Overview of available eLearning Platforms

(focusing on freeware)

Work Package 4 of the Project

Blended Learning Quality-Concepts Optimized for Adult Education

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Content

Draft overview of currently used and available platforms.

1. What is open source?[1]

Open source doesn't just mean access to the source code. The distribution terms of open-source software must comply with the following criteria:

1.1. Free Redistribution

The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license shall not require a royalty or other fee for such sale.

1.2. Source Code

The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a preprocessor or translator are not allowed.

1.3. Derived Works

The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.

1.4. Integrity of The Author's Source Code

The license may restrict source-code from being distributed in modified form only if the license allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.

1.5. No Discrimination Against Persons or Groups

The license must not discriminate against any person or group of persons.

1.6. No Discrimination Against Fields of Endeavor

The license must not restrict anyone from making use of the program in a specific field of endeavor. For example, it may not restrict the program from being used in a business, or from being used for genetic research.

1.7. Distribution of License

The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.

[1] Source: http://opensource.org/osd (retrieved: June, 15, 2014)

1.8. License Must Not Be Specific to a Product

The rights attached to the program must not depend on the program's being part of a particular software distribution. If the program is extracted from that distribution and used or distributed within the terms of the program's license, all parties to whom the program is redistributed should have the same rights as those that are granted in conjunction with the original software distribution.

1.9. License Must Not Restrict Other Software

The license must not place restrictions on other software that is distributed along with the licensed software. For example, the license must not insist that all other programs distributed on the same medium must be open-source software.

1.10. License Must Be Technology-Neutral

No provision of the license may be predicated on any individual technology or style of interface.

2. Why Open source?

Open-source software (OSS) is computer software that is available in source code form and is provided under a software license that permits users to study, change, and improve the software. Open source software is very often developed by communities in a public, collaborative manner where programmers create a program and make it available for others to use, as well as modify the source code and redistribute the modifications to the software user/developer community.[2]

3. A. Open source.

3.1. Moodle

Moodle is a course management system (CMS) - a free, Open Source software package designed using sound pedagogical principles, to help educators create effective online learning communities. It's Simple, lightweight, efficient, compatible, low-tech browser interface. Easy to install on almost any platform that supports PHP and requires only one database.

3.2. Docebo

Till now, 3 versions exist:

- Community (basic).
- Reseller.
- Enterprise.

Customizable according to clients' specific didactic needs (i.e. cognitivism. constructivism and blended learning). Used in large companies and across the sectors: finance and insurance, health, government, universities and schools. ({http://www.docebo.org/doceboCms/)

[2] Source: http://ec.europa.eu/dgs/informatics/oss_tech/index_en.htm (retrieved June 15, 2014)

3.3. eFront

There are also 3versions:

- Community (basic).
- Educational,
- ❖ Enterprise.

It is visually attractive and highly expandable with various modules. The Educational and enterprise extensions are enriched with more powerful administration, performance management and reporting features.
(http://www.efrontlearning.net/)-

3.4. Dokeos

It is available as:

- Free.
- Education,
- Pro and
- Medical editions.

Contains all features necessary for e-learning and blended learning. Dokeos E-learning Studio offers free resources, templates for rapid content authoring and a test builder, image gallery. Live collaboration through video conferencing, tracks learner progress, time and collaborative interaction. Language tool (DLTT) provides a workable language management tool.
(http://www.dokeos.com/)

3.5. Claroline

This system allows teachers to build online courses and to manage learning and collaborative activities on the Web. Translated into 35 languages, it has a large worldwide users' and developers' community. It is preferred more for educational than corporate environments.
(http://www.claroline.net/)

3.6. ATutor

The "A" stands for Accessible and it has excellent support for key accessibility standards (Atutor, Acontent, ATutor social).

ATutor social is a social networking module that allows ATutor users to connect with each other. They can gather contacts, create a public profile, track network activity, create and join groups and customize the environment with any of the thousands of OpenSocial gadgets available all over the Web. ATutor Social can be used as a stand-alone social networking application.
(http://www.atutor.ca/)

3.7. ILIAS

Provides testing and assessment tools as well as collaboration tools (e.g. chat and forums) and distribution technologies (e.g. RSS and podcasts). Learners can personalize their desktops and collect all resources needed to fulfill the daily learning tasks. The personal desktop features News, Personal Messages. Learning Resources. Personal Notes. Bookmarks, External Web Feeds and other information. A learner can rearrange these blocks of information according to his or her needs. Content management and authoring is limited to xml modules, glossaries and wikis.
(http://www.ilias.de/)

3.8. OLAT

While it was developed by the University of Zurich, especially for public institutions such as universities, academies or colleges, it is also suitable for other businesses. It is Java based, Web 2.0 enabled, userfriendly and flexible; however, it is not easy to set up because of quite complex server requirements. It can handle more than 700 students simultaneously on one standard Linux server. If higher performance requirements for up to 30 000 users are needed. OLAT's fully scalable system allows it to be deployed on multiple servers. Users are able to set their own personal home portal, course structure and navigation. It contains an editor for simple OLAT courses with OLAT course elements. Won the "Leadership Award 2009" in the category "Best Open-source Learning Platform".(http://olat.org)

3.9. Sakai

CLE (Collaboration & Learning Environment) - This is a robust system for education based on collaboration and open sharing of knowledge. It includes features of LMSs and VLEs and contains a full set of "core" capabilities (e.g. blogs, calendar, forums, glossary news, wild, RSS reader). Users can easily create rich and collaborative documents and share them with others using integrated Google-powered tools (Docs and Google Apps). Used by Yale, Stanford, Boston, Oxford, Berkeley and Cambridge universities and more than 350 small private and public colleges and universities.
(http://www.sakaiproject.org/)

3.10. .LRN (Dot Learn)

This is one of the world's widely adopted, open-source, full-featured applications for rapidly developing Web-based learning communities. It supports a variety of learning styles,

ranging from traditional structured learning to group collaboration. Its customizable layout allows users to personalize learning space. It is built as a platform for "learning communities" rather than a narrow system for
"course management" or online learning. (http://www.dotlrn.org/)

3.11. OpenELMS

This is flexible and robust, designed for corporate business. It is a complete e-learning solution which contains Jackdraw. a free e-learning creator.
Courses created with this tool can be published onto any SCORM compliant Learning Management System.
(http://www.openelms.org/)

4. Proprietary available platforms (no freeware)

4.1. Blackboard

Was founded in 1997 is a leading provider of eEducation enterprise software applications and services. Its main characteristics are: courses Management, content creation, didactic units, textbook online, teaching and learning tools, administration of personal information, board discussion, group project, book of qualifications and control panel.

4.2. LMS QStutor

Offers communication tools mentor/student and student/student both synchronous and asynchronous: lectures in real time, integrating video conferencing services, forums and messaging.

4.3. Saba's Learning Management System (LMS)

This platform provides comprehensive learning management for identifying, managing- developing, and measuring the capabilities and knowledge of people throughout an enterprise.

TECHNICAL CHARACTERISTICS of the OPEN SOURCE PLATFORMS (according to the FAO 2011, E-learning methodologies A guide for designing and developing e-learning courses)											
FUNCTIONAL AREA	DOCEBO	EFRONT	DOKEOS	CLAROLINE	ATUTOR	ILIAS	MOODLE	OLAT	SAKAI	LNR	OPEN ELMS
Multi language support[56]	**√**	**√**	**partly**	**√**		**√**	**√**	**√**		**√**	
Easy to setup	**√**	**√**	**√**	**√**	**√**	**√**	**√**		**√**	**√**	**√**
Programming language	**PHP**	**PHP**	**PHP**	**PHP**	**PHP**	**PHP**	**PHP**	**Java**	**Java**	**OpenACS**	**ASP/Java Script**
Course management[57]	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**
Reporting tools		**√**	**√**				**V**				
Content management[58]	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**
Authentication	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**
SCORM1.2 compliance	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**
Group setup and management	**√**		**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	
Course authoring			**√**		**√**	**limited**		**limited**			**√**
Communication tools[59]	**√**		**√**	**√**			**√**	**√**	**√**	**√**	
Modular	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	**√**	
Online assessment tools		**√**				**√**		**√**	**√**	**√**	
Enterprise or Pro edition"'	**√**	**√**	**√**								

Comparing and Evaluating Open Source E-learning Platforms. List of Open Source E-leaming Platforms (according to

Fakhreldeen Abbas Saeed (2013).Comparing and Evaluating Open Source E-learning Platforms. International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Volume-3, Issue-3, July 2013

Name of platform	SYSTEM REQUIREMEXTS					
	APPUCATIOS SERVER	Database	OPERATING SYSTEM	Programming LANGUAGE	Webserver	Arabic language
+CMS 2.0.0	PHP 43.0+	MySQL 4.1+	Any	PHP4+	Apache	
ATUTOR 1.5.4	PHP 43.0+	MySQL 0.2+	Linux. MAC	PHP4+	Apache	Yes
CLAROLINE 1.8.1.	Apache	MySQL	Linux	PHP	Apache.ES	
DOKEOS 1.6.4	Apache	MySQL	Any	PHP. JayaScript.XML	Any PHP enable	Yes
DOTLRN/OPENACS 5.1.2	Apache	Postgres. Oracle	UNLX and Linux	TCL	AOL SERVER	
DUPAL 5.3	PHP 4.3.3+	MySQL Postgres	Any	PHP	Apache. ES	
ILIAS 3.8.3	Apache	MySQL 4.1.x	Linux. UNIX. Solaris	PHP4.4+	Apache	
Lon-CAPA 2.5.2	MOD PHP	MySQL	Linux	JavaScript	Apache	
MAMBO 4.6.1	PHP 4.1.2+	MySQL	Ant	PHP	Apache. ES	
MOODLE 1.9	PHP 4.3.3+	MySQL. Oracle. Postgres	Any	PHP 4.3+	ANY	Yes
My source matrix 3.14.0	Apache	Postgres, Oracle	Any	PHP 4.3+	Apache	
OLAT 5.2	tomcat	MySQL, Postgres, MSQL	ANY WITH JVM	Java	Apache	
PLONE 3.0	zope	ZOPE	Ant	photon	Apache. ES	
SAKAI2.3	TOMCAT	MySQL Oracle	UNIX. Windows	Java	Apache	
ANAXAGORA - LC MS	TOMCAT 4	MySQL 4.1	Linux. Windows	PHP 4	Apache	

CHARACTERISTICS	SUB-CHARACTERISTICS	Atutor	Claroline	Docebo	Ilias	Moodle	Plone	uPortal	Learning
System Parameters	Compliance with Standards	3	2	2	2	2	3	2	3
	Search Engine Availability	3	3	1	3	3	3	3	3
	Additional Contents Inclusion	3	3	1	3	3	3	3	3
	On-line Help Availability	3	3	1	0	3	3	1	2
	Scalability (student number)	3	3	3	3	3	3	1	3
	Accessibility	1	*2*	3	1	2	3	2	2
	Language Support (Italian)	3	3	3	3	3	3	1	3
	Privacy Management	1	3	1	1	3	1	1	3
Administration Facilities	Login security	3	3	3	3	3	3	3	3
	Installation Easiness	1	1	1	0	1	3	0	2
	Interface Personalization	3	1	3	1	3	3	1	1
	Activity Trackine	3	*2*	0	3	2	0	3	3
	Upgrade Facility	1	1	3	0	3	0	0	3
	Documentation Availability	1	1	1	1	1	3	1	1
Interaction Support	Integrated e-Mail System	0	0	0	0	0	0	0	0
	Mailing List Management	3	3	3	0	3	0	1	2
	Forum Availability	3	3	1	0	3	0	1	3
	Chat System Availability	3	3	3	0	3	0	3	3
	Notice Board Support	3	3	3	3	3	3	0	3
	Integrated Video-Conference System	0	0	3	0	0	0	0	2
	Group and Class Management	3	3	3	0	3	3	3	3
	Service Personalization	1	3	1	3	3	3	1	2
Teacher Services	Integrated Authoring Tool	0	1	1	1	1	0	3	2
	Types of Additional Contents	1	3	3	0	3	3	3	3
	Availability of Statistics	3	3	3	1	1	0	1	2
	Development of Tests	3	3	1	1	3	0	3	3
	Vertical Interaction Tools	1	3	1	1	3	1	3	3
Learner Services	Interface userfriendly	2	3	2	0	2	2	1	2
	Different Course Type Support	2	3	1	0	3	3	1	3

5. Conclusion

According to the previous works, to the comparative research of Homero Canales Guenaueche &Fernando Garcia Radigales (2008) and to the EDRASE experience, Moodle is certainly the most complete e-learning platform, and also one of the oldest. However, a newer platform more presentation-oriented like Dokeos can be a serious alternative.

The technical knowledge required to design a course in Dokeos is much smaller than with Moodle, and the former is so well looking that sometimes the loss of functionality is worth.