State of the Field: Learning Analytics and Educational Data Mining

August 5, 2013: 1:00 p.m. ET (UTC-4; 12:00 p.m. CT, 11:00 a.m. MT, 10:00 a.m. PT)

Session Links:

- Knowing Knowledge: [http://www.amazon.com/Knowing-Knowledge-George-Siemens/dp/1430302305/ref=sr_1_1?ie=UTF8&qid=1375722308&sr=8-1&keywords=knowing+knowledge](http://www.amazon.com/Knowing-Knowledge-George-Siemens/dp/1430302305/ref=sr_1_1?ie=UTF8&qid=1375722308&sr=8-1&keywords=knowing+knowledge)
- Learning analytics and educational data mining: [http://dl.acm.org/citation.cfm?id=2330661&CFID=330343028&CFTOKEN=93717372](http://dl.acm.org/citation.cfm?id=2330661&CFID=330343028&CFTOKEN=93717372)

Participant Chat:

EDUCAUSE Help (Malcom Brown): (13:09) There's a great book: The Paradox of Choice, on this topic

EDUCAUSE Help (Malcom Brown): (13:09) too much choice is "less"

EDUCAUSE Help (Malcom Brown): (13:10) The curriculum is often like going to the supermarket

Kyle Johnson (Chaminade Univ.): (13:10) We provide four year plans for each major outlining what they should take each semester with some space for electives.

Duke University (Center for Instructional Technology): (13:10) Less is more- the paradox of choice

UF-Jose Silva: (13:10) In general, students take several careers (2-4) before choosing the one that they really want

EDUCAUSE Help (Malcom Brown): (13:11) Another related challenge is when a student changes his/her mind about their major: how agile is your system to accommodate that?

Otto: (13:11) "Dashboards" seem today to be synonymous with 'learning analytics' for many in higher edu because such a tool can be integrated into an LMS or CMS (like Blackboard) to help guide the instructor on student-related online (LMS) interactions ... actionable data for example, "I notice that you haven't posted to the discussion board ..." etc. I do wonder how do we will reconcile the classroom needs for analytics with the institutional. Improved student services through analytics is discussed less often ...

EDUCAUSE Help (Malcom Brown): (13:12) @otto might they be complementary?
Norm Wright: (13:12) (MIT) each department has to create a single roadmap showing how a student could complete their major(s) in 4 years as part of the curriculum approval process but it is up to the departments to share those roadmaps with students.

Kyle Johnson (Chaminade Univ.): (13:12) When students change majors here, our advising center helps them understand the impact, but it's all manual. On my list is trying to get one of the systems that will let students do the "what if I change" scenarios on their own.

Janet Russell: (13:12) will we have any discussion on learning + predictive analytics?

EDUCAUSE Help (Malcom Brown): (13:15) the guy in the maze has no way out going forward!

Jay @ CSUSM: (13:15) that guy in the maze is going nowhere ... start over.

Otto: (13:15) @Malcolm – Yes, but I think that there is a recognition that analytics are needed at the local level (classroom) to compete in the long run with more top-down organizations (and MOOCs) that have the ability to gauge learning outcomes more rapidly ...

Jay @ CSUSM: (13:15) 5-6 year degree completion right there.

EDUCAUSE Help (Malcom Brown): (13:17) Question: how do you measure the impact that a predictive system is having?

Craig Ogilvie (ISU): (13:18) is rating from student-evaluation of teaching or from learning games?

EDUCAUSE Help (Malcom Brown): (13:21) does global = foundational or are there other factors in global centrality?

Norm Wright: (13:21) are these rankings done manually or using some sort of graph of the requirements or based on past students experience?

EDUCAUSE Help (Malcom Brown): (13:22) Did Austin P. invent its own grade prediction method?

EDUCAUSE Help (Malcom Brown): (13:24) Can the recommendation system make a "stretch" recommendation?

Duke Univ, Elizabeth Evans: (13:25) @Malcolm, Ditto your last two questions.

Jay @ CSUSM: (13:27) Are predictive grades adjusted based on course-load of students? I.e. if taking full load of difficult courses, expecting lower grades than if focusing on fewer?

EDUCAUSE Help (Malcom Brown): (13:28) the fall-back resource of talking to the advisor is key, it would seem.

Otto: (13:29) Do you have data on the number of students who engage in an academic advisory session at APSU?

VeronicaDiaz: (13:33) another best practice...
Otto: (13:34) excellent

Jay @ CSUSM: (13:36) are success predictors linked to disciplines? would you expect two students with the same basic SAT, GPA, etc. to have the same success in a math class if one is from the math & sciences major and the other is in the humanities? Does it match types of previous classes/ foundations?

Christopher Reichley - University of Mississippi: (13:41) Have you measured the impact on 5 and 6 year graduation rates?

Otto: (13:44) Very compelling student-centered approach to offer a better experience to the student ... how have your faculty reacted or what has been the feedback from faculty?

Norm Wright: (13:46) wow

Otto: (13:46) ditto Norm - wow!

Bethany: (13:50) Would be interesting to see how this would work with Purdues Course Signals program

Norm Wright: (13:51) At MIT the departments know their key classes and have those conversations with students who then say they want to pursue that major despite this... my guess is the analytics are better and the student would receive the message better too if a "machine" calculated that they will have a tough time if they pursue that major despite the flagging... hmmm....

Otto: (13:52) Can the student provide feedback to the system (akin to high marks/stars on Amazon or Netflix) to substantiate or refute the suggested stars from the system?

Linda: (13:55) Do you track employment after graduation to determine if students have been employed in their major?

Norm Wright: (13:55) can you only get the logic by purchasing from Desire2Learn? Has this been published an any journals?

irene knokh: (8/5/2013 13:03) will we receive the link to the recording along with the presentation? Thank you

George Siemens: (13:04) self-written bios are awesome

Kevin Duvall, U of Virginia: (13:05) http://www.amazon.com/Knowing-Knowledge-George-Siemens/dp/1430302305/ref=sr_1_1?ie=UTF8&qid=1375722308&sr=8-1&keywords=knowing+knowledge In case anyone was interested...

Malcolm Brown: (13:05) brrrrr!

Kevin Duvall, U of Virginia: (13:11) Virginia is a pretty risk adverse University. Has any University set policies in the space?

irene knokh: (13:12) not sure I like the whole Quantified Self option taking over...
irene knokh: (13:13) have read some articles in the Chronicle re: learning analytics to help students (1st year) succeed

Jeff Henline (MN State, Mankato): (13:16) What do you mean by misuing the "educational software"?

George Siemens: (13:18)  
http://dl.acm.org/citation.cfm?id=2330661&CFID=330343028&CFTOKEN=93717372

Heather Stewart: (13:19) What are the typical data domains that institutions are looking at? What passive data do we have that folks are starting to mine?

irene knokh: (13:19) how would you explain edu data mining and learning analytics to a non statistical user

Bethany Croton (Purdue): (13:21) We log BBoard activity, demographics of students, class performance

Bethany Croton (Purdue): (13:21) library activity

irene knokh: (13:21) Bethany, in what ways do you use these data?

Bethany Croton (Purdue): (13:22) so we can say, "other students like you are sucessful by doing these things.

Heather Stewart: (13:22) source is fair

irene knokh: (13:23) yes, would you please speak more about the LMS connection and discourse analysis thanks

Lee Ann Gillen, NCSU: (13:24) What are some of the big questions that we should start looking at?

George Siemens: (13:25) MOOCs hold potential for LA data as well

George Siemens: (13:25) we had several papers at LAK13 drawing on MOOC dataa

irene knokh: (13:26) how is this data debriefed-is there any qualitative in depth follow up case studies?

Bethany Croton (Purdue): (13:26) Big questions we are trying to address are how long should data be retained as well as security issues related to storage.

Kevin Duvall, U of Virginia: (13:27) What about the notion of student privacy?

George Siemens: (13:27) @Kevin - excellent question

irene knokh: (13:27) yes, that's a great question. Thank you Kevin

George Siemens: (13:32) a great resource

MalcolmBrown: (13:32) @Irene: could you rephrase your earlier question on the LMS connection?
Chuck Dziuban: (13:33) what is your experience with how faculty and students are relating to this?

Bethany Croton (Purdue): (13:34) reaction from students have been very positive

Cathi Phillips (NCSU): (13:34) LOL!

Bethany Croton (Purdue): (13:34) faculty are more apprehensive but positive

Kevin Duvall, U of Virginia: (13:35) But, don't we have that data... Students register their devices, most Universities have SSO and can track one user across multiple systems

Malcolm Brown: (13:35) @ bethany reaction to what? Learning analytics

Bethany Croton (Purdue): (13:35) ?

Lauren Hirsh (NC State University): (13:35) specifically to Course Signals?

Lauren Hirsh (NC State University): (13:35) or more generally?

Bethany Croton (Purdue): (13:36) to Course Signals and in general

Lauren Hirsh (NC State University): (13:36) great, thanks

Lauren Hirsh (NC State University): (13:36) glad to hear

Lauren Hirsh (NC State University): (13:37) what about giving actionable information to students?

Terence - OSU: (13:39) yes

Lauren Hirsh (NC State University): (13:39) yep!

Cathi Phillips (NCSU): (13:39) Yes!

Heather Stewart: (13:39) Are there 3rd party aggregators of this data (non LMS or publishing vendor)

Lauren Hirsh (NC State University): (13:40) would that be a data warehousing solution?

George Siemens: (13:40) @Heather - Civitas learning is one example, I believe

Ryan Baker: (13:41) Pittsburgh science of learning center is a 3rd party aggregator

Ryan Baker: (13:41) somewhat limited in scope tho

Lauren Hirsh (NC State University): (13:45) indeed...great point @George!

Lauren Hirsh (NC State University): (13:47) microblogging like twitter?
Bethany Croton (Purdue): (13:47) Course Signals was created by a graduate student, John Campell, and evidence has shown having the grass roots solution has shown some significant gains for students and faculty

Kevin Duvall, U of Virginia: (13:50) What information can be ascertained by watching student movement in school yards?

Lucie Sommer, CU Boulder: (13:51) I'd like to hear a more about the specifics of how data on engagement and emotion/affect might be collected (what types of data are analyzed and how, etc)

Chuck Dziuban: (13:51) iT seems to me that data in and of themselves so not have a voice. Our responsibility is to frame that voice in a meaningful way

Lee Ann Gillen, NCSU: (13:58) ryan - what is the url of your web page? Has it been posted earlier?


Ryan Baker: (13:58) @BakerEDMLab on twitter

Ryan Baker: (13:58) Baker EDM Lab on facebook