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## Open Source for Education

Learning Management Systems: Course Development Software for Free!

Some school districts pay a lot of money for commercial Learning Management Systems (LMSs), although most school districts don't use them. However, some Open Source advocates suggest that school districts turn to free LMS alternatives and offer online courses for their students. Here is Classroom Toolkit's stance on this topic. Note: We have not implemented or tested all of these different software products (we don't have that kind of time, or in the case of the commercial products, that kind of money); but we are developing tutorials that use the Moodle LMS program. We'll explain the reason for our choosing the Moodle LMS later in this article.

What are these Learning Management System programs, and what do these programs do?

### Open Source LMS Programs

Some of the Open Source programs classified as Learning Management Systems (LMSs) include:

- ATutor: Installs in minutes, is W3C Accessibility Compliant (i.e., works with adaptive devices for the handicapped), and complies with the SCORM protocol.
- Interact: Easy to use and Flexible. Cost effective and without hidden costs. Capable of building online learning communities. Can be used as an Intranet portal.
- Open Course: Makes collaboration easy. Contains lots of Open Source presentations. Small project, so your contributions will be noticed.
- Moodle: Built-in tools include the ability to use Articles, Assignments, Chats, Forums, Grading, Glossaries, Links, and Wikis. Lots of activity and the product is constantly being updated. Loads of expansion modules and tools. Can be customized with themes to change the product's "look and feel". Scripts available for many Web hosting companies to automatically install the product.
- MyClassroom: Many content area courses and lessons online. Membership allows customization for your classes. System includes Syllabus, Quizzes, Course Information and Student Information. This project's interface is built on a semester metaphor. These are not the only Open Source LMSs available, but these present a snapshot of the programs that are available.

Some of the LMS programs are small and based upon the work at a specific college. Others are large-scale projects with a world-wide development community. Moodle is one of the biggest LMS development efforts.

By just looking at the list of benefits, you can probably guess the reason that we are building our tutorials with Moodle.

Another reason that many people choose Moodle is that major online hosting companies have automated installation processes that will set up Moodle on your Website without additional cost (in only a few minutes).

### Commercial LMS Systems

Some of the competing commercial software programs in this category include:

- Breeze: Product uses Flash, so most computers have the plug-in already installed. Monthly and Pay per use Plans. Professional Development and Teleconference Modes. State of the Art technology.
- Blackboard: Large installed base, particularly Universities and Large School Districts. Content delivery, professional development, communications and assessment. Supports standards such as SIF, IMS, and SCORM, and connects with data warehouses and student information systems.
- WebCT: Acquired by Blackboard, so WebCT won't be sued. Includes pre-packaged content and pre-built quiz banks. Provides hosting, technical support and training.

The commercial LMS products are very expensive. The Open Source programs are inexpensive. How can Open Source software that costs \$60 a year, or less to host, compete with software that costs \$9,000 per year, or much, much (tens of thousands) more?

Answer: Quite effectively.

If these Programs are Free, Why do School Districts Pay for Expensive Ones?

Districts use the expensive programs because they have the funds to spend. "Funds to spend" are only partially related to costs.

Costs include start-up costs, ongoing costs and technical support costs. For a small school district with only Microsoft-certified personnel, if they hire certified personnel at all, ongoing and technical support costs may be too high if district staff do not have employees that are qualified to work on the Open Source software.

In the case of Learning Management Systems, there will always be additional costs. Some of these are:

The cost of training staff to use the Open Source application

The cost of paying staff to develop the lessons that will be placed on the Open Source application

The cost of paying for the rights to use lessons that someone else creates

There are also hidden cost savings that are often overlooked. For example, when school districts take advantage of some grants (and especially the eRate program), the money can be used for outside vendors, but cannot be used to pay district personnel. So, it is possible to acquire expensive products with someone else's money that do not have to be funded with local funds. To school district administrators, projects funded with someone else's money look more desirable than better projects that are more cost-effective and more effective. Better educational outcomes seem less desirable if they have to be paid for using local money. (Note: School district administrators seem shy about paying for anything through the use of local money. This results in the "low-bid syndrome" and the "What is the minimum cost/ just make it look like we are addressing the issue" strategy.)

So, you see that "free" has many costs associated with it.

There may be other potential hidden costs associated with an Open Source LMS choice. For example, a commercial company, Blackboard, filed a patent that many experts believe was granted in error. Then, Blackboard bought up competitors (for example WebCT; under the threat of a lawsuit for using their patent. Blackboard filed suite against one such competitor that wouldn't sell. (See ATutor; Forum Article. The districts that can afford LMSs may want to avoid any patent infringement lawsuit issues, and so they stick with the high-priced products.

There is also the difficulty of migrating courses built by any proprietary system to another system. So, once a district has a substantial investment in courses that were built for one system, they are basically locked in to that system. This is a benefit derived from using the Moodle; system since Moodle; courses can be transferred easily from one online host to another.

And, as you will see, as expensive as these LMSs are, the cost of course content is incredibly more expensive. School districts could not afford to create content for one LMS platform, and then not be able to use the courses that they paid to create.

Of course, Classroom Toolkit (Link to Classroom Toolkit site) advocates free access to a Learning Management System. Openness (transparency) and sharing are ideals that build quality learning experiences for our students. Access to online courses is important for our students, and it is deplorable that our school districts cannot figure out how to offer this instructional benefit to all our students.

Having a commercial company destroy competition and innovation with legal ploys instead of providing innovative learning products at affordable prices and competing in the marketplace by building a "best-of-breed" product is an even greater disgrace.

Note: Lots of Open Source advocates are angry at Microsoft; for destroying competitors, even though Microsoft; sells its products to school districts at about one tenth the list price of its products.) If school districts were actually offering online courses like they should be doing, there would be a real outcry. But, since most districts are not offering this service, the lack of online course goes largely unnoticed.

If these Programs are Free, Why don't more School Districts Use Learning Management Systems?

Most school districts don't use LMSs, period.

This is a deplorable situation, but a situation that is easy to explain. (No, we are not going to rant about inept bureaucracy or politicians, again.)

The reasons that school districts don't provide this obvious learning resource to their students are:

Creating content, especially online content, takes time...a lot of time

Writing content takes skill

School districts can't afford to pay for the release time that teachers would need to build these courses

If teachers build these courses on their own time, then, teachers expect ownership or compensation for allowing the district to use the course

School district leaders believe that teacher time is free, and they believe that they have unlimited use of that teacher time; therefore, they do not want to pay teachers for building courses

Teachers who build courses using school district computers, even on their own time, probably relinquish copyright ownership to their employer, even if it were not commissioned by their employer to produce the course

Once school districts build courses, they are stingy about sharing these courses with other districts

Of course, teachers in some school districts could build online courses on their own. In other school districts, teachers may have to obtain permission to place anything online, even a course that benefits their students. In some cases, school districts claim all the work that their employees create, whether that work was created on district time or not.

Why did Classroom Toolkit choose Moodle;?

Classroom Toolkit provides access to world-class materials for teachers without charge. This means that we do not have a way to pass costs on to the teachers that we are helping.

This also means that all costs must be kept low.

The costs for running and maintaining a LMS include either a server and connection to the Internet, or, Website hosting. Classroom Toolkit uses two hosts: Our original host, from SiteSell; and an additional site from Go-Daddy.com, since the SiteSell; hosting company does not offer a method for hosting interactive tutorials or project-based

interactive courses.

The Classroom Toolkit tutorials are in development. For a preview of what will eventually be online, follow this link. [Preview of the Classroom Toolkit Tutorials.](#)

Moodle allows capturing and migrating courses from on server (or hosting site) to another. Therefore, any Moodle courses can be saved, moved to new locations, swapped, even bartered.

An example of this ability is the Strategic Open Source Special Interest Group (SIS-SIG) of the Texas Computer Education Association (TCEA). The SOS-SIG established a Moodle Exchange to allow the transfer and sharing of Moodle courses for its members. [Link to the SOS-SIG Moodle Exchange](#)

**Special Offer: Perhaps Someone will Volunteer in your Area**

Here is an idea for your area. It is modeled after an Open Source volunteer effort in Texas where a retired Open Source volunteer (advocate) installs Open Source servers and software for school districts. The Open Source software is placed on older computers, and the district's IT staff are trained at the same time (if they want to be trained).

The cost to the school district, only one day's travel expenses of the volunteer. The volunteer even pays for his own meals.

Here is what the special offer looks like.

[Link to volunteer offer to install Open Source Server and LMS software.](#)

This model is one that Open Source organizations and educational organizations should consider adopting for their region.

We also need to extend this effort with a training component so that teachers can learn how to build Moodle and other Open Source courses.

Fortunately, the basic skills for building a Moodle course are about the same skills as are required for general office productivity software, i.e., word processing, spreadsheet, presentation, and graphics skills.

**Teachers Going it Alone**

Here are suggestions for teachers who want to use Open Source courses on their own.

You may want to do this to protect and retain ownership of your work!

But beware, some school districts claim ownership of all the writings of its employees; whether the employee develops the materials with the district's equipment or not, whether the employee develops the materials on the district's time, or not.

There are a number of Web hosts that you can use. You can search on the term "moodle hosts" at any of the search engines.

For less than \$5 US, you can host your own site. [Link to the Site Ground hosting site.](#) The Site Ground plan comes with a free domain name, and .

Classroom Toolkit has also designed a hosting plan that includes a Moodle setup for only \$3.65 per month. The catch is that you have to sign up for an entire year, and the domain name costs \$5.00. [Link to the customized LMS hosting plan.](#)

If you would like to design a Moodle-enabled hosting plan of your own, you can create an account with Reseller Panel. Reseller Panel offers a reseller plan that you can customize to your own specifications. The difference with the Reseller Panel plan is that you don't have to purchase (or pay) anything until you sell a plan. The catch is the yearly contract requirement. [Reseller Panel Do-it-Yourself \(DIY\) Hosting Program](#)

If four or five teachers joined together, and shared on Moodle site, they could use either plan for \$1.25 (or less) apiece per month.

**Summary**

Real, on-the-ground, actual implementation of Open Source Learning Management System courses is more complicated, complex and time consuming than just using some free software products.

But, if teachers work together, in the Open Source spirit of sharing, online courses can be created with minimal cost.

And, Moodle™ makes it possible to share these courses with teachers around the world.

Posted by Classroom Toolkit Newsletter in Open Source at 03:00