Unizin

Amin Qazi, Unizin
UNIZIN IS

- A consortium of universities working together to shape educational technologies and practices
- Professional staff who manage learning technology solutions to meet the goals of the institutions
- 100% university-controlled & funded
WE ARE BUILDING A LEARNING ENVIRONMENT

CONTENT
- Course-contextual:
  - OER
  - Institutional repositories
  - Commercial
  - Faculty-authored

LEARNING EXPERIENCE
- Canvas
- Unizin Engage
- Open edX

ANALYTICS
- Unizin Data Platform
- Data dashboards
- Research tools
DATA TODAY

Data is everywhere and nowhere. It is scattered. It is slow.

And the warehouse(s) built to house it doesn't include all T&L data.
Transform, aggregate and organize institutional data into proprietary data models for use with proprietary tools.

Report from analytics performed with proprietary, black box algorithms.
LOCAL SOLUTIONS TODAY

Investments occurring, but innovating is getting harder and harder.

Working in silos and often misinterpret or misuse data because the users do not understand the context.
OUR MEMBERS

Value a flexible ecosystem that meets the needs of local imperatives, the sequence and the urgency of their goals

- Learning analytics
- Data capture and access
- Persistence in majors (STEM)
- Teaching/learning tools, integration
- Tool innovation and diffusion
- Content authoring
- Content distribution
FUNCTIONS & SKILLSETS

- Data Delivery
- Data Hosting
- Data Agg.
- Data Explor.
- Data Models
- Interpretation
- Intervention
- T & L
- Cont. Imprvmt.

Access
- Descriptive
  - Warehousing
  - Business Intelligence
  - Reporting
  - Histograms
  - OLAP
- Predictive
  - Regression
  - Random Forest
  - Support Vector Machines
  - Markov Chains
  - Text Mining
  - Natural Language Processing

Insights

Actions
- Prescriptive
  - Bayesian Inference
  - Pedagogy
  - Student Interventions
  - Engagement
COOPERATIVE APPROACH

Access
- Data Delivery
- Data Hosting
- Data Agg.

Insights
- Data Explor.
- Data Models
- Interpretation

Actions
- Intervention
- T & L
- Cont. Improvmt.

Institutions

how?
COMMON DATA MODEL

Standard for representing data across the teaching and learning ecosystem

Normalize data from a wide range of systems, tools, and applications
1. Leverage economies of scale in a secure data enclave governed by the member institutions

2. Evolve common data integration standards and practices from multiple data sources tied to student learning outcomes

3. Participate in the creation of the world's largest learning laboratory at a pace that matches institutional desire and readiness
TECHNOLOGY IS CHANGING

Data processing will be different because context matters more than ever.
DATA & ANALYTICS SERVICES

Institutional Data Store

- Members own all data and may assert permissions
- Extraction of institutional data by Members
- Data may be enriched from institutional sources

Unizin Learning Laboratory

- Aggregated data sets to enable research and analysis
- Access to de-identified or anonymized data from across the consortium

Under Complete Institutional Control by Each Member
Virtuous ecosystems where dashboards inform other connected tools
  • online practice tools that, in an informed way, provide students with opportunities to practice the parts of the course where they struggle

Also, an opportunity to feed student performance data into course and program design
COURSE MONITOR

Data visualization of student performance for faculty, students and advisors

2016SP-BIO-101-001
2016SP-BIO-101-001 / Section #1 / 49 students

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COURSE MONITOR

Demographic Data
Performance Data
Curricular Path Data
Instructional Activity
Student Behavioral Data

Opportunity to answer important research questions and to power the teaching, learning, advising, and instructional design quality journeys.
WHAT IS A MONITOR?

A automated task that watches metrics of incoming teaching and learning data and, per criteria, takes action.

• Instructor, Advisor or Department-defined
• Monitors watch courses, people, and even actions, either in absolute or historical comparisons
COURSE MONITOR 2018

- Email action from student monitoring view
- Locally-configurable monitors
- Module-driven views and monitors
- Institutional monitors
- Vendor integration
UNIZIN & VENDORS

Institutional control of data, openness and transparency of tools and conformance to standards to allow a versatile and nimble ecosystem is key to the success of data-informed organizations.
The opportunity to store, yet augment, data to improve teaching and learning is more compelling as those data sets become richer and larger; time-value of data.

Data-informed applications can be built more quickly when built atop a standard model and architecture.
UNIZIN & CONSORTIAL DATA

Most academic institutions have not truly grasped the real value, both in the monetized and mission critical senses, of data and the power of creating large data sets with other institutions.

New models and insights can be shared more readily.
RICHER DATA LEADS TO RICHER INSIGHTS

The Unizin consortium will:

• Operate the academy’s largest and richest collections of curated data across multiple universities

• Aggregate those data sources into a rigorously managed platform

• Enable the discovery of insights that would not be possible at any single institution
Data is the key to reaching the next horizon of teaching and learning.

If we collaborate to control our data and content, what can we do?