

Strategies for Instructional Design

In this short study I have taken into consideration existing tools, facilities and systems which are Open Source for Instructional Design. Open Source refers to software in which the source code is available to the general public for use and which can be modified and utilised as necessary. Although it is distributed freely Open Source still needs to follow certain criteria and standards to be certified as such (OSI Certified) thus ensuring level of quality. In today's declining economic climate Open Source is becoming ever more popular. Quality as well as support is maintained by a community of professionals.

“The essence of the Open Source development model is the rapid creation of solutions within an open, collaborative environment. Collaboration within the Open Source community (developers and end users) promotes a higher standard of quality, and helps to ensure the long-term viability of both data and applications. Open Source software is also gaining increased momentum in the enterprise. Commonly cited reasons for the growing interest, acceptance, and even preference for Open Source products include low cost, high value, quality and reliability, security, increased freedom and flexibility (both hardware and software,) and adherence to open standards.”

A content management system, or **CMS**, is a web application designed to make it easy for non-technical users to add, edit and *manage* a website.

A good choice could be Plone. It could be used as the main server, playing such roles as a document publishing system and a groupware collaboration tool amongst other things.



Plone a CMS can be deployed as a Portal/ Website for publications/data/information/communication. It can be used collaboratively in that it can be edited by a number of users within the same

framework as it is very user friendly empowering users to manage content on their own. Plone is also Open Source thus it features the benefits associated with Open Source as indicated above. It can also be used as a content repository for any publications. Plone also provides the facility for RSS syndication required to inform subscribers of new additions. Newer versions of Plone have autotrail, versioning so updates to the CMS are part of the core of Plone. A Search ability in Plone would be required if publications are to be stored there. This is one of the great advantages of Open Source – not all features and tools have to be installed but only the one's essentially needed. Plone is a community – driven software project which can be built upon and improved. Access to the code means it can be customized to a community's needs. It is compliant to standards which is important as is accessibility.

On the other hand the WAMP server would be another good choice as a CMS as it too is Open Source and allows for the building of databases which can be manipulated from a browser. It too shares the functionalities of Plone. The word WAMP is an acronym formed from the initials of the operating system (Windows) and the package's principal components: Apache, MySQL and PHP.

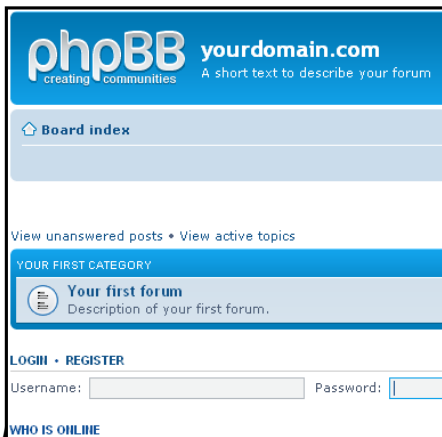


- ◆ Apache is a web server, which allows people to connect to a computer and see information through a web browser.
- ◆ MySQL is a database manager (that is, it keeps track of data).
- ◆ PHP is a scripting language which can manipulate information held in a database and generate web pages each time an element of content is requested from a browser.

All these components work together to create a complete CMS. This would prove very useful as the additional costs need only be for an administrator to co-ordinate the system: giving privileges that is allowing access to specific users with passwords, and for setting up the system and maintaining it altogether. Using a text editor to modify code is possible as well. Its database can then store any kind of data, serve as the website which the is accessed from, and inform users of new publications through the RSS feeds. Being Open Source no costs for licensing is necessary and yet there is a support service available. It operates within multiple operating systems. Another advantage is that this CMS has features which can be added or removed according to the community's special requirements. If the administrator is technical enough the code can then be manipulated to customise the interface and adjust the system to the community's requirements.

A good forum package which is open source is the **phpBB bulletin board system** . Bulletin boards are very popular all over the Internet better known as forums. These are places in the Internet where people meet to discuss matters, post questions, suggestions about particular subjects and topics and in the process creating and forming communities within communities. They are online discussion sites which are managing user generated content. Administrators or moderators lead these communities.

phpBB Bulletin Board has php scripting as its code is written in php. Installation and setup though is very straightforward and user friendly. It has a large and highly customisable set of key features coupled with a standards compliant interface.



The administrator is required to take care of security issues, policies, maintenance and act as moderators. There is also access to manage users, groups, forums, logs and configure settings for features, avatars, messages, privacy and registration amongst others. It could run on

a WAMP server and just needs an Internet connection.

Today collaborative mass media is gaining popularity as any person can be both the source and the receiver of the message giving everyone the power of the media. A particular community will not only be able to discuss and post thoughts but be updated on news, be able to download or upload software or data and meet in specific chat rooms dedicated to particular issues or subjects. They will also be reducing barriers of time and distance. In a Web 2.0 environment this collaborative tool will enhance communication and interaction in the community.

Moodle is an excellent Virtual Learning Environment (VLE). It is an Open Source Course Management System or CMS. A CMS is a web application which means it runs on a web server and is accessed by a web browser with an Internet connection. Moodle has impressive tools to be used for setting up online courses or for supporting face to face courses. There could be the possibility of a completely online course or a blended course where face to face tutoring could be taking place combined with online interactive tutoring. Moodle (Modular Object-Oriented Dynamic Learning Environment) presents an excellent platform for resources and communication tools..

An educational technologist can set up the Moodle course, customise its interface according to the requirements and needs as well as manage the actual teaching. Only enrolled students can access their particular course. The users or learners actually making use of Moodle will simply need a computer, internet access and a web browser as the server will have Moodle installed and running. Moodle also supports various languages which can be downloaded by the administrator onto the server. This could be very useful if a particular community speak a different language.

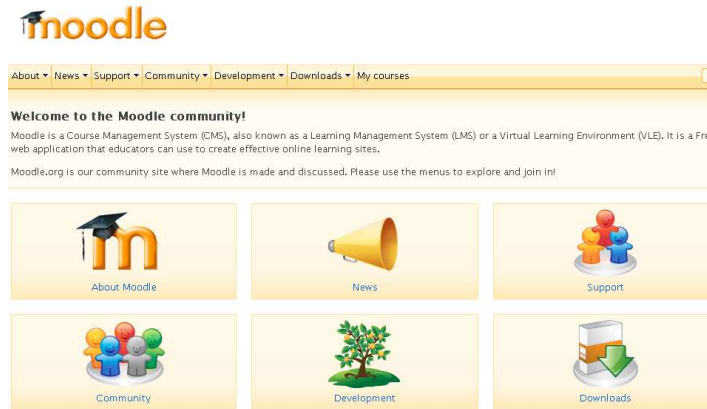
Moodle in its concept has a constructivist and social approach to education wherein the learners as well as the tutor can collaboratively contribute through various features.

“..most CMS systems have been built around tool sets, not pedagogy. Most commercial CMS systems are tool-centered, whereas Moodle is learning-centered.”

Moodle, in this respect will facilitate dynamic learning amongst the targeted learners (over 55's) as it will also enable learners who cannot travel for some reason or other, to take an online course and benefit just as well as anyone taking a face to face course.

Moodle features resources and activities which can be easily customised and used by the educator conducting the learning. Some examples are: creating various types of quizzes, choice (one question with a choice of answers – answers are logged so statistics can be deducted), creating forums, glossaries, wikis and blogs. Facilities to collect assignments and record student grades are also available. Online grades can have new privacy rules that prohibit posting grades with personal identifiers in public places. Grade books allow students to see only their own grades, never another student's. Moodle learners will be able to view their own particular course news, access and upload their assignments, collaborate through wikis/forums and support each other.

Advanced Instructional Design



Such online courses save time and money. Travelling and printing material cost time and money. Another great advantage, in my opinion, is that a learner can always go back to what was not properly learned unlike a face to face environment where all learners must follow the same pace in the same time frame. A forum, a resource or an activity can always be re-visited and at a convenient time as well. Being a global community Moodle has support for educators creating their courses as well as for the learners taking the course.

“..Moodle developers and users work together to ensure quality, add new modules and features, and suggest new ideas for development..”

Moodle also supports SCORM a very important feature.

“..SCORM (Sharable Content Object Reference Model) is a collection of specifications that enable interoperability, accessibility and reusability of web-based learning content. SCORM content can be delivered to learners via any SCORM-compliant Learning Management System (LMS) using the same version of SCORM.”

In other words it is a tool where an educator creates content at one time and can distribute that content in any VLE system without needing to modify anything, saving time. SCORM packages that content to be used in any environment. This continues to make Moodle dynamic and adaptable.

Communities can benefit from the existing tools and packages available online such as the Open Source systems, combined with management and co-ordination of the system by qualified personnel.

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