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# Engaging students with learning technologies

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Edited by  
Anthony Herrington  
Judy Schrape  
Kuki Singh

eScholar Program  
Curtin University

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## Introduction

The context for higher learning has changed significantly in the last five years. Recent changes in technologies such as cloud-based computing, broadband, and Wi-Fi enable students to learn anytime, anywhere and with any device. Students are increasingly accessing their units via mobile devices such as smart phones and tablets.

Nevertheless, it continues to be the case that effective learning requires students to engage in challenging activities set in authentic contexts that are related to the real world and the workplace. Learning with understanding occurs in a social context where students collaborate, share, communicate and reflect on their knowledge. Learning technologies can greatly assist these processes.

Learning management systems such as Blackboard enable course information, resources and communication and collaboration channels to be available in one virtual location. Course content has been developed by teachers and text-book publishers and is increasingly generated by students themselves. Open Educational Resources OERs are becoming widely and freely available and many universities are now beginning to offer whole units as Massive Open Online Courses (MOOCs) open to any student, anywhere and at any time.

Within this disruptive context Curtin University initiated its eScholar program making funds available for academic staff to implement innovative teaching using Curtin's extensive suite of learning technologies. The program is based on the philosophy of engaging students with learning technologies that support their growing understanding through authentic and assessable activities.

This publication presents the research findings of each of the eScholar projects conducted in 2010 and 2011. Each chapter has undergone a process of double-blind review resulting in high quality descriptions of learning using current and emerging technologies. The publication is divided into 6 sections based on these technologies.

Video technology is becoming an important tool in teaching and learning. Part 1 reports on three studies where video is used as a tool to record and reflect on learning, to increase the efficiency in recognising and identifying concepts, and to enable a deeper contextual understanding of theoretical concepts through practical applications.

Social media has become an integral part of people's lifestyles and increasingly part of the educational landscape. Part 2 contains research projects that look at using blogs and journals to understand, present and reflect on weekly topics; using wikis to enable group work and peer assessment; and informal learning using Twitter.

Virtual classrooms enable a high level of engagement between students and teachers in online learning environments. Part 3 describes a study where Blackboard's *Illuminate Live* and a graphics tablet were used to review students' conceptual understandings.

An electronic portfolio has become a commonplace technology for organising and presenting a student's learning outcomes over time — used both as a self-learning and assessment tool. Part 4 reports on a study that uses an e-portfolio as a learning and professional development resource.

Cloud-based computing allows the creation of online learning environments where students and teachers can work collaboratively to post, share, edit and save files such as word documents and spread sheets. Part 5 looks at studies where students use Google Docs to collaborate in writing unit summaries and teams writing collaboratively to create websites. Another cloud-based technology was used to investigate students' development of critical thinking skills through online debates.

Part 6 involves studies where students are immersed in a variety of learning technologies including laptops, iPads, lecture capture, audience response devices, virtual classrooms, plagiarism detection software, e-portfolios and a mix of multimedia and web 2.0 technologies.

University teaching and learning is faced with many challenges. A major one is recognising appropriate learning technologies and their use that support ways in which adults learn. Rapid advances in technologies can easily seduce those with limited understanding of adult learning. This publication offers clear directions founded on teacher and learner experiences grounded in real classroom activity.

Dr Anthony Herrington  
Director, Curtin Teaching and Learning  
Curtin University  
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