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Social presence and participatory media in authentic learning

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Abstract

While increasingly large numbers of students are choosing to enrol in distance modes of learning at university, many are poorly supported, left to struggle with mainly text-based resources while their on campus counterparts are well supported with a range of personal and technology-based supports. In this paper, we describe a first year compulsory university unit based on authentic learning pedagogy. The mandatory learning management system (LMS) was enhanced with a range of resources and communication technologies to provide a truly inclusive learning environment for distant students, using social media, open education resources and participatory web-based methods.

Keywords: social media, open educational resources, authentic learning, educational technology, participatory media

Introduction

The plight of the distance education learner is often a difficult and lonely one. Students are usually isolated both physically and socially from their peers, and they often miss out on social learning opportunities afforded to their on-campus counterparts. It is known that distance education students feel isolated and have reduced rates of retention (Woodley, 2004); they are often bored, and are seeking richer and more engaging learning experiences (Kim & Bonk, 2006); and they benefit immeasurably by learning within a community (Tu & Corry, 2001). While many distance courses have moved on from the traditional print packages popular in the 80s, and have embraced communications tools and social media, these shifts in technology have not necessarily been accompanied by pedagogical changes that capitalise on these advances (Selwyn, 2011). This has not always led to the purposeful co-construction of knowledge by learners at a distance, envisaged by Lee and McLoughlin (2010).

In this paper, we describe the design of a first year university unit in a Bachelor of Education designed according to principles of authentic learning, that seeks to address these issues through the use of authentic learning, social media, learning technologies, and open educational resources. The unit is offered internally (across two campuses) and externally, with about a third of the cohort studying by distance. In this paper, we focus on the pedagogy and support provided to distance students, and the interaction between the modes to engender a sense that a student is enrolled in the unit no matter what mode, and uses the available aspects of the course to learn and interact, rather than being marginalised into one or other groups with separate

treatments. The unit clearly demonstrates that technology can be used not only to great effect in different learning contexts, but that it can benefit many areas of students' lives.

The approach used in the unit is informed by authentic learning pedagogy and a range of innovative strategies that are both current and theoretically sound. The unit encourages students to become self-regulated learners, adept at researching, collaborating and reflecting as they learn and adapt to the changing ICT landscape in schools and in society generally. Students create genuine products that are useful for their future endeavours as social beings, as university students and as teachers in primary schools.

Overview of pedagogical context

The unit is a large 350+ compulsory unit in educational technology that students complete in the first semester of their first year, so for most, this is the first time they have experienced distance learning. Students learn—not about teaching computing—but about using new technologies as social beings, as students at university, and as teachers in primary school classrooms to inspire their students' learning. The University Learning Management System (LMS) is used extensively, and Lectopia lecture capture, together with a range of resources that reside in the 'cloud', so that even as students access ideas and resources, they are learning to use new technologies and programs.

Many educational technology units or courses at university set out to 'teach' pre-service teachers how to use different technologies. As a result, such units are often taught in computer labs in a lock step fashion, where a whole class needs to advance through the curriculum at the same time, and thus only a few programs can be covered (typically software like *PowerPoint*, *Excel*, and website creation programs). Oppenheimer (1997) likened this to teaching hammer rather than carpentry. In contrast, students view technologies as cognitive tools, not as objects of study in their own right, but as tools to be used to solve problems (Kim & Reeves, 2007). The intention is to help students become comfortable using technology as tools, so that they in turn can assist their own students to use technology in engaging and productive classrooms. The unit starts by focusing on technology in students' everyday life, and from there, moves to technology use in their role as university learners and researchers, and then as primary school teachers.

Social, research and pedagogical technology use

Social technologies: The unit begins by encouraging students to use new web-based technologies to solve problems or create opportunities in their everyday social and family lives. One of the first tasks requires them to create a technology-based social resource, such as a family tree (using

a website like *Heritage.com*), a series of movies on how to play better tennis or football (by creating a *YouTube* channel), a social bookmarking site on experimental music or jazz (using *Diigo* or *Delicious*), or a poster for a community fair (using *Word* or *PowerPoint*). Students then create instructions for a peer on how to create this resource, and through a pairing of students on the LMS, they peer review each other's instructions using an assessment rubric. There is no differentiation between internal and external students on this task, so distant students could be paired with on-campus or off-campus students.

Learner/researcher technology use: In the next part of the unit, students develop their technology use as learners and researchers at university. In this task, they research a curriculum topic (such as an aspect of solar energy, literacy, dance, Indigenous culture, algebra, etc.) using databases (such as *ProQuest*, *Eric EdIT Library*) to explore how technology is being used to teach in these areas in primary schools. They then write a short report citing their sources, with *EndNote* used to generate their reference list. Internal and external students use the same online databases to research this task.

Teaching and learning technology use: The remainder of the unit focuses strongly on pedagogical approaches using technology. In the major collaborative task, students construct an authentic learning environment appropriate to curriculum in a chosen subject area and grade level, that primary school students could complete over 2-3 weeks. Students create the resource in a wiki, enabling them to collaboratively construct the work online, and at the same time learn about this technology. Each group creates a short movie on the making of the resource (using programs such as *Camtasia*, *PresentMe*, or *ScreenFlow*), and uploads it to their website together with the completed wiki resource. On campus students introduce their movies during a special presentation tutorial; this is the only point of difference with external students.

Authentic learning framework

The pedagogical framework used to guide the design and implementation of the unit is principally that of *authentic learning* or *authentic e-learning* (Herrington, Reeves, & Oliver, 2010). The model comprises nine guiding design elements where the design of the learning environment provides: an authentic context, authentic tasks and activities, access to expert performances, multiple perspectives, collaboration, reflection, articulation, coaching and scaffolding, and authentic assessment (Herrington, 2012). Each of these elements is instantiated in aspects of the unit.

Ideally, an authentic learning environment requires students to complete a single realistic and complex task encompassing the entire curriculum of a unit, with all assessable components contributing to that one endeavour. Students in the unit complete one product for overall

assessment – a website. They create a prototype shell by Week 3, and then populate their sites with the products of the unit to create a multifaceted web portfolio by the end of the unit. All their products are uploaded to or linked to their website. In addition to the ongoing development of a website, students create a blog throughout the unit to reflect on their growing understanding about the subject matter and the conditions that assist their learning. In this way, students reflect ‘in action’ through decision-making on resource collaboration and development, and ‘on action’ as they write in their blogs (Schon, 1987).

Pedagogical strategies

Even if a teacher is expert in a content area, a range of pedagogical strategies is required to ensure students learn in web-based environments (Henry & Meadows, 2008), and some of these strategies are described below:

Lectures: Pedagogical strategies in the unit include lectures, not as a means to deliver content or information that must be learnt, but as tangible instantiation of the authentic learning element of *expert performance*. Each lecture is presented more in the style of a keynote address rather than a means to deliver information. Lectures are recorded in Lectoria for off-campus students. Not all lectures are on-campus, with several weeks devoted to specialised topics with ‘online’ lectures, not in the recorded lecture-capture style, but with short videos and links to additional resources. On-campus students, who are typically more reluctant to use the LMS and abundant online resources really benefit from these non-contact weeks, while distance students say ‘welcome to my world’.

Tutorials: An innovative approach is used in tutorials as well. Tutorials are timetabled in normal tutorial rooms, and students are encouraged to bring their own devices (BYOD). The Eduroam network enables them to connect their laptops, tablets (iPads) or web-enabled mobile phones to the internet. Tutorials might start with demonstrations of relevant software or programs (such as *EndNote* software or the *Learning Federation*), but usually they are devoted to collaborative work. Wikis have also been used in real time to track tutorial activities with external students who could also contribute to the wiki. For external students unable to attend on-campus tutorials, this provides a real time link to these group activities. This approach moved beyond vicarious involvement in tutorials through the viewing of session notes, to real time participation.

Resources: The resources for the unit include links to existing relevant and expert resources, together with contextualised online videos and sites that are created to fill a learning need. The teaching team has created a series of ‘How to ...’ video tutorials that are short, focused instructional segments relevant to students’ tasks, such as, how to upload a document to

a website, Endnote tutorials and getting started in Wikispaces. Such ‘just-in-time’ tuition relieves the need to teach these skills in lectures and tutorials, leaving time for more collaborative, task-based activities, and aligning the on-campus student experience with the more self-regulated experience of the external student.

In creating the assessable resources for their websites, students are encouraged to master a variety of Web 2.0 tools, largely of their own choosing (such as *YouTube*, *Twitter*, *Flickr*, *Diigo*, *Delicious*, *Skype*, etc). Again, resources and links are provided for initial instruction on the most commonly used sites, often as a link to the official website instruction, but sometimes by the creation of more in-depth instructions. Most of these resources are linked in an open education resource called the *Companion Website* (<https://sites.google.com/site/livelearntechnology2012/home>). The companion site is the first stop for students starting each task, as it is structured to reflect the assessment elements of the unit. For example, the first task requires students to create a website and blog, so under Task 1 on the companion site, there are links to recommended free website-creation software and blogging sites. Students find this site very useful, but surprisingly, many on-campus students would not consult it initially, preferring instead to ask for help in tutorials or the discussion forums of the LMS. However, when other students started to recommend the site, it became more widely used. Of course, for the majority of external students it was an essential and well-used tool. The primary reason for using an open education resource (OER) approach instead of the closed LMS was to provide students with ongoing access to valuable resources that they can use in future units, teaching placements and in their teaching careers. The companion site has been further developed into a technology toolbox, a general wiki-based OER for any student or educator to consult (Parker, 2012).

Authentic assessment

Authentic assessment is used to assess students’ work, so assessment is integrated with the tasks that students complete. Effectively, students are assessed on the products that they create, and those products are professional and polished artefacts that will be useful in their everyday lives and in their future role as classroom teachers. Assessment rubrics have been created for all assessable components of the unit. The rubrics not only provide guidance for the students as they work on their tasks, but they also provide valuable feedback and a basis for useful discussions with their teachers.

Because the unit is large, with both internal and external students, it was clear that there is much value in having an externally invigilated examination. Although an exam appears to be

contrary to integrated assessment, the issue was resolved by creating a *reflective exam*. There is some evidence to suggest that students often benefit from an exam by being required to revise and reflect upon the entire unit's curriculum. In order to ensure that the exam questions would give students the opportunity to fully reflect on the entire unit and its key principles, discussion forum topics were provided in the LMS that thematically encompassed the issues raised in each question. Participants were able to discuss the issues, and suggest ideas on how they might answer the associated question, and many students were very generous in sharing their thoughts.

Meeting the needs of the distance learner

On-campus students have many opportunities to connect, communicate and create communities of learning with their peers. Distance learners often miss out on these opportunities as many educators find creating and sustaining online communities of learning very challenging (Anderson, 2008). Social presence, or the ability to comfortably and effectively communicate through a technical medium, plays an important role in creating a community of learning (Garrison, 1997). To assist online students to develop their social presence and help foster a community of learning between internal and external students, the unit includes three online social spaces: a Diigo social bookmarking group where students can store, share and comment on resources they find; a shared Google Docs folder to encourage online collaboration; and a Skype chat group (real-time communication) to encourage informal conversations similar to face-to-face interaction. Many distance students have commented on the value of the chat, and the opportunities to articulate their views and participate in real time discussions (Parker, Boase-Jelinek, & Herrington, 2011).

Teachers also created many context-specific mini-movies to guide students with particular problems, and use web tools such as *Show me what's wrong* to record the problem from the student's own desktop. A great deal of support is also provided through the discussion forums on the LMS with many thousands of posts and replies received in a semester. At least one teacher is 'rostered' on to monitor the discussion forums every weekday and also on the weekend if online to capitalise on negotiated responsibility of both teachers and students to construct and share knowledge (Nandi, Hamilton, & Harland, 2012). It is interesting to note, however, that it takes little for students to start answering each others' questions and very often, the quality of their responses is insightful and appropriate to the level of understanding of the person enquiring, resonant of the theory of cognitive apprenticeship and its notion that the person who is only slightly more knowledgeable is often in a better position to guide learning than an 'expert' (Collins, Brown, & Newman, 1989).

Conclusion

In this paper, we have described the design of a university unit that has sought to fully address the diverse learning needs of distance students ‘across space and time’. Using technology, students have many ‘avenues to understanding’ because of the way the unit is designed. There are many opportunities for students to learn, through the lectures and tutorials, through the resources and instructional videos on the LMS and companion website, and through the communication support that is in place in the unit.

We will continue to use student feedback, our own research findings (research underway) and our reflective practice to improve the pedagogical strategies we use in the unit. Evidence to date suggests that distance students in this unit are no longer the ‘poor cousins’ of their on-campus counterparts, and that they do indeed engage with the ‘unique and irreplaceable’ learning opportunities (Burbules & Callister, 2000) that distance learning does best.

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