Designing and developing the next generation of re-usable learning objects

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This symposium will present successful work that has been undertaken at London Metropolitan University and by the Universities' Collaboration in E-Learning (UCEL) in developing, using and evaluating learning objects as a starting point for discussion. It will also illustrate how this experience is informing current research in developing the next generation of re-usable learning objects.

The concept behind re-usable learning objects (RLOs) is that the resulting objects can be re-used by teaching staff and learners, in a range of learning scenarios. It also implies that an object can also be re-purposed, for example adapted to suit specific requirements of content, language, preference etc.

The symposium will focus on three central issues that are crucial to the design and development of learning objects to ensure that they are pedagogically effective, 'fit-for-purpose', are used and can also easily be re-used.

The concept of RLOs ultimately works because there is a community that shares in the reuse of common resources. This first issue takes the community of practice one stage further to emphasise the collaborative development of RLOs. The symposium will outline and discuss the system developed by UCeL (Universities Collaboration in eLearning). UCeL has established itself as an effective community of practice, involving several universities who are collaboratively producing and sharing re-usable learning objects. This involves the close collaboration of teams of tutors and multimedia developers located in different institutions. The symposium will outline the progress to date, and discuss how this collaborative model for developing RLOs can be further developed and refined.

A second key issue in developing eLearning objects is quality assurance. UCeL has developed a two-stage development model with quality assurance testing at each stage. The first stage culminates in the specification for the new RLO. This specification is sent for peer review, where it is evaluated against a set of quality criteria. If it passes this assessment, the RLO is then passed to the multimedia developers (often located in a different institution) who develop the specification into a multimedia product. The second stage of quality assurance again involves external assessors who evaluate, in this case, the proposed operational RLO. The discussion on this theme will involve consideration of the adequacy of such tutor based quality assurance systems.

The third issue focuses directly on the structure of the learning objects being developed. Learning objects tend to act as fixed 'chunks'. The local tutor can select or reject these RLOs, but they cannot easily, or at all, adapt them for local use. A major challenge for the next generation of RLOs is to develop RLOs that support adaptable modification to meet a range of learning demands. The symposium will outline the ideas of generative learning objects (GLOs). Generative learning objects are specifically constructed to allow the adaptation of the basic object structure to meet the needs of different learning situations. The discussion theme concerns how this might be achieve, and the educational benefits of such flexible learning objects.

Keywords: reusable learning objects, generative learning objectives, collaborative development