

# Exemplary Collection of tools and standards for producing open educational content

---

<Open Educational Content

To create open content, one should use open standards, furthermore applications and technologies that support the requirements of open standards.

## Standards

### Open formats



#### Definition

TopMargin=10px

Here some examples of open standards (Wikipedia, Open Format, 2006- 10- 12):

- for images: PNG, SVG, OpenEXR
- for audio: FLAC, Ogg Vorbis
- for video: Ogg Theora, XVID
- for texts and documents: PDF (for documents), OpenDocument Format for Office Applications (for office documents and suites), LaTeX (a document markup language), TXT (an unformatted text format), HTML/ XHTML (a markup language), XML (markup language)
- and others: DVI (a page description language), SQL (Structured Query Language), 7z (data compression format)

Open source software obviously uses open formats, but you find proprietary software which respects these standards as well.

## Educational Content Standards

Besides open formats for general content and digital formats there are also specific standards being developed for describing educational content. Using these standards can provide a basis for the creation of reuseable content across eLearning institutions and platforms.

The following are two metadata application profiles that may be used to describe educational content:

- The SCORM (Sharable Content Object Reference Model) is a collection of specification and standards for web- based E- Learning Content packages.
- The LOM (Learning Object Metadata) of the IEEE LTSC has the goal to describe learning resources (digital and nondigital).

These specifications are used by many of the learning or content management systems and some content repositories.

## Tools

All of the following tools are open source- tools. According to the definition of the open source definition (Wikipedia "open source definition, 2006- 11- 12) means that the the code of the software must either be included or freely obtainable and readable for humans. Furthermore, using, copying and modifying of the source code and its redistribution must be allowed.

Open source tools are suited for producing open educational content, because they use open formats.

## Learning (Content) Management Systems

"A Learning Management System (or LMS) is a software package, usually on a large scale (that scale is decreasing rapidly), that enables the management and delivery of learning content and resources to students. Most LMSs are web- based to facilitate "anytime, anywhere" access to learning content and administration." (Wikipedia "Learning Management System" 2006- 11- 13)

"A learning content management system is a solution for the creation, management and transfer of learning content. Although LCMS and LMS have some overlapping technologies, the products are very different. An LCMS includes the following functionality: Content creation (...), content management (...), collaboration tools, (...), assessments and analytics, search and retrieval (...), formal learning (...), performance support and informal learning" ("Learning Content Management Systems" 2006- 11- 13)

Examples for LCMS:

- ATutor various types of modules are available to add extra functionality to ATutor, the ATutor software is licensed under the terms of the GNU General Public License (GPL),]
- ILIAS is an intergrated learning, information- and working collaboration tools, licensed under the GNU General Public License GPL
- Moodle stands for "Modular Object- Oriented Dynamic Learning Environement" with more than 20 lern activities (like peer- feedback, wikiwebs), licensed under the GNU General Public License GPL
- blackboard Consisting of five software applications bundled in two suites, the Blackboard Academic Suite and the Blackboard Commerce Suite, these products are licensed on a renewable basis.

You will find more at the list of content management systems software at Wikipedia

## Social Software applications

For most of the following software applications you need profound adminstration knowledge and own webspace. But there also some free hosting service for educational contents.

- Web- Content- Management- Systems allows several authors to make changes to an existing website with no special IT- knowledge, a great number is available (e.g. CMS made simple (plattform php, MySQL), Plone (plattform zope)
- Weblogs, personal webpublishing in form of a log, e.g. WordPress, LifeType & Blossom

- Wikis, collaborative webpublishing in an easy markup language e.g. Ikewiki, Mediawiki, twiki, DokuWiki, PmWiki, MoinMoin
  - Webchats, which allow real-time communication between two or more, e.g. PCP!N (bases on php, MySQL), Voodoo Chat (bases on php, Perl)
  - Discussion Forums, e.g. phpbb (bases on php, MySQL)
  - Groupware and project collaboration, e.g. eGroupWare, phpGroupWare
  - collaborative realtime editor, e.g. Microsoft LiveOffice, Google Docs, Open Office online, Gobby [Writely?]
  - ePortfolios, e.g. Elgg, OSP
  - whiteboard, e.g. Steam Whiteboard Client, Tulka Whiteboard
  - more at the List of collaborative software at Wikipedia
- del.icio.us is no software!!
- Social Bookmarking, del.icio.us, Scuttle

## Editors and text processing tools

- texts: e.g. OpenOffice Writer,
- html: e.g. Amaya, Mozilla Composer, Quanta +, eXe
- presentations, e.g. OpenOffice Impress,
- calculations, e.g. OpenOffice Calc,
- documents, e.g. OpenOffice Writer (saving as .pdf),
- others (e.g. for programming software): e.g. eclipse, Xemacs

## Authoring tools for graphics, video and audio

### Graphics

- GIMP
- krita
- sodipodi
- inkscape
- Open Office draw
- more at e.g. Free bitmap graphics editors at Wikipedia

### Video

- video editing: e.g. blender, Cinelerra
- video players: e.g. Kaffeine, Xine
- more at Wikipedia: list of video players, list of editing software

### Audio

- editor: e.g. Audacity Jokosher
- player: e.g. Amarok, XMMS

- more players at Comparison of media players at Wikipedia

## Additional Materials

- Eduforge Toolbox some logins for LMS - try it out
- Ossite Weblog Open News Weblog about open source in education
- OHLOH Explore Open Source Mapping the open source world by collecting objective information on open source projects.
- Top 25 Web 2.0 Apps to Improve a Student's or Professor's Productivity (Online Education Database)

- 
- Overview
  - Introduction: PLAN the use of OER
  - Tutorial: SEARCH & FIND OER
  - Tutorial: PRODUCE & REMIX OER: author and modify
  - Tutorial: SHARE OER: publish and re- use
  - Tutorial: CHOOSE a license
  - Tutorial: USE open source tools
  - ORGANIZE: Collections
    - Exemplary Collection of Open eLearning Content Repositories
    - Exemplary Collection of institutions with OER policy
    - Exemplary Collection of open content licensing approaches
    - Exemplary\_Collection\_of\_tools\_and\_standards\_for\_producing\_open\_educational\_content|Exemp  
Collection of open formats, educational standard and tools for producing open  
educational content
-

This content is licensed under the Creative Commons Attribution/Share-Alike License (CC-BY-SA 3.0) and was authored by multiple contributors. Full contributor information can be found at [wikieducator.org](http://wikieducator.org), and the full text of the license can be located at:

<http://creativecommons.org/licenses/by-sa/3.0/legalcode>