



editorial

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E-learning for psychiatrists

SUMMARY

E-learning is an expanding field in which many psychiatrists are active through teaching, training and pursuing their continuing

professional development. Much of the benefits of e-learning are due to the implementation of educational principles rather than the medium itself. The College has invested

in its own e-learning website as a service for members. However, it should not entirely replace face-to-face lectures, tutoring and mentorship.

Computers have been burdened with extravagant claims of being world-changing, but in practice the full benefits take years to bear fruit and may only ever complement existing approaches (Edgerton, 2007). The quill has largely been ousted by the ballpoint pen, but the graphite pencil is holding its own. Nevertheless, the computer and in particular the internet is increasingly the first place information is sought (including researching this article). E-learning is a million-dollar industry but is it a worthwhile endeavour? As the editor of the College's continuing professional development website (CPD Online), you would be correct in assuming I am going to conclude in the affirmative, but e-learning benefits are not to be gained without thought and effort.

What is e-learning?

The educational theories that have helped shape e-learning have developed from psychological research. These include behaviourism, where learning is seen as being conditioned and/or shaped through association or reinforcement, which can be either positive or negative. Cognitive theory is based on discoveries on how the brain processes and stores information. It has brought ideas for improving learning, such as giving content in manageable portions (chunking) or using visual and auditory materials together, and it argues that learning is enhanced if the material is meaningful and relevant. Constructivism focuses on the social and contextual aspects of knowledge, and argues that learning is a creative process enhanced by the pupil teaching others in turn, restoring some credence to the old medical aphorism for mastering practical procedures, 'see one, do one, teach one'.

The jargon of academic education may be extensive, but the world of information technology seems to be able to create new buzzwords and acronyms by the month: computer-delivered, computer-assisted, online learning, virtual learning environment (VLE), web course tools (web CT) and learning management systems (LMS). The term 'e-learning' signifies that a personal computer is

no longer necessary, as other electronic equipment such as mp3 players and mobile telephones can also be used. The actual activity can range from reading papers or listening to podcasts online, to multimedia modules or courses using text, sound, animation, video, links to other websites, and a variety of interactive elements including a final assessment to have the activity credited and results stored. Arguably, with the internet making knowledge available to all, the reputation of educational institutions increasingly rests with the quality of their assessments. Using electronic methods to assess students is in itself an evolving discipline. E-learning systems can incorporate diagnostic tests to pitch the content to the correct level, formative assessments to help the student check their understanding as they progress through an activity, and summative assessments to gain a credit and/or grade for the activity. For any assessment, the nearer the test is to the actual task, the greater the validity (e.g. it is easy to measure computer skills accurately online). In other fields, however, producing high-quality assessments can be a challenge to educators. Indeed, the rationale for introducing workplace-based assessments was to measure key aspects of performance omitted by traditional approaches. Conventional medical exams increasingly feature multiple-choice questions of varying degrees of complexity, with true/false options being replaced by 'choose the best answer' and 'extended matching'. Poor examples can pose questions which cannot be answered from the course content or are too easy to guess by avoiding the 'always' and 'never' options. When using e-learning technologies in 'high-stakes' exams to obtain specific qualifications, security is a key issue, with programs to detect plagiarism becoming standard and rigorous efforts made to verify the identity of the candidate.

Limitations of e-learning

Expecting e-learning to substitute for all previous systems of education and training is unrealistic. Social aspects of



learning such as hearing what your peers and instructor make of the subject can be lost. Individual learners may vary in their confidence in using computers (Kruse, 2002). Badly designed modules may claim to be interactive, but in fact are largely text-based with the only interaction required of the student being to click on the 'next page' button. On a more practical level, the hardware has to be available, and with sufficient bandwidth access to the internet to avoid frustration with waiting for pages to load. Organisations such as the National Health Service (NHS) may centrally limit their computers' access to websites, particularly when it comes to 'streaming', that is directly playing video clips over the internet. Also, as Postman (1993) pointed out, when introducing new technologies, we have to consider what might be lost. The move to electronic access can happen at the cost of reduced availability of print journals and books.

E-learning in higher education

As institutions whose primary purpose is education, universities have been great innovators of e-learning. Some have courses which can be wholly completed online, and all now have websites which give information on timetables, deliver and store lectures, hold e-portfolios of the student's work, and allow students to contribute to discussion boards on academic and social topics. Medical schools offer multimedia modules of increasing sophistication, with simulated cases combining basic science and clinical material (Hare *et al*, 2007), or allowing practice in specific skills such as interview techniques using video clips (Williams & Harkin, 1999) or interactive virtual patients (Fitzmaurice *et al*, 2007). Individual case studies, having all but disappeared from medical journals, are finding a new role as interactive 'games' where students make choices from offered options of history taking, investigation and management, leading to different pathways and clinical outcomes, thereby developing decision-making skills.

Instead of writing reports of their research, student-selected components can now involve writing webpages, weblogs (blogs) or wikis (a website or a similar online resource which allows users to add and edit content collectively). Computers can now track individual contributions, removing some of the difficulty of marking joint projects. In addition, conventions for referencing material sourced on the internet are evolving.

Notwithstanding, medical students of today express wonder that their teachers somehow completed a medical course without access to Wikipedia. These newer features are examples of the concept known as Web 2.0 – instead of computer users purely being passive recipients of online information, they are moving to create and customise contents in collaboration with others, with knowledge being held in social networks. Observing this change, Siemens (2005) has proposed a further educational theory 'connectivism' and suggests such activities might profoundly affect the way we learn, and even think, in the future.

All this aside, not everyone agrees with the wholesale adoption of computer-delivered education. After one

medical school in Australia abandoned lectures in favour of online materials, pleas have been made to reinstate them so that students and trainees have the necessary exposure to passionate role models (Ferrari, 2006).

Postgraduate training

There are proposals for centralised online courses to allow junior doctors to prepare for postgraduate exams. This is already the case with the Royal College of Radiology, where the electronic storage of X-ray images and scans is increasingly becoming standard practice. Attempting to deliver the whole MRCPsych curriculum in this way might be a good starting point to convey factual information in a structured manner. However, the trainee would again lose the chance to hear local specialists lecture on their personal areas of expertise. Although it is relatively easy to preserve the anonymity of computed tomography scans, getting informed consent to use online video clips of patients demonstrating psychiatric signs and symptoms would be very problematic. In any case, actually acquiring the necessary skills for psychiatric practice (eliciting symptoms, considering the differential diagnosis, formulating treatment plans and explaining them to patients in a variety of contexts) will always require considerable experience with real patients.

Continuing professional development

As doctors we need to keep up to date throughout our careers – active coaching is seen as essential for sportsmen and women, never mind professionals dealing with ever-changing clinical situations. Some of the benefits of online delivery are that learners can work at their own pace, practice activities and get feedback on their grasp of the materials without hindrance, and can learn wherever and whenever is convenient to them. In a survey of psychiatrists, 42% said the timing of educational courses was a major obstacle for participating in CPD (Newby, 1999). There is also the economic benefit of employers not being required to cover travel and subsistence costs. Online learning may be particularly useful to practitioners in rural locations. Moreover, meta-analyses of research to date have demonstrated that e-learning is not just popular with consumers but that it is equally, and in some respects more, effective than conventional approaches (Sitzman *et al*, 2006). However, Ally (2008) and Chan & Robbins (2006) argue that the body of research demonstrating the superiority of e-learning does not result from the unique properties of the medium of delivery of the materials, but rather the sound application of learning theory that underpins their construction.

E-learning resources for psychiatrists

Launched in 2003, the BMJ Learning website was one of the first UK publishers to develop e-learning resources. Aimed initially at primary care colleagues, it now has several modules on psychiatric topics. Free to British Medical Association members, the BMJ site, in line with



other CPD websites, also provides a personal area for each subscriber to track modules both started and completed, with space to make reflective notes on the module's content. Other websites offer 'free' modules but they are typically linked to pharmaceutical and market research companies (www.ehiprimarycare.com/news/1405/doctors.net.uk_launches_pharma_marketing_arm). More than a third of the psychiatry and mental health modules currently available through the American Medscape Continuing Medical Education website are about attention-deficit hyperactivity disorder (www.medscape.com/psychiatry). All these modules, and most of the ones on other psychiatry topics, are produced with the support of educational grants from the pharmaceutical industry, underlining recent concerns about the promotion of psychotropics under the guise of education (Timimi, 2008).

The Royal College of Psychiatrists chose to set up its own independent CPD website to provide learning materials designed for trained psychiatrists. It was launched in spring 2007 and now offers 34 podcasts (Agrawal, 2007) and 55 interactive multimedia modules, for an annual subscription well below the cost of a day's attendance at a conference. From our usage statistics, other than the free introductory modules, the most popular module is the Pharmacological Management of Resistant Depression, followed by the Mental Capacity Act and the Recovery Model. Some areas, for example Child and Adolescent Psychiatry, are somewhat sparsely provided, but we are working on it. We have to be patient with our authors who are fitting in writing modules around busy clinical roles. We haven't opted for the full Web 2.0 approach of allowing subscribers to directly edit the modules, but we do welcome feedback. Currently, these comments are not published, but such refinements can be added as the website undergoes periodic redesign. As Benjamin *et al* (2006) observed, when setting up online systems, there is no use in waiting for the perfect one to be developed; instead, get started and adapt and improve as you go.

Conclusion

Learning is a life-long process some of which is serendipitous, but much of which can successfully be pursued by using well-designed online resources.

Declaration of interest

K.H. is the editor of CPD Online and has spent more time on the internet than she would care to know. Nevertheless, her children think it's a hoot that anyone considers her an expert in digital matters.

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