Educational Online Technologies in Blended Tertiary Environments: Experts’ Perspectives

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ABSTRACT

Although educational online technologies (EOTs) present an extraordinary range of higher education opportunities, significant gaps in knowledge about their purpose and functionality may impede levels of adoption. As the demand for online learning grows, it is critical that tertiary education institutes (TEIs) address gaps in knowledge by developing their understandings of EOT applications. This paper aimed to identify, and describe the application of a range of EOTs popularly used in blended tertiary environments (BTEs). Through qualitatively designed semi-structured interviews with 13 blended learning experts from New Zealand, Australia and Canada, and a 5-step analyses of data, it verified the use of 35 different EOTs in BTEs, including Adobe Connect, Blackboard, Facebook, Instagram, and YouTube. Their key characteristics were summarised using a multi-dimensional taxonomy, called the Pentexonomy, which synergised a range of perspectives into a robust, contextualised, and multi-dimensional framework for categorising EOTs. An outline of recommendations for the effective use of some of these EOTs was also provided. As EOTs advance and usage accelerates, the outcomes of this research will assist TEIs in their efforts to keep abreast of EOT developments, make informed choices about EOT use, and contribute to the delivery of relevant, meaningful EOT support.

KEYWORDS

Blackboard, Blended Learning, E-Learning, Facebook, Higher Education, Instagram, Moodle, Technology Framework, YouTube

INTRODUCTION

Educational online technologies (EOTs) have dynamically transformed the delivery of higher education, creating extraordinary opportunities for enhanced learning and teaching. In an era of great digital growth, their enhanced functionalities and affordances have revolutionised methods of knowledge access and engagement, generating phenomenal increases in the demand for web-based learning and support. Factors including affordability, scalability, ubiquity, and accessibility have bolstered levels of generational acceptance and encouraged growth. Traditional learning spaces have evolved into dynamic blended tertiary environments (BTEs), and channels of content dissemination have switched from didactically-styled “traditional, face-to-face courses to … online courses” (Picciano, 2015, p. 148).

This paper aimed to identify, and describe the application of a range of EOTs popularly used in blended tertiary environments (BTEs). Achieved using a qualitative design involving semi-structured interviews with 13 blended learning experts from New Zealand, Australia and Canada, and a 5-step analysis of data, it verified the use of 35 different EOTs in BTEs, including Adobe Connect, Blackboard, Facebook, Instagram, and YouTube. Their key characteristics were summarised using a multi-dimensional taxonomy, called the Pentexonomy, which synergised a range of perspectives...
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**METHODOLOGY**

A qualitative system of methods was used to guide the collection and analysis of data (Marelli, 2016). Participants were selected using an expert sampling strategy to ensure that data came from those with specific expertise and experience in the field (Trochim, 2006). This method was similar to the approaches used by Chapleo and Simms (2010), who obtained data from ‘opinion-formers’, and Wagner et al. (2008) who used experts’ feedback. Criteria were set to establish a basis for their selection for interviews. Participants had to fit the criteria of a ‘blended learning expert’. An expert is defined as “one whose special knowledge or skill causes him to be regarded as an authority” (Oxford University Press, 2014). Experts could be selected on relatively simple criteria, such as through certain qualifications or experience (Changing Minds, 2013). Thus, the following criteria established a basis for their selection: 1) the individual must have occupied an academic role for not less than 10 yrs in a tertiary blended learning context, 2) hold a post-graduate qualification, and 3) have conducted published research in the area of blended learning. Candidates without blended learning experience or without post-graduate qualifications were excluded from this study.

A small group of 13 participants were chosen (Saldana, 2011), from TEIs in New Zealand, Australia, and Canada. The rationale for this number was based on literature about qualitative research. Saldana (2011), for example, explained that there were varying opinions about the appropriate number of participants. While studying a single individual case in depth would make for a rich profile, the individual was not always representative of the population at large. Therefore, a small group of participants would provide sufficient data, with a minimum of 10-20 needed to ensure credible and trustworthy findings (Saldana, 2011). Accordingly, the use of 13 expert participants fitted within the required range. Obtaining data from a group of several individuals, rather than from one or two would likely deliver a holistic set of results that were applicable in more than one setting, and ensure that “no untoward consequences or none…easily anticipated” (Yin, 2010, p. 47) could arise. Obtaining data from long-serving experts, from across several institutions and countries, was considered an appropriate way of “testing the evidence for consistency across sources” (Yin, 2010, p. 20). Due to their significant experience, they would render richer contextualised explanations than non-expert candidates. Notably, the credibility of findings were increased when they involved feedback from those with prolonged engagement in the field (Nicholls, 2009). The expectations were that “this particular group of people thought to share a common experience… [would] offer meaningful insights into the phenomenon”, and “talk candidly about their experiences” (Nicholls, 2009, p. 640).

Participants set aside at least 45 minutes of un-interrupted time to complete their interviews, which were conducted via online video-conferencing technology (Skype), and audio recorded using Pamela software. The interview contained 13 questions in total. Question one asked participants to identify ‘which EOTs were being used in BTEs’. Question two asked for a description of ‘how these EOTs were being used’.

The use of open-ended questions generated deep, meaningful answers, and gave participants an opportunity to state their own opinions (Penner & Mc Clement, 2008). Probes helped to clarify meanings of responses, encourage in-depth explanations, and stimulate participants to expand their original comments (Yin, 2015). A large quantity of data was expected and received.

The data was documented onto pre-formatted question-and-answer templates through a self-transcription process, which enabled the researcher to develop an intimate familiarity with the content (Daniels, 2016). The data was analysed using Yin’s (2015) five phases of qualitative data analysis: 1) Compiling, 2) disassembling, 3) reassembling, 4) interpreting, and 5) concluding. Table 1 demonstrates the link between these five phases and the research techniques used in this research.
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