SLAM MICHIGAN

STUDENT LEARNING AND ANALYTICS AT MICHIGAN

October 12, 2012:
U-M Resources for Learning Analytics Projects:
Grants and Fellows Program

Tim McKay, Arthur F. Thurnau Professor of Physics and
Chair of the Provost's Learning Analytics Task Force

www.crlt.umich.edu/slam

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Tim McKay for the Provost's Learning Analytics Task Force

LA Task Force Charge

1. Explore the UM information environment and optimize for learning analytics

2. Fund a series of the best proposed LA projects at UM

3. Review the metrics used to assess teaching and learning at UM

- LATF will operate for three years
- Year 1
  - Reports assessing charges 1 and 3
  - Initial proposal cycle
- Years 2 and 3
  - Explore new approaches to 1 and 3
  - Continue evolving funding cycles
  - Disseminate

LATF Membership

- **Anne Ruggles Gere:** Arthur F Thurnau and Gertrude Buck Collegiate Professor of Education, Director Sweetland Center for Writing

- **Barry Jay Fishman:** Associate Professor of Education, School of Education and Associate Professor of Information, School of Information

- **Hosagrahar V Jagadish:** Bernard A Galler Collegiate Professor of Electrical Engineering and Computer Science, Professor of Electrical Engineering and Computer Science

- **Martha E Pollack:** Professor of Information, Electrical Engineering & Computer Science, Vice Provost for Academic & Budgetary Affairs

- **Mika LaVaque-Manty:** Arthur F Thurnau Professor of Political Science and Philosophy

- **Stephen Lowell DesJardins:** Professor of Education and Director of CHPSE

- **Stephanie Teasley:** Research Professor of Information, Director of the USE Lab in the University Library Digital Media Commons

- **Susan Marie Dynarski:** Associate Professor of Public Policy, Associate Professor of Education, and Associate Professor of Economics

- **Timothy A McKay (Chair):** Arthur F Thurnau Professor of Physics and Astronomy and Director of the Honors Program

- **Victor J Strecher:** Professor of Health Behavior & Health Education and Director for Innovation and Social Entrepreneurship, School of Public Health, Professor of Family Medicine

- **William J Gehring:** Arthur F Thurnau Professor, Professor of Psychology

- **Joanna Mirecki-Millunchick:** Professor of Materials Science and Engineering, College of Engineering

Two support opportunities this year

- Exploring Learning Analytics (ELA) Grants
  - For those ready to begin a significant research project
  - Both financial and technical support
  - Expect to support 5-10 ELA grants this year
  - One or two year duration

- Learning Analytics Fellows Program
  - A **MOOS** (Mini Offline Old-fashioned Seminar) on learning analytics
  - Support for junior and senior fellows
  - Weekly 2 hour sessions during the Winter term
  - SLAM seminars and discussions of key LA topics with expert guests

ELA Grant Proposals

- Projects will analyze data generated in academic activities at Michigan

- Expected to contribute intellectually to LA community at Michigan

- Annual budgets of up to $150K

- Preference for projects which:
  - Develop new protocols or help to develop institutional capacity
  - Act on the intelligence generated by analytics
  - Address persistent obstacles to student success at any level

Example Projects

- Exploring the impact of student preparation on performance in a high enrollment introductory course
- Analyzing the impact of student study habits on classroom performance
- Developing protocols for assessing the impact of academic support programs
- Expanding programs to track the success of students after graduation
- Constructing tools to explore how students in different concentrations meet college requirements

- Comparing the impact of prerequisite courses and transfer credit on more advanced classes
- Revealing how students prepare themselves for application to professional schools
- Measuring the relationship between student learning and teaching evaluation scores
- Building tools which use data to improve student performance in individual courses
- Extending the use of data in support of academic advising, from orientation to graduation

Data and Technical Support

Two principle sources of data are generally available for these projects.

- First, a wide array of student data has been maintained in the UM Data Warehouse since 1996. This includes detailed information about each student at the time of admission, for each term they are enrolled, and at graduation.
- Second, The CTools archive provides a rich and complex portrait of every action which took place in every course using its tools. Other online tools – commercial homework systems, chat rooms, blogs, and Google docs – all generate data which might be useful for understanding teaching and learning

- Funded projects will receive technical and administrative
  - consultation on what data is available and how to access it
  - technical assistance for extraction of data sets
  - consultation on statistical approaches to analysis
  - help with applying for IRB approval for projects which require it
- All funded projects will be required to submit annual reports and present the current status of their work at an annual session held in conjunction with the Enriching Scholarship Symposium each May.

Selection Process and Criteria

- ELA proposals submitted by each quarterly due date will be reviewed by members of the LATF. Selection criteria will include:
  - Potential impact on the student experience
  - Potential to expand and improve the use of learning analytics at Michigan
  - Appropriateness of project team for meeting project goals
  - Contribution to a broad interdisciplinary mix of ELA projects

- Proposals will be reviewed on a quarterly basis, with due dates on
  - November 15
  - February 15
  - May 15
  - August 15
- Funding decisions will be announced within one month of these due dates.