

# How the University of Technology Sydney is piloting analytics to equip learners for the future of work

#### MAY 2, 2017MAY 2, 2017 / HIGHEREDIQ

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Ahead of <u>Learning Analytics 2017 (https://learning-analytics.iqpc.com.au)</u>, we caught up with Simon to find out the vision behind UTS' Connected Intelligence Centre (CIC) and how analytics is being used to equip students for lifelong learning.

# Can you give a brief overview of UTS' approach to learning analytics – what are the core elements?

In terms of learning analytics, the Connected Intelligence Centre (CIC: <a href="http://utscic.edu.au">http://utscic.edu.au</a> (<a href="http://utscic.edu.au">http://utscic.edu.au</a>) is an innovation centre focusing on tools specifically to advance the UTS teaching and learning strategy. That strategy has created collaborative learning spaces, emphasised teaching Creative Intelligence, and introduced flipped learning.



This all needs to come together if we're to better prepare students for a turbulent society and massive complexity.

All the thinking on the future of work points to the need for graduates to display qualities such as outstanding interpersonal skills, thinking across disciplinary boundaries, innovation capability when presented with a client's problem, critical reflective thinking, teamwork, ability to handle ambiguity, personal resilience, strong sense of personal agency... this list is pretty familiar to anyone involved in the future of work — and universities for that matter!

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## So where does analytics come in?

Well, since that's our university strategy, the analytics question goes something like this: How can data science help equip students for lifelong learning? In particular, how can we provide personalised feedback on such attributes, and at scale? And that's really the reason that CIC's quite different from, and complementary to, our Business Intelligence and LMS teams. We're an innovation centre of academics, PhD students and a professional services team, with our sights trained on UTS challenges. The academics bring a mix of learning science, data science, and tool design.

They can talk pedagogy with the learning designers, assessment with academics, and code and data with our IT Division. I don't hire anyone without the skills to work across departmental boundaries to forge effective partnerships. This gives us the expertise to develop, pilot, and evaluate novel analytics approaches focused on UTS Graduate Attributes. Browse our website and you'll find us talking about Collaboration Analytics (for instance, generating heatmaps and timeline visualisations to help nursing teams reflect on their performance when treating simulated patients), Writing Analytics (aiming for 24/7 formative feedback to students on their draft writing), and Dispositional Analytics (a tool that helps students see for the first time how they approach challenge and complexity).

Those examples are at the sharp end of the innovation spectrum. Added to that are technically less complex tools working with more conventional data. So for instance, like many universities, UTS information systems contain data inaccessible to the right people, in the right form, at the right time. Academics have been asking for better insight into who their new students are going to be. We've been working in close collaboration with academics and the BI team to create a dashboard that shows educators key aspects of the cohort building up to the new semester. Another example is a tool to filter and visualise student subject pathways dating back 40 years, enabling us to explore it for significant patterns.



Dispositional Analytics: Personalised feedback on your resilience and agency

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# What types of organisational conditions are needed to enable the creation and operation of the CIC?

It's fair to say that Learning Analytics is really very well aligned with the university's strategic priorities. The strong senior leadership backing really creates the right culture for us to innovate. UTS sees data and analytics as central to its future, and that covers teaching and learning, research and administrative operations. CIC launched in 2014, following a strategic consultation across the institution starting in 2011 that prepared the ground. CIC sits in the portfolio of the DVC (Education & Students), and from there we work in partnership with academics in the faculties, the student

support teams, IT and business units. So organisationally, we are well positioned to move with agility, and I can liaise with other directors to 'get stuff done'.

### Interested in learning more?

Read the remainder of the article with Simon here (https://learning-analytics.iqpc.com.au/how-the-university-of-technology-sydney-is?utm\_source=blog&utm\_medium=social&utm\_campaign=-external-social&utm\_term=content&utm\_content=text&mac=28068.001heiq\_blog&disc=28068.001heiq\_blog)

Join Simon at <u>Learning Analytics 2017 (https://learning-analytics.iqpc.com.au)</u> where he will further explore how UTS is innovating analytics for institutional impact and future pedagogy, including:

- o Organisational conditions enabling CIC's creation and operation
- Ethical Design Critique workshops for rapid feedback on analytics dashboards
- o From data dashboards, to analytics for 21st Century Competencies

For more information visit <a href="http://learning-analytics.iqpc.com.au">http://learning-analytics.iqpc.com.au</a> (http://learning-analytics.iqpc.com.au (http://learning-analytics.iqpc.com.au) or call +61 2 9229 1000 or email enquire@iqpc.com.au

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