Title: Embracing technology to develop innovative approaches to learning and teaching

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Abstract:

Globally, government education policy is demanding that higher education practitioners and administrators embrace technology to build new kinds and innovative approaches to higher education delivery, providing greater educational opportunities for a broader cross-section of the community.

In this paper we discuss the development of a virtual higher education institution, focused on providing highly innovative online programs, to address this emerging focus in government policy.

Keywords: online learning, technology, innovation, learning and teaching

1. Introduction

Growth in online learning and digital technology disruption is transforming how we relate to and acquire knowledge through education. Consequently, innovative approaches to learning and teaching and new and emerging educational institutions are responding to that disruption. As these developments emerge, the Australian Government's Reform Agenda has recognised the need for new kinds of innovative institutions that give graduates a competitive edge and deliver productivity gains to employers through new models of delivery (Australian Government, 2016 p.7). Furthermore, policy settings must enable institutions to take advantage of technological advances to remain at the cutting edge of course design and delivery.

This paper sets out the educational purpose and design of a 'new kind of innovative institution.' This institution embraces technological innovation to equip its staff and graduates with the requisite knowledge and capabilities for effectiveness in higher education learning and teaching. Its mission is to ultimately deliver the type of outcomes that the Reform Agenda has in mind.

2. Literature Review

Around the world a range of tasks are being performed by groups of people who rarely, if ever, meet in person (Gratton, 2007; Wong and Berntzen, 2019). The Internet explosion and the dramatic growth in technology have enabled the realisation of the virtual organisation (Jackson, 1999; Longsworth, 2010; Tohidi & Jabbari, 2012), within the broader concept of collaborative networks (Camarinha-Matos, Afsarmanesh & Ollus, 2005)

Arising from the movement from elite to mass to universal access to education (Scott, 1995; Trow, 2007), higher education is not immune from the need to respond to the socio-economic demands to embrace virtual learning (Munro-Smith, 2018). Virtual learning is a natural medium to meet these demands and may vary in form from courses offered online by a conventional institution (typically a university) to courses offered online by completely independent and autonomous virtual institutions (typically independent higher education providers) (Longsworth, 2010, p.15).

Norton et al. (2013) posed the question "how should government respond to new online technologies and business models?" and in response proposed that "it should do more to open the door to new education providers". They go on to propose that purely online institutions should not have to provide student welfare services, but should be allowed to accept all students through open access admissions policies" (Norton et al., 2013, p.1). This is reflective of a broader dialectic around the 'standardisation' of education worldwide. Education standards, particularly higher education standards, are founded on laudable ambitions: to assure quality and to protect the interests of students. However, standards are open to abuse, and not just from disreputable institutions seeking profit at all costs. Standards are used by conservative academics, academic executives, policy makers and regulators to constrain the adoption and diffusion of innovation in higher education (Ryan & Smallman, 2018). This is evidenced in the published reasoning behind regulatory decisions worldwide.

In essence, higher education providers, and particularly universities, have not fundamentally changed their approach since 'modern' universities were created in the 11th century. Teaching remains firmly embedded in the master-apprentice model. Even where the 'sage on stage' is now recorded and placed on some Internet video platform, it remains the case that many providers remain solidly attached to *transmissive* delivery models (Svensson, Lundqvist & Middleton, 2017) unconsciously grounded in behaviourist or constructivist learning and teaching paradigms.

This is at odds with much of present learning theory, which encourages the development of at least *transactional* and, better still, *transformative* learning (Svensson et al., 2017). The common characteristic of these models is that they rely on the development of scholarly communities (even where these are spatially distributed), in which educators curate and blend learning content and experiences that align to learners needs. There is still structure in the curriculum. There is still assessment. However, the hallmark of this innovation is that education becomes highly personalised (Keppell, 2014).

All of this noted, the collegial and regulatory constraints on institutions looking to fully engage in innovation such as this are substantial, given the threat this poses to historically embedded convention, and the large-scale requirement for retraining educators that goes with it.

3. Methodology

For this study a group of higher education experts and practitioners was brought together to design a stand-alone virtual institution. The foundational brief of the project was to build an institution that would be focused on providing highly innovative online programs to meet the professional development needs of individuals working in the higher education sector.

The virtual institution was designed over a 12-month period incorporating the latest in educational technology trends including; a leading-edge Learning Management System (LMS); comprehensive Student Management System (SMS) and a wide range of innovative

third-party interfaces through Application Programming Interfaces (API's) resulting in the creation of a seamless virtual campus.

Having completed the design phase, the concept was put to the ultimate test of applying for registration as a higher education provider to determine if such a virtual institution could be approved within the current higher education regulatory and standards framework (Australian Government, 2015).

4. Results

The concept of a virtual institution with no bricks and mortar to support its operations was originally considered to be outside the bounds of what a higher education institution should be. Consequently, resistance was strong, including an apparent premeditated bias by the application's assessors towards an institution lacking a physical presence.

Despite these challenges the virtual institution was approved as designed.

5. Discussion and Conclusion

5.1 Discussion

Online learning is often defined in terms of its differentiation to traditional face-to-face on-campus models, however this does not really take into account that every student uses online technologies as part of their studies. Course administration using online learning management systems (LMS) is now commonplace, where students can access course guides, download recording of lectures, access supporting learning resources and readings, access an online library (normally containing a myriad of additional resources), communicate with their educators and other students and submit assessments, all in a customised user-friendly centralised online portal.

Before the technology boom, paper-based distance learning was a popular choice among students who in many cases, either through circumstance or by choice, chose to not engage with the traditional face-to-face delivery mode predominant throughout the years. Advancements in digital and online technologies have provided a more superior delivery and support medium to these 'distance' students while at the same time enabling universal access to education for learners. Ongoing, voluntary, and self-motivated pursuits of knowledge, or 'lifelong learning' lends openly to the concept of universal access education.

Providing learners access to education that meets or exceeds the existing experiences available via the traditional face-to-face mode of delivery is not a new concept. Most education systems and cutting-edge institutions are constantly striving to improve and to find new and innovative ways of delivering a quality education experience that meets individual, industry and government needs. This can be clearly evidenced by the explosion of Massive Online Open Courses (MOOCs) and other similar online open access courses, or by the adoption of digital learning management systems throughout the higher education industry in recent years.

In many cases the modern learner no longer has the time to personally attend traditional learning institutions and are often time-poor. It is for the education industry to adapt to its learners' needs and move away from demanding learners fit into existing institutional structures and timetables. Making education available 'on-call', available to the learner when and where they wish to engage with their education is no longer a foreign concept and is already offered by institutions who are early adopters of technology.

Delivering an educational experience that is customised, blended, personalised and available

'on-call' can now be enabled through the adoption of advances in learning and teaching methodologies and new and emerging technologies. Proving new and innovative experiences however not only relies on growing student demand, it also requires governments, regulators and educators to embrace the change.

5.2 Conclusion

It is proposed that when technological innovation is embraced, innovative higher education providers with new models of virtual leadership, team work, and technology supported approaches to learning and teaching will emerge.

If technology is to be truly embraced as part of the further development of the higher education sector then virtual institutions, such as the one developed for this study, must become more prevalent to meet the emerging needs identified by government and demanded by students.

5.3 Limitations of this study

This study was based on a government reform agenda that was ultimately not passed into legislation by parliament. Consequently, while the government's policy was explicit there was no means to implement it.

During the study, the regulatory framework for approval of higher education providers changed with new standards (Australian Government 2015) coming in to effect from 1 January 2017 during assessment of the application.

The changeability of government policy and regulation tests the outcomes of the study as they may not hold true in future policy/regulatory frameworks.

This study was based on one 'test' institution in one regulatory framework. Future research could encompass similar studies to gain approval for virtual higher education institutions in other regulatory frameworks.

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