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# Contributing to an open resources repository: sharing and constructing knowledge and expertise across borders

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## ABSTRACT

The idea of building open-access repositories of learning resources is consistent with current initiatives in the areas of widening participation and knowledge sharing in a ‘globalised’ world. Despite some obvious advantages such as the potential for co-creation of resources, contributing to an Open Resources Repository (ORR) is not an entirely unproblematic proposition. Learning resources, as a rule, reflect assumptions held in the particular context in which they are created, and, so, present potential barriers for re-use and adaptation to different contexts. Language differences provide only the most apparent borders.

This paper examines the notion of an ORR and what it may mean to use and contribute to such a repository, proposing a provisional framework to describe the types of issues that may arise. This framework is by no means exhaustive, but it suggests some of the many borders that must be crossed when a resource, developed in a context, is re-used in another. In short, this paper suggests that, in addition to pedagogical, technical and language-based considerations, themselves contextually-located albeit in different ways, there are further issues at stake that may lead to puzzling epistemological, organisational and ethical questions.

## 1. Introduction

The idea of building open-access repositories of learning resources is consistent with current initiatives in the areas of widening participation and knowledge sharing in a ‘globalised’ world. Indeed, the Open Educational Resources (OER) movement has gained rapid support for its goals of universal access to education and a variety of initiatives in the area are currently underway (Smith & Casserly, 2006). Nevertheless, despite a host of immediate advantages such as the potential for co-creation of resources and some convincing arguments supporting the development of the movement (e.g. Hylén, n.d.), contributing to an Open Resources Repository (ORR) is not an entirely unproblematic proposition. Indeed, discussions on sustainability feature highly in the agendas of current projects. Sustainability in Wiley’s (2007) conception, is (or should be) not concerned with costs *per se*, but with costs incurred to meet the broader aims and objectives of the OER movement in respect to sharing and re-using OERs. Consequently, there is merit in the idea that attention must be paid to the nature, in addition to the technological aspects, of the materials being shared.

OECD (2007, p. 31) suggests that ‘a closer look at the definition [of OERs] shows that the concept of “open educational resources” is both broad and vague’. Indeed, from an original focus on learning resources (UNESCO, 2002), the term now seems to encompass tools (e.g. social software and content management systems) as well as ‘implementation resources’ such as licenses and ‘best practice’ guidelines (Margulies, 2005, quoted in OECD, *op. cit.*, p. 31). This paper, however, is concerned with issues surrounding learning resources and, specifically, ‘content’ (although a discussion on the paradox implied by splitting ‘content’ from ‘media’ is outside the scope of this text, albeit an interesting issue). Learning

resources, as a rule, reflect assumptions held in the particular context in which they are created, and, so, present potential barriers for re-use and adaptation to different contexts. For example, there is a considerable difference between the types of resources provided by Wikipedia (<http://www.wikipedia.org>), shaped as an encyclopaedia, the MIT's OCW (<http://ocw.mit.edu>), based in a campus-based institution, and the OpenLearn project (<http://www.open.ac.uk/openlearn>) at the UK Open University (UKOU), which is a distance-teaching university. The resources shared in these repositories are quite diverse given the very different nature of the respective source materials and institutions supporting the initiatives. Language differences provide, therefore, only the most apparent borders.

This paper examines what it may mean to use and contribute to an OER, proposing a provisional framework to describe the types of issues that may arise in relation to learning resources, in particular. This framework is by no means exhaustive, but it suggests some of the many borders that must be crossed when a resource, developed in a context, is re-used in another. In short, the paper suggests that, in addition to pedagogical, technical and language-based considerations, themselves contextually-located albeit in different ways, there are further issues at stake that may lead to puzzling epistemological, organisational and ethical questions. To illustrate these questions, the paper draws upon examples of resources made available by the UKOU through the OpenLearn's twin sites LearningSpace (dedicated to learners) and LabSpace (dedicated to educators), both available through the project portal at <http://www.open.ac.uk/openlearn>.

## 2. Contributing to ORRs: issues and questions

In an encompassing discussion of issues that confront the UKOU's OpenLearn, Ferreira & Heap (2006) propose, amongst a number of categories, some areas of concern arising from intrinsic characteristics of source materials developed for distance learning. These are materials that use well-understood techniques to support self-study based on the UKOU's successful Supported Open Learning model (please see Johnson, 2003, pp.36-45 for an overview of the model). They are created in teams led by subject-specific academics with considerable expertise in the pedagogy of their respective areas and a host of other personnel including editors, software and media developers, rights and support staff. For the LearningSpace, OpenLearn re-purposes excerpts from complete courses into *Units*, self-standing learning resources associated with varying study times. A detailed specification of Units is provided in Lane (2006), but these are the main characteristics:

- '3-20 hours of study time in size, ranging from roughly an evening's worth of study to a week's worth of study, part-time;
- Will probably be labelled as being at a particular Higher Education level ... as known within the QAA's [Quality Assurance Agency for Higher Education] Framework for Higher Education Qualifications [QAA, 2001]
- Are self-contained with no references within them to other Units and limited references to external URLs;
- May be subdivided into smaller sections or bits of 3-hours length;
- Will normally have no more than one learning outcome or competency per 3-hour bit;
- Can involve a mix of media but will use more activities than is traditional in a pedagogic text;
- Will comprise both material study time and learning thinking time.' (Lane, *op. cit.*)

It is important to note that, despite some parallels, the creation of Units is quite distinct than that of learning design based on a learning objects paradigm (Wiley, 2000).

In contrast with the Units' specification, the source materials are taken from courses written for supported, assessed part-time study over 6-9 months, and may vary in length from 300 to 600 hours, with some of the more recent courses ('short courses') requiring 100 hours of study over 3 months. There is, therefore, a significant gap between the source materials and the finished, re-purposed Unit, which raises issues that include (no particular order/hierarchy is implied):

- Linearity
- Components
- Localisation
- Topicality

Linearity refers to the use of paths to structure a set of learning resources and, thus, provide a coherent experience to the learner. Linearity may be imposed by the use of a theme that brings different topics together (for example, 'e-Government' in an ICTs module), or it may be a straightforward epistemological necessity arising from the area of knowledge under consideration (for example, the gradual construction of a philosophical argument, or the gradual development of knowledge and understanding required to tackle a higher-level mathematical problem). Linearity thus raises questions concerning the potential need for listing pre-requisites to accompany a learning resource, or, perhaps more appropriate to Units, providing or linking to subsidiary resources to supplement the source materials. Altering excerpted material to create a self-standing resource is a move that can have a significant impact on the pedagogical structure of the materials. Crucially, the use of hyper-linking enabled by Web-based technologies does not circumvent the fact that, even within a network of possible directions, trajectories are always linear from one location to the other in the network.

The combination of media associated with a course excerpt often creates questions vis-à-vis the available budget, which may, as a consequence, imply the need for alternatives to be sought. For example, IT and computing courses may include, as a core component, commercial software packages that may not be readily available to an ORR, and this is critical for the LearningSpace in its ideal of providing coherent, complete-in-themselves (as much as possible) learning experiences. Indeed, the role of third-party elements within the relevant set of source materials may be such that, if these elements cannot be used, the envisaged Unit may become unviable. There are also constraints imposed by the present state of development of the XML/XSL tools and the VLE used; for example, it is currently not possible to deliver many of the rich, interactive components developed at the UKOU using Java.

In addition to much in-house developed software, UKOU courses often include audio-visual elements (many developed in collaboration with the BBC within the long-standing relationship between these institutions), and these pose their own unique challenges (including the high cost of re-use of BBC-owned assets). UKOU AV material has been delivered to students in a variety of formats exploiting the latest technologies available during the lifetime of a given course, ranging from VHS to current interactive DVDs. Many of these materials do not exist in digital form, hence must be digitised prior to use, adding to the costs. The poor quality of streamed media has deterred widespread deployment, leaving the option of downloading higher quality formats. The question then becomes that of 'how much' a learner can be expected to download, given that some video examples exceed 120Mbytes (e.g. a 10 minute video clip could take 35 minutes to download over ISDN). Such considerations have had a significant impact on re-purposing of AV materials, which in their former life would have been supported by CD-Audio or DVD and, thus, would have been integrated within the course using pedagogical models that do not necessarily translate ideally to Web-

based presentation (in some cases, AV is presented as subsidiary, ‘enrichment’ material). Creating a new, more interactive context for re-purposed AV materials poses a considerable challenge in terms of pedagogy and technical infrastructure.

A further issue impinging on the use of AV (as well as graphics, generally) arises from consideration of accessibility questions, which, in practice in the UK, translate into the need for compliance with the Special Education Needs and Disability Act 2001 (SENDA) specifications (online at <http://www.opsi.gov.uk/acts/acts2001/20010010.htm>). Although the university has counted on a service (The OU Access Centre <http://www.open.ac.uk/cater/>) that adapts materials for different media (amongst other roles), it has now become a core task of course development to consider questions of accessibility. In particular, Web-based materials must contain image descriptions and AV transcripts that can be processed by a screen reader. Such descriptions exist for most courses originally developed for the Web, but most materials put forward for re-purposing by OpenLearn revolve around print that includes a myriad of images, and this has an impact on project resources as SENDA-compliant materials must be created in such cases.

The series of four units created from the preparatory booklet (material sent to student prior to the official start of the course) for the course A103 *An introduction to the humanities* illustrates some of these issues. The booklet consists of 6 chapters that explore the theme ‘war and commemoration’ as a unifying thread upon which is based the teaching of fundamental study skills in the areas of arts and humanities. OpenLearn has re-purposed the booklet into five separate Units (listed as a series of A103-based units under ‘Art and history’ at <http://openlearn.open.ac.uk/index.php>). One of chapters could not be re-used due to a refused permission to re-use a set of music lyrics and associated recording (it is important to note, however, that refusals such as these are very rare indeed, i.e. rights issues arise mostly due to budgetary constraints). The resulting Units still contain interesting and relevant material, and, indeed, the first in the series remains one of the most popular on the site, but a lot has been lost in the process of creating self-standing resources due to the removal of comments based on backwards and forwards references to other chapters in the booklet. This illustrates an interesting paradox in the area of re-use: at the same time that concerns with future re-use of materials support the need to adopt flexible ‘pre-versioning’ design principles (CURVE, 2002, Section 6), which suggest that integration devices such as those references should not be used in teaching texts, it is arguably those very devices that help lend coherence to the text and, assumedly, to the associated learning experiences.

The A103-based series also illustrates some questions surrounding localisation, a major area of concern regarding ORRs. Understandably, the theme and examples used in the materials are all UK-based, and the appeal of the Units outside their original national context is debatable. It is possible that these materials could be re-contextualised by substituting the examples with locally-relevant ones, and it is possible that the materials can be used to illustrate the point that ‘the teaching methodologies employed result in products that are grounded in and specific to the culture and educational norms of their developers’ (OECD, *op. cit.* p. 105). Localisation surely transcends the mere question of translating across languages, as it involves questions concerning the appropriateness, relevance and value of materials transplanted from one context onto another. On OpenLearn, specifically, care is taken to provide subsidiary explanations of UK- as well as UKOU-specific terms; this is, however, but a small gesture to help and encourage users based elsewhere in the world who may like to re-purpose those OERs, even if it carries with it the recognition that it is those users who are in the best position to adapt resources to suit their own needs and realities.

The final area of questioning listed above is that of ‘Topicality’, which concerns not only subject-specific but also pedagogical aspects of OERs. This is particularly relevant to the LearningSpace, which also acts as a ‘showcase’ of current UKOU courses that potential

students can draw upon to inform their decision on whether to register or not with the institution to study a ‘mainstream’ (paid) course. This ‘showcase’ aspect of the project is particularly problematic as it implies potentially conflicts of interest (e.g. between OER movement ideals and those of currently business-like approaches to education), but the concerns raised in respect to the LearningSpace Units are relevant more broadly because they arise from a view of ORR users that includes learners as well as other educators. From this perspective, it is imperative that attention is given to identifying patterns of renewal and updating of materials, which inevitably requires subject-based intelligence in addition to learning design expertise.

Despite the relative specificity of the source materials and OERs from which these considerations arise, they do suggest questions of more general concern. Table 1 provides a (provisional) framework that organises the main characteristics of learning resources that require consideration when these are re-purposed.

Learning Resources	
Structure	Media composition Accessibility elements Pedagogy
Location	Subject Curriculum Language Culture

**Table 1: Characteristics of learning resources**

Interoperability discussions tend to concentrate on technical (functionality and the need for standards) and legal aspects (copyrights legislation) involved in sharing resources, but, although these are legitimate concerns, they seem to obscure questions that arise from the importance of the *location* of resources. Nevertheless, when this ‘locatedness’ is clearly acknowledged, a host of important questions arise, and some of those of a pedagogical and an epistemological nature have been raised above. Indeed, contributing and using ORRs require a double move of de-contextualisation and re-contextualisation, which can not only modify profoundly the original intentions underlying the materials, but indeed misrepresent them.

Ethical concerns such as those related to potential misrepresentation are not an idiosyncrasy of ORRs, but they do indicate further concerns related to the location of OERs and ORRs themselves. OpenLearn, for example, confronts issues relate to ownership as an elusive relationship between authors and ‘text’ that cannot easily be captured in legislation; in practice, although copyrights of materials are held by the university, the relationship between authors and courses can be quite complex. Within the current scenario of change in Higher Education, in which business rhetoric and objectifying views of education become progressively more widespread, the vision of ORRs is not necessarily widely shared, and initiatives such as OpenLearn can be perceived as a threat to individuals as well as institutions. This poses potentially considerable organisational challenges. There are certainly practical differences between the production models proposed by Downes (2006), and institution-based projects adopting a producer-consumer model such as OpenLearn’s LearningSpace may have to grapple with issues concerning academic staff ‘buy-in’.

## 4. Conclusion

This paper has discussed issues arising from the nature of learning resources that impinge on their re-purposing for use in contexts different from the ones in which they were originated. The focus has been on pedagogical and subject-specific considerations viewed as areas of professional practice that are strongly bound to context. In short, whilst the value of ORRs and the resources they store is acknowledged, it is also acknowledged that this value too is strongly bound to context. This means that, despite some obvious justifications and motivations for the development and sharing of OERs, a number of issues are implied that may lead to puzzling epistemological, organisational and ethical dilemmas.

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