

Pandemic Silver Linings & Analytics

John Fritz

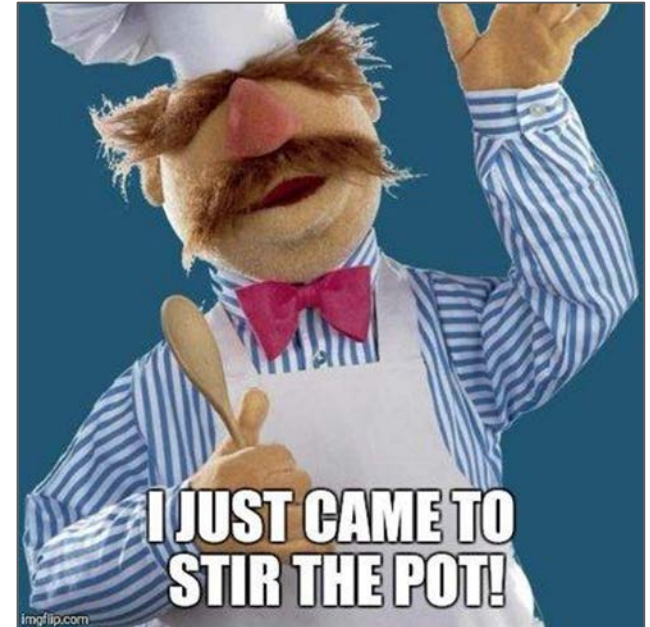
University of Maryland, Baltimore County

USG Strategic Planning Retreat

August 6, 2021

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.

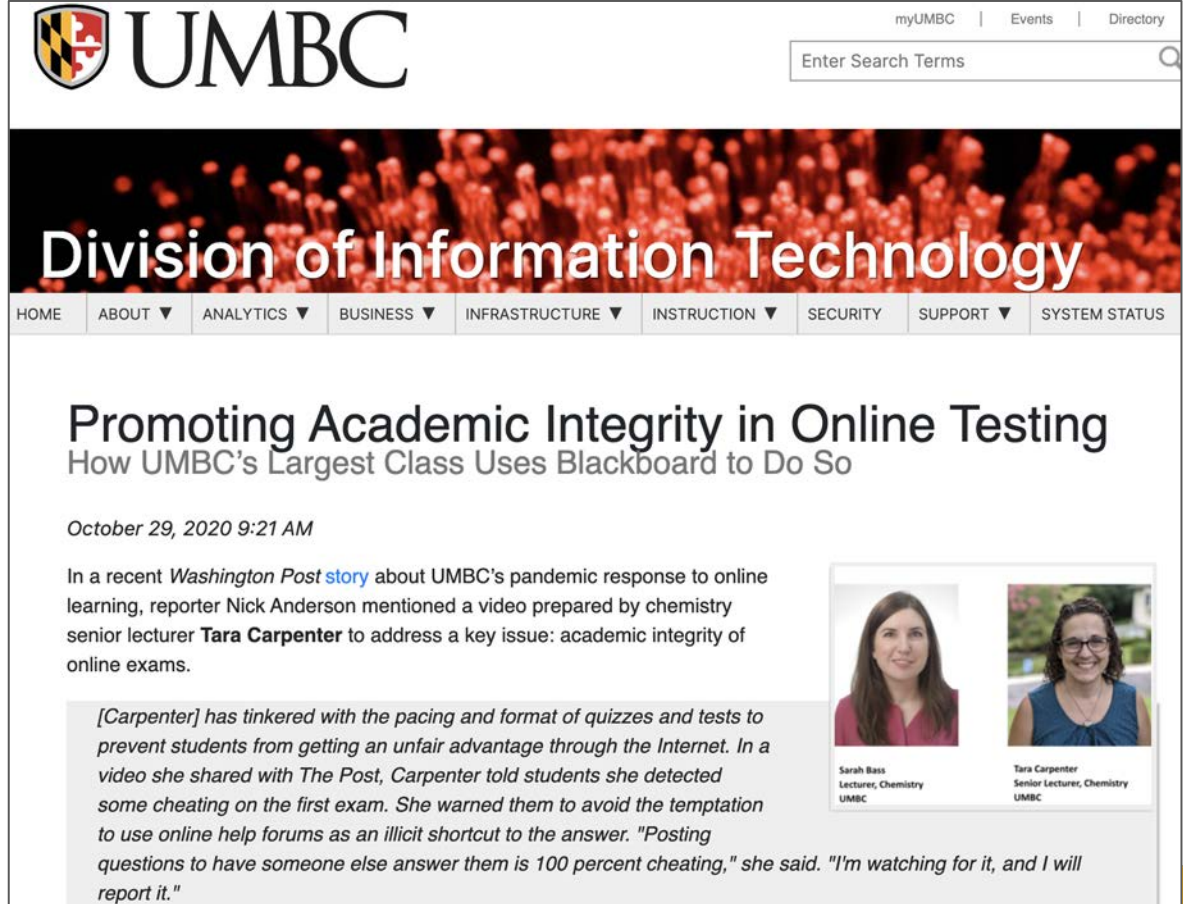
more than **85%**
of [PIVOT+ students said they
agreed or strongly agreed](#) that
PIVOT+ courses flowed in a
logical format (see also research
from Ralston-Berg, 2014).

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.



myUMBC | Events | Directory

Enter Search Terms

Division of Information Technology

HOME | ABOUT ▼ | ANALYTICS ▼ | BUSINESS ▼ | INFRASTRUCTURE ▼ | INSTRUCTION ▼ | SECURITY | SUPPORT ▼ | SYSTEM STATUS


Promoting Academic Integrity in Online Testing

How UMBC's Largest Class Uses Blackboard to Do So


October 29, 2020 9:21 AM

In a recent [Washington Post story](#) about UMBC's pandemic response to online learning, reporter Nick Anderson mentioned a video prepared by chemistry senior lecturer **Tara Carpenter** to address a key issue: academic integrity of online exams.

[Carpenter] has tinkered with the pacing and format of quizzes and tests to prevent students from getting an unfair advantage through the Internet. In a video she shared with The Post, Carpenter told students she detected some cheating on the first exam. She warned them to avoid the temptation to use online help forums as an illicit shortcut to the answer. "Posting questions to have someone else answer them is 100 percent cheating," she said. "I'm watching for it, and I will report it."



Sarah Bass
Lecturer, Chemistry
UMBC



Tara Carpenter
Senior Lecturer, Chemistry
UMBC

Finish Line Near Completers Program

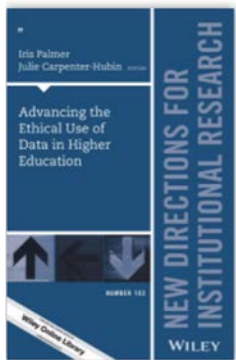
*“Moving nearly all teaching and learning online so quickly was challenging, especially at the undergraduate level, but **one unexpected outcome was successfully recovering or "re-recruiting" 123 former students** who (for one reason or another) left UMBC before finishing their degrees.”*



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](#)

An Ethical Framework for Action



Volume 2019, Issue 183
Special Issue: Advancing
the Ethical Use of Data in
Higher Education
Fall 2019
Pages 27-38



Research Article

Ethical Learning Analytics: “Do No Harm” Versus “Do Nothing”

John Fritz ✉, John Whitmer

First published: 26 May 2020 | <https://doi.org/10.1002/ir.20310>

[Read the full text >](#)

 PDF  TOOLS  SHARE

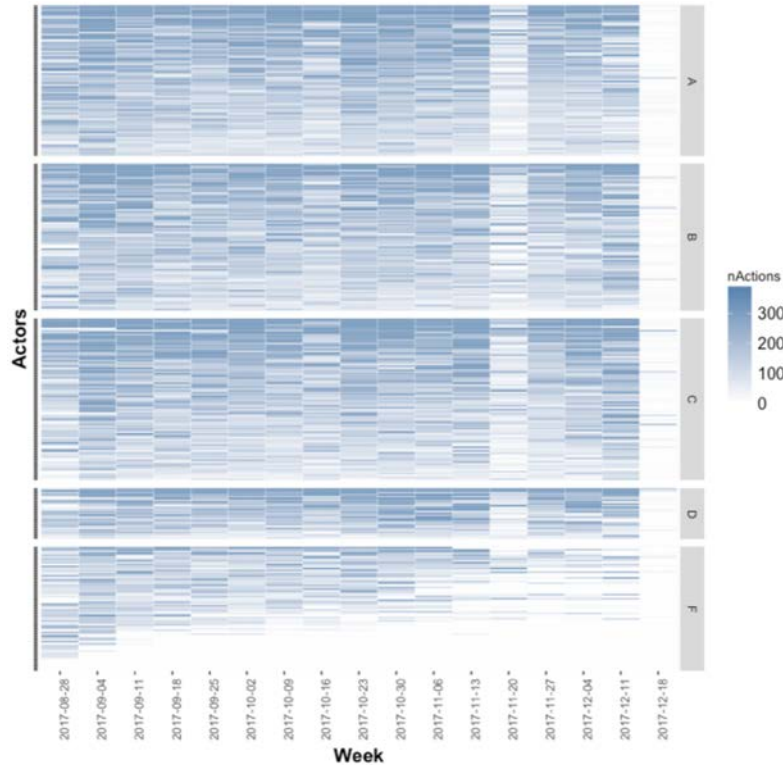
Abstract

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.

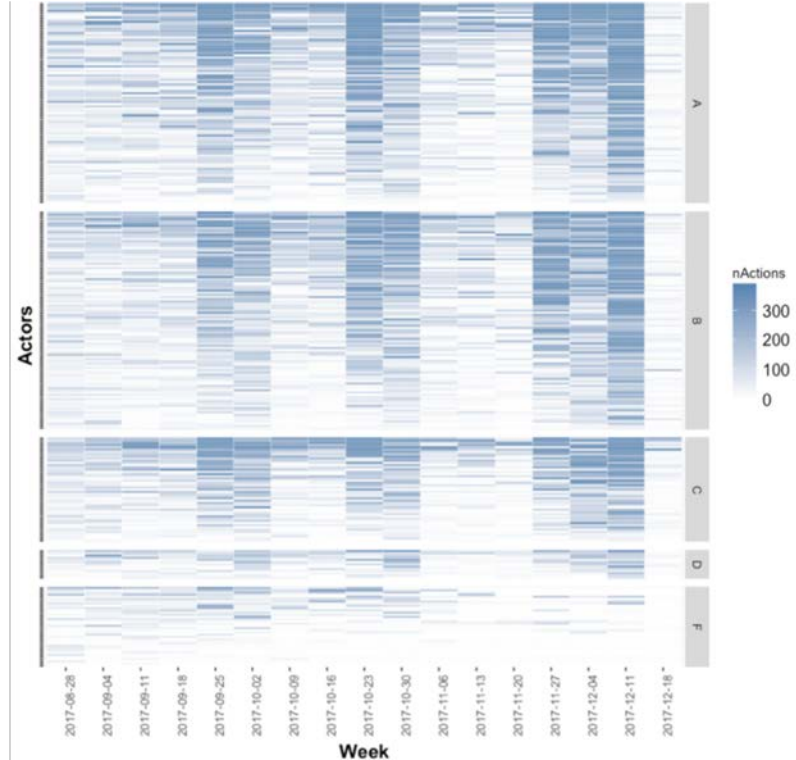
The problem with grades is they occur too late in a term to be actionable.

A Key Finding: Student Tool Use & Final Grade Varies by Class

UMBC Course #1



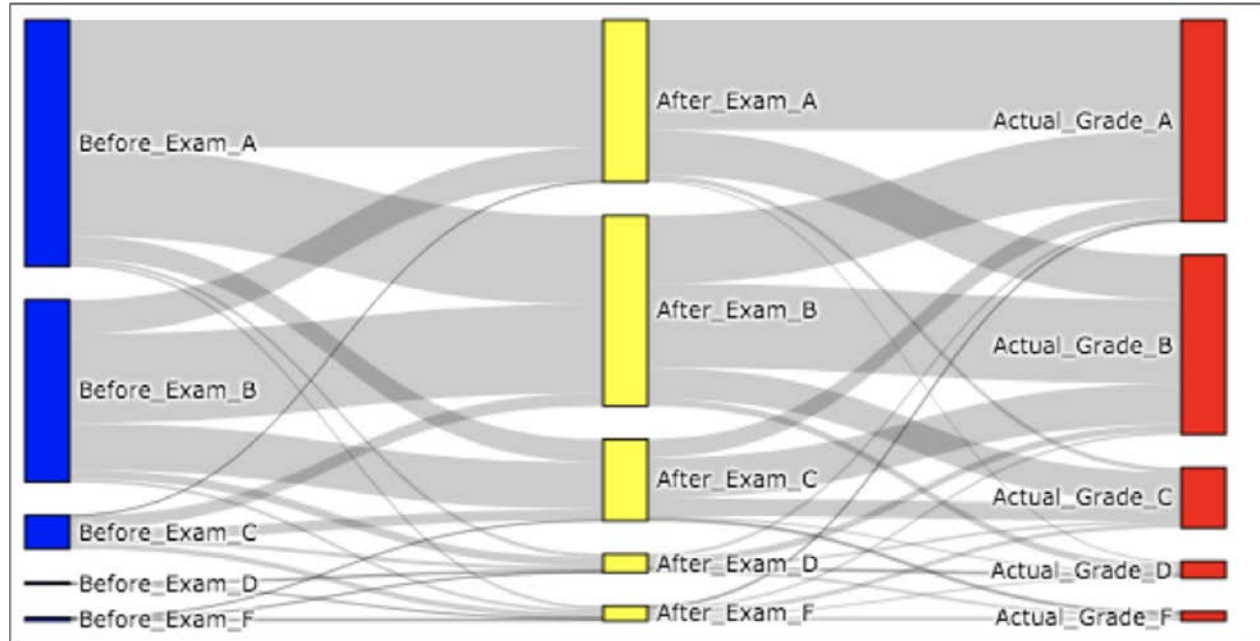
UMBC Course #2



Why we can't do nothing

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

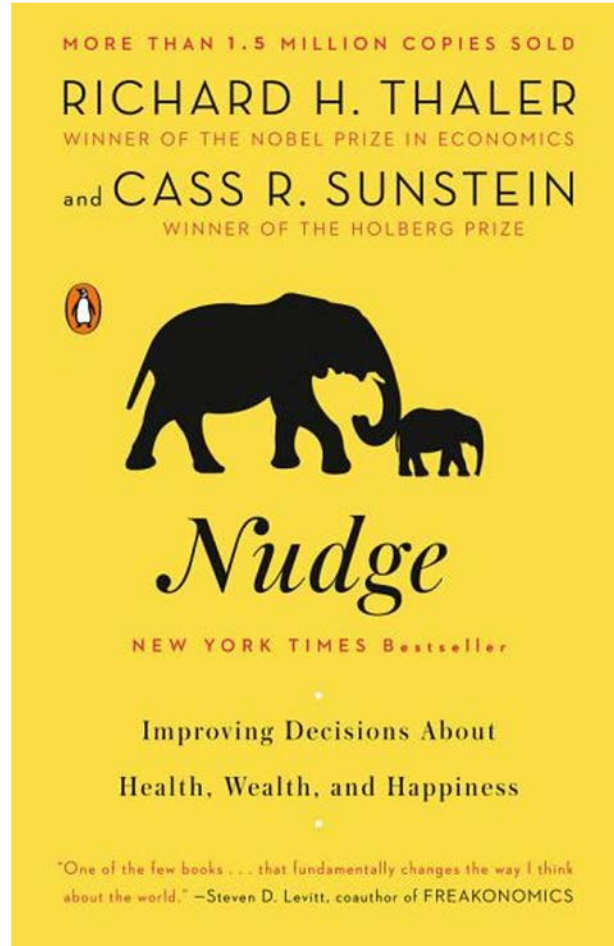
- Indiana Univ. (2019) study of student “grade surprise” across five, very large (300+ students), general ed courses over 6k students.



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

Intrusive Advising

Week 1 (thru add/drop)	Week 4	Week 6-8	Week 12 & beyond
<p>Syllabus Quiz</p> <p>PSYC100: Since SP17, students who didn't take SQ were 4x more likely to earn DFW ($p < .001$, $n = 1,455$)</p> <p>ECON122: Students req'd to take SQ before submitting 1st assignment for credit. Class earns 20% higher grade on dept. common final exam.</p> <p>Nudging Course Repeaters: Go to the Math Lab! It works.</p> <p>High Credit, Low GPA Nudge: "Are you sure?"</p>	<p>Digital Tool Usage</p> <p>LMS & eTextbooks: 70-98% predicting $\geq C$ final grades ($p < .005$, $n = 986$ in 5 FA17 courses)</p> <p>Check My Activity: Students can compare LMS activity w/anonymous summary of course peers earning same, higher or lower grade on any assignment -- if instructors post grades</p> <p>High Credit, Low GPA Nudge: "Here's where other students have gone to get help, if you need it."</p>	<p>Midterm Alerts & Nudges</p> <p>First Year Intervention (FYI) alert asks faculty to ID students in jeopardy of D/F "if semester ended tomorrow." (~60% go on to get $\geq C$)</p> <p>Bb Predict: 87% accurate predicting $\geq C$ by week 4, AYs 16-18).</p> <p>Two Empathetic Nudges: 1) to predicted DFW and 2) to predicted DFW & FYI (slightly different but key is "talk to your instructor" & seek tutoring).</p> <p>2nd Nudge of Rourse Repeaters to use the math lab.</p>	<p>Finish/Start Strong</p> <p>Early Registration: 50% of non-persisting students enroll for the next term less than 40 days before 1st day of classes.</p> <p>Countdown Timer & Checklist</p> <ul style="list-style-type: none"> - Verify Declared Degree - Schedule Advisor Meetings - Review course options - Meet with advisor - Register for classes <p>Last Day to Withdraw (Week 11)</p> <p>Course Repeat Policy</p>

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