Creating New Paradigms with Institution-Wide Analytics at UMUC

WCET Annual Meeting - October 2016

Beth Mulherrin, Assistant Vice Provost, UMUC
Jack Neill, VP Client Services, HelioCampus
Agenda

- About UMUC
- Evolution of Analytics at UMUC
- Platform and Process for Institutional Analytics
- Student Success Analytics
- Lessons Learned
- Looking Forward
About UMUC

One of 12 accredited, degree-granting institutions in the University System of Maryland

Pioneer in adult and distance education

Focus on the unique educational and professional development needs of adult students

More than 85,000 students worldwide

85K
Introductions

Beth Mulherrin
Assistant Vice Provost, UMUC

Jack and Beth partner on strategic analytics initiatives.

Jack Neill
VP of Client Services at HelioCampus
formerly Sr. Director of Data Analysis, UMUC

Beth joins UMUC

1999

Jack joins UMUC

2012

Beth becomes AVP for Student Success

2014

UMUC launches HelioCampus

2015

2016
Evolution of Analytics at UMUC
“UMUC in 2012 was facing a ‘perfect storm’ in all of adult higher education—a storm that would only worsen with time.”

- Javier Miyares, President UMUC
Vision: Getting Value Out of Institutional Data

High Value Analysis
Regulatory & Statutory Reporting
Operational Reporting

Legacy

High Value Analysis
Regulatory & Statutory Reporting
Operational Reporting

Future State
Evolution of Institution-Wide Analytics

LEGACY

Looking Backwards

Longitudinal Reports

Data Silos

External Reporting

CURRENT & FUTURE STATE

Forward Looking (Prescriptive)

Real-Time Dashboards

Integrated Institutional Insights

Continuous Improvements
Building a Data Driven Culture

Transparency

Changed culture around availability of and visibility into information

(Data Driven)

Performance Management

Process in place and data available for continuous improvement
Systematizing Institutional Data

<table>
<thead>
<tr>
<th>Institutional Analytics</th>
<th>Learning Analytics</th>
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<td><strong>To support operational and financial decision making</strong></td>
<td><strong>To support the achievement of specific learning goals</strong></td>
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<tr>
<td>- Management Analytics</td>
<td>- Classroom Engagement Metrics &amp; Alerts</td>
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<tr>
<td>- Marketing Analytics</td>
<td>- Retention Analysis</td>
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<tr>
<td>- Academic Program Health</td>
<td>- Student Risk &amp; Persistence Scoring</td>
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<td>- Enrollment Forecasting</td>
<td>- Adaptive Learning Technologies</td>
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<td>- Prospect and Application Scoring</td>
<td>- Faculty Engagement</td>
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**Data Platform Overview**

**Connect**
Data is replicated from source systems into a central platform

**Model**
Data is normalized and modeled for analysis

**Visualize**
Data is presented in a series of intuitive and interactive dashboards

**Discover**
Trends and opportunities for improvement are identified

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**Student Attributes**

**Course Registrations**

**Academic Performance**

**Other Sources**
Facilitating Institutional Intelligence

EXPLORE

Explore and mine modeled data

EXPLAIN

Analyze and understand trends and their impact

EXECUTE

Make decisions based on targeted analysis and take action
Results: Efficiency, Outcomes & Decision Support

**Institutional Efficiency** - By looking at trends and digging deeper into related data, identify opportunities to reduce cost or shift resources.

**Student Success** - Having a complete picture of your data allows you to highlight and expand on success or focus on areas of improvement for student outcomes.

**Decision Support** - Use insight from the data platform to inform policy changes and measure the impact going forward.
Data Challenges for Student Success Initiatives

Anecdotal evidence and folklore

Data requests take too long

Timely availability of data to assess results

“No Data” is often an excuse for inaction

Lack of shared understanding of student success metrics

Knowing which students need the most help

Trust/Data integrity issues

Don’t know if your efforts are having the desired effect
Best Practices for Utilizing Data for Student Success

1. Create a **centralized data repository** and workflow for repeatable use

2. Follow a **framework** for data analysis

3. **Empower staff** to use data at all levels of the organization

4. **Evaluate** new and ongoing initiatives
Student Retention Enterprise Framework

Retention Opportunity
Captured from multiple UMUC sources

Problem Analyzed
Diagnosed from existing body of knowledge: internal and external research

Hypotheses Generated
Use known indicators of success and other relevant data

Test and Learn
Levers pulled here
Measure success & ROI

Operationalize or Re-create
Operationalize successful initiatives*
Sunset failures*

*Lessons Learned fed back to body of knowledge
Retention Opportunity: Improve student persistence

Problem Analyzed: Predictor of success: student real-time (in classroom) performance

Hypothesis Generated: Right message at right time will drive student success & retention

Test & Learn Cycle: Send advising ‘mindset message’ to students who are at risk for not persisting
# Lessons Learned

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<th>Myths</th>
<th>Reality</th>
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<td>We know our students</td>
<td>Data sometimes tell a different story</td>
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<td>Buy in happens automatically</td>
<td>Cultivation of buy in takes time</td>
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<td>Everyone “gets” student success</td>
<td>Content experts may need hand holding</td>
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<td>More data is better</td>
<td>Simple = actionable</td>
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<td>Business and academic interests are not aligned</td>
<td>Analytics can be a catalyst for finding common ground</td>
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<td>No big bang result = failure</td>
<td>Learning takes time</td>
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Asking and Answering the Most Pressing Questions

- Which degree programs are driving demand, degree production and margin?
- How do we optimize our admissions yield rate?
- Are we meeting our access and diversity goals?
- Do we know what our fully burdened cost per credit hour is?
- Are there obstacle courses that result in much higher non-persistence rates?
- Are we discounting tuition for the right students?
- What student attributes contribute the most to persistence and retention?
- How can we break down students into sub-populations to better serve them?
- How do we know the right treatment for the right student at the right time?
Looking Forward
Questions?

For more information on the HelioCampus & UMUC story, please visit:

http://www.scoop.it/t/heliocampus-and-umuc

- Making Analytics Accessible, Understandable, and Actionable  (EDUCAUSE Review, October 2016)
Thank You
Creating New Paradigms with Institution-Wide Analytics at UMUC

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