



Embedded Learning Analytics: Curtin University

CASE STUDY: Curate, Credential and Carry Forward Digital Learning Evidence: tiny.cc/cccdle

Context: A digital learning, performance and assessment opportunity is provided to a student at anytime, any place and when the student takes action (or not) - the modern university instantly responds with personalised prompts, scaffolds and other feedback messages aimed to improve performance and achievement. In the near future, badges will be awarded based on traces of a learner's progress, problem-solving attempts, self-expressions and social communications, which entail highly detailed and time-sensitive computer-based documentation of the context, actions, processes and products. To address this scenario, Curtin is developing capacities needed for embedded learning analytics.

[1] What are we doing?

Curtin is developing the theory and practice needed for automated recommendations and delivery of content, providing timely feedback, matching student learning needs with levelling of performance, recognition of achievement, and other aspects related to the assessment and validation of performance in authentic digital scenarios.

[2] How are we doing it?

We are defining 'authentic digital scenarios' (eg authoring, affordances, purposes, content, processes) and 'performance assessment' (eg validating and recognising learning and performance achievement in authentic situations). We are undertaking a program of transformation of the information technology guided by the needs of teaching and learning. Within that are several linkages to micro-certification including:

- Embedding analytics in all phases of data systems to support the lifetime student journey
- Recognising and badging learning achievement in highly interactive mobile-ready experiences
- Developing an ethical framework for the research and development of data science capabilities across the university for the fluid application of insights into student learning for their benefit.
- Building a 'student insights centre' capability, supporting its growth, increasing computational skills within faculties.

[3] Who is involved?

All areas of the University that impact on student learning.

[4] Why are we doing it?

Curtin's 'Vision 2030' for teaching and learning is to 'provide richly interactive and personalised learning experiences for our students, equipping them with leadership skills for the future and valuing them as partners in education and research – and as long-term influencers of change within society.' In order to 'personalise at scale' and effectively engage 1 million learners, we are using the embedded analytics approach to transform the business of the university.

[5] What are the challenges?

Keeping faith with a bold dream about the role of data science in higher education, which if it stops scaring us a little, has probably become too small and mundane. The human, technical and political know-how has to be developed with an inclusive capacity-raising commitment. Each area of innovation (human, technical and political) is in its own right, a complex object of research, scholarship, risk-taking and reflection. The challenges cascade into sets of issues that will require shared vision and coordinated action, which in turn will require sustained commitment by the Executive and all other levels of the organisation.

Resources: [Vision, mission and values](#); [Transforming Curtin IT](#) ; [Smart data helping Curtin meet student needs](#)

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