

# Learning Management System (LMS) Review Summary of Findings

December 2009

## Key Ideas

1. Many schools are reviewing their current LMS, with a growing number moving from Blackboard to either Moodle or Sakai.
2. There is no clear trend to explain why institutions have chosen any particular Blackboard alternative.
3. Schools that move from a proprietary system<sup>1</sup> to an open source<sup>2</sup> system often do so for institutional reasons as much as for functionalities that faculty use.
4. It is increasingly important to look at non-course use of LMS tools when evaluating their functionality.
5. Alternative tools are too early in their lifecycle to be full replacements for the standard LMS model. They are, however, important to consider in light of emerging needs for flexible group spaces and social networking.
6. These findings contribute to the Duke eLearning Roadmap group's efforts in defining Duke's guidelines, principles and process to make the best choice for our University's needs.

## Summary

The LMS Review Subgroup reviewed LMS reports from eight institutions to identify trends and evaluation methods from different institutional efforts. Institutions reported the following reasons for switching to an alternate LMS:

- the need to consolidate from multiple systems to one system
- stability problems or difficulty integrating current LMS with their Student Information System (e.g. Banner, PeopleSoft,)
- moving to a new system because their current LMS version is no longer supported by the vendor
- perceived cost savings
- more control of local customizations; more flexibility
- better fit for campus environment based on existing staff expertise
- a desire to explore alternatives to better meet their needs and strategic direction

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<sup>1</sup> "Proprietary software" is computer software which is neither free nor open source. Typically there are restrictions on the use of proprietary software, and its source code is almost always kept secret.

<sup>2</sup> "Open Source Software" is computer software which is often free of licensing costs and whose source code is freely available, subject to terms of the software license.

## LMS Review Summary

When looking at alternate systems, most institutions considered both commercial and open source options in their initial evaluations. Several institutions chose one open source LMS to pilot, starting on a small scale. Of the eight reports we reviewed:

- four institutions went with Moodle
- one chose Sakai
- one report recommended expanding their Sakai pilot
- one plans to re-evaluate at a later date
- one narrowed its choice down to two commercial systems

Institution	LMSs considered	Decision
NCSU	Sakai, Angel, Moodle	Moodle

**Full Report:**

[http://wikis.lib.ncsu.edu/images/1/17/Report\\_of\\_the\\_Moodle\\_Pilot\\_Implementation\\_Team\\_final.pdf](http://wikis.lib.ncsu.edu/images/1/17/Report_of_the_Moodle_Pilot_Implementation_Team_final.pdf)

**Rationale:** Needed a unified environment, reviewed total cost of ownership, local customizations and staff expertise.

**Notes:** Only Moodle was piloted. NCSU is consolidating Blackboard, Moodle, Wolfware, etc. into one environment.

Institution	LMSs considered	Decision
Notre Dame	Angel , Sakai, Blackboard Vista	Staying with Blackboard Vista, re-evaluate in 2010

**Full Report:**

<http://www.ebuford.com/CMS%20REPORT%20FINAL%20PUBLIC%20REPORT%20V1.pdf>

**Rationale:** Avoiding transition costs while recognizing a switch could provide more flexibility.

**Notes:** Angel has since been acquired by Blackboard.

Institution	LMSs considered	Decision
DePaul University	Angel, eCollege, Blackboard, Desire2Learn, Moodle	In process: either Blackboard 9 or Desire2Learn

**Full Report:** [http://teachingcommons.depaul.edu/P\\_S\\_C/LMS/review.html](http://teachingcommons.depaul.edu/P_S_C/LMS/review.html)

**Rationale:** Stability, product quality, integration with campus services, total cost of ownership, vendor relations with 3<sup>rd</sup> party partnerships.

Institution	LMSs considered	Decision
Australian National University	Moodle	Moodle

**Full Report:** <http://information.anu.edu.au/daisy/infoservices/1804.html>

**Rationale:** Flexibility/local customization, meeting institutional needs.

**Notes:** Institutional goals include Interdisciplinarity, International Focus, Service Learning and Research.

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Institution	LMSs considered	Decision
University of Florida	Angel, Sakai, Moodle	Sakai 3.0 (not yet released) + Sakai Portfolio system

**Full Report:** <https://lss.at.ufl.edu/services/reports/>

**Rationale for Decision:** Functionality and total cost of ownership, plus the ability to join a community of peers.

**Notes:** Moving to external hosting. Anticipate \$50,000f savings per year.

Institution	LMSs considered	Decision
University of Canterbury	Blackboard, Interact, Moodle	Moodle

**Full Report:**

<http://uctl.canterbury.ac.nz/files/staff/moodle/Final%20Report%20of%20the%20LMS%20Review%20Steering%20Group%20-%20public%20version.pdf>

**Rationale for Decision:** Students and staff preferred Moodle, total cost of ownership, “future proof” of using an open system.

**Notes:** Has institutional initiatives similar to Duke (interdisciplinarity, internationalization and knowledge in the service of society).

Institution	LMSs considered	Decision
UNC-CH	Sakai (still using Blackboard as the main campus LMS)	Expanding Sakai pilot and integrating with campus systems

**Full Report:** <http://www.unc.edu/sakaipilot/blog/?p=54>

**Rationale for Decision:** Student and faculty input, more flexibility/local customization, total cost of ownership and return on investment, aligning with institutional values and mission.

**Notes:** Lots of online materials about their pilot.

Institution	LMSs considered	Decision
LSU	Blackboard, Angel, Desire2Learn, Moodle, Sakai	Moodle

**Full Report:** <http://moodle.wiki.usfca.edu/file/view/moodle.pdf>

**Rationale for Decision:** All “deal breaker” requirements met, total cost of ownership, local customizations, peer institutions using Moodle.

## Guidelines

Guidelines/recurring themes from LMS reports informing the selection process:

1. Flexibility and options for customization.
2. Support for multiple pedagogical approaches.
3. Ease of integration with campus services.

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4. Multi-campus support or ability to configure system to support diverse programs.
5. Ability to brand the LMS in different ways for different purposes.
6. Reporting tools on system-wide usage for assessment and continuous improvement.
7. "Deal breaker" requirements – requirements that must be met. Prioritize others (important vs. nice-to-have, for example).
8. Exit strategy (if company or supporting organization folds or becomes otherwise unsustainable).

## Summary and Questions

Even though many institutions shared common guiding principles, requirements and needs, the specific LMS choice seemed to depend on how well the LMS fits into the institution's future direction and strategy.

Below are a few questions and concerns that emerged as the LMS Review Subgroup discussed the findings from these reports.

\* Is Duke ready to consider a long-term commitment to Open Source software? Is Duke as an institution more of a consumer of services with supporting vendors or an active member of development communities? Or is Duke somewhere in-between?

\* How should we be thinking about budget? With the expansion of Duke into international arenas, outreach into communities and expertise in knowledge in the service of society, and other strategic initiatives, how will Duke's needs impact the support requirements for our LMS? For example, will the number of FTEs increase, thus requiring a renegotiation of our license cost with Blackboard (or be one advantage of choosing an open source LMS)? Will Duke require separate branding or configuration of the LMS for separate markets?

\* If we decide that we need more control and customization, whether within a commercial system or open source, it would be useful to find out more about how others have handled the balance between customizing their LMS in-house, versus getting the core software modified to reflect their needs. More customization requires more in-house expertise.

## Related Trends

### Adoption Rates

The adoption of open source solutions (Moodle and Sakai) appears to be growing, while Blackboard's market share appears to be decreasing despite their significant acquisitions.

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The rate of adoption of Moodle appears to be happening at a greater rate than Sakai, but not necessarily among Duke's peer institutions.

Additionally, alternative tools and models continue to emerge and evolve that challenge the traditional LMS model. The traditional LMS model favors instructor management of a course web site, providing easy access to roster and instructor-controlled deployment of content and configuration of access to select tools. Emerging models include support for interaction between course, project and research sites, social networking, and delegation of control to learners.

From 2007 to 2008 Blackboard remained the dominant provider but dropped from 66.3% in 2007 to 56.8% in 2008 (Campus computing survey 2008). Open source LMS continued to rise as the campus standard with a market share increasing by 33% from 2007 to 2008 and almost double from 2006 to 2008. In 2008, 13.8 percent identified Moodle or Sakai as the campus LMS, from 10.3 % in 2007 and 7.2 percent in 2006.

For 2009, Sakai is more widely adopted than Moodle at public research universities, but in all other sectors, including private research universities, Moodle is more widely adopted. Overall adoption of open source LMS by private research universities is under 10%, and for public research universities about 15%. (Campus Computing 2009, chart page 17).

As of April 2009, out of 39 peer research institutions, 62% use Blackboard, 13% use a custom system, 15% use Sakai and 10% use Moodle (updated to reflect NCSU choice of Moodle)<sup>3</sup>.

According to the November 2009 Edition of the Campus Computing Project, 47% of universities and colleges are reviewing LMS strategy and 28% plan to change LMS in two years.

Among members of the Ivy Plus group: three are continuing to use Blackboard and plan to upgrade to version 9, two plan to stick with Sakai, one is planning to move to Sakai, one is using Blackboard and piloting Moodle, and one is about to launch an LMS assessment.

### **Breaking the Traditional LMS Mold**

Alternative models to LMSs include models that are community-centric rather than course-centric, that use open technologies for most course interactions, that invite interaction with experts and communities around the world, and systems that focus on social learning vs. course or personal learning environments. Examples include:

- **Goingon.com** - <http://goingon.com/> : A commercial system that builds on open source products Drupal and Moodle to create online communities. Currently in use by the

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<sup>3</sup> "LMS Alternatives Report" by Yvonne Belanger and Margo Evrenidis in the Duke CIT

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University of Pennsylvania Online Learning Commons. New communities can emerge spontaneously out of existing communities and personal profiles and people make connections based on skills and common interests.

- **Georgetown Digital Commons** - <https://digitalcommons.georgetown.edu/> : Georgetown, in addition to using Blackboard as their central LMS, supports a “Digital Commons”: a collection of blogs, wikis, eportfolio, podcasts and digital stories provided as an easy-to-access suite of separate tools to meet various academic needs.
- **WordPress MU (multi-user)** - <http://mu.wordpress.org/> : A popular blogging platform currently being piloted at Duke that has also been used successfully at University of Mary Washington, Cornell and other schools. Blogs have many uses, with their strength being the ability to engage a broader community not restricted to the class roster, including experts in the field. Blogs typically do not include a grade book or other collaboration or communication tools one usually finds in an LMS.
- **Google Applications** - <http://www.google.com/apps/intl/en/business/index.html> : Institutions are also exploring Google applications and other cloud-based computing solutions for greater interactivity and spontaneous collaboration. The collection of Google applications includes: Gmail (e-mail), Google Docs (co-authored documents with built-in sharing over the web), and Google Wave (a new model of communication, a hybrid between email and discussion boards).
- **Elgg** - <http://elgg.org/> - Open source software that can power many different kinds of social media communities, including educational ones. Elgg mimics some of the features found in Facebook.