Pandemic Silver Linings & Analytics

John Fritz
University of Maryland, Baltimore County

USG Strategic Planning Retreat
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Overview

● Planning Instructional Variety in Online Teaching (PIVOT)
● Promoting Academic Integrity in Online Exams without Surveillance Software
● Finish Line Near Completer Program
● Ethical Learning Analytics
Planning Instructional Variety in Online Teaching

- Nearly 85% of PIVOT+ faculty participants said the program was helpful for their pedagogical shift to online teaching.
- More than 85% of PIVOT+ students said they agreed or strongly agreed that PIVOT+ courses flowed in a logical format (see also research from Ralston-Berg, 2014).
- 31% increase in faculty willingness to teach alternative delivery formats.

- 70% of all faculty participated.
- For Fall 2020, SEEQs increased by about .08 for PIVOT+ courses compared with non-PIVOT courses (4.354 on a scale of 1-5).
- Courses taught by PIVOT-trained instructors also have increased Bb interactions, which are both indicative of improved engagement.
- 2021 UMBC “Job Well Done” award & OLC Exemplary Practice Award Winner.
Avoiding Webcams?

Instead of "catching" students tempted to cheat on a small set of questions, Carpenter and Bass are overwhelming their “risk vs reward” calculus. So, they might as well study (and learn to apply) key concepts to a large variety of questions.
Finish Line Near Completers Program

“Moving nearly all teaching and learning online so quickly was challenging, especially at the undergraduate level, but one unexpected outcome was successfully recovering or "re-recruiting" 123 former students who (for one reason or another) left UMBC before finishing their degrees.”

More Info

- undergraduate.umbc.edu/finishline
- 4/8/21 EDUCAUSE Review article
- 6/6/21 Washington Post story
- 7/21/21 Times Higher Education webinar
Abstract

In this chapter, we explore the obligations for individuals and institutions that emerge from the newfound insights that are enabled through learning analytics. While ethical concerns are raised through learning analytics, a misplaced trend is a “do nothing” approach as a way to assure we “do no harm.” We suggest that this is a misplaced notion that reduces our impact on student success.
The problem with grades is they occur too late in a term to be actionable.
A Key Finding: Student Tool Use & Final Grade Varies by Class

UMBC Course #1

UMBC Course #2
Why we can’t do nothing

Students don’t always know what they don’t know about their own learning.

- Indiana Univ. (2019) study of student “grade surprise” across five, very large (300+ students), general ed courses over 6k students.
Choice Architecture

Thaler and Sunstein (2008) base choice architecture on a concept they define as “Libertarian Paternalism.” They believe people should be free to choose, but that

“It is legitimate for choice architects to try to influence people’s behavior in order to make their lives longer, healthier and better . . . In our understanding, a policy is “paternalistic” if it tries to influence choices in a way that will make chooser better off, as judged by themselves. (p. 5).”
# Right Message, Right Person, Right Time

## Student Agency

<table>
<thead>
<tr>
<th>Week 1 (thru add/drop)</th>
<th>Week 4</th>
<th>Week 6-8</th>
<th>Week 12 &amp; beyond</th>
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</thead>
<tbody>
<tr>
<td><strong>Syllabus Quiz</strong></td>
<td><strong>Digital Tool Usage</strong></td>
<td><strong>Midterm Alerts &amp; Nudges</strong></td>
<td><strong>Finish/Start Strong</strong></td>
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<td><strong>PSCY100</strong>: Since SP17, students who didn’t take SQ were 4x more likely to earn DFW (p.&lt;.001, n=1,455)</td>
<td><strong>LMS &amp; eTextbooks</strong>: 70-98% predicting &gt;=C final grades (p.&lt;.005, n=986 in 5 FA17 courses)</td>
<td>**First Year Intervention (FYI) alert asks faculty to ID students in jeopardy of D/F “if semester ended tomorrow.” (~60% go on to get &gt;=C) <strong>Bb Predict</strong>: 87% accurate predicting &gt;=C by week 4, AYs 16-18).</td>
<td><strong>Early Registration</strong>: 50% of non-persisting students enroll for the next term less than 40 days before 1st day of classes.</td>
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<td><strong>ECON122</strong>: Students req’d to take SQ before submitting 1st assignment for credit. Class earns 20% higher grade on dept. common final exam.</td>
<td><strong>Check My Activity</strong>: Students can compare LMS activity w/anonymous summary of course peers earning same, higher or lower grade on any assignment -- if instructors post grades</td>
<td><strong>Two Empathetic Nudges</strong>: 1) to predicted DFW and 2) to predicted DFW &amp; FYI (slightly different but key is “talk to your instructor” &amp; seek tutoring).</td>
<td><strong>Countdown Timer &amp; Checklist</strong></td>
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<td><strong>Nudging Course Repeaters</strong>: Go to the Math Lab! It works.</td>
<td><strong>High Credit, Low GPA Nudge</strong>: “Are you sure?”</td>
<td><strong>2nd Nudge of Rourse Repeaters</strong> to use the math lab.</td>
<td><strong>Last Day to Withdraw</strong> (Week 11)</td>
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<td><strong>High Credit, Low GPA Nudge</strong>: “Here’s where other students have gone to get help, if you need it.”</td>
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<td><strong>Course Repeat Policy</strong></td>
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Takeaways

1. Be open to the use of students’ digital footprints as a proxy of their engagement, especially earlier in term.

2. Use big data for a “bird’s eye view” to study quantitative trends that warrant a deeper dive for qualitative interviews.

3. Look for positive outliers you can study, validate, reverse-engineer, support and promote as effective practices or change over time.

Works for finding & supporting effective course designs, too!
Why This Matters?

“If you want to change the culture, shine light on success, not failure.”

- Freeman A. Hrabowski, III
  President, UMBC
Thanks!

John Fritz
Assoc. VP, Instructional Technology
UMBC
fritz@umbc.edu