



Evidence for Enhancement: Improving the Student Experience

Learning Analytics Hot Topic: Data capability

**Heather Gibson and Alan Clarke
The Open University**

If a key goal of learning analytics is to allow users of all kinds to be able to act appropriately and at the appropriate time to enhance the student experience, those users need to understand the data being presented to them.

Webb and Bailey (2018), reflecting on Jisc's experiences of developing a national learning analytics service, note that there is a desire for a better understanding of predictive models among the academic staff using them. However, they acknowledge that there are barriers to this understanding:

'The underlying assumption from most users was that model was based on rules, and it should show what factors led to a given prediction. The predictive model is actually based on logistic regression and neural networks and explaining to users from a non-mathematical background how this works is challenging.'

Webb and Bailey note that a work-around has been put in place that allows more detailed explanation for 'relatively numerate staff', along with a tool for other academic staff that uses a traffic light system to help explain how the prediction works.

Developing data capability is particularly challenging with respect to helping staff and students understand predictive models, but it is also required to work with wider data and learning analytics activity.

At the time of writing, The Open University is developing a Data Competency Framework and a Data Handbook that aims to increase data competency in staff. The Handbook is hosted on an internal SharePoint site and guides staff through the data used by the University, how it can be accessed, and some good practice pointers for data use. A key message is to ensure that staff are clear when specifying what data they need, and that data is defined and used consistently. The Open University's Quality Enhancement Unit has also produced a handbook to help Faculty staff use Analytics4Action tools to inform action

planning in Boards of Studies (Rienties et al, 2016). QAA Scotland is also working with the sector as part of the Enhancement Theme to support the development of data capacity and capability in the sector.¹ This resource includes links to Open Educational Resources that offer training in various aspects of data capability, ranging from understanding and working with ways of presenting data to data modelling. This resource will be built on and developed.

Predictive analytics is a very technical subject: models are often comprised of multiple variables, subjected to complex statistical modelling. How can institutions best support their staff and students to better understand these models?

References

Rienties, B., Borooa, A., Cross, S., Kubiak, C., Mayles, K., & Murphy, S. (2016). Analytics4Action Evaluation Framework: A Review of Evidence-Based Learning Analytics Interventions at the Open University UK. *Journal of Interactive Media in Education*, 1(2), 1011.

Webb, M., & Bailey, P. (2018). Scaling Nationally: Seven Lesson Learned from Jisc's National Learning Analytics service. *Eighth International Learning Analytics and Knowledge Conference*.

© The Quality Assurance Agency for Higher Education 2019
Registered charity numbers 1062746 and SC037786
www.enhancementthemes.ac.uk

¹ www.enhancementthemes.ac.uk/current-enhancement-theme/sector-level-activity/optimising-the-use-of-existing-evidence.