

Learning Analytics and iSchools: What, Why, & Worries

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Abstract

This two-session SIE is aimed at members of the iSchool community who are interested in Learning Analytics (LA) and thinking through how this arena for Big Data is relevant to the intellectual agenda(s) undertaken by iSchools. The attendees develop their understanding of what learning analytics is, why LA is relevant to iSchools, and how we can design structures that support the ethical use of these tools. The activity between the two sessions will be based on ethical scenarios supported by simple and specific tasks that participants will be assigned in the first session and report on in the second session. This SIE will help the iSchool community understand why LA is important and how their expertise is crucial to developing Learning Analytics-based interventions that meet the values of our community.

Keywords: Learning Analytics; higher education; big data; student data ethics

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1 Introduction

This SIE is aimed at members of the iSchool community who are interested in Learning Analytics (LA)(Siemens, G. & Long, P, 2011) and thinking through how this arena for Big Data is relevant to the intellectual agenda(s) undertaken by iSchools. We expect that attendees will leave the session with an understanding of what learning analytics is, why LA is relevant to iSchools, and how we can design structures that support the ethical use of these tools. The SIE was designed to reach out to the broader conference community by conducting two sessions spread over the conference. The participants will be introduced to LA in the first session, query other conference colleagues between the two sessions, and report back at the second session. The activity between sessions will be based on ethical scenarios described below supported by specific tasks that participants will be given.

2 Workshop Activities

In the first of two SEI sessions we will begin with a 30-minute overview of Learning Analytics, outlining the basics of this emerging field of research. While this first part of the session will be the standard "sage on the stage" format, we will use it as a chance to assure a baseline understanding of LA before engaging in a more participatory process in the following 60 minutes. In the second part of the session, we will use a prepared set of scenarios as a way to engage the audience in surfacing, unpacking, and potentially resolving some of the questions about data use that are often in the forefront of discussions about educational data. These scenarios will focus on the possible differences in perspective based on the types of roles held by the stakeholders contributing to and consuming LA-based research: students, faculty (instructors), and administrators. Members of the audience will be asked to explore the benefits and risks to the three types of stakeholders by working in small groups around each scenario.

During this discussion, the groups will generate specific questions that will be assigned to them as "homework" to discuss with other members of the conference between the two SIE sessions. To facilitate these conversations we will give participants buttons with large labels that say "LA. Ask Me?" When they are asked about LA, they then talk about the question that their groups had generated during the first session. Participants will be encouraged to collect responses in one of two ways: 1) A twitter hashtag will be defined to publicly report what they hear; or 2) A paper log will be provided to informally jot down people's responses.

The second SEI session then will focus on aggregating and reporting the results of these conference discussions among small groups focused on each question. The following scenarios include sample questions, although in practice, the participants will generate these questions.

2.1 Example Scenarios & Related ASK ME Questions

At-risk students are assigned additional time with their academic advisor based on their grades, class activity, and demographics. What are the benefits and risks of pursuing this?

ASK ME Question: If students recognize that they have been identified as being at-risk, will this improve or harm their morale and success?

Instructors have a prediction model for student performance, which is updated in real time as students complete assignments and take tests. This data view includes the ability to see the students' performance in all of their courses. What are the benefits and risks of pursuing this?

ASK ME Question: What are the consequences if instructors know how well a student is doing in other classes?

Individual courses are identified as resulting in learning outcomes that are more positive for males than females. Instructors are asked to change the structure of their course to avoid that biased outcome. What are the benefits and risks of pursuing this?

ASK ME Question: Is it the responsibility of instructors to address bias issues that may have as much to do with student differences as how they teach?

Individual instructors are compared to identify which instructors have more positive learning outcomes for students. Department chairs are allowed to use this information in merit pay and promotion. What are the benefits and risks of pursuing this?

ASK ME Question: What would make it so I would be willing to let my chair compare the learning outcomes of my students to my colleagues'?

3 Relevance to the iConference and Significance to the Field

Learning Analytics is a multidisciplinary field whose success will depend on the application of various types of expertise often located in iSchools, including HCI, Information Visualization, AI & Machine Learning, and tools and techniques of the analysis of Big Data. This SIE will help the iSchool community understand why LA is important and how their expertise is crucial to developing Learning Analytics based interventions that meet the values of our community.

4 References

Seimens, G., & Long, P. (2011). Penetrating the fog: Analytics in learning and education. *Educause Review*, 46 (5), 30-32.