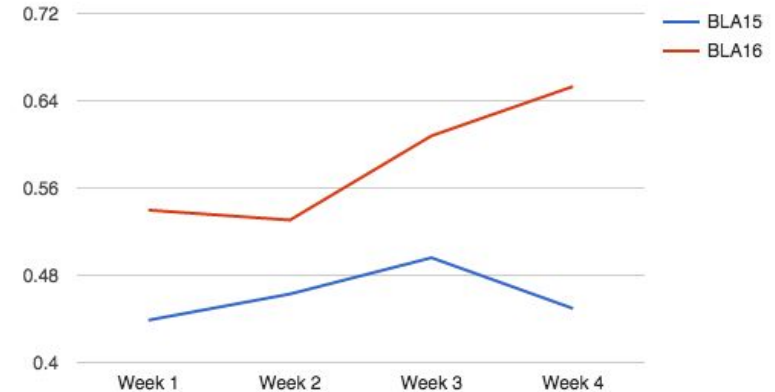


Combine simple data sources to reveal new insights

BLA15 vs. BLA16



BLA15 and BLA16 | Rec Viewers as Percent of all Viewers



3. Course Evaluations

Group similar comments together manually or automatically

- E.g. Comments related to communication

Identify themes, and use quantitative rating to compare

- If students had a hard time navigating course site, did they spend less or more time than comparable course sites?

Determine if anything noted can be quantified (retroactively, or going forward)

- “It would be great if we could keep track of...”

What are the Challenges?

Fitting our data to the course

- Filtering data streams for novel information
- Massaging data into a legible format

Processing qualitative data

- Identifying patterns, linking them to quantitative data



Automating

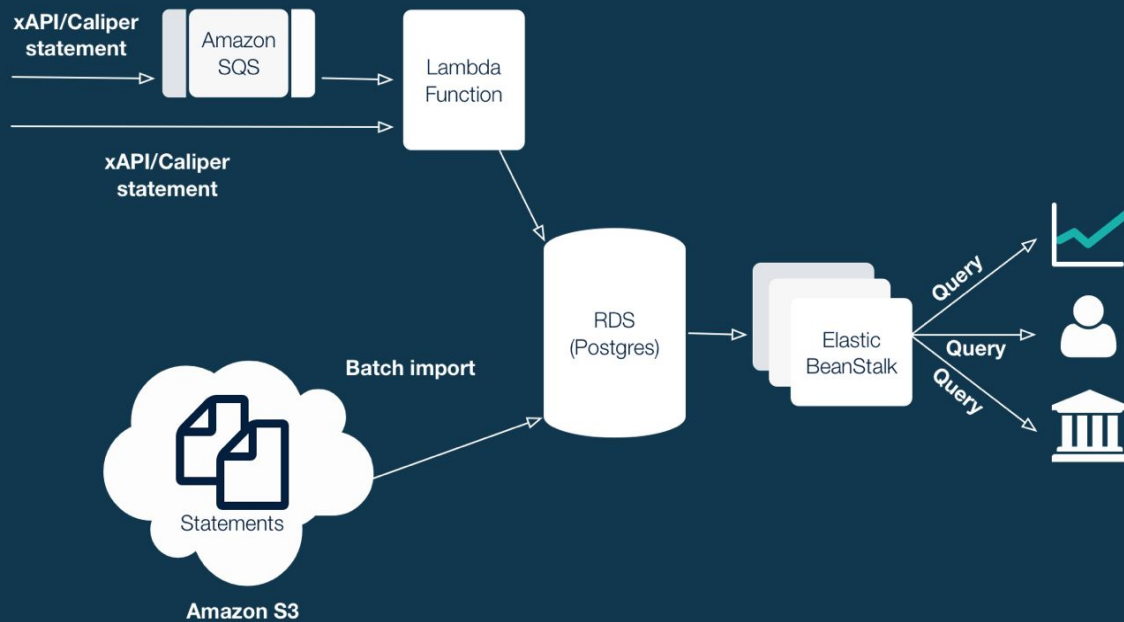
Initial reports were manually produced. How do we scale from 3 reports to 5000+?

Learning record store + Caliper events



In-house LMS Integrations

UC Berkeley's Learning Record Store



Summary

Aggregate data can help visualize workload, when students are working

Learning analytics and third-party analytics inform how students are engaging with course material

Course evaluations can highlight and contextualize information that might otherwise be noise, and call attention to metrics worth exploring

The Path Ahead / Questions



Slide deck: bluenotes.mileslincoln.com

Aside: Asking the Right Questions

Give students questions about their experience that they can answer honestly, instead of asking them to make a judgement:

Less: The course material was well-organized

More: I had difficulty finding course material

Aside: Question Bank

<http://teaching.berkeley.edu/course-evaluations-question-bank>

Created by our Center for Teaching and Learning

Encouraged, but not required

Beneficial for sharing data across departments