

Reusability: cultural, political and (occasionally) technical issues

Dawn Leeder, University of Cambridge, Clinical School dcl25@cam.ac.uk

Paul Garrud, University of Nottingham, Graduate Entry Medicine (GEM) programme
paul.garrud@nottingham.ac.uk

Abstract:

Current elearning development is moving away from courses and more towards the resources that actually form the components of those courses. These components are frequently called reusable learning objects (RLOs). RLOs present a number of educational advantages compared with more traditional course-based approaches. Because they are stand-alone resources that encompass a single chunk of learning, they have the potential to be used in many different ways and across disciplines.

The Universities Collaboration in Elearning (UCEL)¹ is currently utilising a variety of technologies to develop reusable learning objects (RLOs) as a cost-effective, collective solution for the creation of high-quality interactive elearning resources to support and enhance health professional education. UCEL RLOs are designed with substantial reusability: this means they are generic, span a wide range of subjects and thus are extremely flexible. The availability of a collection of RLOs is enabling UCEL to start to address a number of new pedagogic issues. UCEL is embarking on a programme to evaluate whether an RLO developed primarily by teachers in one discipline (say health education) can be readily adapted for use in the teaching of a similar concept in another, unrelated discipline (say engineering or economics). If this approach can be validated, the cost-effectiveness of the creation of RLOs would be much further enhanced as a result of the greatly increased reusability of the RLO.

UCEL RLOs are web-based multimedia modules that support a single learning objective. This means they are self-contained, stand-alone 'chunks' of learning. They consist of four components:

- Presentation – what the learner needs to understand
- Activity – something the learner must do
- Assessment – to see how well the material has been understood
- Links - external resources that support the learning objective

By selecting RLOs that are the most generalisable, and then using as generic examples as possible, UCEL is pioneering methods of maximising reusability. It is UCEL's hypothesis that an RLO can be adapted to aid learning in a variety of disciplines by customising just the assessment component to the particular discipline (though activities can also be customised by using external data). The majority of the RLO does not require customisation, merely the sections that need to be relevant to engage the interest of the specific learner. Examples of this approach currently under evaluation include RLOs covering a number of statistical methodologies and an introduction to research methods. The experience obtained to date provides evidence to address many of the issues related to whether the creation of generic teaching materials is indeed possible and desirable.

Reusability, however, is not primarily a technological issue (although the focus has formerly been on the technology since that was the main driving force). More recently a new wave of educators have taken up the challenge and have shifted the focus to teaching and learning (which UCEL argues has obvious benefits for teachers and students alike). There are also enormous benefits and challenges associated with multi-institutional, multi-disciplinary collaborations as this paper discusses.

¹ A collaborative project, between a number of UK universities, to produce high-quality e-learning resources. (<http://www.medgraphics.cam.ac.uk/ucel/>)