About Us

Loralyn Taylor, Ph.D

• Translational Practitioner—Bridging the gap between research and practice
• Even great initiatives fail without Change Management
• Building a culture of data use requires building data literacy at all levels
• Passionate about the use of data in student success
• Designed and co-led program that won:
  – Lee Noel and Randi Levitz Retention Excellence Award
  – Starfish 360 Student Success Award
  – University Business Inaugural Models of Excellence Award

Krisztina Filep

• Co-lead (with IT) the implementation and management of the campus’ analytics platform
• Survey statistician by training
• Passionate about data – Helping people understand what data to use and how
• North East AIR (NEAIR) Conference Program Chair (2024), Associate Program Chair (2023), past Steering Committee member
• One of the EDUCAUSE Data Literacy Institute subject matter experts
Our Institutions

Ohio University

Established in 1804, first University in the Northwest Territory

R1, Rural Serving Institution, located in rural Appalachian Ohio

5 Branch Campuses

Over 30,000 students
  • Over 25,000 undergrads
  • Over 5,000 grads
  • 1,000 medical students across three campuses

Peoplesoft, SLATE campus

University of Massachusetts Amherst

Flagship of the UMass System

Only public Carnegie highest research university in Massachusetts

32,000 total students
  • Over 24,000 undergrads
  • Nearly 8,000 grad students

9 schools and colleges + Graduate School + Commonwealth Honors College

Peoplesoft, SLATE & Salesforce campus
Our Analytic Journey: Our Analytic History

2008-2011
Data Rich
Info Poor
Individual data requests

IT Strategic Plan
Broader data access but no specifics

Tableau Desktop & Server
Siloed efforts

Strategic Plan
“Instill a culture of evidence at all levels that applies the best possible information and analysis to decisions.”

UAIR & IT
& HelioCAMPUS

2015
2016
2017
2018
2019
2020
...
2023

Campus-Wide Dashboards Deployed

Data Integration & Governance
And then the Pandemic...

Data Literacy & Equity-Minded Analysis

Data Integration & Data Warehouse
Our Analytic History

2011
PeopleSoft Implementation

2012
Q2S

2017
Tableau Desktop

2018
IEA Analyst

2019
HelioCAMPUS

2020
COVID Dashboards

2021
Go Live March 2020

2022
Modeling

2023
Academic Program Margins

2024
SSI Forecasting

Budget & Planning
the ability to read, write and communicate data in context, including an understanding of data sources and constructs, analytical methods and techniques applied, and the ability to describe the use case, application and resulting value.

How people feel when you ask them to look at the data
Data Literacy — Individuals

**Inquire**
Ask the right question

**Inspect**
Find/select the right data/report/dashboard

**Interpret**
What have I learned?

**Iterate**
Do I need to look at additional data?

**Inform**
Communicate results for data-informed decision-making
UAIR’s DEFINITION OF Data Literacy

Position-specific support of data competencies and data fluency.

≠

Why?
The relentless pursuit of self-service analytics

Data flows like streams
Self-service analytics blooms
Insight in your hand

-ChatGPT
Self-Service – Promise...
... vs Reality
Navigating content overload: finding the right resource

Data deluge roars
Info floods, minds overwhelmed
Literacy’s lifeboat

-ChatGPT
Beautiful solution to all our problems
Proliferation

WARNING
MASS CONFUSION AHEAD
# ADS Data Navigator

**Welcome to your ADS Data Navigator**

## Explore by Topic:

### Admissions
- **Dashboard Name**: APR - Student Flow by Entering Major (with Campus Select)
- **Description**: Shows flow of students (retained, left Ohio or graduated) term by term through 6 years after.
- **Use it for**: Tracking student outcomes for specific programs or colleges term by term.
- **Folder Location**: Success Detail

### Enrollment
- **Course Non-S**: ✓ Keep Only
- **Course Success Covid**: Go to this Dashboard
- **End of Term Return Rate**: Return Rate Analysis using only final, end-of-term data. Does not include point in time.
- **Math DV Placement History**: Historical Data for Students with a 'DV' Math Placement
- **Ohio Honors Program - Student Success Overview**: Student Success details pre-filtered for students in Ohio Honors Program
- **Ohio Online - Student Success Overview**: Student Success details pre-filtered for Ohio Online Students
- **Student Flow by Entering Major on Athens Campus**: Tracks students’ primary majors through the first 6 years after they begin as Athens First-time Students

### Faculty/Staff
- **Use it for**: Tracking student outcomes for specific programs or colleges term by term.
- **Folder Location**: Success Detail

### Student Success
- **Use it for**: Tracking non-success rates for programs, courses, or sections. Analyzing failure rates over time or by course.
- **Folder Location**: Success Detail

**Easy Navigation**

**Short business use-case**

**Direct Link**

**Folder location**
## Embedded Data Definitions

## Tab Based

### Clear, complete definitions (harder than it sounds)

<table>
<thead>
<tr>
<th>Section</th>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate Student Success</td>
<td></td>
<td>Number of total degrees conferred, not cohort based, at that level divided by total department faculty (does not include non-faculty or graduate student instructors).</td>
</tr>
<tr>
<td>Graduation Rates from Department</td>
<td></td>
<td>Using a student’s primary major only, all new students who entered in a program owned by the department who graduated in a program owned by the department.</td>
</tr>
<tr>
<td>Graduation Rates from University</td>
<td></td>
<td>Using a student’s primary major only, all new students who entered in a program owned by the department who graduated from the university whether in a program owned by the department or not.</td>
</tr>
<tr>
<td>Persistence to Department</td>
<td></td>
<td>Using a student’s primary major only, all new students who entered in a program owned by the department who persisted in their enrollment in a program owned by the department.</td>
</tr>
<tr>
<td>Persistence to University</td>
<td></td>
<td>Using a student’s primary major only, all new students who entered in a program owned by the department who persisted at the university whether enrolled in a program owned by the department or not.</td>
</tr>
<tr>
<td>Switched</td>
<td></td>
<td>Students who enrolled at the university in a different academic department who have changed their primary major to an academic plan in the selected department and were retained to their X term of enrollment at the university (not counting summer).</td>
</tr>
</tbody>
</table>
Supporting all levels of data literacy: meeting your stakeholders where they are.

Data literacy,
Tools to unlock understanding,
Paths to knowledge wide.

-ChatGPT
Using Design Language
Using Design Language

Dashboard Layout:
- At least 20pt padding space between visualizations
- At least 10pt padding space between filter column and visualizations
- Content should not go higher on the page than the bottom of the ADS logo
Dashboard Guides

OHIO Enrollment Dashboard Information

Overview:
- Provides insights into OHIO student population trends as well as program and course trends.
- A foundational starting point for descriptive analysis and historical trends.
- Answers questions about course registrations and student headcount that may lead to deep dive strategic analysis.

Where do the data come from?
- Peoplesoft
- Updated nightly

5 Tabs in Enrollment Trends Dashboard:
1. Student Headcount
2. Class Enrollments
3. Average Class Size
4. Student Map
5. Program Growth

Examples of Questions the Enrollment Dashboard can answer:

- How many students do we have and how is that number trending over time?
- Which programs are growing or shrinking in terms of headcount or credit hours?
- What is the average class size and occupancy rate for different types of classes?

Program Growth Page: Analysis of program enrollment changes vs prior year.

Available Filters:
- Class
- Course Subject
- Term
- Level
- College
- Department
- Component
- Student
- Career
- Campus
- Site
- College Plan

Filters can be compared for:
- Residence
- Academic Career
- Sex
- URM Status
- Undergraduate Headcount
- Grad Headcount
- FTE

View Details by College, Department, or Academic Plan

Compare change in headcount or credit hours vs prior year.
Circle size = Headcount
Circle location = Change vs prior year

Applicant Demography Page: Shows applicants by geographic location

- Compare by: Sex, IPEDS Ethnicity, URM Status, Admit Type, Academic Load, Residency, Concorded ACT GPA band

DASHBOARD NAVIGATION TIPS:
- Try mousing over areas to view tooltips for more details
- Clicking on an item will filter the dashboard to that item
- Save your most-used views as favorites for easy access
Specialty Dashboard Guides

This dashboard is more complicated than many of the common content dashboards. If you encounter difficulties using this dashboard, we are happy to help. Please contact PRO-ADSHelpAndSupport@catmail.ohio.edu

Examples of Questions the Non-Success Dashboard can answer:

- How are students performing in 1000 level courses?
- What is the letter grade distribution of students in a program, course, or section?
- Has the non-success rate for my students gone up or down over the past 5 years?
- What is the difference in non-success rates by Race/Ethnicity, Sex, URM status or First Gen status?
- What are the non-success rates of key foundational courses in a program?

OHIO Course Non-Success Dashboard Information

Class Comparison Page: Used to compare the Non-Success rate for up to 4 courses

View comparisons by last 4 academic years (Fall-Spring-Summer) or by the same term type over 4 years

This page works best with 4 or fewer courses selected

Course Section Breakdown Page: Shows Non-Success rate distribution & averages by course section

Available Filters:
- Campus
- College
- Department
- Course Lvl
- Course Name
- Term Type
- Component

Shows Non-Success rate for each course section. Shape indicates component type (Lecture, Lab, etc.)

Hover over individual data points for details including section number, course headcount, instructor name

Available Filters:
- Term
- Campus
- College
- Dept.
- Course Lvl
- Course Name
- Section

Use selector to define preferred "non-success" criteria. This filter carries over to all pages.

Select dropdown to view Race/Ethnicity, Sex, First Gen Comparisons over time

View non-success grade distributions for the selected semester
Retention and Graduation

About the Dashboard

This dashboard shows students’ retention and graduation rates by year. Information by school/college, department and major is based on a students’ major at entry. Note that retention rates include both students continuing at the university, as well as those who have graduated. Charts will only display for cohort and year combinations which are applicable (i.e. have already occurred).

How you can use the Data

You can use the data on this dashboard to answer questions such as:

- How has the 4-year graduation rate changed in the last five years?
- Are there differences in retention rates between females and males? Between majors?
- What number of SBS students are retained to the 2nd year? The 3rd year? The 4th year?

By default, this dashboard shows the 4-year graduation rate of state-supported freshmen students.

Please note that the logic in determining cohorts for graduate (master’s and doctoral) students is different between the live and official data.

About the Data

A “snapshot” is taken of university data each semester, on the weekend after the add/drop period ends. The data captured in this snapshot are referred to as Official on this dashboard and match data published by Institutional Research. This contrasts with Live data which gives a current look at the University’s data (refreshed nightly). These data may differ from the official data because of changes that are made after the data is captured (for example, some degrees are backdated).

Data Descriptions

Cohort: A specific group of students established for tracking purposes, such as first-time first-year students or transfer students entering in a specific semester.
Dashboard to Guide Users to Content

Template for strategic plan

Info on training and how to get help with data.
# Teaching Analysis for Budget Planning

See [document](#) for help understanding this dashboard and inclusion in school/college dean’s area.

## Undergraduate Majors

<table>
<thead>
<tr>
<th>Department</th>
<th>Credits</th>
<th>Average Credits</th>
<th>5 year Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>358</td>
<td>1 year 0.8%</td>
<td>5 year 2.0%</td>
</tr>
<tr>
<td></td>
<td>76</td>
<td>1 year 0.8%</td>
<td>5 year 46.7%</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>1 year 0.8%</td>
<td>5 year 20.3%</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>1 year 1.4%</td>
<td>5 year 32.6%</td>
</tr>
</tbody>
</table>

## Credit Hours (AY)

|            | 12,294  | 1 year 3.3%    | 5 year 0.8%  |
|            | 5,396   | 1 year 1.3%    | 5 year 2.1%  |
|            | 34.0    | 1 year 1.2%    | 5 year 5.9%  |
|            | 6.8     | 1 year 2.2%    | 5 year 3.3%  |

## Instructional Tenure System Faculty FTE

|            | 51.3    | 1 year 0.8%    | 5 year 20.3% |
|            | 34.0    | 1 year 1.2%    | 5 year 5.9%  |
|            | 6.8     | 1 year 2.2%    | 5 year 3.3%  |

## Official Data (Fall 2022)

- Headcount
- Teaching
- Faculty

More details (click on the name to go to dashboard):

## Direct links to other things to consider

- Teaching dashboard: [Link](#)
- Teaching Detail dashboard: [Link](#)
- Course Details dashboard: [Link](#)
- Class Size and Occupancy dashboard: [Link](#)
- Department information on course releases, sabbaticals, and parental leave: [Link](#)
Taking action:

Telling a story with the data

Data paints a scene,
Narrating with precision,
Storytelling's key.

-ChatGPT
Iterative Story Crafting Process: Steps we could teach

1. **DATA INFORMED CHANGE**
   - Data stories / compelling visuals

2. **GOOD GRAPHS / APPROPRIATE VISUALS**
   - Tell a story
   - Focus & words
   - Declutter
   - Visualize

3. **SIMPLE GRAPHS / IMMATURE VISUALS**

4. **UGLY GRAPHS / INAPPROPRIATE VISUALS**

5. **PLAIN TABLES / RAW OUTPUT / ALL NUMBERS**

6. **CHANGE BASED ON GUT**

Adapted from Nussbaumer-knaflc via https://www.storytellingwithdata.com/
Teaching what makes a great story

**Compelling Visually**
- Connect The Dots: Present Visuals With Intention
- Discriminate: Choose Charts That Are Easily Consumable
- Think Visually: Incorporate Context Relevant Photos/Videos

**Rooted in Data**
- Be Thorough: Use Context Appropriate Techniques
- Go Deep: Use Complete Data Sets To Set Foundation For The Story
- Be Transparent: Highlight Unknown or Missing Data

**Guide Based Narrative**
- Guide Others: Define a Clear Storyline For Attendees
- Be Honest: Set the Context For The Challenge
- Be Bold: Recommend Actions

The term "Equity-Mindedness" refers to the perspective or mode of thinking exhibited by practitioners who call attention to patterns of inequity in student outcomes. These practitioners are willing to take personal and institutional responsibility for the success of their students, and critically reassess their own practices. It also requires that practitioners be race-conscious and aware of the social and historical context of exclusionary practices in American Higher Education.

Source: USC Center for Urban Education
Equity-Minded Focus and Data Analysis

**Focus**

- Eliminate disparities experienced by excluded, marginalized or minoritized groups
- Prioritize institutional accountability, not deficits in students, faculty and staff
- Monitor the impact of institutional practices, policies and processes

**Data Analysis**

- Disaggregate by all groups
- Explore intersectionality
- Frame findings
  - What is it about our culture, climate, procedures, policies that better supports certain groups?
- Use qualitative data to complement quantitative data

**DATA** → **WHY?**

**REFLECTION** ← **ACTION**
Supporting a data culture: building communities of practice

Knowledge seeds are sown
Communities bloom and grow
Data wisdom shared

-ChatGPT
User Groups

Data & Reporting User Group
- DRUG
  - Comprehensive updates

Analytics & Decision Support
- Viewer Group
  - Review, update, remind
- Explorer Group
  - Can develop dashboards
  - Sandbox access
  - Limited data extracts
  - De-identified data
Supporting each other: our best tips!

Numbers whisper truths
Decode data's hidden script
Literacy's guide shines

-ChatGPT
Empower Data Use

Consistent vocabulary
- Simple, intuitive

Standardized definitions
- Common understandings

Documentation
- Force multiplier
- Continuity planning

Intuitive
- Multiple on-ramps
- Increased comfort, increased use
Empower Data Use

Reduce Barriers
- Training
  - Address level and business case
  - State the whys

Continuing Support
- Available

Proactive Communications
- Nudging
Building Data Culture

Require data support for decisions
  • Review & discuss data

Focus
  • Institutional priorities WHERE data could make a difference

Incorporate into IE Practices
  • Program Review metrics

Build Communities of Practice
  • Multiple levels

Cultivate Data Champions
Being Responsive

Responsive to users

Responsive to needs

Update in definitions and values, addition of more nuanced information

- Primary vs secondary majors
- Legal name vs campus name
- Legal sex vs gender identity
Promote Analytic Maturity

Recognize need to move to more mature forms of analysis
  • Predictive and Prescriptive Analytics
  • Machine Learning / AI

Data training to help ease comfort and willing to transform

Work in parallel with your user community
  • Ensure techniques don’t outpace consumer skill level

Our collective challenge is to push boundaries while balancing existing campus culture
"Data without insights is meaningless, and insights without action are pointless"

Tomas Chamorro-Premuzic
https://hbr.org/2020/02/are-you-still-prioritizing-intuition-over-data
Final Thoughts

If you use and communicate data to others, YOU have a responsibility to help them become data literate!

Deserves critical thought, intentional strategy and investment of our time

Be intentional about integrating into processes

Recognize there is not a one-size fits all, each campus requires its own strategies

Team effort – find your people, supports and champions

Harness your data champions!

Aim high and be positive. You can do this!
Questions?

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