Using eLearning, blended learning and digital literacy to improve student engagement and retention

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ABSTRACT

CAA is New Zealand's largest private tertiary education provider for the hairdressing, makeup and beauty therapy industries. CAA was used as a case study to assess the viability of eLearning innovation, using a phenomenological approach, to increase student engagement, retention and success in a work based training academy. The hypothesis was that the use of blended learning and digital literacy tools via eLearning management system would boost student engagement and improve CAA's business goals of student retention, engagement and success. The empirical research included conducting three focus groups and 12 in-depth interviews with key stake holders. The results confirmed the hypothesis to boost student engagement to improve student retention at CAA.

Key words: HRM processes, blended learning, digital literacy, student engagement e learning

INTRODUCTION

CAA is a private tertiary education, (PTE) provider supplying Level 2, 3 and 4 courses in; hairdressing, makeup; beauty therapy; nails and special effects, (SFX) production. CAA's courses are New Zealand Qualifications Authority, (NZQA) assessed. CAA has been used as a case study to analyse the change impacts of an eLearning innovation in an education provider, using a phenomenological approach. CAA has approximately 650 students per annum and 35 tutors. It is located in Queen St, Auckland with a second campus in Manukau, Auckland. Stakeholders are: learners, staff and management, future employers of trainees in target industries, Tertiary Education Commission (TEC), Hairdressing Industry Training Organisation (HITO) and the New Zealand Qualifications Authority, (NZQA).

CAA is New Zealand's, (NZ) largest provider of education for the hairdressing, makeup and beauty therapy industries. Key business goals have been identified as student retention and student success.

Improved attendance would lead to more engagement and more student success. In outcome driven education, funding has often been tied to performance and it will be vital for CAA to ensure continued student success. Areas of concern to staff and management have been identified as follows: tutors have worked hard to keep learners stimulated by the course, but have identified out of date resources and a lack of modern technology, such as internet access, computers and projectors, as a source of frustration. NZQA requires a large number of theory lessons to be delivered and tutors have found it challenging to make these lessons interesting with traditional whiteboard delivery. CAA management is focussed on reducing the number of students who drop out of the course (retention) and improving pass rates (outcomes). A potential solution for boosting student engagement could be to improve classroom technology and develop more engaging content.

The introduction of new teaching technology through an eLearning innovation could boost student engagement, directly improving student retention as a result. A higher level of student success would result in positive feedback on the market, and may therefore increase the number and quality of enrolments. An eLearning innovation would stimulate change in organisational learning around curriculum design and pedagogy, or "how we teach" at CAA. While an education theory paradigm is important and has its place, as a PTE it is important for CAA to focus on core business goals. Therefore, for this thesis the researcher has adopted a business theory approach.

. While information and communications technology (ICT) can be a facilitator of pedagogical change, this research deals with the business motives for investing in an ICT infrastructure to support eLearning and the following OD implications. Considerable investment is required, so management in the future will want to see return on investment, (ROI) through increased efficiency and outputs. A literature review has been performed to assess whether technology may increase student engagement. The literature review has also addressed whether improving student engagement could have an impact on management's business goals of increasing retention and outcomes. The problem statement, aims and objectives of this study with

the methodology and analysis of the results form the following sections before recommendations are given and the conclusion as the last section.

PROBLEM STATEMENT

The literature review findings have shown that technology can boost student engagement (Ferrari, et al., 2009;; Sargent, et al., 2011). The gap in current research this study sets out to examine is the impact that blended learning and digital literacy tools training could have on hairdressing trainees in a work based training academy. The original business problem the literature review has attempted to resolve is: How can CAA boost student engagement to improve student retention and student success? The main research question has been: Will the introduction of blended learning and digital literacy tools improve student engagement, resulting in higher levels of student retention and student success at CAA?

AIMS OF THE STUDY

The main aim of this study is to establish whether or not the adoption of blended learning and digital literacy tools may increase student engagement in a trade-based training environment, to improve student retention and student success.

The literature review has provided clarity and focus around the research objectives: Group 1: To determine how the adoption of online learning and digital literacy tools will improve the learning experience at CAA and promote student success. Group 2: To determine what role online learning and ICT may play in an assessment environment based on competency based training (CBT). Group 3: To determine if and why the use of digital literacy tools may attract more enrolments to CAA and a higher standard of learner.

LITERATURE REVIEW

Information and communications technology (ICT) contribute to facilitating pedagogical change, by supporting eLearning and which in turn flows from innovation theory (Chou & Chou, 2011). It is a given that eLearning is not pedagogy; but a process innovation designed to add value for existing customers which is also aligned with concepts contained in innovation theory. Education designers must therefore be able to adapt pedagogical thinking to suit new mediums of content delivery. The adoption of digital literacy tools and online learning may therefore enhance the learning environment. Various mediums are discussed in the literature review below.

Creative teaching

Researchers have consistently described student engagement indicators as; intrinsic motivation; extra effort; collaborative learning and deep learning (Du Plessis, Frederick, & Maritz, 2013; Ruhe, 1998, 2002 , 2013; Lerer & Talley, 2010; Moon, 1999; Ruhe, 1998). It has been widely recognised that creative teaching can act as a trigger for the above four processes (Ferrari, et al., 2009). Important enablers of creative teaching have been defined as; multiple assessment tools; cultural awareness; curriculum; individual skills; teaching format, and technology, such as on-line work or social network sites (Ferrari, et al., 2009). These enablers are triggers for indicators of student engagement, particularly intrinsic motivation and deep learning (Ferrari, et al., 2009).

Technology in education

The use of modern technology in the classroom has been identified as an enabler of creative teaching (Ferrari, et al., 2009). Technology has been identified as an enabler of creative teaching, and creative teaching is known to boost student engagement (Ferrari, et al., 2009). The lack of modern technology in CAA's task environment represents a lost opportunity for boosting student engagement ("Becta shows benefits of Web 2.0 in the classroom," 2008; "Content, tools seen migrating to mobile devices," 2011).

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Digital literacy

Much emphasis in education has been focussed on literacy skills ("Adult literacy will help cut work accidents," 2012; "Illiteracy a yearly $3b cost - report," 2012).

However, the adoption of digital devices by young learners has resulted in their increased attempts to negotiate a new understanding of literacy which will include competencies in the digital realm (Ito, et al., 2010; Tierney, Bond, & Bresler, 2006).

Digital literacy has been based on three concepts. Group 1: Skills and knowledge to use digital media software applications and hardware devices. Group 2: Capability to understand critically the content of digital media. Group 3: Knowledge to use digital technology creatively to produce work (Nelson, Courier, & Joseph, 2011).

The term "digital literacy tools" has included: The use of computers and personal electronic devices, along with the training required to master activities; Use of digital software for a wide range of life assisting functions; Navigating toolbars, shortcuts and menus; Communication on mobile phone devices; The use of social media; Blogging; Manipulation of images or video to create a digital storyboard (Tierney, et al., 2006).

The use of these skills has become as much a first language to digital natives as the use of the Oxford dictionary has been to baby boomers (Ito, et al., 2010). Investment in developing digital literacy has become a growing concern in education (Barton, 2011; "Inquiry to look at digital learning in schools," 2012). Experience with computers has resulted in increased levels of digital literacy, regardless of age or background (Eshet-Alkalai & Chajut, 2009).

eLearning

eLearning has been defined by Wheeler et al (2003) as the delivery of content to individuals and groups via the Internet. Brown (2006) defines eLearning as any learning activity supported by ICT. As Figure 2 illustrates, numerous studies have focussed on the benefits of eLearning (Davis & Wong, 2007; Wheeler, et al., 2003).

Wheeler et al. (2003) list the most frequently used models as: On-line supplement to a face-to-face course; On-line self-paced courses; (similar to correspondence courses); On-line lectures; (video and audio over the Internet); Guided collaboration; (students learn through collaboration); Digital game-based learning and simulations.

Insert: **Figure 1: Benefits of eLearning**

Use of a learning management system, (LMS) to supplement the classroom experience has become common (Kaliski, Booker, & Schumann, 2012). The use of an LMS has allowed providers to measure extensive analytics on student behaviour, such as; when students access materials; how long students take to complete assignments; productivity in discussion forums and how often students log in (Kaliski, et al., 2012; Weiss, 2011).

Online learning

Online assessment can help develop meta-cognitive skills, creativity, communication skills and teamwork in learners (Ridgway, McCusker, & Pead, 2006). However, the social dimension of relational teaching is also important in online learning, and the tutor must engage with the online learner in a social dynamic as well as instructional (Ferrari, et al., 2009; Soccio, 2012). For interactions with students online to be successful, a shift towards creative teaching in the redesign of content will be required (Chou & Chou, 2011).

Online interaction has stimulated intrinsic motivation because it takes the learner out of the classroom and brings education into their own private space (Chou & Chou, 2011). Motivated learners will pursue study

outside course hours, resulting in extra effort and increased intrinsic motivation (Lerer & Talley, 2010). Engagement can be boosted online by linking online learning to real-world goals, which stimulates deep learning (DeLotell, Millam, & Reinhardt, 2010). Peers also play a huge role online, as learners may be interacting with thousands of people (Ito, et al., 2010).

Sargent, Borthick, & Lederberg (2011) have found that the use of online tutorials has resulted in higher retention and more student success. Using learning content online has encouraged students to put in extra effort in their own time (Martin, 2012; Shroff, Vogel, Coombes, & Lee, 2007). Collaborative learning can be augmented by online learning, as evidenced by the popularity of social networking sites such as Facebook and LMS (Chou & Chou, 2011; Ferrari, et al., 2009).

While online learning has been evaluated from the perspective of student outcomes, attitudes and satisfaction, researchers are still debating whether it contributes to gains in student engagement (Robinson & Hullinger, 2008). Intrinsic motivation has become more important in an online setting as there is no supervisor to set the pace (Shroff, et al., 2007). Some researchers have been critical of online learning's lack of social contact and failure to inspire deep learning (Chou & Chou, 2011). Students must put in the effort to engage in an online environment, so the tutor must design the course in a way which stimulates participation (Robinson & Hullinger, 2008).

Blended learning

Online learning alone can achieve similar engagement to conventional face-to-face teaching, and some researchers doubt whether it can achieve deep learning due to a lack of social contact (Chou & Chou, 2011; Moran, 2011). However, it is when online learning is blended with face-to-face teaching as blended learning, that gains in student engagement are achieved beyond traditional teaching alone (Chou & Chou, 2011).

Traditional lines between distance education, (DE) and face-to-face teaching have blurred as blended learning has generated a transformation in the way teaching and learning is conceived (Cherng-Jyh & Abdous, 2011; Chou & Chou, 2011). Chou and Chou's model has described blended learning as a radical innovation and recommends a change in the learning paradigm.

Insert: **Figure 2: Innovative learning map.**

Figure 2 has indicated that a dramatic increase in ICT technology could result in radical change in the teaching/learning model at CAA rather than incremental (Chou & Chou, 2011). A case could be made that an ICT innovation at CAA may be regarded as an organisational transformation, (OT). The use of blended learning and digital literacy tools at CAA could require radical change in the way tutors teach and work together (Robinson & Hullinger, 2008). Creating a coalition of support, communicating a vision and embedding the change in company culture are vital (Kotter & Schlesinger, 2008).

Student engagement and retention

Researchers have consistently described student engagement indicators as; intrinsic motivation; extra effort; collaborative learning and deep learning (Du Plessis, et al., 2013; Lerer & Talley, 2010; Moon, 1999; Ruhe, 1998). It has been widely recognised that creative teaching can act as a trigger for the above four processes (Ferrari, et al., 2009). Important enablers of creative teaching have been defined as; multiple assessment tools; cultural awareness; curriculum; individual skills; teaching format, and technology, such as on-line work or social network sites (Ferrari, et al., 2009). These enablers are triggers for indicators of student engagement, particularly intrinsic motivation and deep learning (Ferrari, et al., 2009).

With government funding tied to successful outcomes, it is essential for CAA to boost attendance. A high completions record would signal to market that CAA has a successful teaching formula, so it is important for the brand to achieve successful outcomes, in order to boost enrolments. Re-enrolments are also a

valuable source of revenue. The literature review has shown that online learning alone will achieve similar results to conventional face-to-face teaching. However, it is when the two are used together that there is a dramatic increase in learner achievement (Chou & Chou, 2011; Moran, 2011). Engagement through online learning has increased student retention and the intrinsic motivation of learners (Ferrari, et al., 2009; Sargent, et al., 2011). The resulting boost in the intrinsic motivation of high achievers would inspire other students, therefore improving student engagement and retention across the entire class (DeLotell, et al., 2010).

METHODOLOGY

To test the objectives further, six sub-research questions have been developed. Question 1: Would eLearning improve CAA's business goals of increased student retention and student success? Question 2: Would use of an LMS and the internet improve student engagement at CAA? Question 3: Would use of an LMS and the internet improve the teaching/learning experience for tutors? Question 4: Would staff require extra training to use the internet and an LMS effectively? Question 5: Will there be more student success if CAA provides training in digital literacy tools? Question 6: Should Facebook play a role in the education program at CAA?

The research has explored one hypothesis: H1: The use of blended learning and digital literacy tools via a learning management system, (LMS) may boost student engagement, thereby improving CAA's business goals of student retention and student success.

Data collection

Qualitative research was conducted using the following 3 focus groups to test the hypothesis, and to focus the interview questions for the subsequent individual interviews: Group 1: Unitec post-graduate students with online learning experience (6 participants). Group 2: CAA tutors (5 participants). Group 3: CAA management (4 participants). The 12 in-depth interviews have provided rich data for qualitative research,

which included participants from a wide range of stakeholder groups. Group 1: CAA admin staff (4 participants). Group 2: CAA students (2 participants). Group 3: Industry representative, an elected student representative, and a representative from NZARH (4 participants). Group 4: Academic advisors of CCA who are experienced in eLearning (2 participants).

Quantitative and qualitative methods

Quantitative methods involve collecting data which can be quantified and analysed using statistical methods (Collis & Hussey, 2013). Staff and students at CAA have not been using ICT technology. There have been no outputs of online learning or digital literacy tools which could be measured, therefore quantitative research would not have been useful in this case study.

A qualitative study involves collecting and analysing qualitative data using interpretative methods (Collis & Hussey, 2013). Only qualitative research can probe deep enough to reveal the current attitudes of tutors, students, management and additional CAA stakeholders towards technology hence data has been collected from 3 focus groups and 12 interview participants.

ANALYSIS OF THE RESULTS

Creative teaching and technology in education

From the results it was found that majority of respondents believe that adopting an eLearning strategy will improve CAA's teaching creativity efforts.

Tutors have indicated technology in class would make them feel more professional and more motivated to teach well. However, management have doubts that eLearning would improve creative teaching at CAA because hairdressing is a hands-on craft which requires practical assessment. Teachers could upload course outlines; assessments; tests; assignments; lesson plans; videos and all lessons in PowerPoint form. The finding is supported by the interview response of a tutor who stated "The hairdressing industry is

incredibly visual; you're creating form, structure, making it happen with your hands." The nature of the work requires a blended learning model

Digital literacy tools

All of the stakeholder groups interviewed have perceived the merits of providing training to students in digital literacy tools. Management have also indicated it would benefit students entering the workforce if they learnt more about online activities and the use of software. The findings from the industry representatives have indicated an expectation that digital literacy training would improve a graduate's adjustment to the working environment. This result is supported by an industry representative who made the following comment: said, "It's not a piece of paper that gets you the job; it's the networking you've done."

Insert: Figure 3: Interview findings comparison here

Blended learning

The literature review found that online learning has achieved the same level of engagement as face-to-face teaching. Greater gains in student engagement have occurred when face-to-face teaching has been combined with online learning. In this regards one interviewed tutor commented that; "They [students] could have conversation online, but need face-to-face; you must have collaboration, communication"

Management seem to have an image of their students firmly rooted in a classroom model of the past; the teacher is the source of all knowledge; students have no interest in generating their own extra-curricular study, collaborating in online spaces or networking using technology. This attitude has placed CAA's management in risk of losing touch with and out of alignment with their target market in this critical area. CAA tutors have suggested that they are open to spending more of their own time on preparation and learning Moodle.

Student retention

The findings showed that introducing ICT in the classroom represents a solution to the business problem of "how to boost student engagement to improve student retention and student success

The findings have indicated that introducing blended learning at CAA will boost student engagement, therefore improving retention. Increased student retention will result in deeper learning, giving graduates more confidence when applying for jobs and resulting in stronger careers in their target industries.

RECOMMENDATIONS FOR CAA MANAGERS

Train staff "just the basics, not fancy stuff"; *Get the course operational* "get a basic working course with pictures"; *Presence "*you need a social presence on Moodle"; *Learn web writing* "make it visual." ; *Reward the teachers* "tell them what a great job they're doing."; *Consistency; Collaborate;* "nobody likes being left behind."

CONCLUSIONS

An eLearning innovation will increase student engagement, therefore improving CAA's business goals of student retention and student success. It is essential for learners to possess rudimentary skills in digital technologies if they are going to become capable business leaders in the future. The internet and audio-visual multimedia in the classroom can enhance their learning experience. The main research question answered and all aims of the study have been met with recommendations to the management of CAA.

Finally the potential exists for CAA to have exciting new conversations about the future of blended learning and digital literacy in the education space in New Zealand

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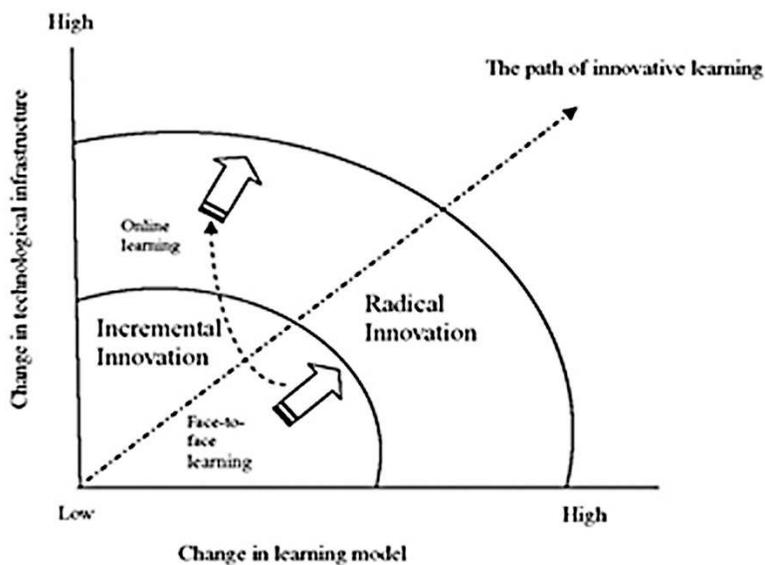
Figure 1: Benefits of eLearning
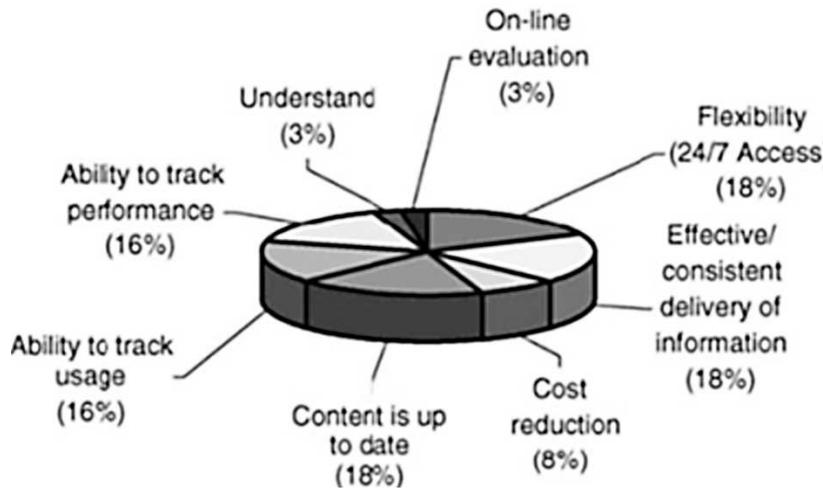
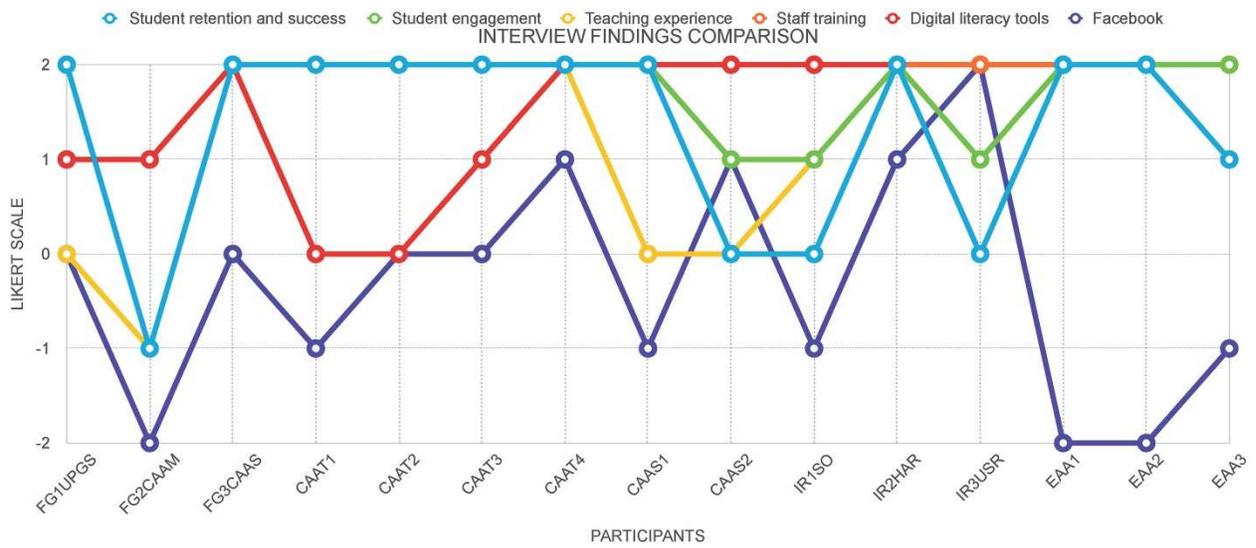Source: Brown, (2006:420).

Figure 2: Innovative learning map.

Innovative learning map: from face-to-face learning to online learning.

Source: Chou & Chou (2011:469).

Figure 3: Interview findings comparison

Source: Developed by researcher.

Likert scale; 2 = strongly agree; 1 = agree; 0 = no opinion; -1 = disagree; -2 = strongly disagree.