Peaks on the Sakai Landscape Overview and Update

Josh Baron, Pro-tem Chair, Apereo Foundation

Ja Sakai Conference

Kyoto, Japan - March 13, 2013

Presentation Overview

Sakai – Jasig Merger and Apereo Foundation

Sakai CLE 2.9 Release Overview

Sakai Open Academic Environment (OAE)

Open Academic Analytics Initiative (OAAI)

Question and Answers

Merger Background
The Jasig-Sakai Connection

- Open-source software community began in 1999 to explore use of Java in higher education
- Received funding from Andrew Mellon Foundation in 2001 to develop portal technology
- Success of the **Jasig uPortal** project laid the groundwork for Mellon to fund **Sakai** in 2003

Merger Background
The Jasig-Sakai Connection

- Jasig grew into a multi-project community
  - uMobile – Mobile content tools
  - bedework – Event Calendaring System
  - CAS – Central Authentication Service
- Jasig and Sakai have collaborated before…
  - Have many of the same institutional partners
  - Co-located conferences (2005 and 2006)

Why Merge Sakai and Jasig?

- Strategy for long-term sustainability
  - Impact of 2008-09 global economic downturn
  - Proliferation of open-source foundations
- Value of a common foundation
  - Economies of scale – staffing, conferences, infrastructure
  - Addressing common challenges – incubation process
  - Global growth strategy – attract new projects/partners

More details on the merger at…

www.apereo.org

apereo

Serving the Academic Mission

The core mission of the Foundation is to assist and facilitate educational organizations which…

"collaborate to foster, develop, and sustain open technologies and innovation to support learning, teaching, and research."

Sakai

uPortal 4 SM

2/3/98 PROJECT
THE OPEN PLATFORM

CAS

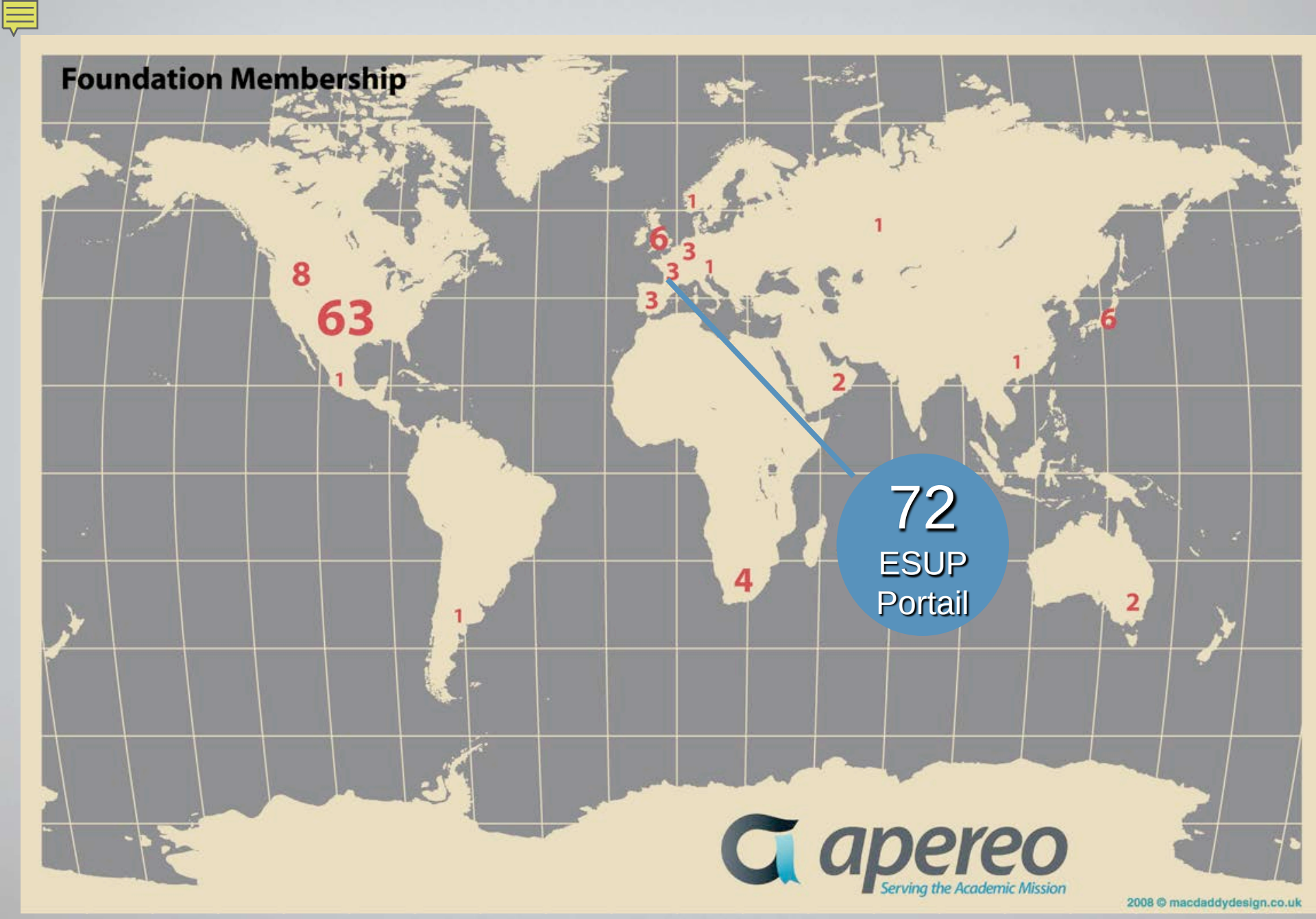
Made up of communities which are largely self-governing, but bound by that common purpose.

Student Success Plan

uMobile SM

18 Projects in Incubation

bedework


Foundation Membership
8
63
1
1
6
3
3
1
3
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2
1
6
4
1
2
72
ESUP
Portail
apereo
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ESUP Consortium

http://www.esup-portail.org/

72 French Universities

Adapt, localise, create open source software

Contribute to i18n efforts

Substantial interest in mobile

Participate in incubation process

New Apereo Board of Directors

Josh Baron (Marist College) Pro-Tem Chair
Alain Mayeur (U Valenciennes + ESUP)
Shoji Kajita (Kyoto University)
Charlie Leonhardt (Georgetown U) Pro-Tem Treasurer
Robert Sherratt (U Hull) Pro-Tem Vice Chair
David Ackerman (NYU)
Tim Carrol (U Iowa) Pro-Tem Secretary
David Kahle (Tufts U)
Jim Helwig (U Wisconsin-Madison)
Doug Johnson (U Florida)
John Lewis (Unicon)
Nate Angell (Little Bird)
Steve Swinsburg (Flying Kite)

Six Current Foundation Priorities

Complete legal process

Strategic planning process

International advisory board

Redevelop web presence

Infrastructure planning

Incubation review (working group forming now)

... and a seventh ...

2013 Apereo Conference San Diego Conference

2nd (Preconference) to 7th June (Project Day)

Keynotes -

Theresa Rowe, CIO Oakland U

Marilyn McMillan, VP IT & CIO at NYU

How will the Merger Impact on Sakai?

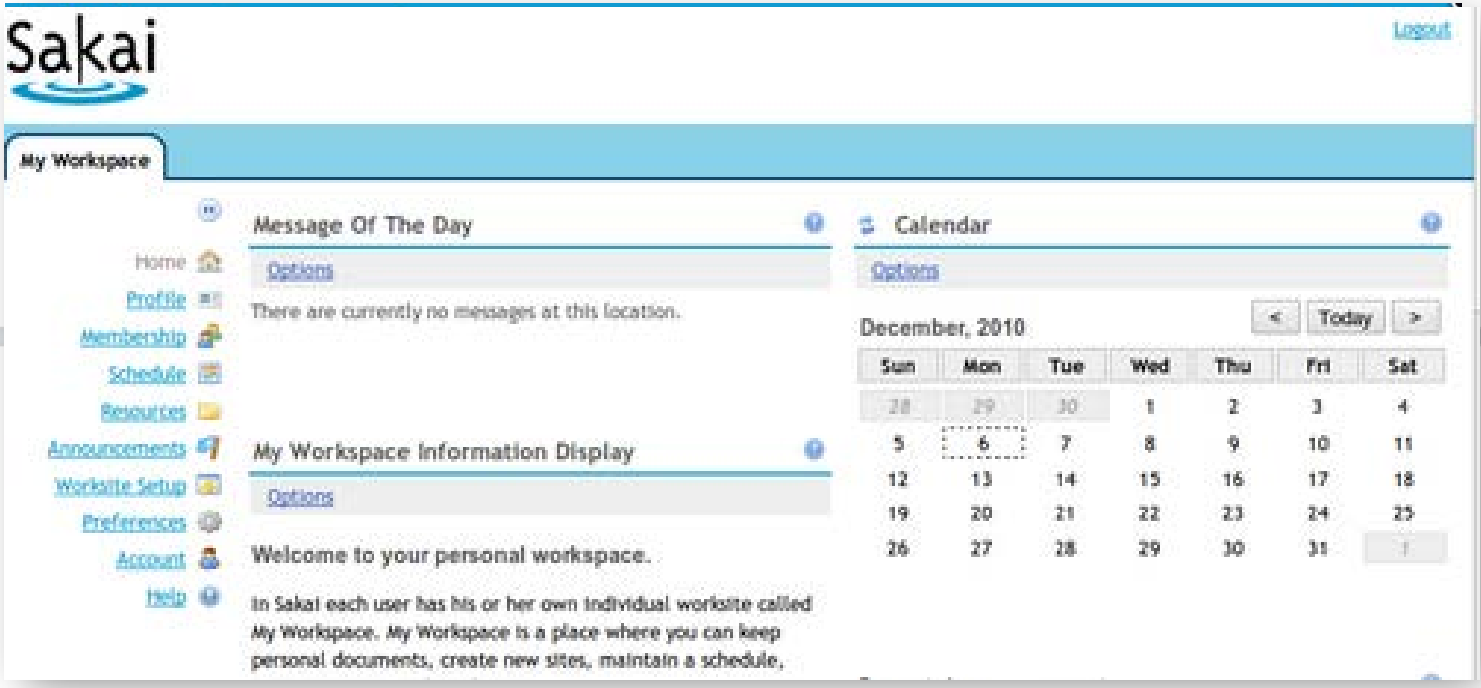
- No changes to branding (name and logo)!
- New Apereo services and resources
  - Incubation process for new projects
  - Larger and more diverse international conference
  - New Foundation staffing – Associate Director position
    - Neal Caiden, Sakai CLE Coordinator
- Sakai will around for the “long haul”

Sakai Collaboration and Learning Environment

Update on Sakai CLE Project Initiatives

Sakai CLE 2.9 Release

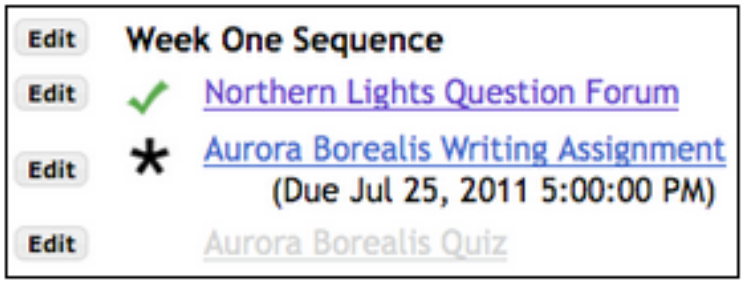
A Major Leap Forward for Sakai & the LMS Market



Sakai CLE 2.9 Release

A Major Leap Forward for Sakai & the LMS Market

- Lesson Builder Tool (version 1.4)
  - Part of Core Release (turned on by default)
  - Content authoring for instructional materials



  - Instructors can embed Assignments, Tests and Forums
  - Conditional release option available
  - Supports IMS Common Cartridge (import only)

Sakai CLE 2.9 Release

A Major Leap Forward for Sakai & the LMS Market

- FCKEditor replaced by CKEditor (now the default)
- Profile picture appears in Forum posts
- Drop highest/lowest grade in Gradebook
- Randomly assign users to Groups
- Ability to set a language at course/project level
- 600 bug fixes and over 20 security improvements

Sakai CLE 2.9 Release

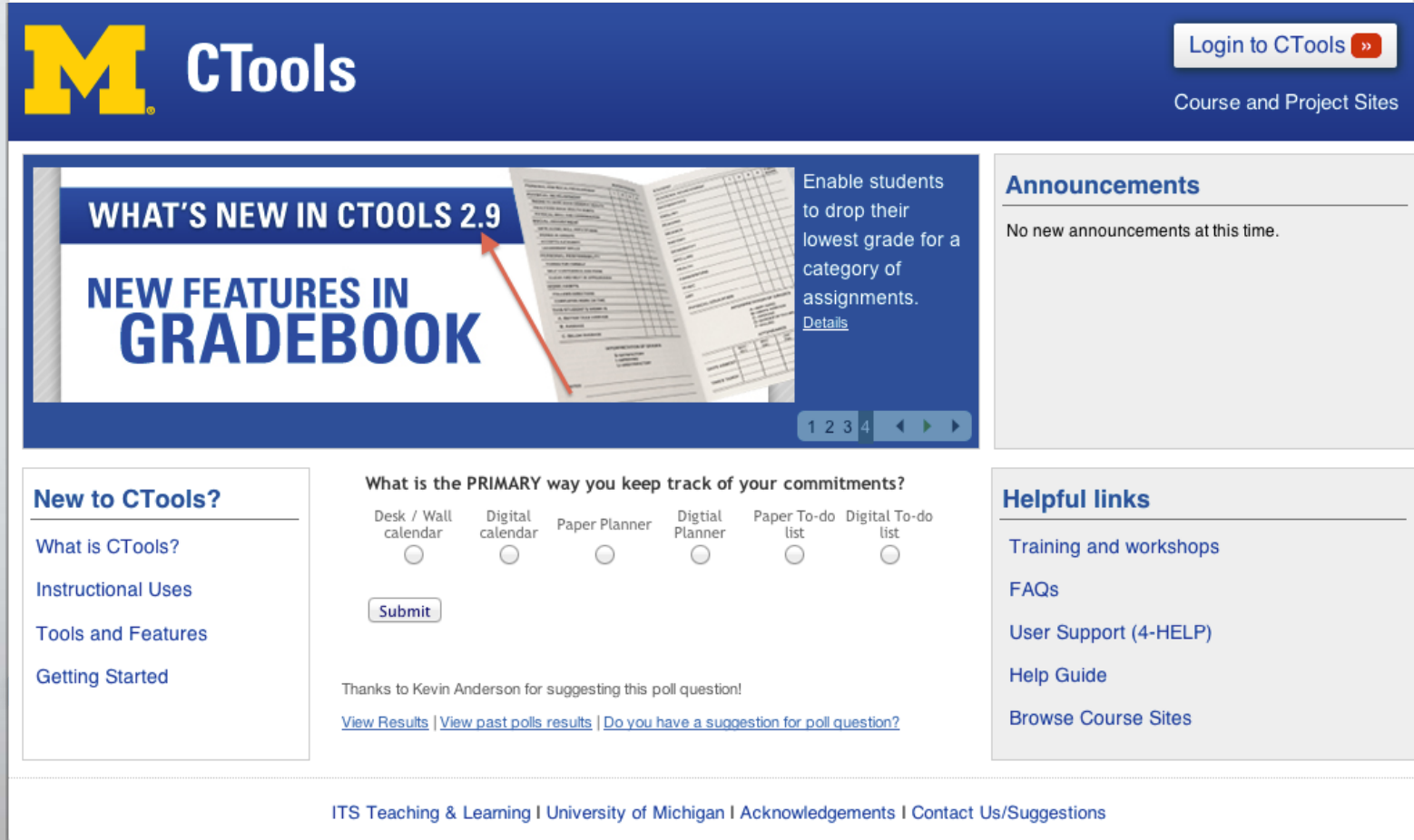
A Major Leap Forward for Sakai & the LMS Market

And much much more…

https://confluence.sakaiproject.org/x/xIGrB

Sakai CLE 2.9 Release

A Major Leap Forward for Sakai & the LMS Market



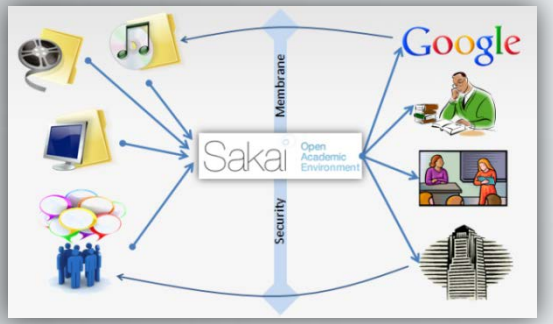
Other Sakai CLE Initiatives

- Keitai Mobile Initiative
- i18n Initiative
- Portfolio Initiative
- HEC Montreal, U van Amsterdam - MOOC

Sakai Open Academic Environment

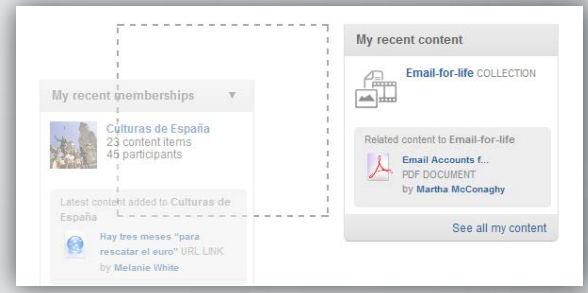
Update on Sakai OAE Project Initiatives

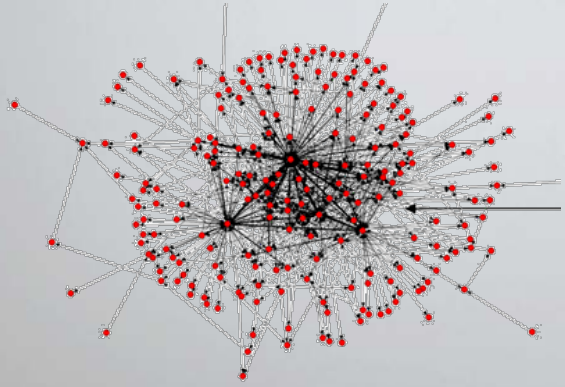
Academic Collaboration 2.0



Permeability

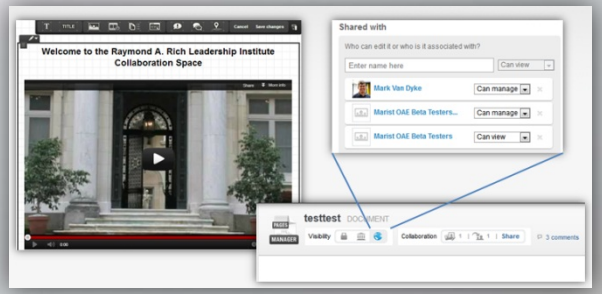
User Autonomy





Academic Networking

Remixability



Sakai OAE Status Report

- Project Challenges Faced in 2012
  - Performance issues identified when running at scale
  - Misalignment of strategic goals among partners
  - Several partners ended their involvement (August '12)
- Significant progress w/ small team since August
  - New technology stack performs well at scale
  - Current partners are aligned on strategic vision for OAE

Sakai OAE Status Report

- New Sakai OAE Technology Stack
  - Leverages Apache Cassandra (NoSQL) system
  - Cassandra is used by Netflix, Twitter and eBay
  - Remained stable with 8000+ simultaneous users
  - Performance scales linearly with additional servers
- Focus on “Re-connecting” Tools to New Backend
- GA Tech and Cambridge Leads, More Investing

Sakai OAE Status Report

More Details at…

http://oae.sakaiproject.org/node/29

CLE – OAE Cohabitation Model

CLE	OAE
Instructional Classroom	**Academic Commons**
Structured *Single Purpose* *Rigid Design* *Closed to the World*	*Unstructured* *Multi-purpose* *Flexible Design* *Open to the World*

Strategic Vision
Academic Community Cloud

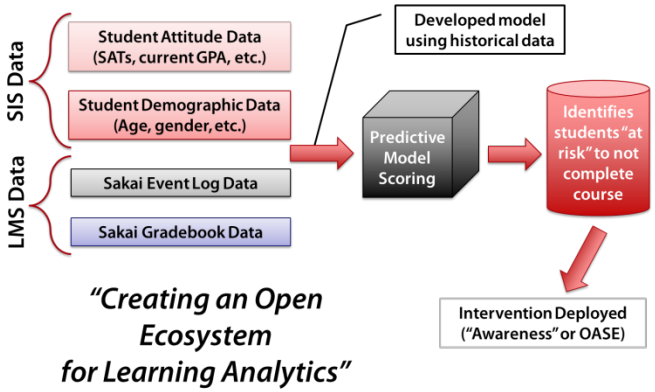
A collaboration platform to allow the world to…

Connect with faculty, students, staff, partners…

Collaborate around our “centers of excellence”…

Create new knowledge and thinking…

Open Academic Analytics Initiative



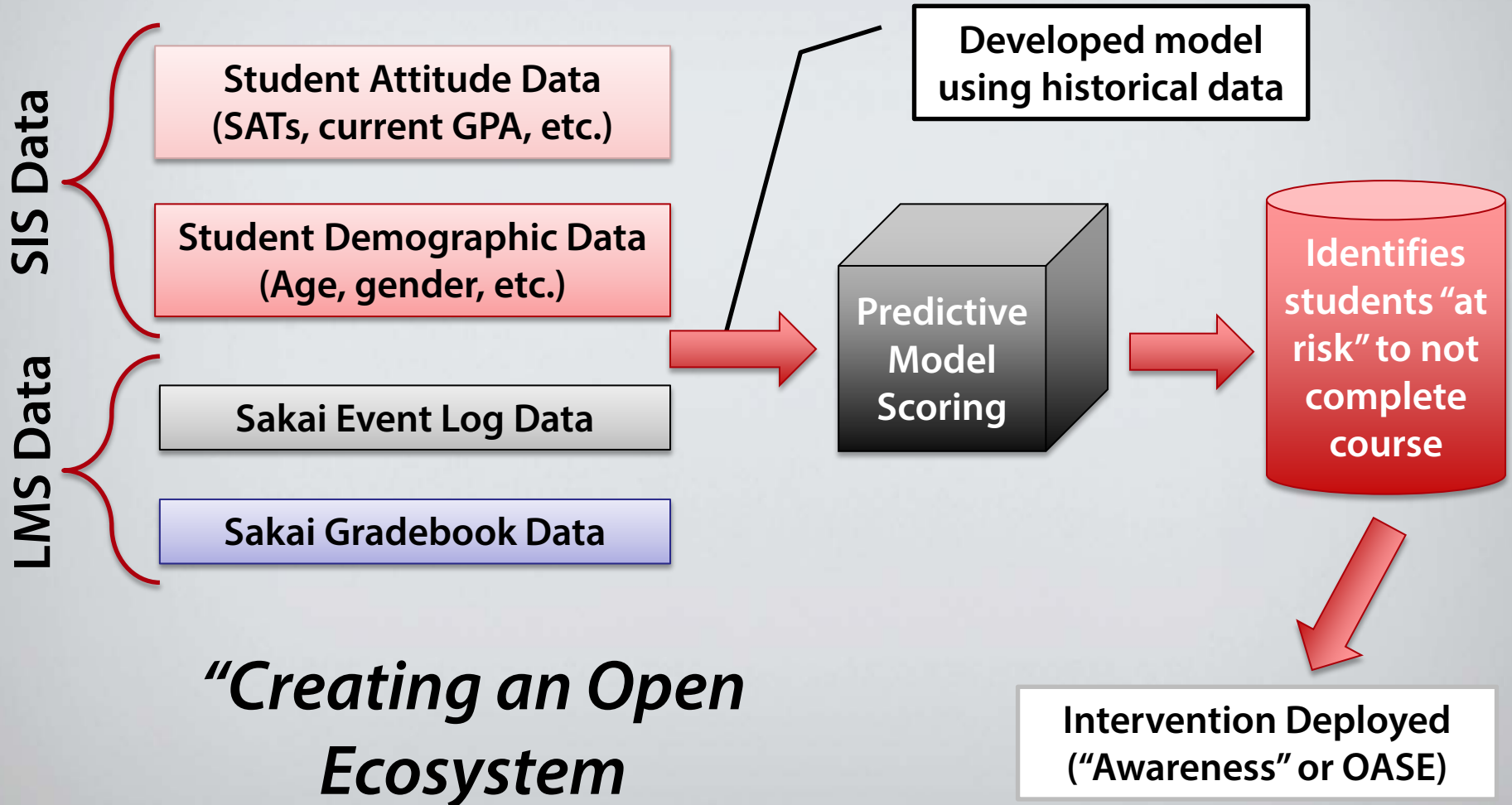
"Creating an Open Ecosystem for Learning Analytics"

A New Sakai Initiative Focused on Learning Analytics

Open Academic Analytics Initiative

- EDUCAUSE Next Generation Learning Challenges
- Funded by Bill and Melinda Gates Foundations
- $250,000 over a 15 month period
- **Goal**: Leverage analytics to create an open-source academic early alert system.

OAAI Early Alert System Overview



"Creating an Open Ecosystem for Learning Analytics"

OAAI Goals and Milestones

Build “open ecosystem” for Learning Analytics

- Sakai Collaboration and Learning Environment
- Pentaho Business Intelligence Suite
- Predictive Model released under open license

Researching Learning Analytics scaling factors

- How “portable” are predictive models?
- What intervention strategies are most effective?

OAAI Research Methodology

Conducting real world pilots

Pilots run in Spring and Fall 2012

Introductory-level F2F courses

~40 courses at community colleges

~30 courses at HBCUs

Conducting student surveys and focus groups

Preliminary Findings

Portability and Intervention Effectiveness

Initial Findings - Portability

Model **accuracy remained in the 60-80% range** when Marist-derived model was deployed at community colleges and HBCUs.

Table 3: Prediction Analysis from Spring Pilots

College	% of Semester Completed	# of students	Accuracy	Recall	Specificity	Precision
Savannah	25%	504	66.96%	70.76%	64.64%	55.00%
	50%	504	71.52%	78.22%	67.56%	59.41%
	75%	504	77.75%	72.53%	80.94%	69.84%
Cerritos	25%	502	59.13%	69.23%	56.31%	30.73%
	50%	601	70.92%	66.14%	72.51%	44.44%
	75%	649	74.77%	74.42%	74.88%	47.76%
Redwoods	25%	195	70.50%	86.27%	61.36%	56.41%
	50%	195	79.86%	72.55%	84.09%	72.55%
	75%	195	79.14%	72.55%	82.95%	71.15%

Initial Findings – Interventions

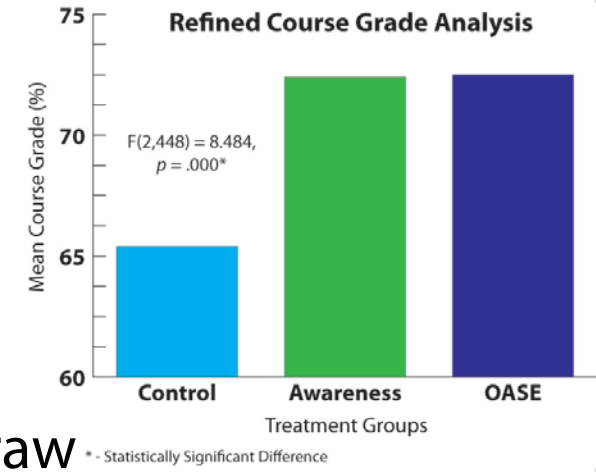
Found statistically significant difference between treatment and control groups

- ~7% increase in course grades
- More students "mastered content" (C or better)

Similar trend among low income students

Students were more likely to withdraw

- Similar to Purdue findings, not necessarily negative

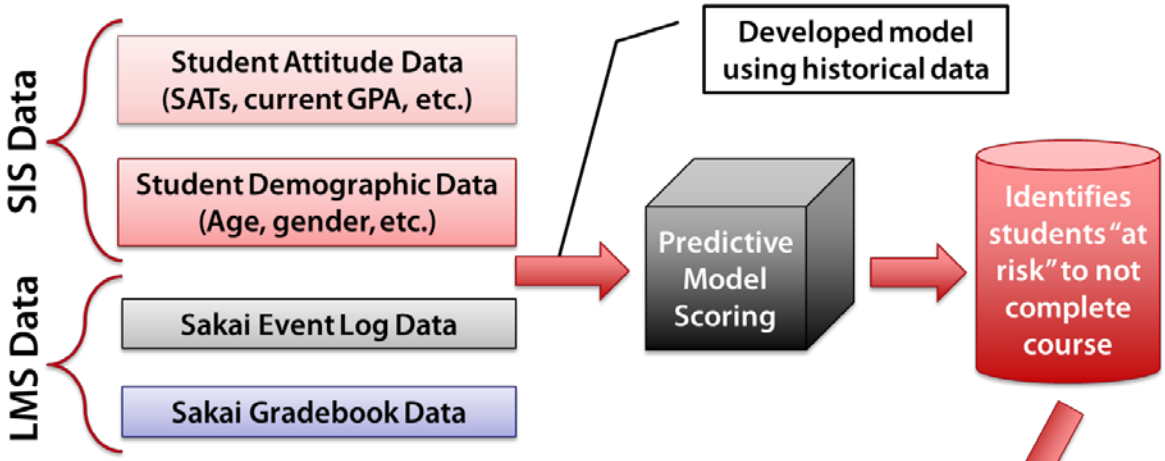


Instructor Feedback

"Not only did this project directly assist my students by guiding students to resources to help them succeed, but as an instructor, it changed my pedagogy; **I became more vigilant about reaching out to individual students** and providing them with outlets to master necessary skills.

P.S. I have to say that this semester, **I received the highest volume of unsolicited positive feedback from students**, who reported that they felt I provided them exceptional individual attention!

Next Step? Start New Apereo Learning Analytics Project



"Creating an Open Ecosystem for Learning Analytics"

Q&A Session

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MARIST