

A repository of pharmacology multimedia learning objects for pre-registration and post-registration medical and nursing courses

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By searching Google Scholar, Wikipaedia and other learning repositories, learners have access to a wide range of on-line pharmacology materials to support their studies. There are however problems with this broad brush approach to discovery which might negatively impact on learning; the materials may not be accurate, they may be of low multimedia quality and they may not be fully aligned with the learner's needs. We have developed a community based methodology in which tutors and learners play a major role in the development of quality assured, multimedia learning objects (Boyle et al, 2006) that are packaged and tagged using SCORM compliant guidelines and stored in a repository. Learning objects have a single defined learning goal and include activities and self-assessment. Pharmacology learning objects have been developed using these methods and offered in a range of courses in medicine and nursing.

Previous evaluation research on embedding pharmacology learning objects in a post-registration non-medical prescribing course used questionnaire data from three successive cohorts to evaluate the use of ten learning objects focussed around pharmacology concepts (Lymn et al, 2007). Student's perceptions of their own understanding of pharmacology concepts increased substantially following the introduction of learning objects to supplement the pharmacology component of the course. Student evaluation of the attributes and design of the learning objects was universally positive. A small number of students were followed up by telephone interview one year after qualification, 50% had continued to access the learning objects post-qualification and had recommended them to others. We are currently carrying out evaluation studies on more learning objects developed using the same methods, covering 'Volume of Distribution', 'Aminoglycoside Dosing', 'Introduction to 'Drug Clearance' and 'Clinical Implications of Clearance'.

Although, this development method has been shown to produce materials aligned to the learner's needs, a related issue that still needs to be addressed is that online materials from open, shared repositories often fail to reach their full pedagogical or economic potential, because they are not reused by tutors and learners (Currier and Campbell, 2002). This is partly because they are often difficult to adapt and contextualise for particular courses. We are addressing this issue by developing tools to allow repackaging and repurposing of the learning objects using a tutor-friendly interface. A series of learning objects on cell signalling and receptors are being produced in this new format. We will discuss the development and evaluation methodology in the presentation and demonstrate some of the learning objects from the repository.

Boyle,T, Cook,J, Windle,R, Wharrad,H, Leeder, D & Alton,R (2006) in Learning in Tertiary Education: Who's Learning Who's Technology? (pp. 256-265). Sydney: Sydney University Press

Currier, S & Campbell LM (2002) 19th ASCILITE conference proceedings.

<http://www.ascilite.org.au/conferences/auckland02/proceedings/papers/059.pdf> (accessed 1.12.06)

Lymn, J, Bath-Hextall, F & Wharrad, H J (2007) BMC Nursing (in press)