

Open Source Learning Management Systems - A Primer (Nov 08)

Mark Aberdour, Kineo Open Source CEO, provides an overview of the rise of Moodle and the wider open source learning management systems market.

The rise of Moodle

Research by BESA (the British Educational Suppliers Association, 2007) revealed that Moodle is the leading virtual learning environment (VLE) in both UK Further Education colleges and secondary schools, and a significant player in primary schools. Last year Moodle also became the second most used VLE in universities worldwide.

It's a similar story in the corporate market. E-learning Guild research of learning management system (LMS) use in small and medium sized enterprises (SMEs) placed Moodle with 24% of the market, ahead of SumTotal at 21% and leaving the likes of Learn.com, Blackboard, Plateau and Saba fighting over the remains of the market.

LMS or VLE, it's the same thing: a learning platform. So just how did a free product with no commercial backing manage to reach number one spot in the LMS market, moving aside major players like Blackboard and SumTotal in the process?

Moodle is an LMS

An LMS is software for delivering, tracking and managing training. At its most basic an LMS just launches and tracks e-learning courses. Most products also feature online collaboration tools and the more fully featured products integrate HR and performance management systems.

The LMS market is fast changing, even without taking the current credit crunch into account. In 2001 there were over 250 LMS products in the marketplace. This number has been gradually reduced through mergers and acquisitions and natural attrition. In particular the major players like Blackboard and SumTotal have dominated, while a large number of specialised LMS products have serviced niche markets like health and defence. Open source LMS products have been around for a decade but started making significant dent in this market over the past five years, increasing in popularity and maturity to the point where the open source LMS Moodle now leads the market in most sectors.

Moodle is open source

Open source is collaboratively developed software that is shared with no license fees. People get together, build something, then give it away, and provide access to the source code, so that anyone can contribute ideas for its continued improvement and development.

Traditionally open source projects have been started and maintained by teams of volunteer programmers. More recently open source has proven its worth as a viable business model so software companies are increasingly putting payroll programmers to work on open source products. For example, both Google and Open University have put their own programmers to work on Moodle. But the spirit of the volunteer community lives on in the form of software extensions, translations, documentation, bug reports and so on. Contributors around the world work together in order that the software evolves and improves.

Four key uses of Moodle

At Kineo Open Source we have found our customers generally have four key uses of Moodle:

- Basic launching and tracking of e-learning courses
- Facilitating learning through collaborative activities such as wikis, chat rooms and forums
- Supporting classroom courses through the provision of online resources and collaboration tools
- Online performance support centres such as sales academies.

Advantages of Moodle

So what do you actually get with Moodle? You can upload a range of content types including e-learning packages, word documents, PDF documents, audio and video files and web links. Functionality includes tracking learner activity and course progress, calendar, discussion forums, chat rooms, blogs, wikis, quizzes, assignments and much more. Users can be put into different types of groups for ease of enrolment and monitoring.

Moodle is a feature-rich product and highly configurable. It is designed in such a way that anyone can write new components and plug them in easily. These 'modules' can be turned on and off with the click of a button. The look and feel can be changed very easily, and side blocks can be quickly added for news items, promotions, etc.

Moodle is a mature product with over a hundred active developers. Moodle is scalable for enterprise use, as over 300 organisations running Moodle with over 10,000 learners each will attest. Global organisations benefit from Moodle's translation into 75 languages.

With over 80,000 downloads per month, over 50,000 registered Moodle sites serving nearly 25 million learners, half a million Moodle.org community users of whom 45,000 use the community site monthly, it's safe to say that Moodle is here to stay. The strength of the community lies in its size – if you have a Moodle problem the chances are that someone on the forums will have had it before you and provided an answer and if not, your forum questions will be answered very quickly.

Disadvantages of Moodle

Of course we'd be lying if we said Moodle was perfect. While the richness of Moodle's functionality and the almost endless configuration possibilities are one of Moodle's main strengths, they are also a key weakness as we have seen many a Moodle administrator overwhelmed by the possibilities and coming running to us for help. It's nothing that a day's training won't sort out, but if you're running Moodle alone with no commercial support then it can be daunting.

For many people, launch and track is all they need. While Moodle's collaborative features can be turned off easily, it may be overkill for such a simple requirement. The reporting is also not strong, and we often need to write custom reports to enable customers to get at the data they need.

Alternatives to Moodle

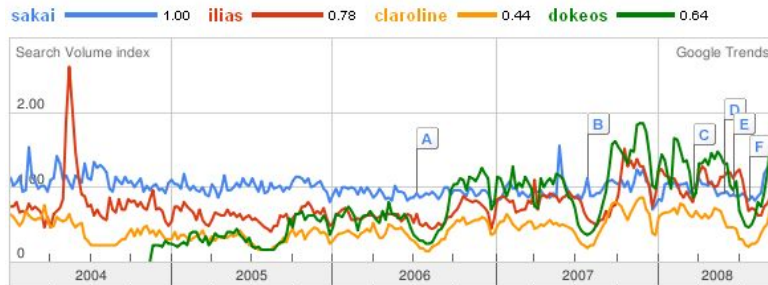
So are there any alternatives to Moodle that you should consider? In a word, yes. There are over 50 open source LMS alternatives. However sorting the wheat from the chaff can be time consuming. We can save you time by telling you the key players:

- Atutor
- Claroline
- Docebo
- Dokeos
- dotLRN
- Ilias
- Sakai

A quick search on Google Trends shows just how dominant Moodle is.



But look more closely and you'll see that the competition is pretty evenly spread.



All of the products are written in PHP apart from Sakai, which is a Java application. Depending on your IT team's skills this will be a major consideration in your selection criteria.

If you want to customise your code, then Sakai, Dokeos, Ilias and Claroline should be the easiest to customise due to the quality of code comments, added by programmers to enable other programmers to understand what each section of code is doing. This reduces the learning curve for programmers engaged in customisation work. Moodle fares less well in this respect.

Ilias, Dokeos and Sakai have between 50 and 70 developers with access to update the core source code. So these are sizeable projects in their own right. Moodle has over 130 so while it is far ahead in terms of market penetration and usage, it does not have such a significant advantage in terms of development team size, which impacts on the quality and release cycles of the products.

However the sheer number of Moodle end users means that the Moodle community forums are tremendously active which is crucial for informal support, although not such a major consideration for organisations using commercial support services.

Dokeos and Ilias support the use of job competencies which is important in the corporate LMS market. Moodle is catching up with it's latest version.

SCORM compliance is important for many learning organisations as SCORM compliant content that works in your existing LMS is almost guaranteed to work in any other SCORM compliant LMS should you wish to change vendors. Sakai is the only LMS of this bunch that does not support SCORM out of the box.

The open source advantage

Whichever system you choose, there are a number of advantages that open source can bring to an organisation.

- Firstly there are no licensing costs. Of course there is a cost of ownership that includes installation, infrastructure and maintenance but the zero license cost is a major attraction to organisations looking to reduce costs.
- As an open source product there is no vendor lock-in. There are hundreds of Moodle service providers the world over, and with Moodle courses and data archived with ease it's never been easier to change suppliers and migrate your entire system intact – your learners need never know a thing.
- Going down the open source road mitigates the risk of vendor collapse or product discontinuation.
- The open source development process means improved software quality. Never have so many eyes been able to test a product so quickly. The size of the development community also means that bugs get fixed quickly. The key to driving quality in open source products is a large and mature sustainable community, and Moodle has this in bucket loads.
- Fixes and patches get to market more quickly due to the rapid release process in open source. In many commercial systems you'll be hanging around for months for updates.

- Ease of customisation is assured. With the source code accessible it's never been easier to hire your own developers to customise a product to your organisations needs. No more expensive customisation work by the vendors own developers – the customer is now in control.

A Bersin survey in 2007 found that 24% of commercial LMS buyers wanted to change platforms, citing a number of key problem areas:

- out of the box functionality
- management reporting
- ease of customisation
- inflexible data models and architectures
- rapid return on investment
- vendor service and support.

Many of these weaknesses in commercial LMS products are strengths in open source LMS products:

- Functionality in open source products is developed to meet users' needs. Open source development processes mean that features are generally suggested by end users and are often voted in.
- Ease of customisation goes without saying when you actually have the source code.
- Data models and architectures are completely open and modular by design so that contributors can develop add-ons without the need to change core system files.
- Return on investment is much quicker when there are no cost-per-user licensing deals to negotiate.
- Commercial service and support is offered for most of the major open source LMS products and is of a high quality, it has to be when you consider the ease with which customers can migrate to another vendor offering services for the same LMS.

So where's the catch?

There's still some nervousness about open source. You may face it in your own organization when it comes to convincing others to take it forward. To help them, and you, here are some common fear factors - and why you don't need to be scared.

Open source fear factor

"What happens if the tool just goes away? If there's no commercial organization in charge, couldn't it just stop being supported?"

"What about security? Sounds like it might be prone to viruses and hacks, who knows what's in that code?"

"If anyone can change the code, isn't it inherently unstable? How do I know my version is going to run"

Don't be scared

That's a lot less likely to happen with open source than with most software you're using, which – let's face it – will end up being discontinued at some point due to acquisition or upgrade. Sure, some open source products are 'owned' by a company who does the bulk of development, but with open source the code is ultimately owned by everyone and no-one – and that's much safer.

This is one myth where the reverse is actually true. Just ask NATO, the US Department of Defence or NASA, who are all big advocates of open source. The fact is, without full access to the source code, a full security audit is impossible, which makes closed source code much less secure. With high profile examples of enterprise applications which contained Trojan code or 'back doors' for many years before they were detected, security is one area where you can trust open source.

Actually no. With code being reviewed and interfaces tested by far more people than a proprietary software house could even afford or find, bugs are found and fixed quickly. Or, in open source nerd-speak: Many eyes make all bugs shallow.

Additionally, due to the logistics of having developers distributed around the world working out of the same code repository, release management and version control is handled far more

"Nothing's really free is it – aren't there costs to install, host and support it."

rigorously in open source than in most proprietary software companies. While interim releases come more rapidly, great care is taken to release stable versions at key milestones.

Actually some things really are free. The fact is, there are absolutely no licence costs for open source, it is freely available for all to download.

But yes, there are costs involved – the effort of reviewing and selecting tools, to start with. Then there are labour costs to install, host, train and support users and upgrade to new versions (the same as you'd expect for commercial software). But small to medium businesses don't need to go it alone here. Companies like Kineo Open Source provide leading open source tools on a secure and hosted platform with all the services business needs, so that plugging into open source is easy and extremely cost effective.

What next?

Open Source can deliver real benefits to business by improving productivity and cutting costs in key areas. The business case for open source is a no-brainer. You get better support than the commercial software you're currently using, with no licence fees. And secure hosted and supported 'software as a service' offerings which many open source companies now offer further reduce your implementation and maintenance costs.

You will of course need to consider the costs, which fall into the same categories as any commercial software except that you've removed the licensing costs, such as:

- Hosting and backup
- Rebranding to your organisation's look and feel
- Possible need to customise management reports
- Setting up your online courses
- Administrator and tutor training
- E-learning content modules

Also consider your own organisation's requirements. The most successful software implementations are those which map to an organisation's existing processes, not where you have to change your organisational processes to meet the needs of the software. Use the saving in license costs to customise the product to your needs.

To get the full benefits of open source, many organisations may need a trusted partner who can guide you through the options, provide help and support to get started, and make usage for your team easy through secure hosted solutions and dedicated support. They can also provide support and tailored services to ensure you get the maximum impact from open source software.

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