E-learning, resilience and change in higher education: A case study of a College of Business

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What can e-learning offer in a crisis that closes the University campus? This paper presents the emerging findings in a case study of one College of Business impacted in 2011 by earthquakes in New Zealand. Analyses from interviews of nine staff and documents they recommended were used to describe processes of increasing resilience with e-learning over the worst seismic events. Increasing deployment of the University's learning management system by staff and students plus audio recordings and video recordings of lectures enabled the College to continue its teaching. The Technology Acceptance Model (Davis, Bagozzi, & Warshaw, 1989) and the generic model of organisational resilience by Resilient Organisations (Resilient Organisations, 2012) will be used to evaluate the adoption and adaptation of e-learning when a crisis occurs.

Keywords: E-learning, crisis, resilience, higher education, Technology Acceptance Model (TAM).

Introduction

There has been rapid evolution in the range of software since the beginning of the 21st century to support learning in universities. "Online education is established, growing, and here to stay" (Mayadas, Bourne, & Bacsich, 2009, p. 1). When disasters and crises, both man-made and natural, occur, resilient higher education institutions adapt in order to continue teaching and research. The University of Canterbury (UC) was affected by seismic events, which resulted in the closure of the University for two weeks at the start of the 2011 academic year (Agnew & Hickson, 2012; Dabner, 2012). Case study research aimed to provide a rich illustration of the ways in which e-learning assisted the University to keep open and improve learning and teaching as it recovered.

The larger study of the University includes an embedded case study of how the UC College of Business and Law (CoBL) adapted with e-learning in the wake of the seismic activities. The emerging findings of the embedded case study are presented here.

Methodology

A qualitative intrinsic embedded/nested single case study design was chosen for the study (Gray, 2009). Sources of data included interviews and documents and the UC Progressive Restart website. Nonprobability purposive sampling was employed in the study to select the sample for the study (Cohen, Manion & Morrison, 2007). Seven academics who used e-learning were purposively selected and interviewed plus two members of the e-learning support staff (flexible learning advisors). Key informants for the University case identified the first key informant in the CoBL who then identified other academics in the College who used e-learning, both before and after the earthquake of 2011. These participants also identified relevant documents. The responses from the primary and secondary sources were coded and analysed using NVivo 10 qualitative analysis software (QSR International, 2012). The nine interviews were coded into three deductive categories: positive to e-learning, negative to e-learning, and mixed before further inductive analysis into themes. The themes were then also reviewed with the documentary sources of evidence and a timeline of the main seismic events and adaptations.

Results

This analysis has not yet been completed. Across all three categories a total of 18 themes were identified. The seven themes found in all three categories were: Perceived usefulness, Access to support, Organisation direction, Earthquake motivating factor, Attitude of students, Skills and Perceived ease of use. The most common theme was Perceived usefulness, which was mentioned by

eight of the nine interviewees in a total of 62 units of meaning. For example: "…in the short term it [e-learning] was very useful when there was no physical campus" (CoB 6). This is particularly interesting because of the fit with the theoretical models that will be used in further analyses.

Next steps

The case study will be presented as an account of the adaptations made by the College from the first earthquake in 2010 until 2014, as perceived by the staff interviewed. It will also be interpreted using the Technology Acceptance Model (Davis et al., 1989). Finally, the Indicators of Resilience Model (Resilient Organisations, 2012) will be applied, if possible, to determine the value of e-learning as part of the resilience in the College of Business and Law in the aftermath of the 2010-2011 seismic events. The study aims to contribute to increased resilience for universities and might be used as a scenario by senior managers in their disaster planning exercises, which adds another challenge to the research analysis and reporting.

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