Disruptive Data
How Educational Analytics Will Transform Teaching, Learning, and Organizational Performance

Shannon Meadows
The Great American Competitiveness Crisis

Higher education in the U.S. is falling behind

9th in the proportion of young adults enrolled in college

16th in the share of degrees awarded to adults 25-34

We have a college attainment gap

Source: Whitehouse.gov
A New Vision to Transform Education

Old Paradigm

= Observable Behavior
A New Vision to Transform Education

New Paradigm = Observable Behavior + Data
A New Vision to Transform Education

Analytics = The Bridge Between Causation and Correlation
Analytics Dashboard

Faculty's Summary

- **42.57 min** Avg Session Length
- **39** Avg Pages Viewed
- **5.81** Avg Highlights, Notes, Bookmark
- **30** Books Subscribed
- **89.50** CourseSmart Engagement Index

Trend Analysis

- Engagement days by Month: Select a timer to view your results.
- Activity by Month: Highlights, notes, and bookmarks for each individual student, compared to the overall average activity.

Top 5 Students by Engagement Index

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<tr>
<th>Student Name</th>
<th>Engagement Index</th>
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Students with Room for Improvement

These students are not as engaged as they could be and may require attention.
Key Components of CourseSmart Analytics

The dashboard integrates into an institution’s LMS and workflow
CourseSmart Analytics Goal

Improve Student Outcomes + Retention
CourseSmart Analytics Goal

Reduce Costs
CourseSmart Analytics Beta Pilots

9 Schools

= 76 Faculty

= 3,700 Students

Universities: University at Buffalo, Texas A&M University, Rasmussen College, Ashworth College, Central Carolina Technical College, Algonquin College, Career Point College, Stony Brook University
Beta Pilot Mechanics

1. Identified mix of schools – various sizes; a mix of for-profit and non-profit

2. Established timeline for spring term

3. Established faculty recruitment guidelines + faculty training

4. Updated privacy policy and informed students of opt-out feature

5. Conducted pre-beta pilot surveys for all schools – student, faculty and administrators -- to gauge stakeholder perceptions and set benchmarks for pilot success

6. Developed case study checklist to capture results as a feedback mechanism to provide product insights and refinements
Pre-Beta Pilot Survey Expectations

Student Results

Agree or strongly agree that they are comfortable sharing their data:
- 75%

Believe it will help improve engagement and student success:
- 70%
Pre-Beta Pilot Survey Expectations

Faculty and Administrator Results

- **83%** Of Faculty believe CourseSmart Analytics will help guide decisions about course materials
- **100%** Of Administrators believe CourseSmart Analytics will help guide digital platform strategies
Post-Beta Pilot Survey Results

Data-sharing is still a non-issue among students

+ Engagement Index has been a catalyst for student-faculty conversations that might not occur otherwise

+ Faculty are using Engagement Index as a performance metric for course materials and their teaching approaches
Post-Beta Pilot Survey Results

Post beta surveys

+ 

grade correlation

= 

Validate causation and correlation as to retention and learning outcomes
Beyond the Beta

Measurement Rubrics

CourseSmart Engagement Index

CSU LMS Study

Harvard white paper
Beyond the Beta

From pilot to product – refinements and rollout timeline

Publisher dashboards

+ 

Student access to Engagement Index

Through LTI in the future – IRB of each institution: marry outcome data → regression factor analysis
Analytics: The Intersection of Technology and Education Innovation

Big Data is

“the most dramatic factor shaping the future of higher education today...”
The Industry is Taking Notice

CourseSmart Analytics uses a proprietary algorithm called CourseSmart Engagement Score Technology that evaluates a student's use of an electronic textbook, such as the number of page views, time spent in the book, number of notes taken, and amount of highlighting.

“Analytics will be a powerful tool in higher education, especially when data is reported in easy-to-understand, actionable ways. The higher education community is hungry for actionable data that links student engagement to their learning content.”

-- Ellen Wagner, Executive Director for WICHE's Cooperative for Educational Technologies
Analytics: The Intersection of Technology and Education Innovation

Analytics will transform
Teaching,
Learning,
Institutional Accountability.

Analytics will help us regain our competitive edge.