EDEN Research Workshop 2018
Barcelona, 24-26 October
@Universitat Oberta de Catalunya

Round Table

From data use for guidance to guidance for data use.

Juliana E. Raffaghelli

Digitalized data has entered our lifes in a massive way in the last ten years. Beyond the Internet of the Information Society, we are now witnessing a *datafied* society, where large amounts of digital data, the ADN of information, is addressing new social practices.
The university as institution fell into this paradigm somehow abruptly, while striving to survive its crisis of credibility throughout forms of innovation that were hand in hand with the digitalization of processes and services (Daniel, 2015). Initial fervent discourses embraced data-driven practices as an opportunity to improve efficiency, objectivity, transparency and innovation (Daniel, 2017). The two main missions in Higher Education, teaching and research, went through several processes of digitalization that encompassed data-intensive practices.
From the side of teaching, the data collected about learning and learners on an unprecedented scale, giving birth to educational data mining and particularly to learning analytics (LA), led to techno-determinist visions of educational quality. From one side, there is a doubtless value in the developments proposed by LA to support teachers' pedagogical practices and learners self-regulation towards lifelong learning and employability (Baneres & Conesa, 2014; Ferguson, 2012). In fact, there is urgent need to mainstream them into several practices, from learning design (Persico & Pozzi, 2014) to challenging issues in teaching and learning such personalized learning and assessment (Gañán, Caballé, Clarisó, Conesa, & Bañeres, 2017; Roll & Winne, 2015). However, there are also frequent assumptions on the power of algorithms to predict, support or address learning that could hinder agentic and transformational practices if unsupervised (Perrotta & Williamson, 2018). The studies in the field have pointed out the scarce connections of LA models and pedagogical theories (Knight, Buckingham Shum, & Littleton, 2014; Nunn, Avella, Kanai, & Kebritchi, 2016), the lack of evaluation in authentic contexts, the difficult uptake by teachers and learners (Vuorikari et al.,

2016), and the social and ethical issues connected to the topic (Prinsloo & Slade, 2017; Slade & Prinsloo, 2013).
It seems that the appropriation of data in relevant ways requires reflective and critical skills, as forms of *data literacy,* both from the side of students and the academics. The students' preferences to study in online courses should be also considered at the time of designing for learning, including data-driven practices (Koper, 2015). Opening spaces and guidance for critical data literacy (Pangrazio & Selwyn, 2018) could lead to more agentic forms for analyzing, evaluating, and sharing effective pedagogical practices, resisting the imposed models and working on innovations. Hence, beyond this critical vision, data could enter the class into more creative ways, informing teaching and learning and helping to improve complex educational processes such as learning design or formative assessment; or by being placed as educational resources to learn.
This round table brings together experts from Higher Education and online education that will address some of the challenges described above, throughout their personal expertise and research work. The activity will be based on a number of questions to the invited experts, promoting discussion on critical issues, possible scenarios of practice and solutions. In the end, the participation will be opened to the audience, for further questions and comments to the experts.

The round-table

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Questions to the experts - RT Topics:

1. Which innovative tools based on AI will we used in the near future? Which are the challenges and the criticalities for the end user?
2. How can we inform learning design through the use of learning analytics in STEM education and how can be this connected to improving processes of teaching and learning, considering the students' preferences in this specific field?
3. How can we use better the available data to facilitate smarter learning?
4. What can be done to improve students & teachers use of data to inform their practices, as well as to build a more aware position relating educational data mining, learning analytics, social media analytics, and other sources of data entering the educational practice?

Round-table experts:

- Diane Butler - Deputy Director of eSTEeM, Open University of UK
- David Bañeres Besora - Lecturer and Researcher, Computer Science, Multimedia and Telecommunication Studies - Universitat Oberta de Catalunya
- Rob Koper - Distinguished Professor (universiteitshoogleraar), Innovation of Education, Open Universiteit

Chair: Juliana E. Raffaghelli, Faculty of Education and Psychology, Universitat Oberta de Catalunya

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