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Growing resilience with social media and e-learning: The case of the University of Canterbury

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Abstract

A university set on a beautiful spacious landscape had little need for e-learning until it was stimulated by crises to become more innovative. This case study research provides a rich picture of rapid adoption of social media and e-learning as the ‘tide’ of e-learning rose in waves, both rising and falling as changing needs were addressed over five years (2010-2015). The overarching research question was: How has the University changed with e-learning in the wake of seismic activities?

The co-evolution of digital technologies and education in this ‘late adopter’ (Rogers, 2003) university is linked with organisational development. Social media does support communication of organisational responses to crises, including increased adoption of e-learning. This paper shows there is a place for social media alongside e-learning tools and that their combined use also fosters resilience for students and academic staff (Dabner, 2012; Mackey, Gilmore, Dabner, Breeze & Buckley (2012). This case study of one University’s journey “there and back” from a major seismic event has charted only one aspect of the journey to increase resilience. Ayebi-Arthur (2016) describes more aspects that are relevant to DEANZ conference’s theme of Twin Pillars including infrastructure and e-learning support. Universities in Aotearoa New Zealand cannot dodge the likelihood of natural disasters that can close one or more buildings on a campus (Seville, Hawker, & Lyttle, 2012). The findings are also relevant to other crises such as those caused by weather and digital infrastructure.

Introduction

At times an organisation that would be considered to have characteristics of a ‘late majority’ (Rogers, 2003) in its university-wide adoption of e-learning can be stimulated by crises to become innovative with rapid changes to its structures and practices, including increasing its adoption of open, flexible and distance learning. This paper reports research on one such university. The first author arrived in 2012 to research the phenomenon for his doctoral studies (Ayebi-Arthur, 2016). The remaining authors in this paper began to work for the University of Canterbury (UC) before 2010, except for Cunningham who joined in 2013. The writing of this paper is thus informed by both research and experience.

In 2008, with its beautiful spacious Christchurch campus, four of the five colleges in the University had little need to develop e-learning. Therefore, in terms of Rogers’ (2003) adopter categories with regard to e-learning, UC at that time was a member of the ‘late majority’ or even a ‘laggard’, when benchmarked against the eMaturity Model (eMM) developed by Steven Marshall (Marshall, 2009). In 2008 only the College of Education made extensive use of technology enhance

learning as it built on the innovations that took place before the teacher education college had merged with the university (Hunt, Mackey, Dabner et al., 2011).

In 2010 and 2011 a series of earthquakes stimulated rapid adoption of social media, including Facebook and websites, by the executive leadership to enhance their communication within and beyond the University and a directive to increase e-learning in all colleges. In addition, all colleges of the university increased their adoption of open flexible and distance learning to enhance education.

The problem being addressed

In the event of a disaster/crisis in an organisation it is important for the organisation to communicate with its members and the wider society on how the disaster/crisis is being resolved. Communication can contribute to the empowerment of citizens in crisis situations by supporting preparedness, enhancing societal understanding of risks and increasing co-operation (Vos, Lund, & Reich, 2011). Spicer (2008) established that, in an emergency, the ability to communicate – internally and externally – becomes a key service for an organisation. Social media and websites have become important channels of communication to students as well as other stakeholders (SchWeber, 2008; Seville, Hawker, & Lyttle, 2012). Social media can support any educational organisation and the voluntary responses of its students and staff (Dabner, 2012).

However, little is known of how social media may fit with the adoption of e-learning. The overarching question for the first author's doctoral thesis was: How has the University changed with e-learning in the wake of seismic activities? The use of communication channels that students were familiar with, and were already using, was implemented as a means to aid the dissemination of the information. As well as a strong need to communicate with their community about actions to mitigate earthquake related crises at UC, the use of e-learning was increasing as a response to the crisis (Monti, Tull & Hoskin, 2011). That UC would be using e-learning as one of the options to complete the academic year in 2011 was one of the messages to be communicated via social media. Moreover, those already studying in an e-learning mode were easier to reach electronically because these tools were already part of their everyday life.

Study design/Approach

A qualitative intrinsic, nested single case study design was chosen for the study (Gray, 2009) and research conducted from 2012 to 2015 on data from 2010 to 2015. Sources of data included interviews and documents and the University's websites. Non probability purposive sampling was employed to select the sample for the study (Cohen, Manion, & Morrison, 2007). It began with a search on archived websites UC *Restart* and UC *Progressive Restart*. The websites were setup after the seismic events of 2010 and 2011 respectively to provide information on how the University was responding to the seismic events as they continued to occur. Key informants for the University case identified the first key informant in each of the two nested case studies of colleges, who then identified other academics in the College who used e-learning, both before and after the earthquake of 2011. A total of 29 participants were purposively selected and interviewed, including academics who used e-learning, e-learning support staff and executive leaders. These participants also identified relevant documents (totalling 66) such as UC policy documents and reports from Units and Working groups in the University as well as publications by UC staff, including some of the authors of this paper.

The responses from all sources were coded and analysed into three deductive categories before further inductive analysis into themes, and a final deductive analysis. The challenges relating to the ease of participant identification have been carefully managed to maintain the mana of the University and enable the voices of multiple participants to be heard. Descriptive content and thematic analyses was used to describe processes of increasing resilience with e-learning in the aftermath of the seismic events in 2010 and 2011.

Findings

The six themes that emerged from the data were: communication about crises; IT infrastructure; e-learning technologies; support in the use of e-learning technologies; timing of crises in the academic year; and e-learning strategy. There is only space to discuss the first theme in this paper.

Communication was essential for propagating the message across the university community, including the use of web sites and the introduction of social media; ‘very early in the response process, our leadership team made a conscious decision to invest a lot of effort in communications’ (Seville et al., 2012 p. 32). With so many sources of information, the University created a policy that its website, *UC Progressive Restart*, would be the single source of “truth” (Healey, 2011). The communication that began with the first seismic event in September 2010 involved reassuring students, staff, other stakeholders, both local (e.g. students’ parents) and national (e.g. Ministry of Education) that the University was taking the necessary steps to ensure that teaching, learning and research would continue in the aftermath of the crises. The Vice Chancellor was prominent in many of the communications. Announcements included directives that e-learning was to be considered as one of the viable options.

Discussion and conclusion

UC communication through Facebook began shortly after the first earthquake in 2010. According to Dabner (2012, p. 75) ‘the university communications team worked on the site for 18 [hours] a day over the initial 2 weeks and at all hours of the day’. Seville et al. (2012) reported, that

social media was a 24/7 operation and took a huge amount of resource and energy to sustain. The mode chosen for this instance of Facebook lacked administration tools, making it difficult to track, categorise and sort discussion threads into a more coherent format’ (p. 34).

In 2011, the design of the flow of information on Facebook was improved to become systematic and well-managed and there appeared to be greater emphasis upon providing a broader range of support for students from different organisations via the Facebook site (Dabner, 2012).

The use of social media and dedicated websites to inform the University community of the UC response to the seismic events confirmed Bird, Ling, and Haynes’ (2012) Australian study of the importance of disseminating effective and rapid emergency information in times of natural disasters. Dabner (2012), an academic in UC College of Education, confirmed that the Facebook community enabled “on- going dialogue and information sharing between staff and students from the Institution as well as the wider educational community (p. 69). Seville et al. (2012), another UC academic, reported, “we found social media to be very effective, particularly in keeping staff and students

engaged and interested, not only in what the University was doing, but also how it was going about reopening campus” (p. 34).

Social media was one of the communication channels the University used to inform staff and students that UC would be using e-learning as an option for students to complete the first semester in 2011. There was increased use of the University Learning Management System to support learning and teaching. In 2011 the gift of ECHO360 lecture capture was added including initiatives that have embedded it within the university (Tull, 2014). This e-learning journey continues to proceed in waves (Mackey et al, 2012) so that the ‘tide’ of e-learning adoption continues to rise over the years as evidenced in the embedding of UC’s current Learning and Teaching strategy. UC’s journey provides evidence that social media does support organisations to respond to a crisis, or series of crises. Evidence also suggests that enhanced e-learning practices in response to a crisis can improve the learning experiences for students and enhance the resilience of both students and academic staff (Mackey et al, 2012) and as evidenced in a 2012 [DEANZ award](#) for resilience.

This case study of UC’s journey ‘there and back’ has charted only one aspect of the journey to increase resilience. Ayebi-Arthur (2016) describes more aspects that are relevant to DEANZ conference’s theme of Twin Pillars including infrastructure and e-learning support. Universities in Aotearoa New Zealand cannot dodge the likelihood of natural disasters that can close one or more buildings on a campus (Seville, Hawker, & Lyttle, 2012). The findings are also relevant to other crises.

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References

- Ayebi-Arthur, K. (2016). E-learning, resilience and change in tertiary education. Unpublished Ph.D. submitted November 2015.
- Beggan, D. M. (2010). The impact of Hurricane Rita on an academic institution: Lessons learned. *Disasters*, 34(1), 93-111. doi: 10.1111/j.1467-7717.2009.01116.x
- Bird, D., Ling, M., & Haynes, K. (2012). Flooding facebook - the use of social media during the Queensland and Victorian floods. *Australian Journal of Emergency Management*, 27(1), 27-33.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. New York, NY: Routledge.
- Dabner, N. (2012). "Breaking ground" in the use of social media: A case study of a university earthquake response to inform educational design with facebook. *Internet and Higher Education*, 15(1), 69-78. doi: 10.1016/j.iheduc.2011.06.001
- Gray, D. E. (2009). *Doing research in the real world* (2nd ed.). Thousand Oaks, CA: SAGE Publications Inc.
- Healey, N. (2011). The 2010 and 2011 Canterbury earthquakes and organisational learning at the University of Canterbury: Does practice make perfect? *Journal of Management & Organization*, 17(06), 850-856.
- Hunt, A-M., Mackey, J., Dabner, N., Morrow, D., Breeze, D., Walker, L. & Davis, N. (2011). Culturally sensitive blended learning for future teachers in challenging times. *Distance*

- Education Association of New Zealand (DEANZ) Magazine* (May 2011): 1-4. Retrieved from <http://www.deanz.org.nz/home/images/newsletters/May11.pdf>.
- Mackey, J., Gilmore, F., Dabner, N., Breeze, D. & Buckley, P. (2012). Blended learning for academic resilience in times of disaster or crisis. *Journal of Online Learning and Teaching* 8(2): 122-135.
- Marshall, S. (2009). Report on the e-learning maturity model version 2.3 capability assessment of the University of Canterbury. Confidential unpublished report (with permission).
- Monti, A., Tull, S. and Hoskin, A. (2011) *Engagement at the Epicentre*. Hobart, Australia: Changing Demands, Changing Directions, 4-7 December 2011. (874-879) Retrieved from <http://www.ascilite.org/conferences/hobart11/downloads/papers/Monti-concise.pdf>
- Rogers, E. (2003). *The diffusion of innovations*. (5th ed.) New York: Free Press.
- SchWeber, C. (2008). Determined to learn: accessing education despite life-threatening disasters. *Journal of Asynchronous Learning Networks*, 12(1), 37-43.
- Seville, E., Hawker, C., & Lyttle, J. (2012). Resilience tested: A year and a half of ten thousand aftershocks. Christchurch: University of Canterbury.
- Spicer, D. Z. (2008). Information technology services support for emergencies. *Journal of Asynchronous Learning Networks*, 12(2), 51-53.
- Spillane, J. P., Halverson, R., & Diamond, J. B. (2004). Towards a theory of school leadership practice: Implications of a distributed perspective. *Journal of Curriculum Studies*, 36, 3–34.
- Tull, S. (2014). *Finding a Solution: Solution Focussed Professional Development for a Web Based Lecture Technology*. Tampere, Finland: World Conference on Educational Multimedia, Hypermedia and Telecommunications (EdMedia), 23-27 Jun 2014. (1933-1938) Retrieved from <http://www.editlib.org/p/147739/>
- Vos, M., Lund, R., & Reich, Z. (2011). Developing a crisis communication scorecard. *Studies in Humanities, University of Jyväskylä*. Retrieved from <http://www.crisiscommunication.fi/research/downloads>