

Report from the Advisory Committee on Instructional Technology & Course Management at the University of Virginia

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For the past year, the course management faculty advisory committee has been working with the Provost's office (Milton Adams) and the CIO's office (James Hilton) to evaluate and advise on the selection and implementation of a new course management system and collaboration environment to replace the Toolkit. After thoughtful deliberation, we have decided to go with an open source system supported by the Sakai community (www.sakaiproject.org).

This document contains questions and answers divided into three parts:
Part I – Why Open Source? Part II – Why Sakai? And Part III – When and How?

Part I – Why Open Source?

Why do we need to replace the Toolkit?

While the Toolkit provides many useful tools and features, it does not provide the kind of comprehensive online support that is increasingly needed to support both residential education and distance education. The Toolkit does not, for example, support blogs, wikis, chat, or a host of other collaborative tools. Moreover, the Toolkit's assignments, quiz, and materials tools lack adequate functionality. All of the features that are currently available though the Toolkit are also available through the more comprehensive course management applications (except for UVA-specific processes like final grade submit which would need to be ported to the new environment).

Why has UVA decided to adopt a community/open source solution rather than a commercial solution?

A number of factors contributed to the decision.

- By going down the open/community source route, we gain the ability to modify the tools to serve our particular needs. Commercial/proprietary systems typically do not allow you to modify the tools. This is important because universities have deep experience and competence in supporting both instruction and research. They are our core activities and by adopting a community source solution, we have an opportunity to have them feed the development of new tools and have those tools feed the classroom and the lab.

- Research universities are not the core market for the available commercial products and those products are difficult to modify to meet our needs given the proprietary nature of the code.
- The commercial sector has seen considerable consolidation. What was a highly competitive field is rapidly reducing to a small number of players. Market consolidation often leads to unfavorable pricing and monopolistic practices. The largest player, Blackboard, is currently engaged in an aggressive campaign to lock in its market dominance. Last year it purchased its main competitor (WebCT) and has sued Desire2Learn with patent infringement based on very broad and questionable claims. It is worth noting on this last point that Blackboard has publicly committed to refrain from suing open source non-profit projects that they consider infringing.
- Participation in a community source solution is in alignment with the culture of the academy and offers the university new ways to leverage links between that culture and the wider world.

Will an open/community source solution place more demands on ITC than a commercial product?

Not necessarily. Today's open/community source applications are packaged very much like commercial products. Both open/community source and commercial products install out of the box and both require the local IT shop to be engaged in implementing, maintaining, and supporting the systems. The main difference between the two approaches is that the open/community source applications allow for (but do not require) code modification.

Is "open/community source" the same as "build it yourself?"

No, they are not the same. While both approaches allow users to modify the source code of the application, they have distinctly different development requirements. As the name implies, build it yourself approaches require significant development activity. The Toolkit is an example of a build it yourself approach. In this approach, the institution bears the entire responsibility for developing the code that runs the application. In an open/community source approach, the code already exists. An institution can decide to contribute to the subsequent development of the code, but it does not have to do so. In fact, it could decide to devote no more development resources to an open/community source project than it would to a commercial/proprietary approach.

How does the total cost of ownership for an open/community source plan compare with the total cost of ownership for an off-the-shelf solution?

Determining the total costs of ownership for the two approaches is difficult because those costs depend largely upon the level of development effort an institution chooses to put into a community/open source project and the fixed costs of licensing associated with proprietary systems. In both cases, the institution must bear the costs of implementing and maintaining the systems. An open source solution is potentially less expensive because it does not require licensing fees--thus freeing up more resources for support from ITC.

In times of budget cuts, isn't a locked in commercial license safer?

Being locked into a commercial license is not necessarily safer. The cost of the software licenses is only a part of the total cost of maintaining a large IT infrastructure system. Having license costs locked in (and contractually committed) to a vendor reduces the flexibility we have in dealing with budget challenges, forcing us to cut things like support that have a much more direct impact on the value of the system to the university.

Part II – Why Sakai?

What open/community source products were considered?

The committee did a survey of the landscape and quickly determined that Moodle and Sakai are the two primary contenders in the open source arena. The committee also determined that providing central support for a single course management system was preferable for two reasons. First, providing a single system should minimize confusion. The committee discussed the challenges that multiple course management systems would create. The committee saw advantage in having students and faculty deal with a single interface common to all classes rather than multiple, and potentially confusing, systems. Second, supporting a single system should be less expensive than supporting multiple systems.

Why was Sakai chosen over Moodle?

Although both systems would be an improvement over the Toolkit, several factors led to the selection of Sakai.

- Sakai community is comprised primarily of research universities that align well with UVa's core teaching/research mission.
- Sakai has a formal and stable architecture.

- Sakai has web service tools that allow the easy integration of other systems and the possibility for rapid innovation. Using the “link tool,” for example, a professor could commission two of her students to design a new module in any of several programming languages (e.g., Java, Perl, PHP, etc.) and integrate that module into her classroom site. Similarly, the link tool allows Sakai to connect with a server running Moodle and bring those modules into the Sakai environment.
- We have considerable experience with Sakai. Sakai is the software that supports Collab.

What other institutions are running Sakai, and where can I get more information about it?

Dozens of universities, including Michigan, Indiana, Berkeley, Yale, and Stanford are currently running Sakai. A full list of institutions, along with more information about Sakai, can be found at www.sakaiproject.org.

Part III – When and How?

Can we keep the Toolkit for the long haul (either in addition to or instead of a full-blown course management system)? What would the transition from the Toolkit look like?

In the early phases of the transition, the Toolkit and the new system will both be available and supported. Those needing collaboration tools, or wanting to use some of the newer web technologies (e.g. wikis, blogs, podcasts) would start using the new system; those who want to continue using the Toolkit could do so. Eventually all new course websites and course administration activities would move to the new system, and the Toolkit will be placed into read-only mode for access to previously offered courses.

Will I lose all of the things that I love about Toolkit?

No, you will not lose all of the things you love about Toolkit. At a minimum, the new system will include all the functionality of the Toolkit.

In addition to replicating the Toolkit functionality, the new system will offer a single environment that supports course content and course administration, and provides collaboration tools for researchers – thus helping to blur the distinction between the laboratory and classroom, and between knowledge creation and digestion.

Will supporting a full-blown course management system place more demands on ITC and will ITC be able to meet those demands? Will the University supply the necessary expertise to complete the implementation successfully?

Supporting a full-blown course management system, whether proprietary or open source, will place more demands on ITC. Selection and implementation of a new system is a joint project of the Provost and the CIO. The Provost and CIO will work together to devote the resources necessary to meet the new demands and to ensure successful implementation.

What is the prospect of sustained funding and the continued financial backing necessary after the implementation is complete? What is the plan for sustained support and system enhancement?

Course Management Systems and collaboration environments are rapidly becoming an essential part of the infrastructure that supports teaching, research, and scholarship. As such, they have high priority for new and reallocated resources. The ongoing support costs will be incorporated into ITC's budget and decisions about particular system enhancements will be made on a case-by-case basis.

If additional course management systems such as Blackboard are used on-Grounds by different Schools, what type of (if any) support will be provided to schools utilizing such systems?

Much as is the case today, central support for additional systems is not planned.

Will the chosen system be able to support the delivery of completely online courses and programs?

Yes.

Will resources and infrastructure be developed to support and sustain the system over time?

Yes, we believe the following components are key for a successful implementation:

- System hardware requirements
- System administration
- Upgrade provisions and "rollout" plan
- Communication plan with other community source based Universities
- Faculty training

- Learner training
- Technical support

Can the complete implementation timeline be defined for the new course management system?

While the timeline is still being finalized, the goal is to have the new system available for early adopters in January 2008 with more and more courses/users moving to it during the 2008-2009 academic year. Assuming this timeline holds, Toolkit would no longer accept new homepages after the Spring 2009 semester.

Will I be able to move my Toolkit resources to the new system?

We recognize that moving resources from Toolkit to the new system is critical and ITC will be working with faculty to make that process as easy and efficient as possible.

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