Recommendation and Report of the Learning Management System Team
Durham Technical Community College
March 31, 2010

Recommendation

The Learning Management System (LMS) team unanimously recommends that Durham Tech remain on Blackboard while our team explores Sakai further to determine if the college should invest in a full-scale pilot of that product. We also recommend that the team examine the next major release of Blackboard (version 9.1, due out in April 2010) so that an appropriate comparison can be made.

Before the college commits to switching from Blackboard to another LMS, we believe it is necessary to conduct a pilot in which selected Durham Tech instructors (some technically-oriented, some not) teach courses using that LMS. A Sakai pilot would require funds ($5,000 – $25,000) to train instructors and support staff and to provide a stable, supported environment for student learning. The investment in the pilot would serve as a first step in transitioning should the decision be made to continue in that direction. Due to the costs, time, and human resources required, we do not recommend piloting more than one product.

In making our determination to examine Sakai more closely and to compare it with Blackboard's forthcoming new version, our team gave thoughtful consideration to which product best supports student learning, and we attempted to be forward-thinking in choosing a direction that is most likely to suit the needs and trends of the future.

Process and Findings

Our team explored three LMS options: our current system (Blackboard) and two open-source alternatives (Moodle and Sakai). We believe that over the next decade, these three products will be the dominant learning management systems in higher education.

As we examined each option, we considered five general criteria: (1) usability, (2) content conversion / creation, (3) interactivity and assessment, (4) interoperability with systems such as Datatel, and (5) scalability and sustainability. (See Attachment B.)

As part of our research, team members participated in numerous webinars and attended presentations offered by users and vendors representing South Piedmont Community College, NCSU, UNC-Chapel Hill, Kettering University, Datatel, Moodlerooms, Blackboard, and rSmart (a Sakai partner). We reviewed the NCCCS *Moodle Assessment Report*, which examines the experiences of four NC community colleges that have migrated to Moodle.

Moodle

Because Moodle is the LMS favored by the NCCCS, we began by exploring that product in depth. We set up a Moodle server, viewed Moodle tutorials, and practiced adding content into

Moodle.   We learned that a variety of institutions – such as NCSU, UNC-Charlotte, Appalachian State University, and a dozen or so NC community colleges – are using or migrating to Moodle.

While some team members liked aspects of Moodle, everyone agreed that Moodle is considerably less user-friendly and less intuitive than Sakai and Blackboard. Team members were concerned that Moodle would be difficult for many users to master. The present version of Moodle offers some different options but little added functionality beyond the current version of Blackboard. Because courses are structured much differently in Moodle than in Blackboard, converting content would be challenging and would require instructors to rethink and redesign the organization of their course materials.

Unlike Sakai and Blackboard, Moodle was not designed as an enterprise-level LMS. Its underlying structure and administrative functionality are less robust than the other two products. A recently announced Datatel/Moodlerooms partnership and the support of Moodle by the NCCCS lead us to expect that further work integrating Moodle and Colleague will occur. Few details are known, but it is clear that an integrated Datatel/Moodle web portal would require significant resources and work on the part of ITSD to implement, as this would replace the current WebAdvisor system.

Blackboard

To evaluate our current LMS, we surveyed the 360 instructors who have used Blackboard at Durham Tech in the past year.   Of the 132 respondents, 92% reported that overall they either liked or loved Blackboard.   Unlike the four colleges profiled in the NCCCS *Moodle Assessment Report*, Durham Tech's faculty seem generally quite pleased with Blackboard. However, 84% of the respondents have never used any other LMS. (See Attachment C.)

We studied Blackboard's track record and gathered information about the future direction of the company and its products. For most of the past decade, Blackboard has provided poor customer support; the company has seemed to focus on acquisitions and lawsuits rather than on serving its customers and maintaining a quality product. Its prices have risen steadily and dramatically but changes to its product have not kept pace with advances in web technology.

Facing competition from open-source alternatives, Blackboard has made efforts to improve its customer service and products. Its newest version (scheduled for release in April 2010) includes an updated, streamlined user interface along with new tools for interactivity (blogs, wikis, and journals) and for incorporating Web 2.0 content. Blackboard is an intuitive, user-friendly product. Based on demos we have seen, we expect that the new version will be relatively easy for instructors and students to learn. However, we will not be able to assess the quality of the new version until it is released later this spring.

Like many colleges, Durham Tech is at a crossroads where we must decide whether to upgrade to a new version of Blackboard or devote our energies to changing to a different LMS.

Sakai

Our team thought it was important to consider more than one alternative to Blackboard. We chose to look at Sakai, which UNC-CH began piloting in Spring 2009. (This semester, they have 4,000 faculty and students enrolled in 57 Sakai course sites.) Georgia Tech and UVA are using Sakai, and Wake Forest is in the process of converting to Sakai.

Released in 2004, Sakai was initiated by major research universities (MIT, Stanford, Indiana, Michigan, and UC Berkeley). Rather than each continuing to "build their own," these institutions established the Sakai Project to facilitate the ongoing collaborative development and maintenance of an open-source, enterprise-level LMS. The direction of Sakai is governed by a board made up of representatives from large and small institutions of higher education. Sakai is based on advanced web technologies, conforms to emerging interoperability standards, and is supported by major universities; thus we expect Sakai to evolve into a superior LMS.

We found the current version of Sakai (2.6) to be user-friendly, flexible, and comprehensive. In addition to course sites – which include features common to Blackboard and Moodle – Sakai offers tools for students to create e-portfolios and to participate in "project" sites. The structure of a course in Sakai is similar to Blackboard. Converting content from Blackboard to Sakai would be a largely manual process that would take time and effort but would not require the course redesign needed for a Moodle conversion.

We were impressed with the possibilities of Sakai and with the quality of support and training services offered by a company called rSmart. Team members agreed that we will arrange a session in April to learn more about Sakai's features and do some "hands-on" experimentation in order to determine if the college should invest in a Sakai pilot.

NCCCS

As a follow-up to its *Moodle Assessment Report*, the NCCCS is currently conducting a "feasibility study" and plans to recommend a future path to the State Board of Community Colleges in May 2010. The nature of this recommendation is not known, but the Assessment Report indicates an interest in pursuing "centralization of applications" and a "system-wide hosting solution" for a selected LMS product or products. The report makes it clear that Moodle is the product favored by the system office.

At the NC3ADL conference in March 2010, Saundra Williams (NCCCS Senior Vice-President) announced that the system office would be releasing an RFP before the end of 2010 to solicit bids for a system-wide LMS. Unofficially, Dr. Bill Randall (NCCCS Vice-President) relayed that we can expect the NCCCS to continue funding Blackboard through at least June 30, 2012.

All team members expressed concerns about choosing a path different from the direction in which the NCCCS seems to be moving. We are concerned about financial and political pressures Durham Tech may face if we do not switch to Moodle. There are also some concerns about integration with future tools the NCCCS might provide. However, in addition to our view that Moodle is not the best LMS, we also worry about the quality of service we would experience

under a centralized, NCCCS-managed LMS system. The track record of other large, centrally-directed technology projects is not encouraging.

If we choose to convert to Sakai, one possibility is to seek partnerships with UNC-CH and/or other institutions that use it.

Costs/Resources

Pilot Costs

The LMS team is collecting information on the funding required to run a Sakai pilot in which selected instructors teach "real" courses for a full semester to evaluate the product. Estimates range from $5,000 to $25,000. (We are working to determine a more precise estimate.) While the cost of a pilot seems high, we view it as an investment that would offset some of the costs described below should the decision be made to implement Sakai.

Implementation and Ongoing Costs

The team has also collected information on the resources that would be required for a full migration to Sakai or Moodle. (See Attachment D.) The costs, tasks, and timeframe involved in migrating to either system would be similar. However, we expect that a migration to Sakai would go more smoothly because of its similarities to Blackboard and its ease-of-use.

A full migration to a new system would take 1½ – 2 years to complete (including a pilot period).

To start the migration, the college would need to contract with a vendor for training and consulting services. The estimated cost of this for either Sakai or Moodle is $20,000 (minus amounts invested in a pilot).

For either LMS, contracting with a vendor for ongoing top-level support will be critical during and after the migration. We expect the cost of ongoing support for Sakai to be much higher than for Moodle. For example, rSmart offers a Sakai hosting and support package for $42,000/year, while Remote Learner offers a similar package for Moodle for $9,000/year. However, it is essential to consider potential differences in the quality of service offered by each vendor.

Throughout the migration period, Durham Tech would incur the cost of operating the new LMS while continuing to maintain Blackboard. This year and next, the NCCCS is covering the cost of Durham Tech's annual Blackboard license: $38,925 for 2009-10 and $44,115 for 2010-11. We have been told unofficially that the NCCCS plans to cover this for 2011-12 as well.

Switching to Sakai or Moodle would require significant faculty/staff time to…
- Learn the new product at the instructor, student, and admin/support levels;
- Migrate course content;
- Recreate training and support resources for faculty and students; and
- Establish new back-end administrative procedures.

Attachment E provides an estimate of the hours required for faculty to be trained and to migrate content. We recommend that priority be given to migrating online and hybrid courses and that supplemental summer contracts be provided to faculty for migrating course content.

Instructional Technologies will need additional resources to train instructors and assist them with course migration. We recommend appointing "super-user" instructors in each department (giving them release time and/or supplemental contracts) to help train and assist instructors. Other new instructional technology initiatives would need to be put on hold until migration is finished.

Related considerations

An issue that impacts ongoing costs is the question of whether to continue to manage our servers on-site or to contract with a vendor for off-site hosting services.

Advantages of off-site hosting include 24/7 management, implementation of software updates, reduced equipment costs, enhanced power redundancy, and business continuity in case of local catastrophe. The disadvantages can include lack of control over the quality of service (speed, reliability), possibility of bandwidth overage charges, future price increases, and the difficulty of transitioning away if the vendor's services are inadequate.

Closing

Durham Tech's LMS has become "mission critical." It is a 24/7 learning environment used today by 94% of curriculum students, over 1,000 Continuing Education students, a growing number of Basic Skills students, and nearly 300 instructors each semester.

All paths presently available to the college will require increased investment of money and faculty/staff time. Our recommendation calls for further research into Sakai and a possible significant investment in a pilot of that product, followed potentially by a larger investment in a full migration and ongoing support. Given the central and direct importance of the LMS to student learning and to the success of the college's strategic plan, we must be prepared to budget the appropriate funds and human resources needed to achieve a successful transition.