Open Educational Practices and Resources

Presentation at the OECD-CERI
Second Export Meeting on OER
Barcelona, 26-27 October 2006

Guntram Geser and Veronika Hornung-Prähauser,
Salzburg Research - Austria
Viola Naust, FernUniversitaet Hagen - Germany
Overview

• Basic project information

• Project philosophy and objective

• Status of ongoing project activities
I. Project basic information

• OLCOS is a Transversal Action funded by the European Commission under the eLearning Programme

• Duration: January 2006 – December 2007

• Budget: 373.263 € (279.947 € funded EU)

• Project partners
  • European Centre for Media Competence, Germany
  • European Distance and E-Learning Network, Hungary
  • FernUniversitaet in Hagen, Germany
  • Mediamaisteri Group, Finland
  • Open University of Catalonia, Spain
  • Salzburg Research Ltd., Austria = project co-ordinator

• Website: www.olcos.org
Project co-ordinator

- Interdisciplinary research company
- 60 employees
- Owned by the State of Salzburg
- Technological R&D, eCulture, eLearning, socio-economic impact
- e.g. EduMedia Group: Focus on didactial innovation,
  - For example:
    - e-portfolios for competence based learning,
    - development of semantic social software for group/community learning,
    - monitoring and evaluation of European trends in „smart content tools“ for Education and Culture

www.salzburgresearch.at
II. Project objectives

Establish a virtual (online) *information and observation service* for promoting

- *the concept,*
- *the production and*
- *the usage of open educational resources,*
- *with special respect to* open (e-)learning practices *using open digital educational content*
• Focus on the development of self-organised learning and digital competencies/skills for the knowledge society – students and teachers

• OER is firstly about open educational practices for such development

• Open Content is a means to this end, i.e. supporting the need to change current educational practices

• Simple delivery of OER to teacher-centred “knowledge transfer” education does not make for a change
III. Education yesterday - today

Image sources:
http://www.uni-leipzig.de/cumpraxi/img/hoersaal_410.jpg
http://www.difaem.de/index.htm?/100Jahre/bildergalerie_geschichte.htm
http://www.bslonline.de/images/raum3e1.jpg
III. Students tomorrow

Multi-media competent and multi-tasking learners
"Highly media competent learners - learning informally"
III. Learners become active web-publishers
III. Web-based e-portfolios

Explore Wolf Hilzengauser

Elgg - Learning Landscape
Welcome Wolf Hilzengauser

Explore Wolf Hilzengauser
Communities | Owned Communities | Friends | Friend of | Friendship requests |
FOAF | Access controls | Invite a friend | Page help | Explore |

- Double-click to expand a node
- Left-click to move the display area
- Right-click to zoom

The visualization applet is experimental and may take some time to load.
III. Wiki-based collaboration

Welcome to iReWiki

This is a sample article. You may edit its contents by clicking on 'edit content'. You may also refine links to and from this page by clicking on 'edit links'.

iReWiki is a new kind of Wiki (a Semantic Wiki) developed by SalzburgResearch that allows users to annotate pages and links between pages with semantic annotations. Such annotations are useful because they give a machine a certain amount of understanding of the content that goes beyond merely displaying the page. This information can then be used for context-specific presentation of pages, advanced querying, consistency verification or drawing conclusions.

Currently, iReWiki can make use of some of the knowledge represented in RDFs and OWL schemata to display enhanced navigation tools. Furthermore, we implemented a sample "biology ontology" that automatically displays a taxonomy tree for biological objects.

Although iReWiki looks and behaves like Wikipedia/NedaWiki in many aspects, it is a complete novelty, and the system design significantly differs from other Wikis. iReWiki makes full use of Semantic Web technologies like RDF(S) and OWL using the Jena-RDF store.

A Tool for Knowledge Engineers

The "i" in iReWiki is the German word for "knowledge". That is because the purpose of iReWiki is to be an easy to use, collaborative tool that guides knowledge engineers in the process from unstructured informal texts (or semi-structured knowledge in the form of documents, lists, etc.) to knowledge represented in a formal language or ontology. Our aim is that domain experts who are not proficient in the other complicated tools and languages (like Protégé and OWL) used on the Semantic Web are nonetheless able to formalize their domain knowledge and make it accessible by other Semantic Web applications.

A typical workflow could be to start with a set of Wiki pages from Wikipedia and modify them according to one's needs and requirements. Thus, a knowledge engineer could gradually associate types with the pages and the links between pages, thus increasingly formalizing the knowledge represented in the Wiki. Finally, he could download the Wiki contents as RDF or OWL ontology for further use in other applications.

Try it out!

To show the capabilities of iReWiki, we have set up a sandbox server containing a few sample pages (mostly from Wikipedia). The sandbox server is available at http://ihlweb.wiener-direkt.de

Publications

The following publications are relevant for iReWiki:


Availability

iReWiki is available under GNU Lesser General Public License. Please visit http://iReWiki.org for an overview and the SourceForge Project Site (for downloads, currently only snapshots). If you require a different license, please contact the authors. Be sure to read the installation instructions on http://iReWiki.org, as the development snapshots don't contain much documentation.

Requirements

- Apache Tomcat 5.5.12 (or greater)
- JDK 1.5.0 (or greater)
- Jena-RDF 1.3.2.6 (or greater)

OLCOS - Open eLearning Content Observatory Services

Co-funded by the EU Commission
III. Semantics inside
III. In realtime...

Barcelona - Open Content Rules
25 October 2006

What is this?
Recent weblog entries
- 1:00
  - OpenLearn
  - ICT4U
  - Bazaar

Show details | Hide details
Show details | Hide details

- October 2006

Graham Attewell on learning, knowledge & technology
The Wales-wide web

Open eLearning Content Observatory Services
III. Open educational practices

• Active, constructive and collaborative engagement of students with relevant, “real world” questions

• Teachers as facilitators/“coaches” of learning processes and experiences

• Part of such processes and experiences is to identify, share, reuse and enrich OER

• Teachers and students contribute own ideas, study results, lessons learned
III. Open educational practices

• OER as an evolving Web of openly and easily accessible resources (content, tools, services…, also other than typical “courseware”)

• Important role of a new generation of tools and services (“social software”) such as wikis, weblogs, RSS-feeds, bookmarks/content sharing, social networking,…

• Learning environment often self-managed by individual and groups of learners

• E-portfolios to document, reflect, and present learning progress and results
IV. OLCOS Activities

• 1. Road-mapping to provide orientation & recommendations

• 2. Web-based services: OER awareness video, OER tutorials and examples of best practice

• 3. Co-operation with other projects and communities of practice in OER

• 4. Dissemination of information and “OER evangelism”
IV.1: Road-mapping activity

(1) Aims
- Explore how OER can make a real difference in teaching and learning
- Identify drivers & enablers and stumbling blocks
- Provide a set of recommendations for decision makers on required actions
- Decision makers includes teachers and learners!

(2) Focus
- Broader than Higher Education
- Open practices not “canned products”
- Time-horizon until 2012

(3) The Roadmap (about 150 pages) will become available in November 2006

(4) Below some findings (but see the full Roadmap for supporting observations, data and examples) …
(1) Drivers & enablers

- Growing high-level recognition of the importance of OER, e.g. in lifelong learning agendas
- Healthy competition in providing OER ("latecomers" will need to convince through highly useful OER; active user communities may be of critical importance)
- Breakthrough of the open access principle in academic publishing
- Ever more funding bodies require that project results are made openly accessible

(2) Stumbling blocks

- Business models in OER are tricky; the right mix of income streams must be found
- Growing competition on scarce funding resources (also within institutions)
- Difficulty to find a balanced approach for open and commercial educational offerings (entrenched interests of educational publishers)
- Possible implementation of rigid DRMS by many organisations (incl. Royalties Collecting Societies, Cultural Heritage institutions, …)
RM-2: Open educational practices

(1) Drivers & enablers

• Strong policy emphasis on educational innovation and organisational change
• Tremendous use of “social software” outside the educational sector, a “spill over” can have real impact (already some experimentation in the sector)
• Increasing recognition that OER repositories need active communities to thrive (“critical mass” of content is not the key for success)
• Creative Commons licensing is firmly established and increasingly used

(2) Stumbling blocks

• Lack of incentives for teachers to excel in OE practices and resources – needs institutional reward as well as training and support
• OE practices require new ways to assess individual achievement
(1) Drivers & enablers
   • Free and OS software more widely used in Higher Education and Further Education institutions (use in schools needs in-house capacity building)
   • Widespread tried and tested know-how in best practice distributed repositories (e.g. Open Archive Initiative metadata harvesting approach)
   • Ontologies based Semantic Web applications will offer new ways to understand concepts and access resources
   • New technical solutions for handling group-based Learning Designs are in the pipeline (LAMS is already trialed)
   • Emerging Personal Learning Environments (“e-learning 2.0”, e-portfolios)

(2) Stumbling blocks
   • Ontologies and rich metadata will remain cost-intensive (e.g. LOM, educational categories are often not used)
   • Need for more cooperation between tool developers and educators
IV.1: Status and Next Steps

- Roadmap in Draft version, ongoing expert discussion and feedback

- Next expert meeting at UOC UNESCO Chair in eLearning, Third International Seminar on OER: Institutional Challenges, 22-24 November 2006

- Openly accessible at [www.olcos.org](http://www.olcos.org) (end of november)

- Licensed to share –

- Dissemination at eLearning events in Europe (Online Educa, EDEN Workshops, European Schoolnet, and others)
IV.2. Web-based information services

• Awareness Video about benefits of open learning practices
• Online Guidance and Tutorials on HOW TO plan, use and share open learning practices with open digital educational content
  • Search/Find
  • Produce and modify (re-use)
  • Share open digital educational content (ODEC)
  • Publish and license
• Best Practice Collections (E/G/S) of:
  • eLearning content repositories
  • Institutions / initiatives with OER policy
  • Open content licensing approaches
  • Tools and standards for producing ODEC
IV.2: Tutorial: How to find Open Digital Educational Content (ODEC)

Open Educational Content/olcos/Tutorial1 Use Open Content

Contents
1. About this tutorial
2. Table of Contents
   2.1.1 Searching Open Digital Educational Resources
   2.2.2 Keeping up-to-date with ODEC
   2.2.3 Using ODEC

About this tutorial

Why to reinvent the wheel if one can build on existing material. The question is "only" where and how to find the right sources. Active searching for useful material on the Web becomes an integral part of the learning process and therefore search support mechanisms play an important role for the success of a self-directed technology-enhanced learning process.

This tutorial offers you practical information, advice, and guidance as learners and promoters & maintainers in the creation and use of open content for innovative competence-based learning settings and processes. It will show you efficient ways on how to search the Internet for relevant information, resources and Open Digital Educational Content (ODEC) to meet your needs.

Definition

Agreed: Open Definition of ODEC here

The tutorial explores basic Internet search strategies and search in repositories. It covers the basics of multiple-word searches, the search for and in trusted educational repositories and scholarly publishing resources as well as some selected web search tools.

Duration

It won't take long to work through this tutorial but it will save time and effort to find open educational content you can reuse for your purposes.
1) Searching/finding ODEC

1.1 Searching ODEC with Search Engines
1.2. ODEC search with special Open Content Search Engines
1.3. Media-specific search
1.4. Searching in dedicated ODEC sites

2) Keeping up-to-date with ODEC

2.1. Internal Subscription
2.2. RSS-Feeds
2.3. Agents
Open Educational Content/olcos/Tutorial1 Use Open Content/Searching ODEC with special Open Content Search Engines

Some of the available search engines allow you to search for resources that are available under a Creative-Commons license. In the following sequences we will lead you through the search process using the Google and Yahoo - CC Search.

Searching ODEC with Google
[Integrate animation of search process here]

Searching ODEC with Yahoo
[Integrate animation of search process here]

Searching with Creative Commons Search
[Integrate animation of search process here]

Assignment

After you have seen now several ways of searching for ODEC it is time for you to take action. Search all three possibilities of searching ODEC and compare the results.

Which one do you like most? Which search engine delivers the best results for your queries?
V.3. Co-operation, community and user involvement

(1) [www.wikieducator.org](http://www.wikieducator.org) as development platform (free education material) (end of 2006)

(2) Invite users to test and adapt tutorials (between February and June 2007)

(3) Finalise tutorial production and offer information service from

- OLCOS home-page (traditional) and
- provide content in Wiki system as service, allows for integration in institutional content (open content)
IV.4. Co-operation and further development

- Co-operation with other projects and communities of practice in OER
- Focus on eLearning communities
- Looking for funds for establishing profound training scheme (EPICT pedagogical driving license)

www.olcos.org

Project co-ordinator / contact:
Salzburg Research Forschungsgesellschaft m.b.H.
veronika.hornung@salzburgresearch.at
Tel: +43-662-2288-405
Jakob-Haringer-Str. 5/II
A-5020 Salzburg
http://www.salzburgresearch.at