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The Power of Learning Analytics: Is There Still a Need for Educational Research?

Across the globe many institutions and organisations have high hopes that learning analytics can play a major role in helping their organisations remain fit-for-purpose, flexible, and innovative. A broad goal of learning analytics is to apply the outcomes of analysing data gathered by monitoring and measuring the learning process. Learning analytics applications in education are expected to provide institutions with opportunities to support learner progression, but more importantly provide personalised, rich learning on a large scale. Substantial progress in learning analytics research has been made in the last few years. Researchers in learning analytics use a range of advanced computational techniques (e.g., Bayesian modelling, cluster analysis, natural language processing, machine learning) for predicting which learners are likely to fail or succeed, and how to provide appropriate support in a flexible and adaptive manner.

In this keynote, I will argue that unless educational researchers at EARLI embrace some of the key principles, methods, and approaches of learning analytics, educational researchers may be left behind. In particular, a main merit of learning analytics is linking large datasets of actual learning processes and outcomes with learning dispositions and learner characteristics. Using evidence-based approaches rapid insights and advancements are developed how learning designs and learning processes can be optimised to maximise the potential of each learner. For example, our recent research with 151 modules and 133K students at the Open University UK indicates that learning design has a strong impact on student behaviour, satisfaction, and performance. Learning analytics can also drive learning in more “traditional”, face-to-face contexts. For example, by measuring emotions, epistemological expressions, and cross-cultural dialogue, social interactions can be effectively supported by innovative dashboards and adaptive approaches. I aim to unpack the advantages and limitations of learning analytics and how EARLI researchers can embrace such data-driven research approaches.

- Dr. Bart Rienties, EARLI2017 Keynote Speaker, May 2016.

