OlcoS

Open eLearning Content Observatory Services

Tutorial: SHARE Open Educational Resources (OER): publish and re-use
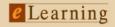
December 2007

About the tutorials:

Please note, that this tutorial (December 2007) is based upon web based information (http://www.olcos.org/tutorials/). It could be that the contents and links in this tutorial change, e. g. for technological changes. The latest version of the tutorial can be found on the Internet: http://wikieducator.org/Open_Educational_Content

Open Educational Content – Introduction and Tutorials

A collaborative development with the OLCOS project consortium (www.olcos.org).

The term **Open Educational Resources (OER)** stands for are educational materials and re-sources offered freely and openly for anyone to use. The OLCOS Tutorials intend to support students and teachers in the creation, re-use and sharing of eLearning material. Management staff will find information about how to implement open learning policies and activitities in their institution.

OLCOS (Open eLearning Content Observatory Services):

This tutorial is based on the work of people within the project OLCOS (www.olcos.org).
The project aims at building an (online) information and observation centre for promoting the concept, production and usage of open educational resources, in particular, open digital educational content (ODEC) in Europe. OLCOS was co-funded by the European Union under the eLearning Programme (Duration January 2006 - December 2007). Please feel free to contact info@olcos.org if you have suggestions for, or questions about the tutorials.

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eLearning

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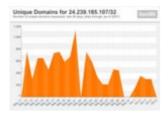
Co-funded by the EU Commission   eLearning

Objectives:

This tutorial provides information and practical tasks in
–   publishing and sharing open educational resources, and
–   facilitating the sharing of this new content by using suitable formats, licenses, educational metadata and visibility strategies

This tutorial invites teachers to publish and share open educational content. For that, learners should have knowledge about the creation of open content. The tutorial will take about 30 minutes. For that, internet access is needed.

1.   Introduction

A chart. Licensed under Creative Commons Attribution-ShareAlike 2.0. Source: Pseudoplacebo, Flickr (http://www.flickr.com/photos/pseudoplacebo/532735261/)

Dolores, a teacher in Statistics has been collecting online (web-based) learning materials during a few academic semesters, and now she decides to share them with other teachers and, of course, with the students taking her course. In fact, most of these resources are previous exercises solved by students in the classroom, but other resources have been developed by Dolores or by her colleagues as well, and Dolores is also aware of the thousands of additional resources available through the Internet.

Taking into account only her own resources, the total amount of available resources is estimated to be around a few hundred, comprising text documents, HTML and PDF resources, some videos and a few applets used in simulations, etc. In short: a large diversity of heterogeneous multimedia resources. All the documents available in non-open formats have already been converted into open formats following the recommendations of the Tutorial: "PRODUCE & REMIX OER: author and modify" (http://wikieducator.org/Open_Educational_Content/olcos/PRODUCE_%26_REMIX)

The Statistics course has also an interesting particularity in the learning scenario, that is to say, it is a (partially) common course for several degrees (Computer Science, Economics, Social Studies, etc.), each one of them with its special specification, but sharing a common core of content for all the degrees. Nevertheless, this fact is more a requirement than an advantage, as similar resources have been created for each degree, without any collaboration between the different teachers of Statistics. This situation could be improved by creating a single large repository in which all re-sources are shared, and some of them may be reused among the different degrees, as examples of specific applications.

2.   Publish OER

Ways of publishing

In general, the following options exist. OER can be published and distributed

- via email
- as a download on your own/personal/institutional website
- on a website hosting educational content
- in an institutional repository and/or
- in a thematic repository

Once these resources have been validated and described accordingly to the determined applica-tion profile, depending on the institution's policies, they are ready to be published and made avail-able to all the community, in order to promote their reuse. Therefore, the re-usability concept must be established in order to determine how these resources will be shared, who will have access to them, and so, but also the metadata used for their description.

Some questions need to be answered for determining the meaning of "re-use" in such a context:

- Who will use the learning resources? Students and teachers within the institution? Or any-one? Depending on the answer, resources could be set up in an internal repository with dif-ferent publishing licenses or repository with open access.
- Who will be granted to modify and upload new learning resources? Only teachers? Teach-ers and students? Or anyone?

Assignment:

Think about the situation in your own institution. If Dolores is your colleague, how would you define the possible "reuse"? Please comprise your institutional policy about learning and publication. Please write some comments at the Wikieducator-Page Open_Educational_Content/Comments about re-use of educational science in Institutions

Using existing repositories

Although the answers of these questions might be partially constrained by educational and institutional policies, in order to promote open access it is much better to publish in existing repositories rather than starting new ones, unless a list of requirements is fulfilled. According to McNaught (2006), a repository is more likely to be successful if it adresses (and satisfies) three main issues: materials, activities and people. Basically, this means that successful educational content repositories should be designed having in mind the following issues:

- are developed out of a genuine need within a community,
- have a core of committed promoters with sustained enthusiasm,
- articulate a clear direction and focus,
- consult with their user community(ies),
- establish a good management process,
- are open access,
- facilitate easy addition of resources,
- provide a reasonable number (critical mass) of resources,
- and have suitable granularity in searching.

In this case, the teacher needs to determine whether there is an appropriate repository for these resources or not, before setting up a new repository for them. The Tutorial: SEARCH & FIND OER (http://wikieducator.org/Open_Educational_Content/olcos/SEARCH) includes some guidelines for searching such a repository.

Furthermore, there is the possibility of searching for additional resources in Internet, and incorporating them into such repository, according to the application profile and license.

If the number of resources is small (i.e. less than one hundred), let's try to find an existing repository focused on the topic of the learning resources and publish them accordingly to the policies of

such repository (format, metadata, licenses and so). If such a repository does not exist, let's try to find a general purpose repository.

Tip:

Exemplary Collection of Open eLearning Content Repositories (http://wikieducator.org/Exemplary_Collection_of_Open_eLearning_Content_Repositories)

This is much better than publishing the learning resources in a public space (web page, wiki, or whatever) and then expecting possible users will find it by means of a searching engine (Google, for example). Visibility through Google is not a simply issue, and even if the appropriate metadata is used to ensure searching engines reach the page using the adequate keywords, the large amount of similar pages available in Internet makes very difficult to find any particular document.

Even if the number of resources is large (i.e. a few hundreds), it may to be helpful to try to publish them in a thematic repository. This ensures a higher degree of visibility, and it contributes to maintain such repository, improving it in both quantity and quality terms. Nevertheless, if there is not an appropriate repository, and the institution has the available infrastructure (for example a digital library), it is possible to set up a new repository which may be the seed for a hopefully successful larger repository.

Assignment:

Search a fitting thematic repository for Dolores and her colleagues. Please look for the terms and conditions for publishing own resources and needed information about the content. Please write some comments at the Wikieducator-Page "Open_Educational_Content/Comments about repositories for
statistics" (http://wikieducator.org/Open_Educational_Content/Comments_about_repositories_for_statistics)

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3.   Facilitation of the sharing

Prepare the learning resources for publication, according to the policies of the repository, but take also into account the following issues:

Possible benefits of re-using and sharing

From the point of learning material itself, the prime benefit of open content is that it can be actualised, corrected, modified, reused and rearranged more easily, in a collaborative approach. Better quality of the open content is one effect of these possibilities.

From the point of the creator (faculty) the facilitation of the re-use and sharing of open educational content means credits for the creator and could improve recognition, personal marketing, the creation of an accessible academic legacy, connections/networking/collaboration, and easier content dissemination.

Using suitable formats

It is highly recommended to use an open format (for more information look in the Tutorial: PRO-DUCE & REMIX OER: author and modify (http://wikieducator.org/Open_Educational_Content/ol-cos/PRODUCE_%26_REMIX).

Beside considerations about existing tools and time and effort for install other (open source) tools, Dolores should also permit modifications of her work. That means, she should create .odt or .html files instead of .pdf files, for example. If she decides to openly published the resources, she should decide about whom to permit.

Other important issue is granularity, the size of the resources made available, which may range from single elements or assets (images, texts, and so), to complete courses. Usually, the larger work volume of the learning content is, the more formats are involved in its description, and more complex is its maintenance by third parties.

On the other hand, it is also important to store educational content in compressed formats, in order to reduce network overload when such content is retrieved from the repository. Obviously, only open formats for compressed files should be used.

Using suitable licenses

If something should be "open content", this has to be declared with a special license. Notice than saying nothing about licensing for a given content means that the classical copyright rules apply,

so a decision must be taken with respect to.

The Creative Commons licensing model is a good starting point for sharing resources. Basically, there is only a rule: The more restrictions you impose upon a resource, the less reused it will be. Fostering the re-use means, that you should allow modifying your content!

You can find more information about this in the Tutorial: CHOOSE a license (http://wikieducator.org/Open_Educational_Content/olcos/CHOOSE_a_license).

Using educational metadata

At some point you may also need to consider how to describe your educational content. One of the important reasons to do this, is to facilitate search and retrieval and to increase the ability for content to be exchanged between different Learning Content Management Systems.

Besides Open Standards for software there are also specifications and open standards for describing educational content. The following metadata application profiles can be used to describe Learning Objects and other educational resources: SCORM (Sharable Content Object Reference Model; http://www.adlnet.gov/scorm/) is a collection of specifications and standards for web-based E-Learning content. The LOM (Learning Object Metadata; http://www.imsglobal.org/metadata/) of the IEEE LTSC has the goal of describing learning resources (digital and non-digital), which can be used in computer-based learning. There are attempts to investigate the usage of a range of open standards for the E-Learning content.

These standards are included in many of the learning or content management systems and software and some content repositories, but are not included in most wiki software.
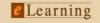

Web Resources:

Look in the SCORM tutorial and samples for ways to use the SCORM recommendation: http://www.docebo.org/doceboCms/page/29/Scorm_standard_tutorial_elearning.html

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Visibility strategies

As mentioned before, it is important to ensure the open educational contents are tagged with the appropriate metadata for giving credits to all participants in the life-cyle of each educational resource. Metadata is also used by searching engines to locate contents when browsing the Internet,

so it is a simple but efficient way to ensure a minimum degree of visibility.

There are three factors that determine the degree of visibility: namely, findability, accessibility and shareability. Once again, the more open a repository is, the more likely it is to succeed.

Findability starts by making diffusion of the educational content repository through the appropriate channels: mailing lists, other related repositories, and so. A good starting point is the Exemplary Collection of Open eLearning Content Repositories (http://wikieducator.org/Exemplary_Collection_of_Open_eLearning_Content_Repositories).

Accessibility means that all content in the repository is properly indexed and, therefore, can be retrieved using a friendly search engine, which should offer several searching and browsing capabilities: by keywords, by taxonomies, and so.

Finally, shareability means that it should be easy to the users to share their obtained results in order to propagate their searches to other users with similar interests or, on the other hand, to other repositories which might have additional contents related to the topic of interest.

Web Resources:

- Exemplary Collection of Open eLearning Content Repositories (http://wikieducator.org/Exemplary_Collection_of_Open_eLearning_Content_Repositories)
- Dublin Core Metadata Initiative (DCMI) Education Community (http://dublincore.org/groups/education/)
- Learning Object Metadata (LOM) at Wikipedia (http://en.wikipedia.org/wiki/Learning_object_metadata)
- Carmel McNaught (2006). "Are learning repositories likely to become mainstream in education?" In Proceedings of the International Conference on Web Information Systems and Technologies (http://en.wikipedia.org/wiki/Learning_object_metadata) and all the other information and tutorials about Open Educational Content (http://wikieducator.org/Open_Educational_Content)

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4.   Further Materials

Below you find further OLCOS tutorials. The materials are available in PDF format [pdf] or can be found online on the OLCOS wiki [wiki] .Because the content of the OLCOS wiki (http://wikieducator.org/Open_Educational_Content) will be updated we recommend you to visit the wiki.

Co-funded by the EU Commission   eLearning

- Overview [wiki]

- Introduction: PLAN the use of OER [pdf] [wiki]

- Tutorial: SEARCH & FIND OER [pdf] [wiki]

- Tutorial: PRODUCE & REMIX OER: author and modify [pdf] [wiki]

- Tutorial: SHARE OER: publish and re-use [wiki]

- Tutorial: CHOOSE a license [pdf] [wiki]

- Tutorial: USE open source tools [pdf] [wiki]

- ORGANIZE: Collections

  - Exemplary Collection of Open eLearning Content Repositories [wiki]

  - Exemplary Collection of institutions with OER policy [wiki]

  - Exemplary Collection of open content licensing approaches [wiki]

  - Exemplary Collection of open formats, educational standard and tools for producing open educational content [wiki]