

Engaging Learning Scientists in Policy Challenges: AI and the Future of Learning

Chair: Jeremy Roschelle, Digital Promise, USA, jroschelle@digitalpromise.org

Organizers: Toshio Mochizuki, Senshu University, Japan, tmochi@mochi-lab.net

Jun Oshima, RECLS Shizuoka University, Japan, joshima@inf.shizuoka.ac.jp

Panelists:

Nancye Blair Black, Teachers College Columbia University, USA, nblack@nancyeblack.com

Chee-Kit Looi, Nanyang Technological University, Singapore, cheekit.looi@ntu.edu.sg

Inge Molenaar, Radboud University, Netherlands, i.molenaar@pwo.ru.nl

Hiroaki Ogata, Kyoto University, Japan, ogata.hiroaki.3e@kyoto-u.ac.jp

Simon Buckingham Shum, University of Technology Sydney, Australia, Simon.BuckinghamShum@uts.edu.au

Abstract: As learning scientists and as educators, we share a desire for our research to have meaningful, positive impacts in realistic teaching and learning settings. Those settings have been rapidly changing. In the past few years, technology usage in schools and universities has soared. Further, the nature of technology is changing. In particular, machine learning and Artificial Intelligence techniques have started to infuse large-scale educational technology products. Over the next 3-5 years, we can expect increased incorporation of techniques that (a) rely on big data and (b) yield greater agency to computational algorithms. As learning scientists and educators, we will be involved in developing and investigating these uses of machine learning and AI. The underlying techniques that we and others discover will likely bring benefits that make them attractive to educational decision makers, but also will carry major new risks. What is the responsibility of our research and development community to engage in shaping policies regarding a forthcoming wave of AI capabilities in routine educational products and services?

In this invited, international panel, we hope to stimulate a discussion of the issues and our role and responsibilities as learning scientists. We will begin by sharing what is happening already both globally and in each of the panelist's own regions or countries. Globally, for example, organizations like the OECD and the UNESCO have begun developing and publishing policy documents intending to guide the adoption and use of AI in education. New global organizations that aim to convene work on the issues, such as EdSAFE AI Alliance, are beginning to appear. Many individual countries and regions have begun their own work.

Panelists will also be invited to share what they see as key challenges and risks, and how these risks go beyond what learning technology leaders have managed before. For example, educational technology managers have dealt with data security and privacy, but there are new issues of bias, lack of transparency, and lack of accountability for automated large-scale decision making. Ethics of learning technologies are now at stake in new ways.

We will seek to engage a conversation around how ISLS attendees can and should be involved. As Learning Scientists, we have a clear priority on *learning processes* that are more inclusive and effective. How can we help decision makers focus their attention on the goal of improving learning processes, and not the “charisma” of emerging technology? How can we help teachers and other instructional leaders to conceptualize a future with these technologies? What contributions can we make to naming and addressing risks? What are our ethical and civic responsibilities as learning scientists?