## Foreword by L. Vigentini and Yuan (Elle) Wang.

As well as attracting millions of learners worldwide, MOOCs have received a lot of attention from both popular media and the research community. Whilst MOOCs have opened interesting new lines of research, few of the findings had major implications for learning and teaching:

"For MOOC research to advance the science of learning, researchers, course developers, and other stakeholders must advance the field along three trajectories: from studies of engagement to research about learning, from investigations of individual courses to comparisons across contexts, and from a reliance on post hoc analyses to greater use of multidisciplinary, experimental design." (Reich, 2015, p.34).

Reich's remark was a call to action for researchers across the disciplines to 'reboot' the trends and refocus on learning design and improve assessment practice, facilitate data sharing to expand our understanding beyond the presentation of findings in a single course or context, and rethink about the types of research implemented, moving away from the typical experimental designs.

Two recent reviews expanded Reich's lines of thinking focusing on methodology (Raffaghelli, Cucchiara, & Persico, 2015) and criticising existing approaches in modelling learning at scale and pointing out several areas of research which could be further (Joksimovic et al., 2017) and demonstrated the gaps in the literature.

This joint column contains papers from the Workshop on FutureLearn Data Analytics the Workshop on Integrated Analytics of MOOC Post-Course Development, co-located with the 7th International Learning analytics and Knowledge Conference, held March 13th to 17th.

Although organized independently, the two workshops set to tackle some of the gaps and share the same commitment to bring scholars and practitioners together to share their work and advance our understanding of learning (in context), professional development (across contexts) and learning design (beyond the context) and how these interact in the open learning occurring in MOOCs. The first Workshop takes the opportunity offered using a specific MOOC learning platform (FutureLearn) and showcase a range of studies focusing on the use of nearreal time data to understand learning design, interactions and engagement with learning activities across multiple institutions. The papers in this workshop include work done to make the data available and usable by different stakeholders, the application of analytical methods to understand and improve learners' engagement and participation and the use of analytics to support the future pedagogical development.

The second workshop was conceived to respond to the challenge that MOOC research is typically limited to evaluations of learner behaviour in the contest of the learning environment. The papers published in these proceedings represent examples of recent efforts from learning analytics researchers to examine the relationship between performance and engagement within the course and learner behaviour and development beyond the course. The workshop awareness in the community regarding the importance of research measuring multi-platform activity and long-term success after taking a MOOC.

## References

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