UMBC Audit Update
May 4, 2022

Presented by

Management Advisory Services

Terry Cook, Sr. AVP for Admin. Svcs.

Megan Cherry, MAS Director

David Sohns, MAS Sr. Mgt. Analyst

Agenda

- Welcome

- Ethical Learning Analytics: "Do No Harm vs. Do Nothing"

- Internal Audit Updates

- External Audit Updates

- New UMBC Policies

- Questions/Discussions

Ethical Learning Analytics: "Do No Harm" vs. "Do Nothing"

John Fritz

Division of Information Technology (DoIT)

Sharon Doherty-Ritter

MARCH 28, 1966 – OCTOBER 12, 2020

From: **Sharon Doherty-Ritter** <doherty@umbc.edu>
Date: Mon, Oct 28, 2019 at 2:34 PM
Subject: Academic Data on Campus
To: John Fritz <fritz@umbc.edu>

Hi John! Hope all is well with you. **MAS has been discussing the use of certain student data/statistics for predictive analytics** (please see related NACUBO article and summary attached) **and someone indicated to us that your group actually gathers this type of data for UMBC?** Is this correct?

Would you be willing to perhaps meet to discuss the use of these types of data?
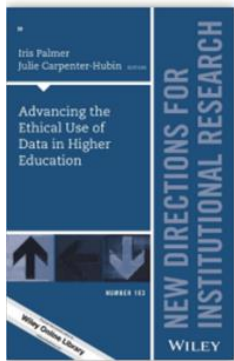
Please let me know your thoughts...

--
Sharon D. Doherty-Ritter, MBA, CPA
Director
UMBC Management Advisory Services
410-455-1620

Basis for this Talk

NEW DIRECTIONS FOR INSTITUTIONAL RESEARCH

Research Article

Ethical Learning Analytics: "Do No Harm" Versus "Do Nothing"

John Fritz ✉, John Whitmer

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.

Overview

1. Imperatives

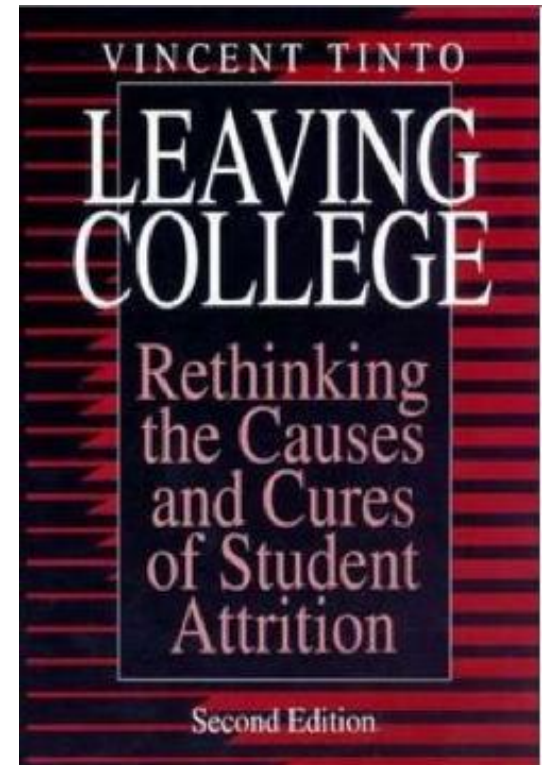2. Principles

3. An Ethical Framework for Action

4. Questions?

Imperatives

Student Responsibility for Learning

"Institutions can't absolve students from at least partial responsibility for their own education.

To do so denies both the right of the individual to refuse education and the right of the institution to be selective in its judgments as to who should be further educated."

~ Vincent Tinto (1993)

The "ethical obligation of knowing"

*If the academic analytics model provides a probability of student success, **what is the obligation of faculty, students, and institutions to act on that information?** With whom does the obligation to act lie? How is the responsibility shared among different groups?*

~John Campbell (2007)

ACADEMIC ANALYTICS
A New Tool for A New Era

By John P. Campbell, Peter B. DeBlois, and Diana G. Oblinger

In responding to internal and external pressures for accountability in higher education, especially in the areas of improved learning outcomes and student success, IT leaders may soon become critical partners with academic and student affairs. IT can help answer this call for accountability through *academic analytics*, which is emerging as a new tool for a new era.

Recognized Challenge for Learning Analytics Research

RESEARCH-ARTICLE

An elephant in the learning analytics room: the obligation to act

Authors: Paul Prinsloo, Sharon Slade   Authors Info & Claims

In this paper we explore the moral and legal basis for the obligation to act on our analyses of student data. The obligation to act entails not only the protection of student privacy and the ethical collection, analysis and use of student data, *but also*, the effective allocation of resources to ensure appropriate and effective interventions to increase effective teaching and learning.

Learning Analytics Defined

At its core, learning analytics (LA) is the collection and analysis of usage data associated with student learning. The purpose of LA is to observe and understand learning behaviors *in order to enable appropriate interventions.*

~Educause Learning Initiative (ELI), 2011

...the measurement, collection, analysis and reporting of data about **learners and their contexts**, for purposes of **understanding and optimizing learning and the environments** in which it occurs.

~Learning and Knowledge Analytics Conference, 2011

Analysis without action is not analytics

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

Student Data Trails as Proxy for Engagement?

The *Oxford English Dictionary* defines proxy as . . .

"the action of a substitute or deputy" or "agency of another" and from science and economics **"a variable that can be used as an indirect estimate of another variable with which it is correlated; (more generally) a property used as an estimate or indicator of another with which it is associated."**

Rise of the LMS as a source of LA "actionable intelligence"

- FYI: Since 2007, UMBC students earning a final grade of D or F use the LMS ~40% less than students earning a C or higher. Every semester.

LMS Research & Practice

- *J. Campbell, 2007*
- *Dawson et al., 2008*
- *Macfadyen & Dawson, 2012*
- *Whitmer, 2012*
- *Fritz, 2016*
- *Fritz & Whitmer, 2017*
- *Hellas et al, 2018 meta-review*

How do UMBC Bb Course Designs Correlate to Final Grades?

"Show & Tell" will demo new Tableau dashboard prototype

Thursday, February 17, 2022 · 12 - 1 PM
Online

Resources
- Meeting recording (UMBC login req'd)
- Presentation
- Anonymous evaluation

In this workshop, **John Fritz**, **Tom Penniston** and **Mike Sharkey** will demo and discuss a new prototype Tableau visualization of the relationship between faculty course design and student use of the Blackboard Learning Management System (LMS) as a digital proxy for their engagement. Screenshots of the Tableau visualization appeared in Blended Learning Research Perspectives Vol 3, Ch. 5 (2021); UMBC version (login req'd). For "homework" here's a brief (7 min) UMBC VoiceThread demo. Currently, UMBC Tableau access is "by request," but what questions or suggestions might you have based on these preliminary dashboards?
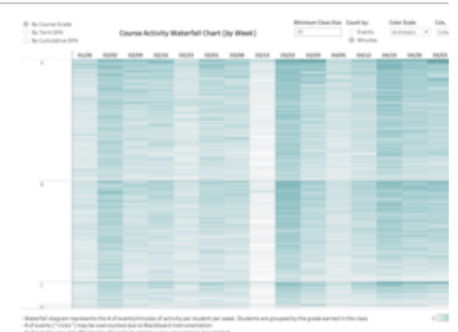
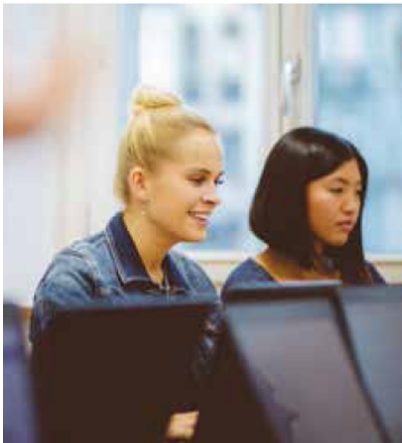FYI: This workshop is part of a Spring 22 series about data science and learning analytics for the UMBC community. More information.

http://events.umbc.edu/go/101263

July 28, 2018

Blackboard

Improving Student Risk Predictions: Assessing the Impact of Learning Data Sources
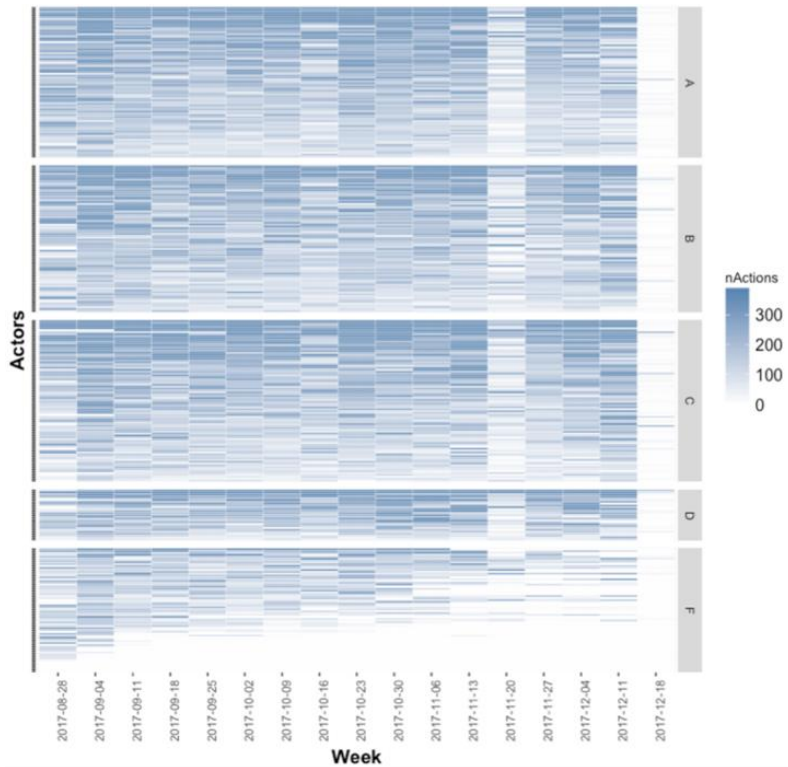
Authors:

Diego Forteza, Blackboard | John Whitmer, Ed.D., Blackboard
John Fritz, Ph.D., University of Maryland, Baltimore County (UMBC) | Daniel Green, VitalSource
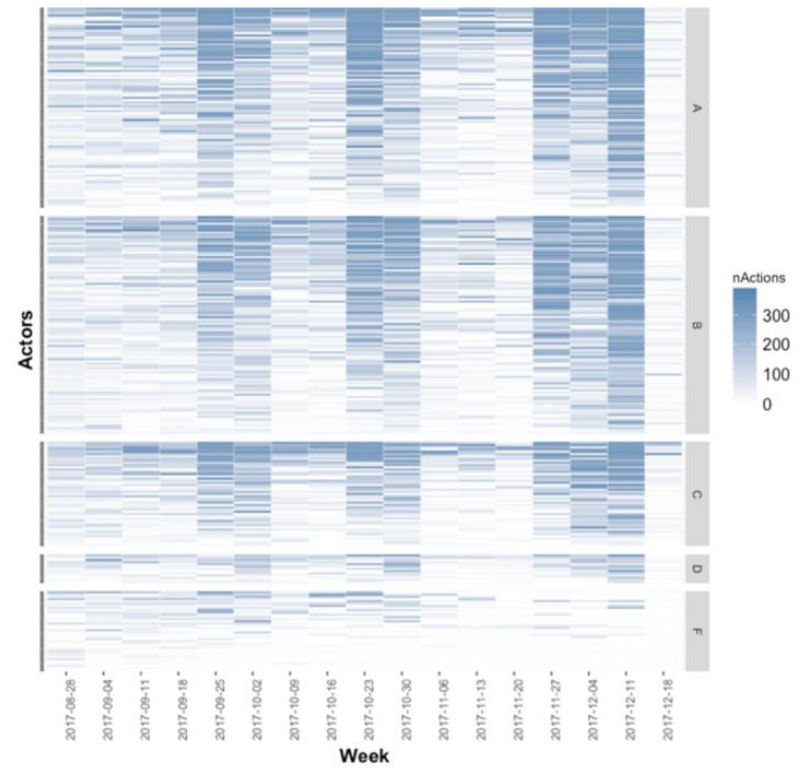
Key Findings

Using IMS Caliper Analytics® with Blackboard Learn & VitalSource at the University of Maryland Baltimore County

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

UMBC Course #1

UMBC Course #2

Practice Makes Perfect

Spaced Practice

Carpenter described her use of **"spaced practice" or "distributed learning,"** designed to discourage students from cramming for high stakes exams by encouraging (and designing) regular, smaller study & practice focused on promoting long-term proficiency and retention.

http://events.umbc.edu/go/101268

CHEM 102 (FA21)

Interactions over time by final grade earned.

- Every row is a student.
- Every column is an active day in the semester using RealizeIt.

*Note: Excerpted with permission from 2/24/22 analysis (UMBC login req'd) by **Colm Howlin**, RealizeIt Learning.*
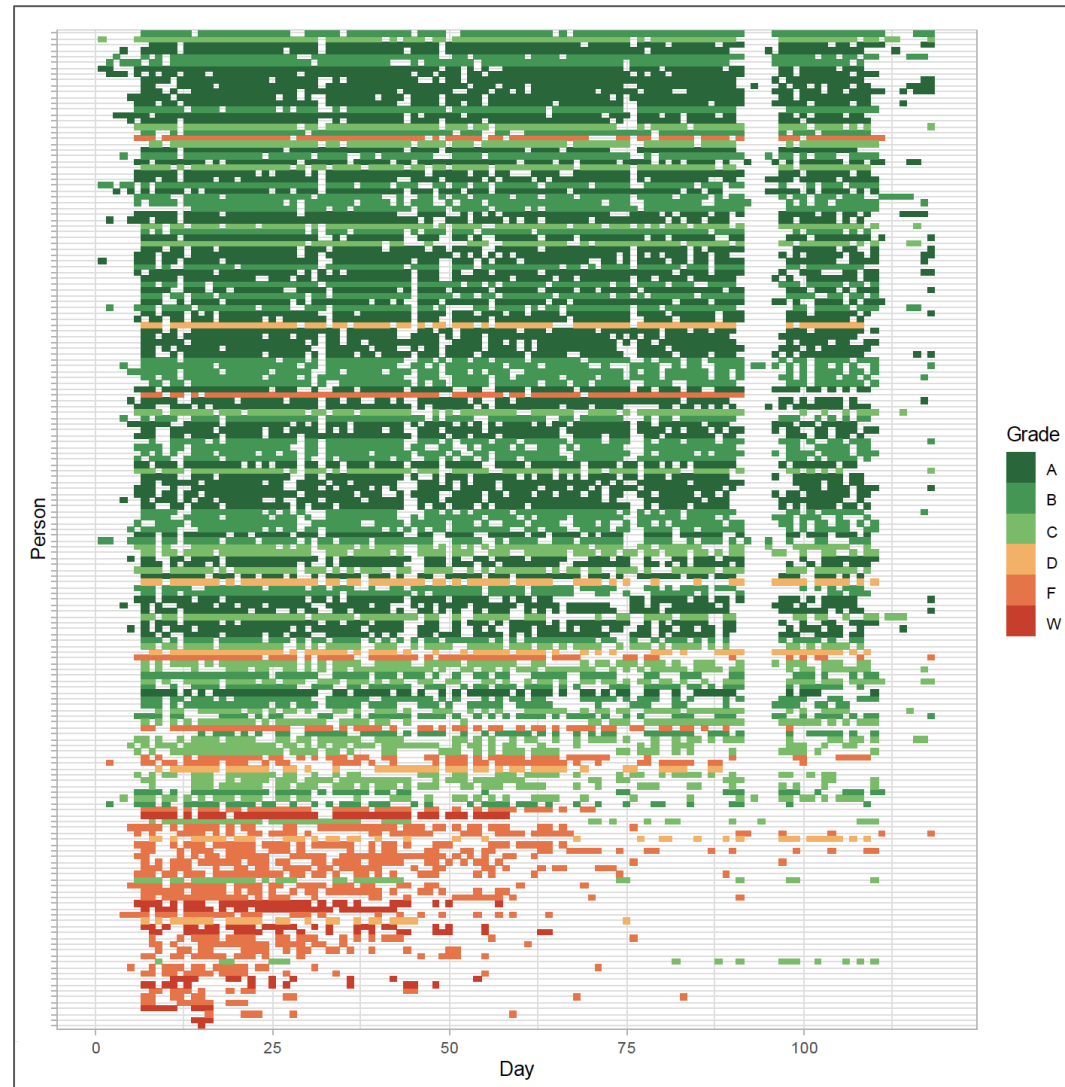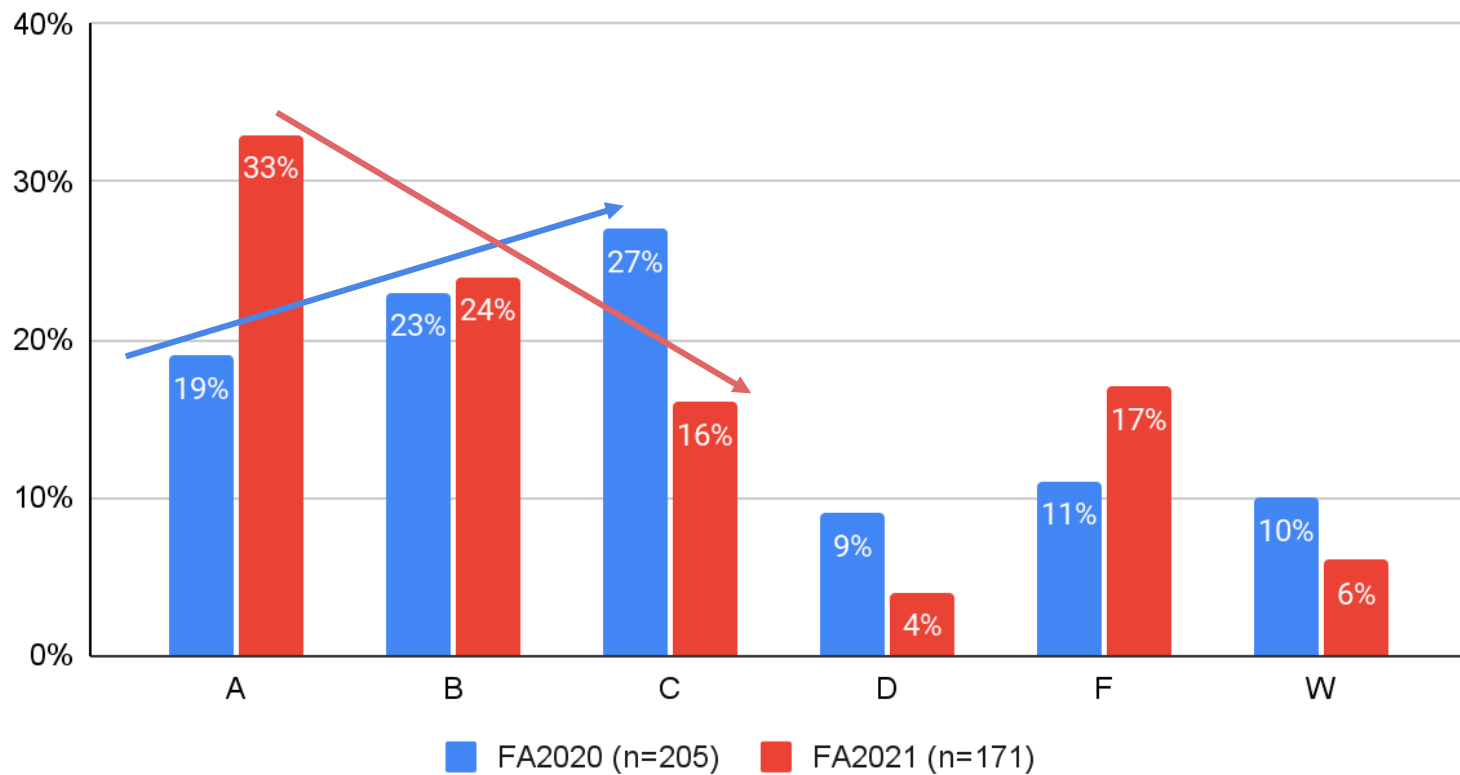
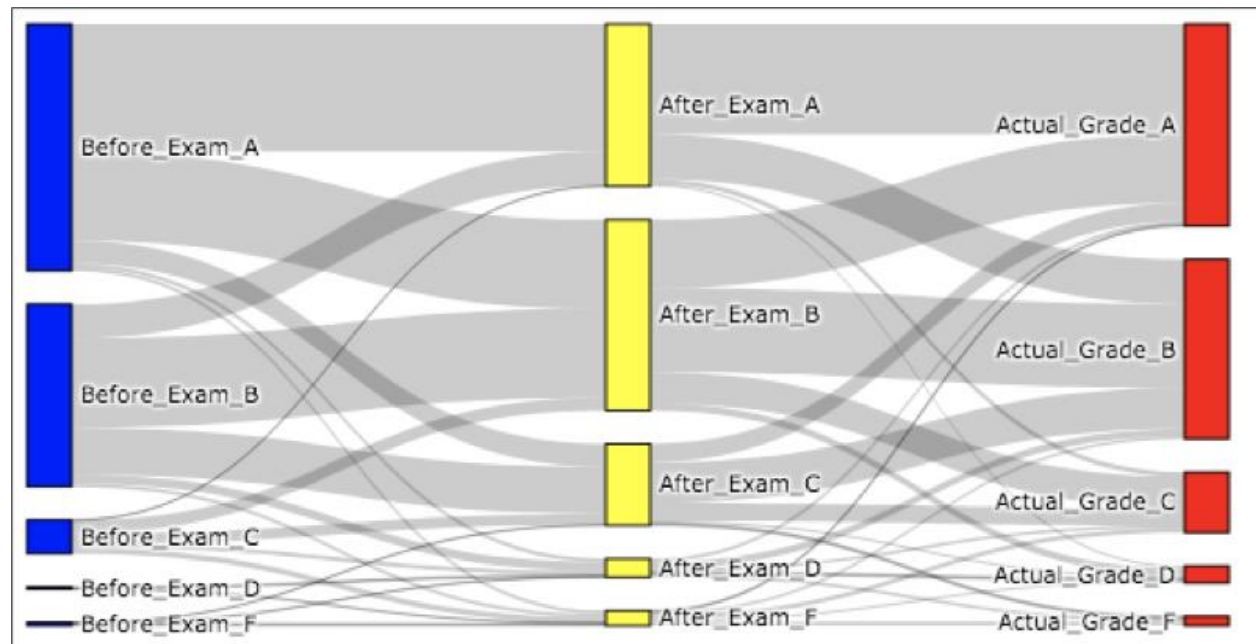CHEM 102 Grade Distribution

CHEM 102 Grade Distribution by Race
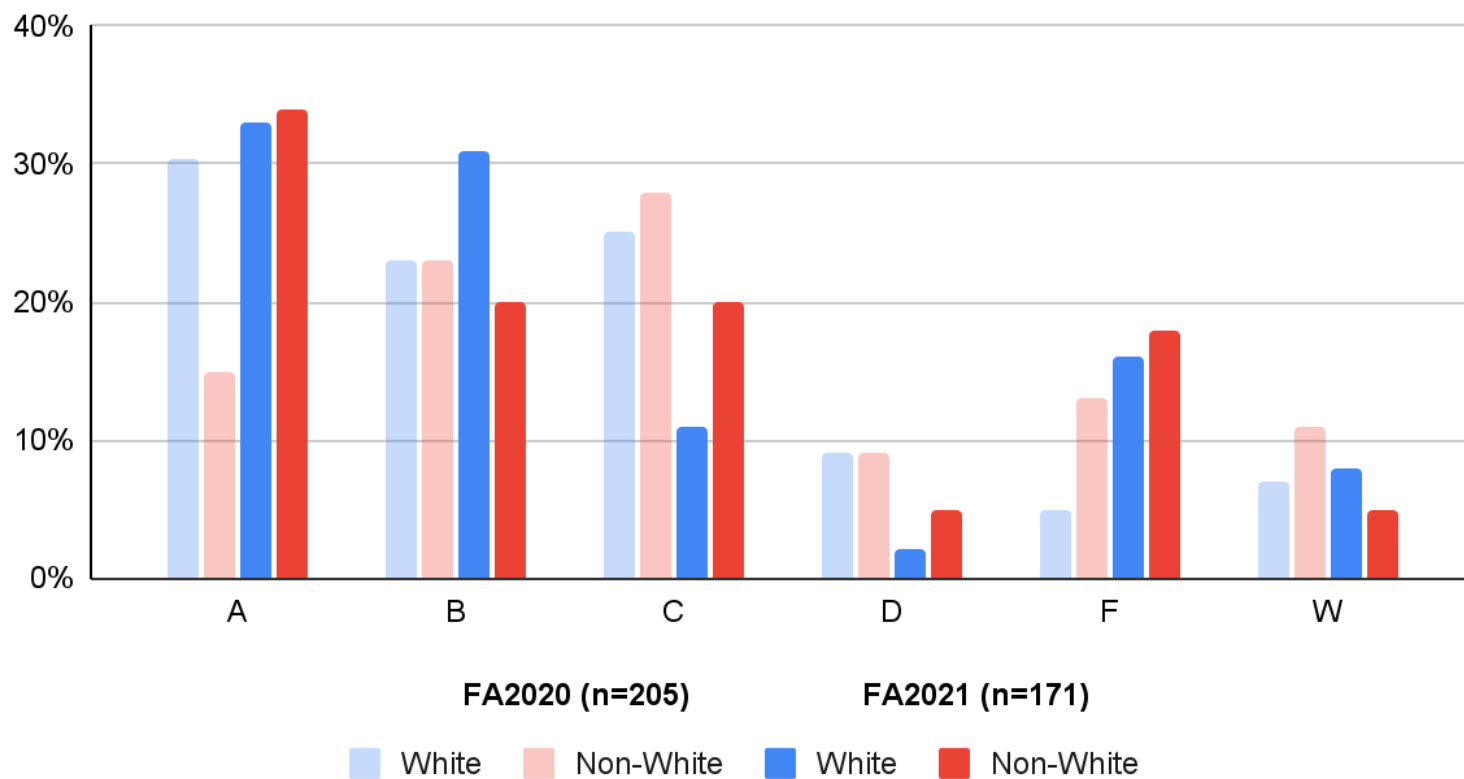
Principles

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.

What FERPA empowers, not just prohibits

- Enables (even encourages) institutions to study their own data about prior students, precisely to try and improve the educational experience of current and future students.

- Allows access to information without requiring students' consent (and prohibits people without a direct interest from accessing PII). Can be transferred to "providers" not directly employed by university/local ED agency.

- We might even say FERPA *obliges* (or at least encourages) institutions to study their students' experience of learning to improve outcomes.

*Generally, a school official has a **legitimate educational interest** if the official needs to review an **education** record in order to fulfill his or her professional responsibility.*

(Source: studentprivacy.ed.gov)

Transparency

Disclaimer

In compliance with the Family Educational Rights and Privacy A[...]
be monitored to improve its educational effectiveness for you a[...]
officials are obliged to keep your identity confidential. For more [...]
Notification of Rights under FERPA.

myUMBC is a UMBC limited public community forum for information s[...]
member's right to free speech on this forum. UMBC does not endorse[...]
UMBC post. Learn more...

About myUMBC

Team | **Use of Student Data** | **Acknowledgments**

Use of Student Data

Why?
The University of Maryland, Baltimore County has developed a national reputation for collecting and analyzing student data to help improve the educational effectiveness of our programs and services and to support individual students with available academic resources. We've also worked with other institutions to develop best practices in transparency about use of student data.

The data UMBC collects is protected under the Family Educational Rights and Privacy Act (FERPA), which allow institutions to analyze student data while also protecting its privacy. For more information, please see https://ogc.umbc.edu/ferpa-rights-notification.

What?
The types of student data that UMBC collects may include:
- Information included on student applications for admission, housing, and financial aid
- Course enrollment and extracurricular activity involvement
- Use of campus academic resources (i.e. Retriever Learning Center)
- Mid-year and final course grades

How?
UMBC will collect this information through:
- Web-based platforms and systems such as Blackboard, myUMBC, Request Tracker and other campus systems.
- Handheld electronic scanners or sign-in sheets
- Selected surveys

Who?
UMBC grants student data access to employees with an "educational interest," including the following:
- Faculty
- Advisors
- Registrar's Office staff
- Student Affairs staff
- Career Center

Questions?
For questions about the use of your data, please send an email to Brittini Brown (bbrown@umbc.edu) in Student Affairs or the Division of Information Technology Privacy Office (privacy@umbc.edu).

An Ethical Framework for Action

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)."
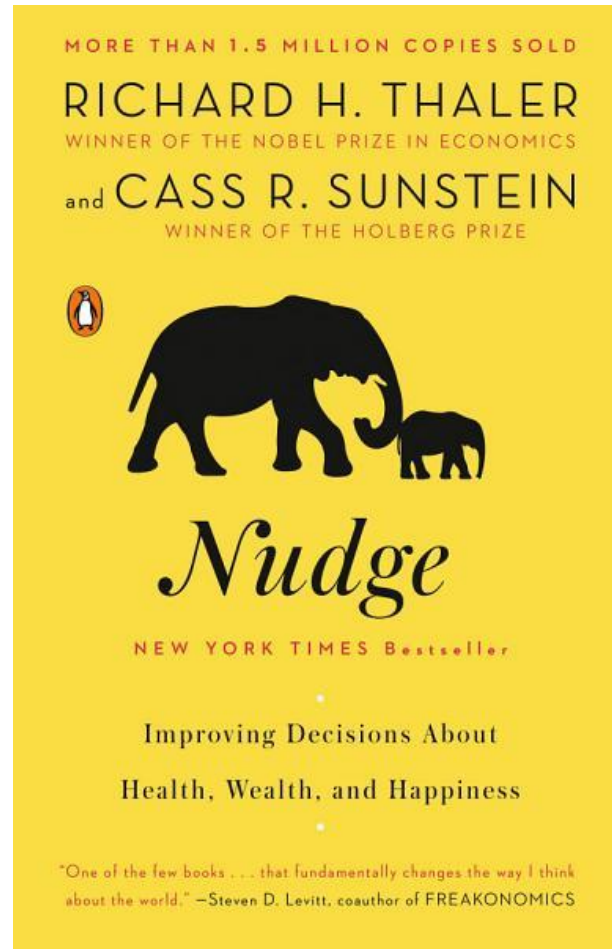
Right Message, Right Person, Right Time

Student Agency   Intrusive Advising

Week 1 (thru add/drop)	Week 4	Week 6-8	Week 12 & beyond

to use the math lab.

Conclusion: Ethics of "Omission" & "Commission"

"Ethical obligation of knowing"

Focuses on **omission or "doing nothing,"** in light of new (quantitative) evidence strongly suggesting some students may be at risk of not succeeding.

More recently: "Ethical use of learning analytics"

Focuses on **commission or "doing no harm"** -- with big data, privacy, etc.

In our experience, they are not equal in weight

Thanks & Questions

John Fritz
Associate Vice President,
Instructional Technology
fritz@umbc.edu

OIA Internal Audit Updates

CoEIT – 4 findings

Physical Inventory Counts

Sensitive Equipment Additions to Inventory

Reconciliation of Study Participant Payments

Business Purpose for Travel

Remote Work IT Security – 1 finding

Incident Response Plan

In Process Audits

USM and Affiliated Foundation Operations– In Process

CNMS Follow Up – In Process

External Audit Updates

1. FY 2021 Financial Statement Audit (completed)
2. MHEC Student Enrollment (completed)
3. NCAA Agreed Upon Procedures (completed)

No Findings!

4. MHEC Educational Excellence Awards Program (in process)

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USM Audit Plan
CY 2022

- Campus Construction

- College of Art, Humanities, and Social Sciences (CAHSS)

- Enterprise Risk Management (ERM) Plan – Policy Compliance

- Intercollegiate Athletics

- Malware/Ransomware Security

- Title IX

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UMBC Policy Updates

- UMBC Policy on Non-Capital and Sensitive Equipment (Amendment)

- UMBC Policy on Intellectual Property (New)

- UMBC Signature Authority Policy (New)

- UMBC Undergraduate Transfer Credit Policy (Amendment)

Signature Authority Policy Background

"Contract" is defined as any written document that *binds* UMBC and *commits* its funds, personnel, equipment, property and/or facilities.

Signing contracts is a serious responsibility with legal implications

This policy is an internal control mechanism

Signature Authority Policy Summary

The President retains the authority to sign all Contracts

Policy provides for the delegation of this authority by the President and the process for sub-delegation

Policy delegates signature authority primarily to Provost, VPAF, VPIA, and VPR.

Contact Policy Liaison in MAS with any questions on signature authority

MAS Updates

- Updated Online Training
  - Ethics
  - Internal controls

- Pre-Audit Orientation Sessions

- Live Trainings to suit your team

- Look for a new MAS Learning Short on Internal Controls - *coming soon!*

Contact Us

- Megan Cherry (5-1620)

- Dave Sohns (5-6257)

https://mas.umbc.edu/