Moving from 'e' to 'd': what does a digital university look like?

Bill Johnston
Centre for Lifelong Learning
University of Strathclyde
Sheila MacNeill
GCU LEAD,
Glasgow Caledonian University

This paper is based on a series of blog posts entitled "A Conversation around what it means to be a Digital University" (MacNeill, Johnston, 2012), which set out the authors ideas about the nature of higher education, eLearning, social media etc. in terms of strategic development within universities. Through the development of a conceptual development framework, we suggest that the exploration of the overarching term "digital university" offers the potential to act as a catalyst for fundamental change throughout an institution from administration to teaching and learning. The aims of the paper are to explore the concept of the Digital University and share an analytical model of strategic change. The authors are currently working with Napier University, Edinburgh as they develop their new digital strategy.

Keywords: strategic development, information literacy curriculum design, learning environments, curriculum design.

Introduction

This paper provides a concise account of on-going work to develop a strategic model for the digital university which can be adapted to meet a variety of institutional conditions and offer flexible tool for engaging staff in identifying and formulating systematic programmes for change.

The Digital University: What is it? How do we achieve it?

The notion of a Digital University seems to be gaining traction within institutions, however we observed that it was being used in a very narrow context, mainly relating to digital technology and infrastructure e.g. repositories and/or VLEs. The exploration of the term Digital University offered the potential to explore central issues for strategic development in a more holistic manner. Digital literacy, is also a term that although increasingly being used in HE is still not commonplace; and again suffers from narrowly focussed discussions particularly relating to computer science related skills and not as a developing set of wider ranging competences. A notable exception is the recent JISC Developing Digital Literacies Programme.

We believe that digital literacy is an extension of information literacy - one cannot exist without the other. The "literacy" of the digital university is the literacy of information. This in turn raises wider social issues of digital inclusion and the role universities can play in the wider community. Figure 1 identifies our key constructs and provides a model of their interrelationship.
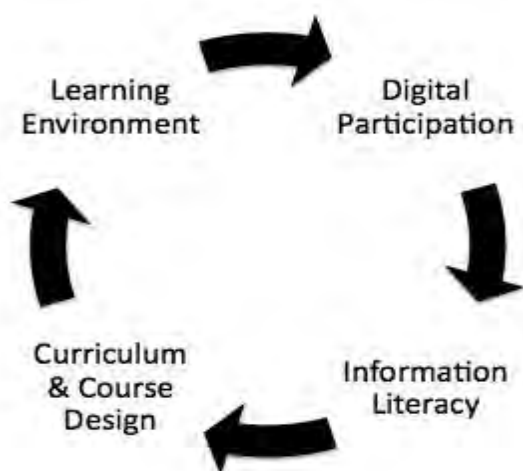
Figure 1: High Level Concepts

The logic of our model starts with the macro concept of Digital Participation which provides the wider societal backdrop to university educational development. Information Literacy enables digital participation and in educational institutions is supported by Learning Environments which are themselves constantly evolving. These elements in turn have significant implications for Curriculum and Course Design. We see educational development as the primary channel to unite the elements of our conceptualisation.

The matrix in Figure 2 develops the four categories in our model to identify the key dimensions of our concept of the digital university. Of the four categories digital participation and information literacy receive much less attention in organizational discourse than notions of learning environment and curriculum. Part of our intention is to redress this by giving more attention to participation and information literacy, with a view to opening up new and productive channels of change and maintaining a broad, but systematic perspective on strategic change. The constructs in figures 1 and 2 therefore represent strategic tools and frameworks, which can be used to analyse existing strategic documents and shape institutional conversations about the practical implications of digital change.

If applied to a university seeking to modernize itself, these four dimensions can channel key activities such as: synthesising the relevant pedagogical literature; analysing particular institutional settings; and identifying plausible lines of action for change.

Digital Participation	Information Literacy
*Glocalization *Widening access *Civic role and responsibilities *Community engagement *Networks (human and digital) *Technological affordances	*High level concepts and perceptions influencing practice *Staff & student engagement and development *Effective development and use of infrastructure
Curriculum & Course Design	**Learning Environment**
*Constructive alignment *Curriculum representations, course management, pedagogical innovation *Recruitment and marketing *Reporting, data, analytics	*Physical and digital *Pedagogical and social *Research and enquiry *Staff and Resources

Figure 2: MacNeill/Johnston conceptual matrix (2012)

Exploratory work with the universities of Greenwich, Dundee and Edinburgh Napier has highlighted how the use of this matrix can allow for the development of more holistic strategic frameworks, with multiple points of

direct engagement for staff and students**.**

Connections and Questions

Over the last two years considerable interest has been developed through our series of blog posts about the matrix. We have demonstrated with two different institutions (Universities of Greenwich and Dundee), how use of the framework and matrix can provide a quick analysis of their institutional strategies which can then be used as a stimulus for discussion around digital developments.

Our aim was to model a process using our tools and framework for exploring the notion of a Digital University, which colleagues could adapt and develop; most obviously as part of ongoing institutional conversations aimed at linking the high level statements in pubic strategy documents, to the matter of aligning those statements to major aspects of institutional activity, such as participation, curriculum and learning environment We have also sought to emphasise the importance of Information Literacy to curriculum and course design, as a necessary enabling feature of teaching and learning in response to the growth of digital information resources for education, employability and citizenship. Current work at Edinburgh Napier through the University's Digital Futures Working Group is providing a more in-depth case study of how our model can be adapted and used.

Chaining back through our model/matrix, and in the light of experience, we can now offer some practical advice for modernization projects more generally:

1. That strategic and operational management of learning environment must be a function of course design/re-design and not separate specialist functions within university organizations. To what extent can all stakeholders in the ongoing re-design of all courses to an agreed plan of curriculum renovation?

2. That education for information literacy must be entailed in the learning experiences of all students (and staff) as part of the curriculum and must be grounded in modern views of the field.

3. That participation in all its variety and possibility is a much more significant matter than simple selection/recruitment of suitably qualified people to existing degree course offerings. The nature of a university's social engagement is exposed by the extent to which the full range of possible engagements and forms of participation are taken into account. For example is a given university's strategy for participation mainly driven by the human capital/economic growth rationale of higher education, or are there additional/ alternative values enacted?

Conclusion: Education, digital media and information

The modern digital university is characterized as a blend of familiar undergraduate and postgraduate education, together with community based and workplace learning strands to offer more varied opportunities to a wider range of entrants. This positive development takes form in a more varied portfolio of courses and course designs, which make full use of constructivist learning theory in guiding pedagogy. Lecturing is much more interactive than in the past, and students are engaged through a variety of enquiry-based course designs. Digital information is the key learning resource and Information Literacy is fully developed to maximise the value of investment in technology. We see our model and matrix as pivotal in order to achieve this organizational reform in a holistic and engaging way.

References

MacNeill, S., Johnston, B., (2013). The Digital University in the Modern Age: A proposed framework for strategic development. Retrieved, November, 2013, available from https://journals.gre.ac.uk/index.php/compass/article/view/79/121

MacNeill, S., Johnston, B,. A Conversation around what it means to be a digital university. Retrieved, July 2012 available from: http://blogs.cetis.ac.uk/sheilamacneill/2012/01/26/a-converstaion-around-what-it-means-to-be-a-digital-university/

Background reading

Barber, M., Donnelly, K., Rizvi, S., (2013) An Avalanche is Coming, Higher Education and the revolution ahead, IPPR. Retrieved July 2013, available from; http://www.ippr.org/publication/55/10432/an-avalanche-is-coming-higher-education-and-the-revolution-ahead%29

Berlanga,J., Penalvo,F.G., Sloep, P., Towards eLearning 2.0 University, Interactive Learning Environments, Routledge, 2010. https://doi.org/10.1080/10494820.2010.500498

Bruce, C. (1997), The seven faces of information literacy, Adelaide, Auslib Press.

Biggs, J & Tang,C. (2007). Teaching for Quality Learning at University, McGraw-Hill.

Hepworth, M. & Walton, G. (2009). Teaching information literacy for inquiry-based learning. Oxford: Chandos. https://doi.org/10.1533/9781780630175

Johnston, B. & Webber, S. (2003) Information literacy in higher education: a review and case study Studies in higher education, 28(3), 335-352. https://doi.org/10.1080/03075070309295

Luckin, R.,Bligh, B., Manches, A., Ainsworth, S., Crook. C,, Noss, R. Decoding Learning Report (2012) Nesta, Retrieved, July 2013, available from:
http://www.nesta.org.uk/areas_of_work/public_services_lab/digital_education/assets/features/decoding_learning_report

Lupton, M, (2004), Information Literacy and the student experience. Auslib Press

National Forum on Information Literacy (2006) Beacons of the information society: the Alexandria proclamation on information literacy and lifelong learning. Paris: UNESCO. Retrieved July 2013, available from: http://www.unesco.org/new/en/

Secker, J. & Coonan, E. (2011) A new curriculum for Information Literacy: curriculum and supporting documents. Retrieved August 10, 2012; available from: http://ccfil.pbworks.com/f/ANCIL_final.pdf

Swain, H., Will university campus's soon be over?,(2012) The Guardian, http://www.guardian.co.uk/education/2012/oct/01/university-campuses-decline-elearning-students, Retrieved July 2013

University of Dundee, Teaching and Learning Strategy, Retrieved, July 2013 ' available from; http://www.dundee.ac.uk/academic/learning/archive/201213/mtg1/Microsoft%20Word%20-%20paperb1.pdf

Vermunt, J.D, Student Learning and University Teaching (2007),British Journal of Educational Psychology.

Author contact details: Sheila MacNeill, sheilamacneill@me.com