



Handout for the OLCOS Expert Workshop

14th of June 2006, 14.00-18.00

Technical University Vienna, Austria

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Coordinated by Salzburg Research, A



1 Introduction to the project objectives and roadmap

1.1 What is the project about?

OLCOS, the Open eLearning Content Observatory Services project (1/2006-12/2007) is funded under the European Union's eLearning Programme and aims at building an (online) *information and observation centre* for promoting the **concept, production and usage** of **open educational resources**, in particular, **open digital content** in Europe.

Presently the benefits and characteristics of open source software in education is apparent and widely acknowledged, this is not the case with respect to the concept of digital open content that may particularly benefit flexible and open learning models (e.g. collaborative knowledge and skills building) in schools, higher educational institutions and vocational training.

Partners working together in the OLCOS project are:

- Salzburg Research Forschungsgesellschaft (Austria, project-coordinator),
- FernUniversitaet in Hagen (Germany),
- Open University of Catalonia (Spain),
- Mediamaisteri Group (Finland),
- European Centre for Media Competence (Germany) and
- the European Distance and E-Learning Network EDEN (UK/Hungary).

Results of the project include:

- the ODEC Roadmap 2012 which explores the possible pathways towards a higher level of production, sharing and usage of Open Educational Digital Content. The Roadmap will provide an orientation as well as recommendations on possible measures and actions to support decision making at the level of educational policy and institutions (first project year);
- a set of online tutorials that provide information and guidance on how to practically work with Open Educational Digital Content. These tutorials will be freely accessible on the web in several languages (second project year);
- several awareness raising workshops in the European eLearning community designed to foster the take-up of the concept of Open Educational Digital Content, and how to develop the required infrastructures, legally sound practices, educational policies and organisational strategies (second project year).

1.2 What do we mean by Open Educational Resources and in particular Open Digital Educational Content (ODEC)?

The term “Open Educational Resources” (OER) was first adopted at the UNESCO’s 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries funded by the William and Flora Hewlett Foundation. Open Educational Resources are understood to be offered freely and openly for educators, students and self-learners to use and re-use for purposes of research, teaching and learning.

Open Educational Resources include:

- *Learning Content*: Full courses, courseware, content modules, learning objects, collections and journals.
- *Tools*: Software to support the development, use, re-use and delivery of learning content including searching and organization of content, content and learning management systems, content development tools, and on-line learning communities.
- *Implementation Resources*: Intellectual property licenses to promote open publishing of materials, design principles of best practice, and localization of content. [source: http://en.wikipedia.org/wiki/Open_educational_resources, 2006-06-12]

Although boundaries between learning tools and digital content are getting blurred more and more, in OLCOS we concentrate specifically on the role of Open Digital Content for Educational purposes (ODEC). The main idea behind publishing Open Content is that anyone can use the content, distribute it freely, modify it and redistribute it. Therefore, the content can be improved upon and the knowledge is made freely available for the common good. This concept of “open content” has a shorter tradition than that of the open source movement. The term “Open Content” was coined by David Wiley who launched the Open Content project in 1998 and provided the Open Content License (now superseded by the Creative Commons licences).

In OLCOS we relate this concept to the domain of education. In our view ‘Open Digital Educational Content’ (ODEC) is all digital content that :

- *is used for teaching and learning (presence/eLearning)*
- *can be freely accessed, modified and redistributed and*
- *conforms to open technical standards and formats.*

If the latter characteristics should be obligatory can be discussed, since currently it would exclude a lot of material. In practical terms ODEC relates e.g. to stand-alone teaching material (single pictures, videos, text, audio-files), courses packaged in units and/or collaborative online sequences usually taking place in an internet-accessible learning environment (LMS).

1.3 Why do we focus on the role of digital content?

We have observed a number of potentially paradigmatic changes in e-Learning:

A change in educational paradigms is taking place

- Click and learn content is losing ground
- Educators emphasize self-sustainable, modular contents adaptive to their needs

- Educators of today are media competent and demand an organisational, technical and legislative sound infrastructure allowing for collaborative evolvement of knowledge

Availability of high quality ODEC is a key success factor for the cumulative dissemination of technology enhanced learning:

- Academic content was traditionally free, then came the publishers...
- The knowledge gap between the first world and the developing countries can become smaller on the basis of sharing resources

A change in the traditional publishing model is taking place:

- Online multimedia publishing has blurred the divide between content producers and consumers due to new web publishing software system and tools.
- Costs for re-producing digital content are lower than traditional production costs (new tools for collaborative production).
- Since professional means of production are available on everybody's desktop, learners are able and willing to contribute relevant educational material. This means that the production of educational content is no longer bound to the established business models of traditional educational publishers.
- Emergence of dual publishing modes

Need for easier access to (innovative) educational information:

- The European knowledge society requires more active instead of passive learners.
- The European knowledge society requires more learners/students/workers who know how to self-organise and manage the life-long acquisition of knowledge and skills.
- Constantly changing fields of knowledge need vast track of producing innovative, high quality content and have that information distributed beyond a limited audience and in many languages.

1.4 What are the benefits of a higher level of production, sharing and usage of ODEC in education?

Similar to the concept of open source software, the following arguments can be used discussing the added value and benefits of producing and using open digital content in education (ODEC) in contrast to traditional concepts (see also UNDP, Free/Open Source Software-Education; 2004). We suggest an improvement of the dimensions quality, processes and costs:

Quality in eLearning:

Use of ODEC has the potential to encourage educational innovation:

- In an open educational scenario exists the notion that learners and tutors interact with each other and construct their learning and teaching material collaboratively; active learners not only passively read the texts or material given to them as static content; they use social software tools to comment on ODEC and even modify it.
- In our scenario we envision that colleagues share their resources and provide the possibility to evolution and enhancement of teaching material in special circumstances: for example one field of interest in which the theoretical knowledge is changing very fast or constitutes a niche;

Open Philosophy – A similar concept in education as in science

- Academic content was traditionally free, and then came the publishers. The concept of ODEC allows an individual or institution who is interested in disseminating material even without financial revenues to do this in a “controlled” way. One may be inclined to give others a chance of enhancing content (e.g. a course design) for a special purpose in a special context, however, only if “at least I know what others are doing with my ideas and credit me for my input”).
- ODEC implies the option that “an educational message” shall be heard beyond a primary audience on a large scale. This can be interesting for societal important learning objectives (e.g. decreasing illiteracy with open content and courses).

Process(es):

More access to a critical mass of open content/course repositories of high quality can increase the knowledge base of Europe:

- Open courses can support lifelong learning strategies since a learner can upgrade his/her knowledge with an open course and be prepared for enrolling at a university.
- Larger collections of educational sources support the semi-professional production process of individualised (localised) teaching material.

The concept of ODEC offers the possibility of localisation

ODEC in conjunction with edu-licensing schemes would be an alternative to existing processes of “illegal” copy/paste

Build long-term capacity

Students are increasingly used to open source software, especially publication tools. They should therefore already learn during their study about how to deal and make use of it.

Costs

Lower costs and new business models for educational services

- Lower costs of producing digital multimedia content for online courses would encourage the widespread use of ICT.
- Lower costs of content production could save money for effective teaching.
- Lower costs of content production could contribute to ease the budget crisis of publicly funded educational institutions.
- The use of ODEC potentially provides a chance for developing new business models for educational institutions (e.g. offer an open course for free, but demand fees for online tutoring/mentoring).

2 ODEC Roadmap towards 2012

2.1 Objectives

The OLCOS consortium - together with a group of experts - will develop a roadmap illustrating the possible path(s) towards more value, production and usage of Open Educational Digital Content in the future. Its purpose is to provide a consistent orientation about the concept of ODEC and perspectives about how to foster it in the future.

The roadmap will

- Define and characterize the concept of “open content” in education (ODEC life cycle)
- Analyse factors that have a positive or negative impact on its future development (scenario technique/SWOT-analyses) and
- Discuss possible courses of action for different stakeholders with respect to overcome the barriers (Recommendations).

As final result, the roadmap would like to offer the actors, involved in eLearning processes information and guidance of what actions may be useful to take on the future road towards more production and usage of ODEC, for raising awareness and implementing the concept of ODEC in an educational institution.

OLCOS *primary target groups* are the producers and consumers of ODEC (eg. Students/teachers/lecturers), *secondary target group* are the educational institutions and eLearning centres needed to provide an organisational setting and support. Educational policy makers would be needed to encourage sound legislative infrastructure. Last but not least technology developers and researchers are encouraged to provide easy solutions for ODEC publishing.

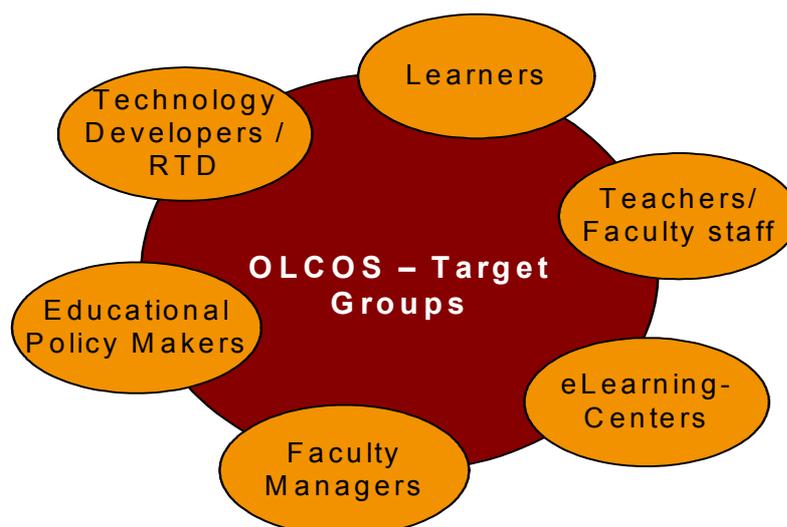


Figure 1: OLCOS Target Groups

2.2 Structure of the Roadmap to ODEC 2012

The work on the roadmap includes the following steps:

Firstly, we introduce the concept of an ODEC life-cycle, its difference to traditional publishing (lose boundaries between producer and consumer) and discuss its added value for innovative learning and teaching (Hypothesis). The ODEC life cycle encompasses the following activities:

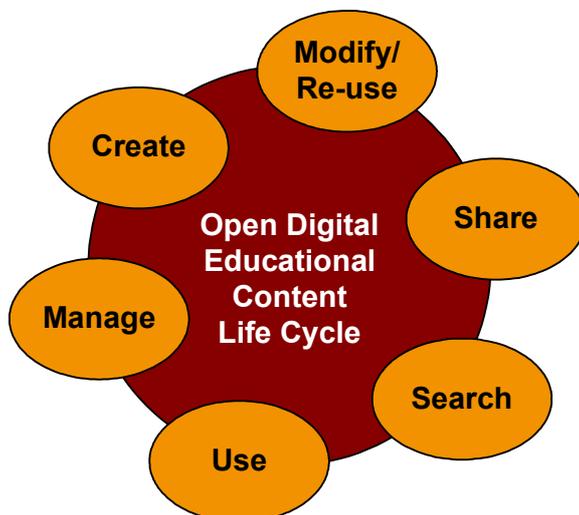


Figure 2: The ODEC – Lifecycle

In the next step, we analyse the current **state of the art** of the concept of ODEC and thereby explore especially those factors playing a crucial role in developing ODEC in Europe on a wide scale. We assume that the future of ODEC is influenced by the following dimensions:

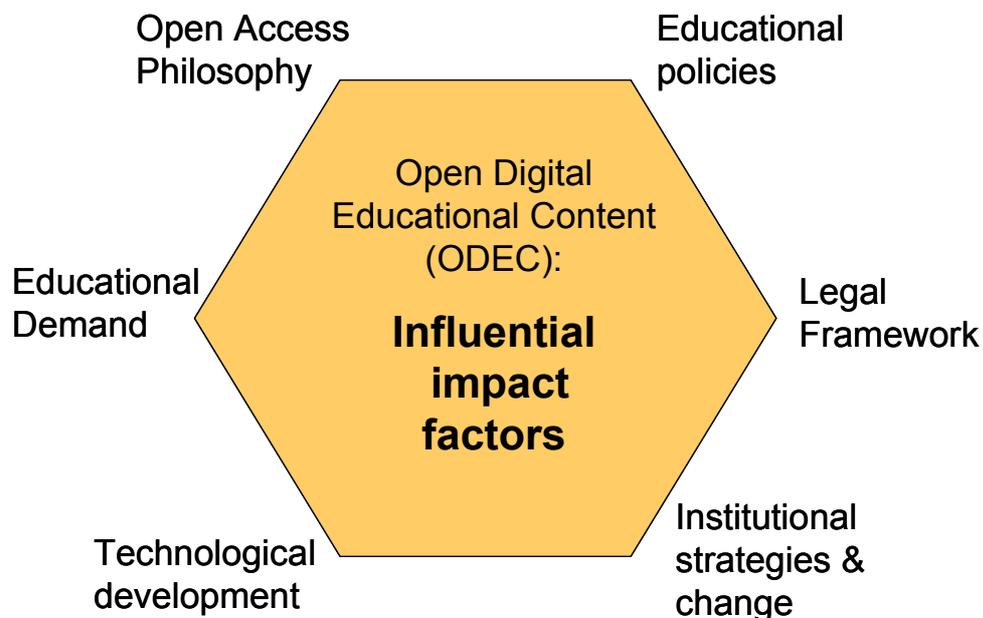
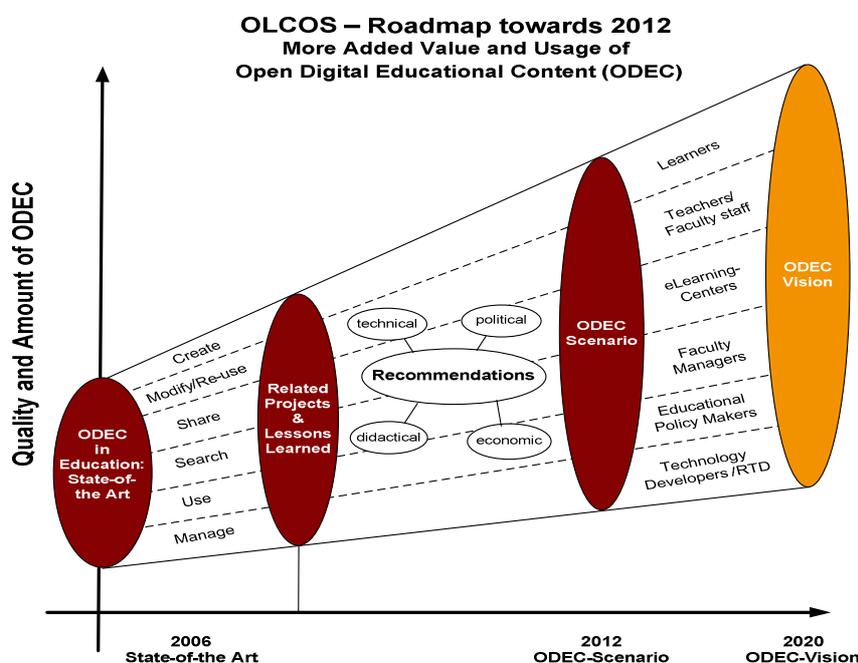


Figure 3: Influential impact factors regarding the future of ODEC

Therefore, in the *state-of-the-art analysis* we will:

- 1), explore the educational framework of educational content (eLearning strategies; market demands and supply), make inquiries into existing ODEC projects and summarize lessons learned (Best-Practise-Examples).
- 2), explore the trends and development of learning and knowledge technologies in supporting the users along the activities of the ODEC life cycle. We will discuss what type of technologies and open source tools support the single steps in the ODEC life-cycle already now. Among others, this will be done with special respect to semantic-web-technologies.
- 3), the licensing models for open content will be screened and user-needs identified.
- Finally, the concept of “open access” used within digital libraries will be analysed (esp. issues of quality, trusted repositories; long-term preservation) and current state-of-art (characteristics of good – practise examples of open content repositories) will be described.

In order to assert the future of ODEC, we will use the scenario technique.



- We will propose the *vision*, that in 2020 ODEC is a widely established concept in schools, HEI and vocational training. On the way towards the implementation of this vision, a point in time should be reached (eg. 2012) in which the following premises should get on the right track already:
- The prevailing mindset in education has changed to collaborative evolution of knowledge in communities
- ODEC as a means to increase technology enhanced learning will be a very well-established and intensively used concept in many educational institutions
- A *general* mindset has emerged that the distribution of costs and benefits of producing and using open content is different from traditionally produced content
- Content sharing communities will be encouraged through EU-wide awards and programmes

- There will be few and large repositories for educational content (as opposed too many and small)
- The re-use and re-linking of content will be supported through legislation (rather than hindered)
- ODEC is easily identifiable and findable due to semantic web technologies and/or new services (“EDU Content Finder”)
- There will be clear and easy to be used licensing schemes

The increased production and usage of ODEC is not a means to an end in itself.

Success criteria of the development and added value of ODEC in the future could be:

Quality

- Larger amount of high quality ODEC content to disseminate eLearning methods and courses
- Higher amount of enrolled/graduated students
- Higher degree of shared teaching resources
- Higher degree of re-mixed and cross-licensed content units
- Higher degree of „semantic based“ digital educational content (incl. didactical descriptions)

Process

- Better results in teacher and student evaluation („Pisa 2012“)
- Larger and better qualified workforce (LLL)
- Achievement of *critical size repositories*
- More and better access to teaching resources

Costs

- Cost reduction for publicly funded educational institutions
- New business models for educational institutions

Final task of the work on the roadmap for the OLCOS study group and experts is, to discuss

- what factors influence or hinder the realisation of this vision/scenario and
- what measures/action need to be taken to overcome the barriers
- (Recommendations for each target group.)

PLEASE NOTE:

This document is a working document that outlines some basic ideas of the OLCOS project and thus serves as background information.

It does not represent any official statement of any of the institution involved.