

EDITORIAL

Accessibility: the killer app of learning technology?

As I come to the end of my term as editor, I have been reflecting on the questions I have been asked in this role. Other than “will you publish my paper?”, the most common question has been “what’s the benefit of technology?” For institutions, teams and individuals who have invested money and time in keeping up with new technologies, this is an important question. I have largely skirted around an answer, talking about my desire to see more sophisticated research questions and the need to understand the context in which one is operating. From my own experience, I have seen technology prompting numerous minor improvements in many places. This is largely due to the need, when introducing any change to teaching, to rethink and redesign the teaching and assessment (Dempster, Benfield, and Francis 2012). Technology often prompts such redesign, and the value of successions of changes that feed through into our local course-improvement cycles are not to be underestimated. Frameworks for understanding such cycles of improvement, such as Ellis and Goodyear’s (2009) ecological approach (which foregrounds the relationship between student experience and institutional context), recognise the complexity of the systems in which we operate.

However, when I am forced to sum up the benefit of technology in a sound bite, I usually argue that technology has made learning opportunities more accessible. I am using accessibility in the broadest sense here, to mean bringing together people who would otherwise not meet, giving learners access to tools, resources or materials which would otherwise not be available to them, giving individuals access to participate within communities, as well as making learning accessible in a format or mode necessary for an individual learner. Is accessibility the killer app of learning technology? It is certainly an answer that seems to satisfy most questioners, and the articles in this issue illustrate some of the ways in which technology is being used to provide access to learning. For those of us engaged in learning technology, these studies allow us to look more closely at the nature of access and how we can ensure its value to learners.

Garry Falloon begins the issue with an evaluation of video-conferenced workshops and labs which acted as a link between secondary school students and scientists. Here, technology provided students with access to experts who are physically away and too busy to travel. We could argue that technology provides sufficient access but this evaluation shows that in reality it is not that simple. Although Falloon succeeded in providing children with access to scientists, he found that students were lacking in confidence to interact via video-conference, some were embarrassed to appear on camera and the scientists needed reassurance that the students were intellectually engaged during the sessions. However, high-quality learning discussions occurred only after the cameras were switched off. The success of this initiative depended on those involved who encouraged participation to make

the best use of that access and construct engaging learning activities around the key event.

Nicos Souleles provides a further illustration through his study of the use of Facebook within art and design teaching. In a study which compared students' and teachers' views, Souleles reports that while students see Facebook mainly as a tool to access friends and stay in touch with them, teachers see its potential to facilitate "socially mediated reflection", – developing critical thinking which is so important in art and design subjects. What is also striking in this phenomenographic study based on interviews with 15 students is the broad range of perceptions about the relevance of Facebook in students' studies. There is little consensus with some students seeing use of Facebook as a distraction, whereas others find it useful for supporting study-related activities. Access is the intuitive, easy use of the technology, but teachers desire more meaningful activities and have a role in preparing students to use it in more educationally valuable ways.

Palmer and Holt provide some reassuring evidence that we are improving in our ability to engage students in the use of constructive technology. Reviewing student evaluations of the use of the institutional virtual learning environment between 2004/2005 and 2011, they found that student satisfaction ratings have risen over time. The highest ratings are for, unsurprisingly, access to online learning resources. The elements with the highest mean importance and satisfaction ratings in 2011 were "accessing unit guide and other unit information" and "accessing unit lecture, tutorial or lab notes, etc". According to Palmer and Holt, although those of us working in learning technology research might see these as "basic functions" of a virtual learning environment – they are quite clearly what students value. In addition, Palmer and Holt's interesting representation of their data in vector graphs also clearly show that there have been improvements in how we engage students with the technology, with increases over time in the student ratings for "working collaboratively in a group" and "contributing and reading contributions to online discussions". As with the Falloon study, technology is used to provide access and the teachers add value through their design of engaging discussions and group work activities.

Amanda Rockinshon-Szapkiw reminds us of the importance of student satisfaction in her study on doctoral candidates' use and perceptions of a collaborative workspace. Once again technology is used by doctoral students working at a distance to access their supervisors. An analysis of the supervision process showed that it is necessary to keep track of the review and rewriting of documents associated with the dissertation. Useful, functional access would be about improving the workflow between student and supervisor. Evaluation showed that by far the most popular feature of the collaborative groupware system introduced was "My libraries" – a document store where drafts were checked in and out, to help improve the flow and organization of the dissertation process. Crucially, doctoral candidates who used the system extensively had significantly higher student-to-student connectedness and student-to-faculty connectedness compared with doctoral candidates who use it moderately on a limited basis. Other than being an elegant example of a specific use of technology to meet a clearly defined need, this study helps us unpick the relationships between satisfaction, use and effect.

While some of the previous articles in this issue have referred obliquely to the role of academics in adding value to technology-enhanced learning, Margot McNeill's study sets out to examine the influence of teachers on the use of technology.

She summarises evidence suggesting that teachers' beliefs influence course design and the use of technology in courses. This is a clear statement that although technology offers opportunities for diagnostic, formative or summative assessment, academic practice is the key to how they are used. She finds that academics' attitudes towards, understanding of, and confidence with technology are all factors which influence the choices they make about technology use.

Finally, Gorissen, Bruggen and Jochems demonstrate to students the value of having access to lectures anytime and anywhere, showing that students use these recordings as a replacement for missed lectures and also to support preparation for exams at the end of the course. Almost all students who accessed the recorded lectures did so from home, using this access to help organise their busy schedules and fit learning alongside other obligations. They also used the functionality offered by having a recording, such as one student who described watching in 20-minute chunks and taking breaks, and another watching the parts "I think I need to watch again". Notably, these students were not exercising a preference for online over face-to-face lectures; they were gaining access to teaching they found inaccessible or difficult to access when only provided in face-to-face format.

This collection of articles shows that from art and design to science, from secondary school to doctoral studies, technology is used to make more learning opportunities accessible to more students. The carefully designed research studies published in *Research in Learning Technology* and elsewhere are helping us to understand how to exploit this accessibility in ways that suit our local contexts. Fortunately, my answer to the question, "what's the benefit?", has changed over my 15 years in the field from "technology has the potential to ..." to "studies show that ...". These studies allow us to examine the nature of access and other such benefits of technology and debate their implications. It has been a pleasure to discuss such issues with authors, reviewers and editorial board members during my editorship and to be able to facilitate the dissemination of this research.

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