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## Learning Analytics: A Growing Interest for Big Data Analytics in Australian Higher Education

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Big Data analytics is commonly used to inform decisions, particularly in the areas of business, health care, science, and agriculture (Daniel, 2015). In recent years, there has also been an increase in the use of Big Data analytics for educational purposes, driven and facilitated by various reasons. First, educational institutions are facing more pressure towards performance management, metrics and quantification. Secondly, learning tends to generate large data sets, especially in Learning Management Systems and Massively Open Online Courses. One most common form of Big Data analytics in higher education is Learning Analytics. Through the analysis of educational data, learning analytics applications enable educational institutions to build predictive models on student outcomes, especially to identify at-risk students (students will potentially drop out or fail) and to provide early warnings so that interventions can be made (Rienties et al., 2016; Timms, 2015). The project extracted learning data from a learning management system, which is based on the Brightspace platform (Desire2Learning, 2017), used at one Australian university. The data were analysed through Excel, R and Python, and models were developed to detect factors that can be used as predictors and measurements for student engagement and performance, for instance, the length of time spent by students in online discussion boards, and for accessing online lectures and reading materials, as well as lecturer and tutor inputs. As an early exploration in the research field, this project demonstrates one example of how Learning Analytics can be used to support decision making in Australian higher education.

### Biography

Si Fan is a lecturer in the School of Education at the University of Tasmania, Australia. She completed her PhD at the same university in 2011. She has been involved in a number of research projects, and has a broad research interest in higher education, learning analytics, early childhood education, educational technologies, Big Data analytics for educational purposes, and online language education.

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