# IJVU. IJATA IJSUMMIT

# Data Literacy in Action: Shaping a Data-Informed Future

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Shaping Data Literacy – The Pillars



Organizational Data and Al Literacy



**Higher Education Applications** 



# Shaping Data and Al Literacy: The Pillars



#### DEFINING DATA & AI LITERACY



- Data Literacy The ability to read, work with, analyze, and communicate with data (Qlik)
- Al Literacy Equipping individuals with the knowledge and skills to understand, use, and interact with Al responsibly and effectively. It's about enabling people to make informed decisions about Al technologies, understand their implications, and navigate the ethical considerations they present (DataCamp)



# **Key Components of Data Literacy**

Not a one size fits all



# **Key Components of Al Literacy**

Empowered & Effective

Question

Evaluate

**Execute Decisions** 



# **Future Trends**

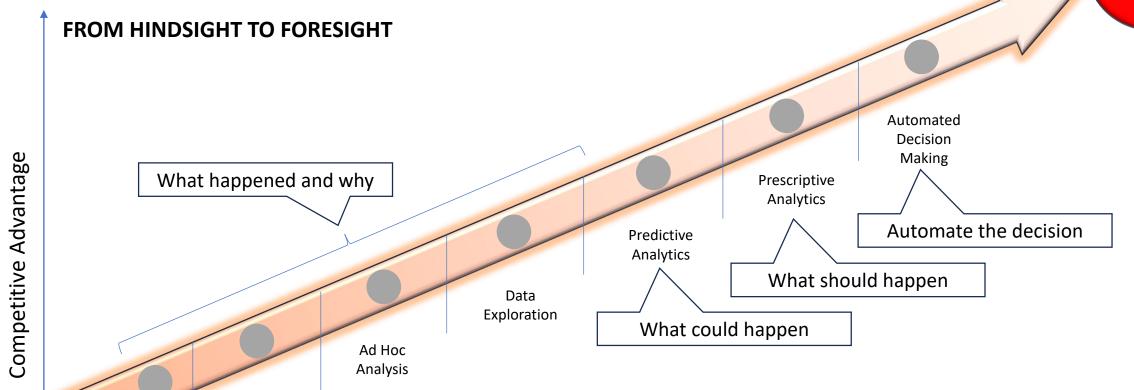


# Organizational Data and Al Literacy



Reporting

Data Management





# **Purposes of Data and Al**

- ✓ Decision Making
- ✓ Problem Solving
- ✓ Process Improvement
- ✓ Predictions (Predictive)
- ✓ Monitoring and Evaluation (Descriptive)
- ✓ Understanding the "Why" (Diagnostic)
- ✓ Communication
- ✓ Data Monetization

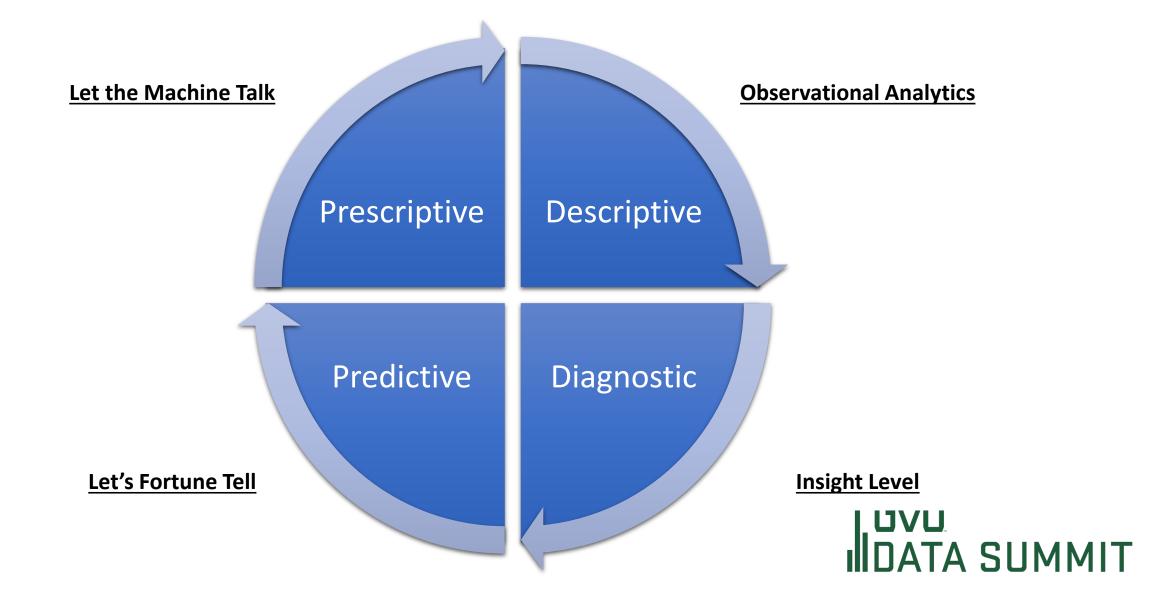


# Value through Data & Al Literacy

- ✓ Decision Making
- ✓ Increased Efficiency and Productivity
- ✓ Innovation and Competitive Advantage
- ✓ Understanding and Knowledge
- ✓ Cost Savings and Revenue Growth
- ✓ Enhanced Collaboration and Improved Communication
- ✓ Strategic Planning
- ✓ Culture



# The Four Levels of Analytics



# The Importance of Critical Thinking

Questions Questions Questions





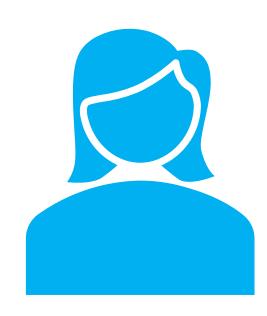
# **Get Leadership Buy-In**

Speak	Speak their language – like ROI
Connect	Connect to the institution's mission
Demonstrate	Demonstrate value
Start	Start small
Address	Address concerns and risks
Build	Build the culture
Proof	Proof points
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#### **Best Practices**

- ✓ Establish a Data and Al Driven Culture
- ✓ Data and Al Literacy
- ✓ Data Ownership and Stewardship
- ✓ Council and Committees
- ✓ Focus Continuous Improvement
- ✓ Effective Communication













**Ensure Data Accuracy** 

Implementation

**Documentation** 

Collaboration & Communication





Change Management Support



# Higher Education Applications



# Our Data Landscape is Changing...

**Data Access & Literacy** 

Leadership & Advocacy

New Roles: CDO, CDAO, CISO, CAO **AI & Machine Learning** 

**Data Security** 

**Need for Metrics** 

**Data-Informed Decisions** 

More Users want Data

Data Quality

**Data Strategy** 

Data Lakes lead to more Data

Data Privacy

**Shared Sourcing & Consistent Messaging** 

Fair & Ethical Use

...ALL Increase the Need for Data Governance India Summit

## Trends Shaping the Future of Higher Education

#### **Social Trends**

- Declining Public Perception
- Evolving Demographics
- Flexible Learning Demands

#### **Technological Trends**

- Cybersecurity Concerns
- Learning Analytics Growth
- Digital Divide
- Al Trends

#### **Economic Trends**

- Workforce Skills Demand
- Employee Retention Challenges
- Impact of Student Debt

#### **Environmental Trends**

- Sustainability Commitments
- Green Skills Demand
- Al in Sustainability Efforts

#### **Political Trends**

- Polarization Effects
- Regulatory Influence



# Trends Shaping the Future of Higher Education

#### **Rising Interest among Adult Learners**

- Surge in Enrollment Intent
- Career Motivation

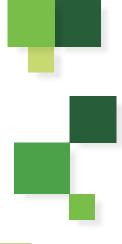
#### **Barriers to Enrollment and Completion**

- Cost Concerns
- Need for Flexibility
- Mental Health Struggles

#### The Workforce Imperative

- Educational Attainment Gap
- Closing the Gap

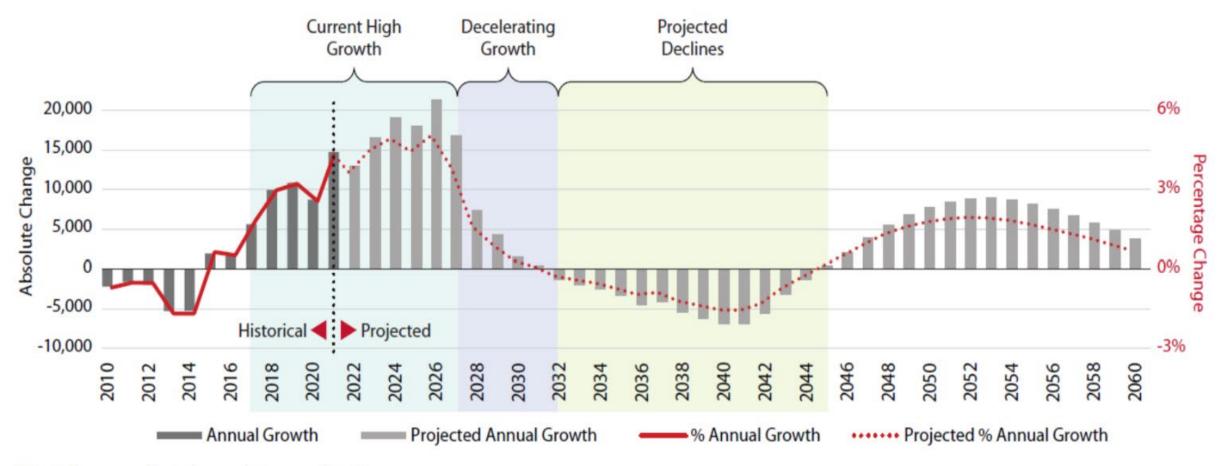




# Navigating Utah's Demographic Dip



#### Annual Absolute and Percent Change in Utah's College-age Population, 2010-2060



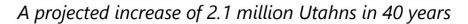
Note: College-age reflects the population ages 18 to 24.

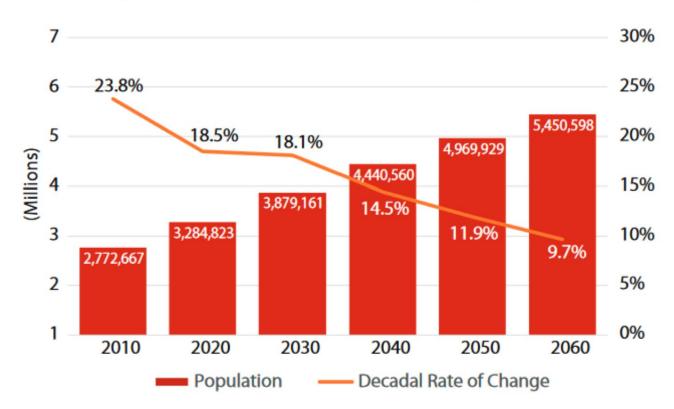
Source: Kem C. Gardner Policy Institute State and County Projections 2020-2060 and State and County Estimates 2010-2019



# Changing Demographic Characteristics Will Impact Our Growth Opportunities

- More populous, mid-sized state
- External growth (61% of growth from migration in 2021 and 2022)
- Much lower fertility (Utah fertility below replacement level since 2018)
- Older: 20% age 65+ by 2050
- More multicultural: 23% minority in 2022 and 30+% by 2040
- Elite economy: Utah job growth consistently among best in nation
- **Unaffordable housing**: Utah housing costs represent major economic risk







# Strategically Positioning Us for Future

- Enhancing Student Persistence and Retention
- Engaging Non-Traditional and No-Degree Students
- Designing future-ready curricula and academic infrastructure
- Aligning Resources with Performance Goals
- Promoting Student Growth





# How Are You Providing and **Using Data to Reshape Enrollment and Retention** Strategies at UVU?





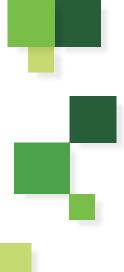


# Three Pillars for Building a Resilient <u>Data Culture</u>

Data Search & Discovery

**Data Literacy** 

Data Governance



# **Data Literacy Strategies**





### **Offering Data Training Series**

**Enrollment** Reporting



**6 Sessions** 

Retention & Persistence



**5** Sessions

Department Level Training



9 Sessions

Graduation Rate Reporting



**4 Sessions** 

Student
Engagement
& Success



9 Sessions



# Redesigning Training Resources.

On Demand **Training Videos** 

35 Videos

One-on-One **Appointments** 

60 **Individuals** 

**Virtual Training** 

54% **18 Sessions**  Face-to-Face **Training** 46% 15 Sessions WEBER STATE DATA HOL Key Terms & D

2024 Graduati

First-Time Student: students at

Transfer Student: students att education institution after exiting

IPEDS: the Department of Ed that participate in any Fede Education Act (HEA) of 19

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WEBER STATE DATA HOW-TOS:

REPORT GALLERY: COURSE INFORMATION DASHBOARD

**FACULTY GUIDE** 

SUMMARY

This dashboard contains information about students enrolled in courses and the outcomes of those courses. Users can select a variety of demographics about both courses and students to

Specific questions this dashboard can help faculty answer include:

- What is the DFWI rate for a specific course?
- What are the DFWI trends for a specific course compared to a department or college? Are there any DFWI concerns or gaps for different student demographics or course
- What are the Withdrawal Rates and Grade Distributions for a specific course?

Multiple How-to Guides Published with more to come!





### **Developing Marketing Assets**

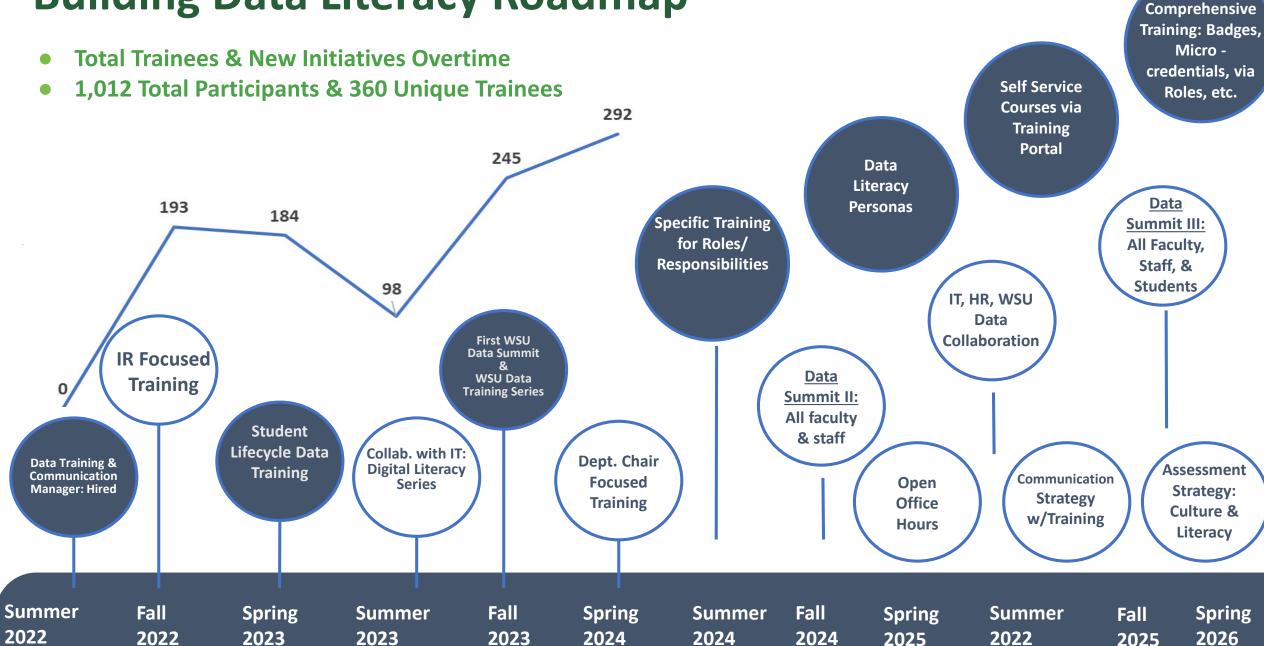








# **Building Data Literacy Roadmap**



### **ROI: Training Evaluation**

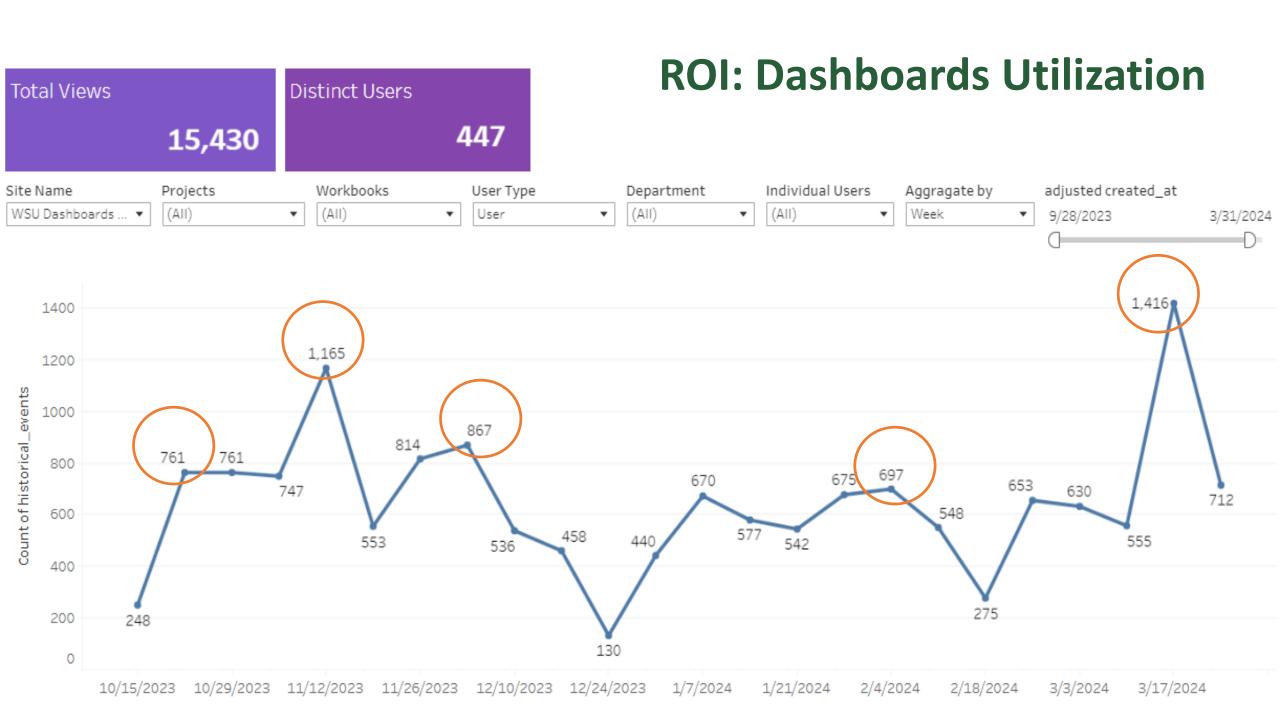
Improve the quality of the training

**Determine the content for future trainings** 

Determine the effectiveness and relevance of the training

Improve data literacy across campus





### **Essence of Participants' Feedback**

#### **Training Evaluation Questionnaire**

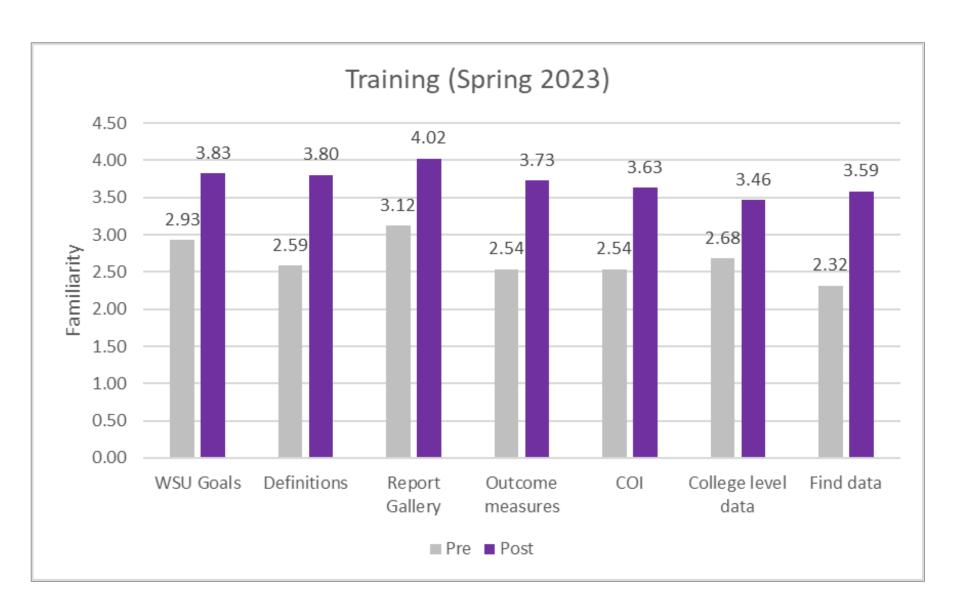
Six quantitative questions to assess relevance, effectiveness, and abilities in applying the content covered in the training

#### **Over 200 Qualitative Comments: Summary**

- Concerns around faculty engagement
- Need for specific training within roles and responsibilities
- Increase training around data's impact on student success
- Feedback on specific training sessions
- Increase access to data and training resources
- Proposed advanced training opportunities
- Senior leadership input needed
- Technology and logistics feedback



### Pre & Post Assessment: Fall 2022 & Spring 2023









# Fostering a data-informed culture is not a destination, but a journey.



#### **Contact Information and Resources**

Jordan Morrow - LinkedIn

#### www.bodhidata.com

- Book 1: Be Data Literate
- Book 2: Be Data Driven
- Book 3: Be Data Analytical
- Book 4: Business 101 for the Data Professional
- Children's Book: The Data Detective at the Carnival

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