Badge trouble: piloting open badges at the Australian National University

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Despite calls for innovation in learning technologies, setting up new tools for learning at large institutions is an often difficult road. This paper will address the challenges involved in setting up a small pilot of open badges at the Australian National University (ANU). It will investigate the options available for trialing badges when system administrators are unable to support the endeavor, and discuss the university policies and government legislation which have impacted the use of badges at ANU. Drawing on actor-network theory, it examines the complex techno-social environment and power structures surrounding the piloting of new technologies. This paper will also provide suggestions for other institutions struggling with concerns relating to privacy, branding, and reliability of open badges and invite discussion on ways to move forward.

Keywords: digital badges, institution-wide technology integration, innovation, actor-network theory

The changing nature of research education

Over the last twenty years, scholars in research education have questioned the effectiveness and relevance of traditional forms of research degree study (Green & Lee, 1995; Gilbert, 2004; MacAlpine & Norton, 2006; Cummings, 2009). The conventional 'master/apprentice' model of research education is under pressure with the 'massification' and increasing diversity of the research student cohort (Group of Eight, 2013). Universities can have research students from their early 20s to their mid 80s enrolled to study over a wide variety of disciplines. These students have a wide variety of skills on entry and learning needs while they are enrolled. Providing flexible, fit for purpose training is difficult, but necessary. While the structure of research degrees in Australia vary widely, most are relatively lightly populated with formal training opportunities.

On the face of it, digital badges seem to offer an authentic, evidence based alternative to progress reporting which has been shown to be problematic (Mewburn et al., 2013). Helping students to make progress through their degree is a critical need, given concerns about research degree retention and completion times. Our project aimed to explore the use of digital badges in research degrees.

'INSIGNIA', was successful recipient of an Office of Learning and Teaching seed project and started at the beginning of 2014 as a collaboration between the College of Asia and the Pacific, the Library and the Research Skills and Training team with the guidance and input of Dr Lyndsay Agans. INSIGNIA was conceived of as the start of a digital badging system to support research candidates in the development of key transferable skills around digital literacy and research integrity.

Unlike other digital badging projects, we were not primarily interested in the potential of digital badges as alternative curriculum delivery modes, but as a way of enhancing the learning experience by making research degree study easier to navigate. The lack of course-work can make research degree study confronting to many students, especially at the beginning of their candidature. Unable to benchmark their progress with others through conventional grading systems, research students can find themselves unsure of what skills might be useful to acquire or polish with respect to their own professional development. Ward (2014) calls this part of the 'hidden curriculum' of research degree study and points out the attendant difficulties research students face. As she put it, student can often know what they don't know, but "don't know what they *need* to know" (emphasis added).

The social sharing aspect of digital badging systems has much potential in helping research students navigate their degree experience. An explicit badge taxonomy can act as a de-facto statement of expectations with a variety of entry points and levels. If students can see other students acquiring badges they may, indeed, find out "what they need to know". Thus digital badges could become anchors for students in a complex learning landscape. Further, since conventional means of tracking progress in research degrees (usually written progress reports) have been shown to be largely ineffective at monitoring research student engagement and progress (Mewburn et al., 2013; Mewburn, Cuthbert & Tokareva, 2013), badges offer a lightweight, fit-for-purpose alternative to formal accreditation mechanisms.

The exact nature of the badges to be offered in the INSIGNIA project was not pre-determined, but it was intended that they be geared towards digital literacies (information searches, retrieval and appropriate storage) and research integrity. It was intended that specific badges be developed in collaboration with the supervisors and students in our test groups. We were aware, when we started the project, that there may be some barriers to adoption and implementation. The alternative learning and assessment model offered by digital badges is not necessarily a simple fit with conventional university systems, processes and ways of thinking, which tend to privilege coursework – even in a research-intensive setting like the ANU. Our initial budget and project schedule allowed plenty of time for design and testing of the badges with our user groups. However, as the project unfolded, it became increasingly apparent that we had over-estimated the technical complexity of the project and profoundly *under-estimated* the difficulties we would encounter with university processes, in particular administration and contractual arrangements.

In short, making badges was the least of our problems.

Disruptive technologies?

Badges have been acknowledged as a disruptive technology (Carlson & Blumenstyk, 2012). It is important to understand the nature of this disruption: in particular, the barriers to implementation that might be invisible until approached. These barriers might not be the result of deep seated attitudes or a lack of willingness of individuals to change. The trouble we encountered was far more interesting than that, so we turned to Actor-Network Theory to help us develop a deeper and more useful explanation of our 'badge troubles'.

Actor-network theory (ANT) has been described as a sensitivity to data or an approach to methods, rather than a theory (Law, 2004). Researchers working in an ANT sensibility pay attention to sociomateriality - the way people, things, processes, documents and even ideas form assemblages which produce realities (Latour, 2007). Agency - the actions that produce these realities - is not granted a priori to human or non human actors (Arnseth, 2011).

In this paper we show how trying to bring the concept of digital badges to life inside the Australian National University exposes all the normally invisible work and the 'connective tissues', such as policies and procedures, IT systems, and the deployment of individuals with certain resources, skills and experience. We tend to ignore the complexity of human and non human action that both assembles and animates the university as it is experienced. Badges started to test the limits of our university-assemblage, potentially, we contend, configuring it in new ways. Using the commonly used ANT approach of storytelling, we use data from observation, surveys, and focus group discussions to tell the story of digital badging inside the ANU. This story is offered as a cautionary - and ultimately hopeful - tale to others considering similar projects.

Badge trouble

We should not assume that seemingly minor parts of the badge design process are unproblematic, take as just one example how badges look. Part of our data gathering involved the use of focus groups as a way of teasing out community views. The focus group containing students was open to the idea of badges, but had concerns around forgery and manipulation or 'gaming' of the system. Students told us that they wanted badges to look 'official' and 'boringly institutional', not 'like something my kid would bring home from the daycare centre'. Students were keen to have any badges represent the ANU brand, with all the seriousness and status that it might convey. When shown badges from NASA and the Chicago Summer of Learning, one student commented: "I think the graphic stuff is a little bit gimmicky...I think part of the way you can show that it's an institution is it doesn't have any fun images." Another student responded, "We don't want it to look like it was fun being at ANU! We want it to look like it was hard work."

Figure 1: Badge design provided by ANU Marketing.

In practice, a seemingly simple request to make the badge look 'official', at least within our highly 'corporatised' universities, not as simple as it sounds. A 'brand' is an amorphous concept that is built from many concrete actions. Universities take their branding seriously, with many complex rules around how and what 'on brand' means depending on the medium; even letterhead is kept in locked cabinets. The ANU marketing department proved adept at negotiating this territory. Marketing was open to the use of the ANU logo because they had long realised that their ability to control the graphics in the digital eco-system was next to nonexistent. Marketing had already had to deal with making small graphic avatars for social media services and had a graphic designer who specialised in making "Brandy looking things while not using any elements of the 'official Brand'", as the head of marketing put it. With the help of this specialist designer, a range of options were developed - a good example of a hidden cost in both time and expertise.

Our focus group showed us that potential users of badges were more interested in accreditation for concrete, measurable skills like software competency, rather than so called 'soft skills' like digital literacy. Concerns were raised about the quality frameworks that would be put around badges and students implied that some parts of the university, specifically central units like the library, were more trustworthy than other sections, such as the Colleges. Students also suggested providing a paper certificate showing all badges issued to a student as a way of addressing the perceived mistrust in digital verification. Clearly if our badges were to have any hope of being taken up by our students they would have to look - and act - as official parts of the conventional university degree awarding apparatus. This left us with an initial set of difficulties that only expanded as we investigated further.

The technical implementation of badges at ANU was theoretically a relatively straightforward process. Badges are available in the current version of Moodle, ANU's learning management system (called 'Wattle'), and can be easily attached to activities completed by students in that system. However, merely 'turning on' the badge would be impossible, as this extract from our project blog demonstrates. It records the moment where Inger, the team leader, raised the possibility of turning on badges in Wattle with the system administration team over lunch. The team initially baulked at the suggestion and asked a number of questions about the project rationale, which masked the real reason for their hesitation:

> They told me that turning on the capacity for making badges would have to pass through their stakeholder consultation mechanisms. I've been in the university long enough to spot the possibility of slow death by committee when I see it, so I offered to write a memo for the committee and the DVC-A - to explain the project and the need for badges…
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> … As it turned out, the ANU Online team were worried about the possible privacy implications of open badges…. If the badge 'carried' data about the student with it, like an email address, this would be a breach of privacy legislation and the institution would be subject to up to $300,000 in fines….
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> … The ANU Online team looked at me sympathetically. They didn't want to stifle innovation they explained, but they had Responsibilities. (Mewburn, 2014)

The Responsibilities were to maintain a rigorous system for adjusting the LMS and making additions, specifically to defer to their academic steering group to take any potential decision affecting the system as a whole. This involved putting together a high level white paper and business case for the change. This had been envisioned as the outcome of our project, after the badges themselves had been piloted. Immediately we realised

all our calculations around timelines were wrong and if we were to pursue this process we would have put the project itself at risk.

The steps we took to avoid complete collapse of the project revealed the complete disjuncture between legal/policy requirements and realities of 21st century technology and needs. Faced with the possibility that the whole project would not get off the ground, we investigated open badging systems and other options but turned to the third-party services which issue badges for a reasonable fee, such as Credly.com and Basno.com

Accordingly we initiated conversations with the Marketing and Legal department about the use of the ANU brand and the use of third party services. While marketing showed what we thought was remarkable and unexpected flexibility, Legal was a completely different matter - and for good reason. ANU exists under a different set of legislative and budget instruments from other universities in Australia because it is funded by the Federal government, not the state government. Legal could not support a 3rd party contract where student details, like email addresses, were handed off to outside parties (essential to the creation of a digital badge) would cause ANU to breach section 95B of the Australian Privacy Act 1988 (Cth) if this information was sent outside Australia. While some revisions to the act have been made since its initial passing, it still does not take into account the common use of Web 2.0 and cloud platforms by staff and students, most of which exist offshore.

One proposed solution to get around this problem was to ask Credly or Basno – US based companies – to specifically sign up to Australian law. We realised straight away that this was no solution at all. International internet based companies deliberately make their terms of service as wide as possible in order to allow them to provide services in the first place . They have no interest in limiting these powers and thereby increasing their own risk. We joked that it was 'policies at 10 paces': the two competing legal frameworks, Australian and American, were essentially dead-locked. Surprisingly, what helped to bridge the gap was a third framework, an ethico-legal one in the form of our ethics application. The ethics application process is a policy framework that is not exactly a law, but an externally imposed policy that ANU must sign up to in order to ensure NHMRC funding - which in turn is constructed from acts of parliament (a good example of how policies can create 'action at a distance'). The process demanded we gain informed consent from students to fill in a survey about the badges. This informed consent could be applied to the issuing of the badge as well as to the survey. But in order to deliver any badges at all, we eventually required the intervention of the Deputy Vice Chancellor Academic (DVC-A) to approve our request to use Credly as our badging platform (it amused us that her ability to act was represented by a literal rubber stamp - another form of badge?). Interestingly, these conditions would not be imposed in the ordinary run of the mill teaching, so the ability of ANU to actually 'turn on' badges for their students is still in question. At the time of writing, after six weeks of trial, we have currently given out twelve badges to HDR students using Credly.

Discussion

Our negotiations with Legal confirmed that educators & goals of other service units within universities are not always aligned - something both educators and administrators know in practice, but rarely investigate in any detail. Many 'hacks and kludges' are made to route around problems and ensure smooth functioning, as demonstrated in this case study. In fact, we could argue that these 'hacks' are routine part of 'doing university'; if everyone truly played by the rules it is likely that innovation would be stifled altogether. Our paper draws attention to the source of trouble originating in humans and non-humans working together - it was rarely the problem of one or the other 'standing in the way of progress'. Most of the non-human actants in our technology actor-network, while cheap, available and easy to engage with, operate within a complex policy and legal environment - full of other actors with the ability to influence at a distance in complex and perhaps unintentional ways.
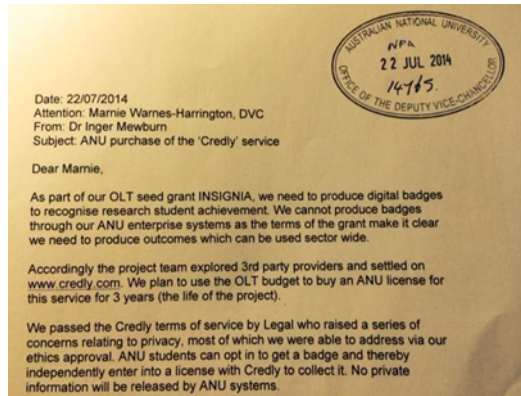
Figure 2: The 'badge' of approval from the DVC.

To complicate matters, there is no obvious external quality framework we can rely on to ensure students' worries about the credibility to be addressed. Factors like individual willingness to engage in badge activities and acceptance of the whole idea of badges pale in comparison with these larger barriers. A relatively small change - the digital equivalent of flipping a switch - becomes nearly impossible with these multiple and competing dependencies. In this process-heavy and risk-averse culture, lightweight and innovative uses of technology become difficult. This 'badge trouble' and the students' clear attachment to paper and conventional processes, calls into question the broader claims that badges provide a space for innovation of education within the walls of the academy.

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