Chapter 16
E-Assessment as a Driver for Cultural Change in Network-Centric Learning

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ABSTRACT
This paper explores the potentially powerful role e-assessment practices can have on culture change in learning and teaching. This paper demonstrates how new e-assessment practices can ‘push back’ through educational institutions. This is done by applying the work of Gibbs and Simpson (2004/5) to e-assessment practices. To illustrate the practical effects of this evidence-based framework, the authors use UNSW@ADF to demonstrate the possibilities for new e-assessment practices and their potential to drive systemic change. The authors conclude that the incorporation of these structured, evidence-based e-assessment practices demonstrably improve learning outcomes and student engagement without increasing the workload of staff and students.

INTRODUCTION
The use of Web 2.0 technologies provides higher-education practitioners with the opportunity to engage in new assessment practices. However, practice does not necessarily follow possibility. This is particularly the case in universities in which traditional pedagogic practices dominate. In this paper, we explore the potentially powerful role that e-assessment practices can play in driving a culture change in learning and teaching. There is a continuing problem in digital learning and e-assessment of definitional ‘fuzziness’ or ‘slippage’, which occurs mainly as a result of the wide range of backgrounds and theoretical positioning of practitioners. Therefore, for the
E-Assessment as a Driver for Cultural Change in Network-Centric Learning

Purpose of clarity, and borrowing from a definition attributed to the University of Oregon, we define e-assessment as: the use of digital information and communication technologies to gather and analyse information from multiple and diverse sources to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences.

Our aim is to demonstrate how new e-assessment practices can ‘push back’ through the organization and its various parts and members (Eijkman, Kayali, & Yeomans, 2009) by highlighting the value of applying Gibbs and Simpson’s (2004/5) seminal evidence-based work on conditions under which assessment supports learning to e-assessment practices. Using UNSW@ADFA as a case study in which assessment is framed as an essentially contested practice (Eijkman, 2008) we demonstrate the possibilities for new e-assessment practices and their potential to drive systemic change.

Organizational Context

The core mission of the University of New South Wales at the Australian Defence Force Academy (UNSW@ADFA) campus is to provide undergraduate education to officer cadets and midshipmen, designed to fit them for service in increasingly network-centric work environments. Driving cultural change to develop essential graduate attributes in such a ‘traditionally oriented’ university college proves a formidable challenge for those supporting innovation in learning and teaching practices.

While UNSW@ADFA may not be unique, an overview of its organizational structure and student profile highlights how this environment presents educators with a distinctive space in which to implement new e-assessment practices. We want to highlight how, in traditional contexts such as this, the different, if not at times contradictory, understandings about the meaning, objectives, and role of assessment can generate significant cultural tensions across an organization.

ADFA (or ‘the Academy’) provides the Australian Defence Force with a distinctive education-focused environment for officer cadets and midshipmen. This immediately raises tensions between university education and military training in terms of different practices and underpinning general mindsets, and also around differences in the role and application of e-assessment technologies. For example:

- Military training and assessment is focused on competency-based outcomes, while the educational outcomes leading to a degree qualification have a much broader capability focus on a wide range of graduate attributes.
- Competency outcomes are designed to be stored on the Department of Defence (DoD) human resource database (PMKeys), while the attributes and learning outcomes are entered into UNSW@ADFA’s learning management system (LMS), also known as Online LIVE or OLIVE, and subsequently officially stored in the university’s student administration system.

Significantly, there is also a difference in cultures at a basic level of a digital environment. E-assessment artefacts and records developed in OLIVE and a student administration database, respectively, cannot be directly transferred to the official military repository of student training histories. Other issues, relating to differing privacy and security requirements within the two environments, further exacerbate these cultural tensions and make a shared understanding of e-assessment even more problematic.

With respect to the students, ADFA has a recruitment process distinctly different from other universities in Australia. Students are selected on academic achievement, nationally and on the results of a comprehensive battery of tests relat-
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