UMBC Report Exchange (REX)
Data Warehouse

ABOUT
- Based on a collaborative partnership between DoIT, IRADS, EM, A&F and others around common decision support needs.
- Developed in 2006 with the purchase of iStrategy to better understand PeopleSoft.
- Blackboard acquired iStrategy in 2010, in part to build a learning analytics platform (released in 2012) that UMBC helped influence and test.
- Key Benefit: Extensibility. We have been able to add and correlate multiple data sources.

DATA SOURCES
- Typically, transaction systems are not suited for simultaneous reporting at scale. They would grind to a halt, defeating their primary purpose and value to users.
- Extract, Transform and Load (ETL) is the process whereby data from these systems are standardized for and thus useful for the data warehouse to query against, especially in combination that would be impossible in single systems.
- Other data sources include but are not limited to Campus Card, Central Payroll Bureau, ImageNow/Docusign, Symplicity (ResLife), T2 (parking).

REPORTING
- Once transactional data is loaded in REX, there are three ways to report on it (pending access):
  - Structured Query Language (SQL): Typically used only by a handful of data warehouse admins, selected researchers and report developers.
  - Pyramid: A more visually intuitive interface than SQL, allows one to explore relationships in the data and build custom reports.
  - Reporting Services (RS): Pre-written ("canned") reports based on frequent requests to Institutional Research and Decision Support (IRADS).

Note: UMBC is obliged to comply with the Family Educational Rights and Privacy Act (FERPA), which all employees must acknowledge to gain or retain REX access.

ANALYSIS
- UMBC is seen as a national model for innovative use of analytics, but our most recent Strategic Plan calls for a deeper investment to improve efficiency and effectiveness in all aspects of campus life, including student success.
- As a result, we’ve partnered with three organizations that complement the scope, scale and importance of our aspirations:
  - Civitas Learning: Consisting of predictive models on student persistence, we’ll soon be able to also measure impact of current interventions.
  - Blackboard Predict: Similar to Civitas, but more focused on the role of the LMS, we’ve already done a FA16 pilot.
  - Educational Advisory Board (EAB): Focused more on course utilization.

INTERVENTIONS
UMBC uses the Student Success Matrix (SSMx), designed to catalog "any intervention that assists students in the successful completion of a given course or degree credential of value in the workplace."
- Examples:
  - LRC tutoring or supplemental instruction (SI)
  - First Year Intervention (FYI) Alerts
  - Integrated Planning and Advising for Student Success (IPASS).

Note: To properly analyze any intervention’s "lift" or impact, we need to track who participated – and was eligible – by studentID.

MORE INFO
- http://rex.umbc.edu
- http://doit.umbc.edu/analytics