

Re-using externally sourced learning objects

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This paper seeks to highlight selected aspects of the Joint Information Systems Committee (JISC)-sponsored 'By THE Numbers' project (JISC, 2009). This programme sought to uncover issues involved in sourcing, re-using and re-packaging learning objects sourced externally to the institution. In recent years the expansion of higher education has led to increasing student numbers linked to a widening range of student abilities and experience. At the same time reduced resources – particularly time for teaching, assessment and feedback – have led to further pressures which have been exacerbated by an increasing 'subject scope': the need to cover broader as well as deeper content and skills. This means that modules with narrow ranges of materials and supplementary resources may not be appropriate for today's education and academics may not have sufficient time available for the production of a wide range of materials; hence sourcing of materials produced by others is a concept worthy of exploration.

The project's aim was to allow flexibility in assessment, learning and teaching through the use of reusable learning objects (RLOs). One definition of an RLO is "an interactive WWW-based resource based on a single learning objective which can be used in multiple contexts" (University of Nottingham, 2009), so an RLO might, for example, include slides, exercises and notes on employability that could be used in different subjects and at different educational levels. A further aim was to source or produce a bank of supporting activities and materials that would allow tutors to cope with variations in ability, experience and expectation. The final aim was to produce a report and case studies documenting the cultural issues involved in the sharing of content.

Learning object repositories

Consultations with staff, students and employers were maintained throughout the project. In parallel to these consultations a review of repositories was instigated to select and categorise appropriate objects. A repository is a place where resources can be stored and retrieved: "Repositories of training and educational materials offer a range of resources developed by many different organizations and individuals for different subjects, educational levels, and purposes" (Wikieducator, 2008). Repositories such as JORUM and MERLOT, educational establishments such as CORNELL and MIT, and commercial sources such as BizEd were searched thoroughly. The team started by looking at related work, including the Streamline and Persona projects at Leeds Met that

looked into repository processes. It is worth noting the major problems encountered at this stage. As with any 'directory' (especially web-based sources) there were problems with materials and the links identifying them being up-to-date and fully descriptive of their purpose, extent or technical details. More importantly from a re-use and re-publishing point of view, details of the original creators and hence intellectual property (IPR) holders were often harder to establish. Any repository is only as good as the organisation and the regular housekeeping supporting it. Full details of any project – the team involved and the terms under which it was created – should be provided. This supported the By THE Numbers team's contention that it is important to produce complete 'packages' of materials that include full descriptions, technical and briefing documents.

Software tools for re-purposing

Discussions with JISC, learning technologists and others experienced in 're-purposing learning materials' suggested several possible pieces of software. Using these software tools in an everyday environment was an important part of the project team's evaluation. Most of the re-purposing tools appeared to be aimed more at the technically minded. Using them might present barriers for the typical (hard-pressed) academic – again this would work against wide-scale production and re-use of materials. Many projects are run by the technically competent for the technically competent. Widespread take-up of use and re-use of materials needs a simpler approach and more consideration for the end-user.

Working with others

A key issue in this project was that it called heavily on the goodwill of others outside it. Engaging authors of externally sourced materials became increasingly difficult as soon as any hint of written clarification of Intellectual Property (IP) was involved – YouTube videos (a rich source of materials) being a particular case in point. Attitudes to re-purposing and re-packaging varied but often reflected the experience, background and career stages of the staff involved, with mid-career academics generally less enthusiastic than those new to academia. These are, obviously, generalisations made from a relatively small sample. However, it is possibly significant that they reflect comments made at workshops by other JISC ReProduce project teams. Most significant is the simple conclusion that an environment that might be expected to be more co-operative (the academic

world) exhibited reticence. This is a cultural tendency that needs to be addressed if 're-purposing' or sharing of materials is to become more prevalent – and more effective.

Outcomes

The basic concept of re-use of content would at first glance appear straightforward. It would appear that judicious choice of what is re-purposed is key to reducing the number of problematic issues involved. Selecting an item of film from a generic source may involve a range of performing rights to be cleared with the owner and the performer(s) along with further complicated dialogue around using it in a different way to that intended; conversely a simple accounts exercise on a learning objects repository, with clearly noted owners and pre-cleared IPR, may be straightforward. In many ways re-purposing can be as difficult or as easy as one wants to make it – of course it may be that a particular piece of content is a must-have and that all the barriers are worth overcoming. Nevertheless issues such as finding, choosing and using the right approach to re-purposing – together with the pervasive issue of IPR – will get in the way to a greater or lesser extent.

In an ideal world re-purposing content would be a very efficient process, possibly akin to putting a new look on an existing core of content or materials, but the team's experience has not suggested that this is so. If the material is exactly what you need it will have to be taken apart to 'disaggregate' the relevant sections of content, which can be very time-consuming. Second, there is an issue of currency – just how up-to-date is the material? The project's experience is that this will often depend on the level and subject area. As an example, Level 1 finance materials tend to date less rapidly than higher level materials or those in subjects that change rapidly, such as technology. There is an argument for working in blocks and stages to create multiple versions of the materials (often an output from the workflow anyway) to allow unpicking and different formats and sizes of materials. This could be, for example, video output for computer and iPod. This also allows staff to add formative tests or any other exercise more easily in a range of places.

Then there is the design issue. One of the key learning points of the project has been that when breaking down content into objects small enough to be re-used, the breaking down process is costly and time-consuming. The team found that a number of resources such as lecture notes would contain a number of topics; breaking these down gave a lot more flexibility for re-use at a later point. Ideally this would be done by the depositor of the original materials, but almost never is, so instead of a bottom-up design process, the end result is a top-down process where the content is put together and then 'chunked up' later into individual resources. This also suggests that the producer of materials needs to work with both the module and future external usage in mind – not all content producers are likely to want this overhead.

Repositories have been interesting to engage with; it is surprising that there is a lack of clear and consistent standard taxonomies and hierarchies for searching repositories. It's almost as if the repositories have arrived, been filled with material, and then that material has been indexed by a group of people in different countries. With very limited time to re-purpose, access to external content has been critical, and the content has certainly not always been what it said 'on the tin'. It would be beneficial if content depositors had training in this area, though it is recognised that this is another overhead.

Finally, another critical issue has been that of intellectual property – it is not always easy to find out who owns a webpage. Unfortunately IPR clearance also has the biggest potential penalties for getting it wrong – legal battles are not welcome in most institutions!

In terms of overcoming obstacles and recommendations for the future, the following should be considered. The older the material that has been reused, the longer it takes to refurbish – materials from newer projects are very efficient because the material is current and still familiar to the author. Consideration is taken of the level for which the content was initially developed along with its propensity to date. IP issues are enormously complex and take multiples of the time initially estimated. Repositories are potentially rich sources of material, but are completely useless if that material cannot be found or isn't what the index suggests. Some centralised resource or support for learning technologists on the handling of IP issues would be beneficial.

References

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