LMS Focus Group Report

May 11, 2006

Instructional Technology Resource Center
Idaho State University

LMS Focus Group Report

Summary:

The learning management systems (LMS) Focus Group Report evaluates feedback by Idaho State University (ISU) faculty members, students, support staff, and assessment officer review of WebCT 6.0, Sakai 2.0, and Moodle 1.5 LMS software packages. The ISU campus community currently utilizes WebCT 4.0, which will no longer be supported after July of 2007, to deliver course materials and activities via the Internet. A typical upgrade path would be to upgrade to WebCT 6.0, but that process has been identified as a larger shift in support and resources than previously required for WebCT version upgrades. The goal of this study is to determine if better LMS alternatives exist that can demonstrate increased pedagogical value, support financial concerns, address support issues, meet appropriate assessment criteria for accreditation, integrate with the information technology services on campus, and offer dependable long-term solutions.

Background:

ISU has been utilizing WebCT since the fall semester of 1997 when the product was still in beta release. We started paying WebCT for their support and license in 1998 for $500/year and are currently paying $35,700/year with an expected increase of 5% annually (based on current licensing policies). Currently, ISU supports over 600 WebCT courses a semester with an annual increase of about 50 courses in the last two years. Having a significant influence on distance learning and the ways in which faculty teach at ISU, the University requires a close investigation of LMS options to begin long-term planning and to expand the level of our current course support and offerings.

In the fall semester of 2005, ISU was informed by WebCT that our current platform – WebCT CE 4.0 – would no longer be supported after July of 2007. The new version (WebCT CE 6.0) was identified as requiring a significant shift in personnel and equipment support and resources. Soon after the version 4.0 "end of life" and support deadline was announced, Blackboard Corporation, which makes a competing LMS product, announced its acquisition of WebCT. This merger was finalized in April of 2006 and created additional concerns for product directions, pricing, and support requirements. Consequently, the issue of upgrading an existing platform became complicated by issues of upgrading to which product – WebCT CE 6.0 or, in view of this corporate acquisition, moving to a Blackboard product? The consideration of a Blackboard option necessitated a review and evaluation process of our existing LMS needs and planning for future campus-wide requirements and requests.

The first step in evaluating our LMS requirements was to determine our choices in either migrating to the new version of WebCT or to identify another product that was comparable to the current platform. Data was collected from WebCT to determine costs to migrate from CE 4.0 to CE 6.0. Other commercial venders (e.g., Blackboard, Angel, or D2L) have been evaluated over the previous two years internally by the Instructional Technology Resource Center (ITRC). None of those commercial alternatives has proven to be a viable option when comparing price, usability, and support. Changing to another commercial product would offer another layer of challenges that make it difficult to discontinue WebCT. Additionally, we have

enjoyed a productive relationship with WebCT, and it does not appear advantageous to consider other commercial vendors.

After surveying the major additional alternatives, Sakai and Moodle emerged as the two main Open Source LMS solutions worth being evaluated against WebCT. Open source LMS products evolve through community cooperation and development. Such communities are composed of individual programmers and educators who freely develop and share product ideas (this is a viable approach to product development and support – for example, Open Source Apache web servers currently hold a 63% market share). Both Moodle and Sakai offer cost effective solutions that can be comparable to our current WebCT LMS, and in some cases can offer more flexibility with teaching and learning tools. As part of evaluating Sakai and Moodle, ISU support staff from ITRC, ETS, and ITS communicated and visited with other Universities implementing both products. San Francisco State University, Humboldt State University, Portland State University, and Indiana University provided useful information regarding our evaluations of Moodle and Sakai.

LMS	Background
WebCT CE 6.0	WebCT began as a project by a University of British Columbia professor Murray Goldberg as part of a grant project to study the effects of online teaching on learning. Murray founded WebCT in 1997 at UBC, and delivered it as a commercial product at that time. In 1999 the company was acquired by Universal Learning Technology (ULT) and combined company was renamed WebCT, and headquarters moved to Lynnfield, Massachusetts. WebCT is a privately held company backed by a group of investors, which include CMGI@Ventures, JPMorgan Partners, SCT, and Thomson Corporation.
Sakai 2.0	The Sakai Project is a coordinated higher education open source community project launched in 2003. It builds on previous work done by Stanford, Michigan, Indiana and other partners, and is built within the uPortal framework. The project has been funded through 2005 by the Mellon foundation as well as contributions from the Hewlett foundation and the core partners themselves. The project has also created the Sakai Educational Partner's Program (SEPP), a for-fee community that is open to educational institutions and for which they receive early access to code releases, documentation, project staff and exchange of partner tools.
Moodle 1.5	Moodle.org is an open source community launched in 2001 that has grown out of a PhD research project by Martin Dougiamas. Version 1.0 was released on August 20, 2002. Moodle.com is a company launched in 2003 that sponsors Moodle development and provides commercial support, hosting, custom development, and consulting. The Moodle Partners are a network of companies that work with Moodle.com to provide services around the world.

Table 1: LMS Backgound – Reference Citation: EduTools. (2006). CMS: Product Comparison System. Retrieved May 06, 2006 from http://www.edutools.info/compare.jsp?pj=8&i=263,276,299,358,366,386,387

The ITRC utilized two methods in collecting data to evaluate the three LMS products. The first instrument initiated during the focus groups was created by the ITRC staff to collect reflective data during the initiation of the focus group. This tool provided information about perceived likes and dislikes of the current system and the effects of a new LMS. In addition, the reflective process focused on administration, content, assessment, and communication interfaces of WebCT 6.0, Sakai 2.0, and Moodle 1.5. The second instrument was borrowed from Chico State University, where it had been utilized in their evaluation of several LMS systems. Their tool was slightly modified to match our local needs and to focus on more specific stakeholders affected by the LMS decision-making process.

Pedagogical Value:

In selecting a new LMS, pedagogical issues focused around design, delivery, and interface of each product. The ITRC encouraged participation of the faculty and student population, because the users of the product needed to have a significant voice in this evaluation process in order to make it meaningful and reflective of our campus community and instructional technology needs. Based on current usage of WebCT, three faculty groups of WebCT users were selected and one group of non-users was selected. Faculty members were selected according to the percentage of WebCT usage in the various colleges (Deans were also asked to submit additional faculty names for this process, as desired), and students were randomly selected by the ISU Student Senate.

Students
The five students that participated in the focus group had an opportunity to engage with all three products (i.e., WebCT 6.0, Sakai 2.0, and Moodle 1.5) with a focus on specific instructional tools based on student learning needs. The students demonstrated various levels of WebCT knowledge, from low- to high-level usage and experience. Their Rubric focused on three areas of collecting and reporting student learning needs:

1. Tool Set/Features List (compared with current)
    a. Login
    b. Content
    c. Communication
    d. Assessment
    e. Gradebook

2. Ease of use interface (compared with current)
    a. Intuitiveness
    b. Accessibility
    c. Interface consistency
    d. Number of clicks
    e. Searching

3. Technological issues related to learning
    a. Cross-platform
    b. help feature (robustness)
    c. browser support – plugins
    d. Three faculty groups of WebCT users

Each of the areas of evaluation was rated using a four-level Likert scale (Doesn't Meet, Meets, Exceeds, and Superior). An explanation of each area was demonstrated by the student focus group in the data presented in Chart 1. Students found Moodle to have advantages in supporting their learning needs. The detailed data analysis from the student group is available in the Appendix I.
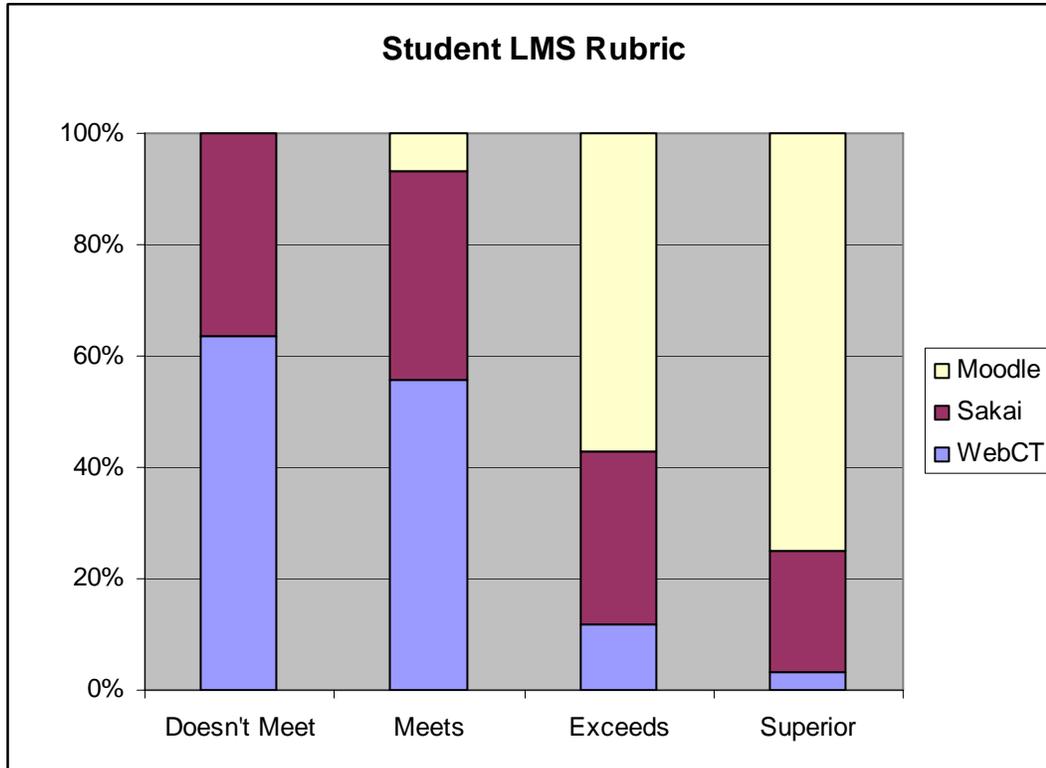
Student LMS Rubric

Legend
☐ Moodle
■ Sakai
■ WebCT

Chart 1: Student LMS Rubric Results

The student reflection process provided some group feedback related to student learning needs in utilizing an LMS. Students have concerns with the current WebCT technology with icons not matching, making the learning process very confusing, and they expressed a desire for more faculty training with the technology. The students specifically requested that any new LMS include quick access to grades, improved assessment instruments, and an interface or visual approach and display that will help differentiate file types. In addition, students would like their instructors to take advantage of more online resources. Their overall rating of all three products concluded with Moodle unanimously ranked first by all student participants.

Faculty

The 23 faculty participating in their four focus groups also had the opportunity to engage and reflect on all three products (WebCT 6.0, Sakai 2.0, and Moodle 1.5) and identified the specific assessment tools based on faculty teaching needs. Their rubric focused on six areas of collecting and reporting on faculty teaching needs:

1. Tool Set/Features List (compared with current)
    a. Completeness (tool sets)
    b. Content Creation
    c. Content Management
    d. Communication
    e. Announcements
    f. Collaboration
    g. Student Presentations
    h. Assessment
    i. Gradebook

2. Ease of use interface (compared with current)
    a. Intuitiveness
    b. Interface consistency (buttons, labels, breadcrumbs)
    c. Number of clicks
    d. Content Creation
    e. Content management
    f. Assessment

3. E-portfolio – options
    a. current support (course level)

4. Blogs/Wiki – options
    a. current support (course level)

5. Pedagogical Flexibility
    a. Communication
    b. Content
    c. Assessment
    d. Announcements

6. Technological issues
    a. cross-platform (Windows, Mac, etc.)
    b. help feature (robustness)
    c. browser support – plugins

As with the students, each of the areas of evaluation was rated using a four-level Likert scale (Doesn't Meet, Meets, Exceeds, and Superior). The rubric results of each of the areas were completed by 16 of 23 faculty members and are illustrated in Chart 2. Detailed data from each faculty focus group is available in the Appendix II.
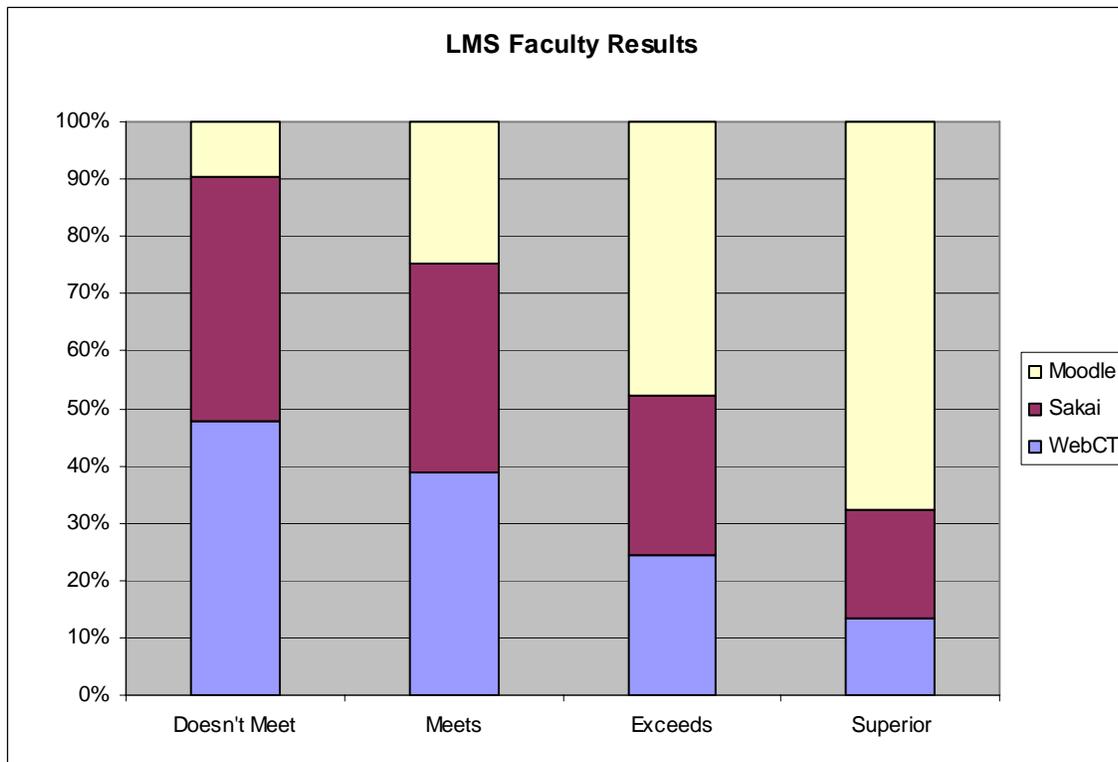
LMS Faculty Results

Chart 1: Faculty LMS Rubric Results

The faculty reflection process, involving a series of open-ended questions, provided group feedback related to faculty teaching needs in utilizing an LMS. The 23 faculty members that participated in the focus groups have specific concerns about:

- time needed to transfer information from the current application into a new application,
- the time needed to learn the new product,
- students' ability to navigate the learning environment, and
- the level of support provided by the ITRC.

A number of faculty initially indicated that WebCT technology is more familiar and would provide an easier transition, but the majority felt the Moodle LMS would be easiest to learn if something other than WebCT were selected. Most faculty members agreed that Moodle was a favorable option if it provided the same level of flexibility and instructional application as the current version of WebCT. The majority of the faculty participants agreed that Sakai was user-friendly, but did not offer the same level functionality in the assessment, communication, and content tools as its two competitors in this process. Faculty consistently regarded Moodle as having the most potential; they also observed that it appeared to be a better teaching and learning tool then the other products. With respect to the prospect of having to change the LMS platform again should Blackboard's acquisition of WebCT soon result in a single, Blackboard-based product, faculty members were concerned about adopting one product now yet having to move again in a couple of years. Faculty preferred and requested a dependable, long-term solution. The overall faculty rankings of the three products are reported in a series of bar charts by 22 of 23 faculty that participated in the ranking, demonstrating rankings by first, second, and third choices, as displayed in Chart 3 below.

Number One Ranked LMS

	Sakai	WebCT	Moodle
Number of Focus Group members	1	6	15

Number Two Ranked LMS

	Sakai	WebCT	Moodle
Number of Focus Group members	6	9	7

Number Three Ranked LMS

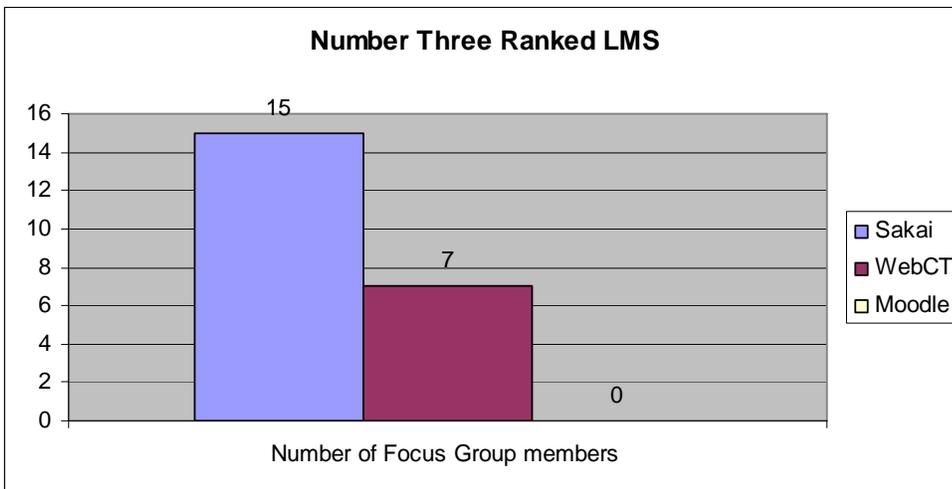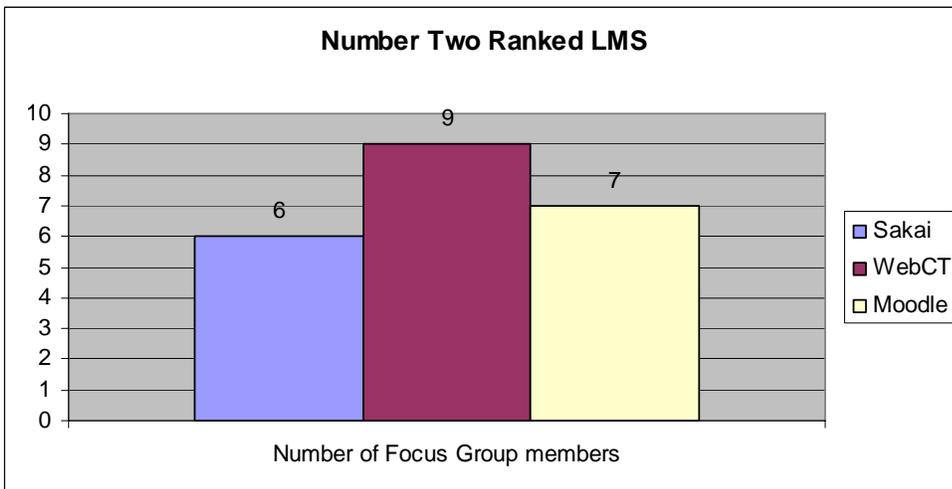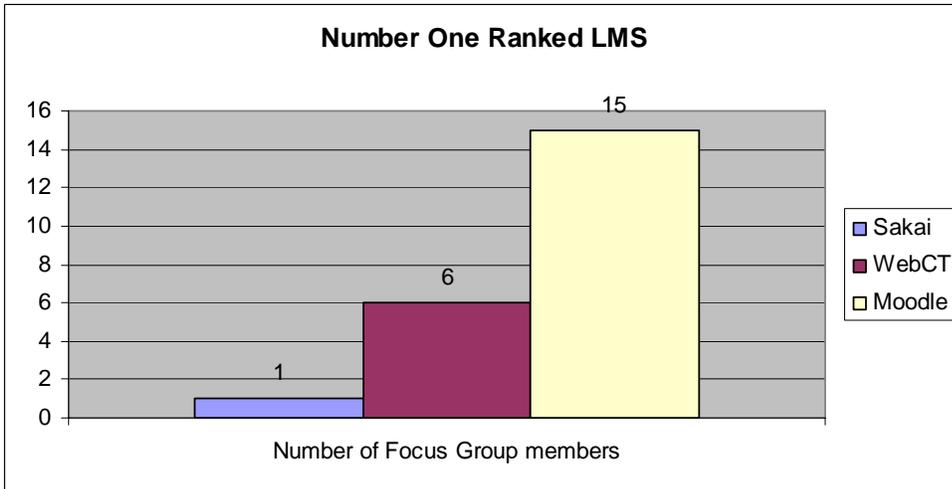|	Sakai	WebCT	Moodle
Number of Focus Group members	15	7	0

Chart 3: Student LMS Rankings

Assessment Criteria:

The ISU Assessment Coordinator also had an opportunity to engage with all three products (WebCT 6.0, Sakai 2.0, and Moodle 1.5) and identified the specific assessment tools based on ISU accreditation needs. The Rubric focuses on five areas of collecting and reporting student learning:

1. Solid course-level assessment
2. Potential for program level assessment (WASC)
3. Reporting capabilities
    a. export and aggregate data across courses/programs
4. Potential to support Student Evaluation of Teaching
5. Potential to support departmental periodic reviews
    a. content management/sharing (standards, evidence)

Each of the areas of evaluation was rated according to a four-level Likert scale (Doesn't Meet, Meets, Exceeds, and Superior). An explanation of each area was demonstrated by the assessment officer. Overall ratings of all three products are reported in Chart 4, and the data from each area evaluated is available in the Appendix III.

Chart 4: LMS Assessment Rubric Results

The ISU Assessment Coordinator's reflection process provided some feedback related to University assessment needs in utilizing an LMS. When focusing on assessment needs and capabilities, he regarded Moodle as, without question, far better positioned to serve ISU's greatest common good over time in much stronger and more productive ways than the other two options. Overall, the assessment officer felt there could be some sound reasons to go with WebCT 6 in the short term, but that he was, "afraid that such a decision would leave us

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wondering in a couple of years why in the world we didn't go with Moodle to do the assessment activities that are absent in our current LMS."

Support Issues:

The Instructional Technology Resource Center (ITRC) support staff had an opportunity to engage with all three products (WebCT 6.0, Sakai 2.0, and Moodle 1.5) and identified the specific assessment tools based on support issues involved in supporting faculty with an LMS. The Rubric focuses on seven areas of collecting and reporting faculty and student support needs:

1. Migration of courses and content
   a. Tools/utilities/process
   b. Ease for faculty
   c. Ease for support staff
   d. Response from reference sites
   e. Migration of content out of product

2. Training and support for staff
   a. "Train the trainer" available onsite/online
   b. Ease of retraining (5 days)
   c. Ease of new training development (out of the box)

3. Training and support for faculty/departments
   a. Basic Retraining (8 hours)
   b. Introduction (12 hours)
   c. Advanced Training (30 hours)

4. Accessibility (508)

5. Platforms, browsers, plug-ins (Mac, PC)

6. Ease of use for staff
   a. course design
   b. application administration
   c. application support
   d. distributed administration

7. Single-sign-on access
   a. library systems/subscription services
   b. other campus systems

Each of the areas of evaluation was rated using a four-level Likert scale (Doesn't Meet, Meets, Exceeds, and Superior). An explanation of each area was demonstrated by the staff. The detailed data from each is available in Appendix IV.

LMS Support Results

Chart 5: LMS Support Rubric Results

The ITRC support staff reflection process provided some feedback related to University faculty support needs in utilizing an LMS. Reflections from the staff were collected both during the student and faculty focus groups and during informal review of each LMS product. The process of converting courses and retraining faculty were the staff members' top concerns with the each product. The staff members were concerned that any new LMS include more intuitive help files, better browser support, and more flexibility when modifying or interfacing with administration tools that support faculty and students. Overall, Moodle appeared to offer the most flexibility in addressing the support staff concerns.

Financial Considerations:

The costs associated with the three LMS alternatives (WebCT 6.0, Sakai 2.0, and Moodle 1.5) are estimated for the first-year and third-year expenditures. These costs focus on new hardware, personnel, and license fees or software community support provisions. WebCT and Sakai start-up fees are very comparable, but Moodle demonstrated a need for only half of that amount at outset. Moodle also would have a slight advantage over Sakai in the third year of implementation, and at that stage would require almost half the continuing financial support needed to maintain WebCT. The evaluation of expenditures for each product is demonstrated in Charts 6 and Chart 7. Appendix V provides the cost breakdown for each product and includes criteria for budget requirements.

Chart 6: LMS Year-One Totals

Chart 7: Total Annual after July 2008

Campus Information Technology Services (ITS):
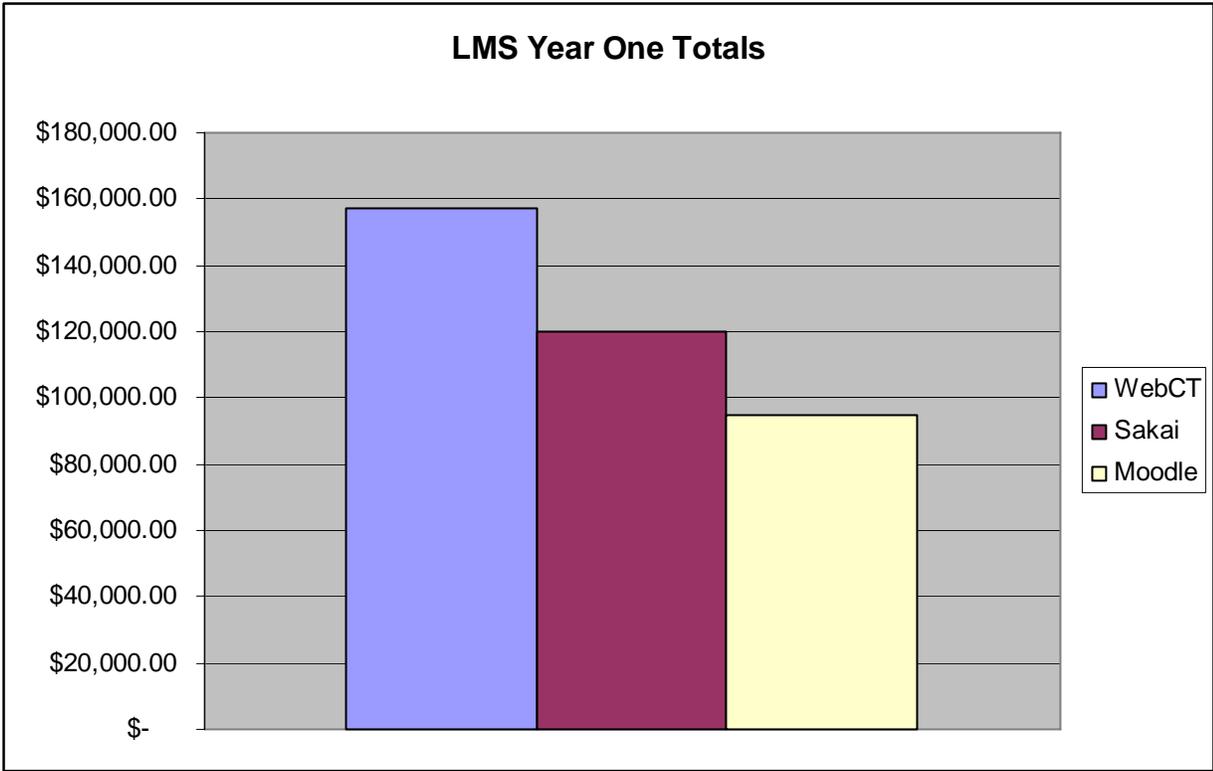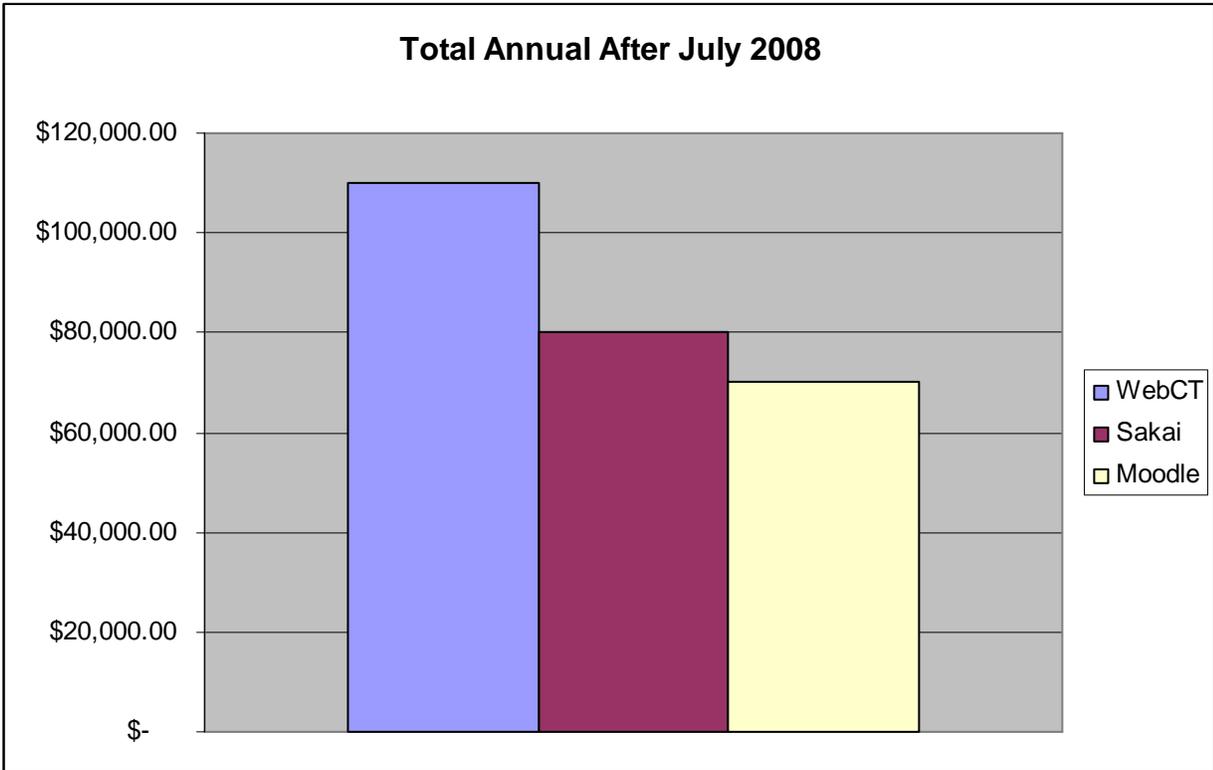
The information technologies efforts will be evaluated by integration and support services offered by the University. The areas of focus will be on student information, server operating systems, database software requirements, hardware specification, and potential integration with an enterprise system.

Student information can be connected to the LDAP with all three LMS products, providing ready integration with our current and likely future enterprise system. The limitation of all three is the time and resources needed to develop an interface that will allow manual or automatic student data population and course creation and archiving.

The database software requirements of each product offer standard commercial database support. WebCT 6.0 will require Microsoft SQL or Oracle. Moodle and Sakai offer additional flexibility with other databases and data tables from other applications (e.g., generic MySQL). See Table 2 for more specific details for database requirements for each LMS.

LMS	Database Support
WebCT CE 6.0	For Intel (Windows and Linux) configurations, the system requires Microsoft Windows 2003 (SP1) and Microsoft SQL Server 2000 SP3** (Standard or Enterprise Edition) or Red Hat Enterprise 3.0 Linux ES (Update 4) and Oracle 9.2.0.6 (Standard or Enterprise. For Sun Sparc Solaris configurations, the system requires Solaris 9 and Oracle 9.2.0.6 (Standard or Enterprise Edition).
Sakai 2.0	The system supports Oracle 9i or later, or MySQL 4.1+. The system requires only one database and can coexist with tables from other applications.
Moodle 1.5	The system supports either MySQL or PostgreSQL databases. The system requires only one database and can coexist with tables from other applications.

Table 1: LMS Database Support – Reference Citation: EduTools. (2006). CMS: Product Comparison System. Retrieved May 06, 2006 from http://www.edutools.info/compare.jsp?pj=8&i=263,276,299,358,366,386,387

The server operating system and hardware technology vary with each product. Moodle and Sakai have the most flexibility, to include a variety of options with OS and hardware, whereas WebCT requires more specific equipment configurations. The technology hardware and software requirements are demonstrated in Table 3.

LMS	Server Hardware and Software Support
WebCT CE 6.0	The system is a four-tier architecture within the J2EE Framework that uses the BEA WebLogic Enterprise Server, which is included in the software license. Unix Server – The software is available for Red Hat Enterprise 3.0 Linux ES (Update 4) and Solaris 9 Windows Server – The software is available for Windows 2003 (SP1)
Sakai 2.0	The software is intended to work on a wide range of hardware and operating systems that support Java. The software requires Tomcat 5.5.9 or later, and the Java 2 SDK. Unix Server – The software is deployable on any Unix variant with Java support, but Linux and Apple OS X are the typical environments Suggested environment would be an Intel-based Linux with 4GB RAM. Windows Server – The software is likely deployable on any Windows variant with Java support, but XP is the typical environments used by the developers. Suggested typical production environment would be a Windows Server 2003 with 4GB RAM.
Moodle 1.5	The software requires PHP 4.1.0 or later, MySQL(or PostgreSQL), and a web server. The software was developed using the Apache web server. The software includes: administration reports through a web browser, course archive and restore, installation setup wizard that includes database creation, backup and archiving, tools to backup and purge either course content or student data for individual courses and groups, rotated logs, notification services, a display of the last sessions in the system that can be filtered by either IP address or date, site configuration. Unix Server – The software is available for most variants of Linux or Unix. Windows Server – The software is available for a variety of Windows web servers.

Table 3: LMS Server Hardware and Software Support – Reference Citation: EduTools. (2006). CMS: Product Comparison System. Retrieved May 06, 2006 from
http://www.edutools.info/compare.jsp?pj=8&i=263,276,299,358,366,386,387

The University is currently working on an ERP to begin the selection of an Enterprise System to help distribute and report institutional data through a common system. The LMS products discussed in this report offer integration in most systems with the LDAP and API capabilities. Universities currently utilizing commercial enterprise systems have solutions in place for all three products.

Recommendation:

Based on the data collected from this study, the ITRC proposes a full-scale evaluation of Moodle. In the summer 2006 and fall 2006 semesters, 15-20 faculty members will receive ITRC support with instructional design and technology production to begin prototyping their courses in Moodle. LMS survey instruments will be designed to integrate with each course to evaluate levels of student and faculty success. In some cases, a control group will be utilized to compare criteria of those working with the same course in WebCT.

The most current Moodle application will be installed on a small production server to provide prototyping courses with an environment to begin this evaluation process. The server will be housed in Information Technology Services; ITS will provide support for the operating system, hardware, and telecommunications of this system. The ITRC will use its limited resources to install and manage the Moodle software during the prototyping stage. A request has been made to create an LMS Administrator / Database Administrator position to support future efforts LMS mission requirements (whether with respect to final adoption of Moodle or WebCT).

This process will involve reports from faculty and students enlisted in the evaluation study. The future direction of web-based, instructional technology resources provided by our chosen Learning Management System will depend on the success (or lack thereof) while prototyping courses in summer and fall semesters. The information thereby collected will provide the University with the appropriate evaluation information needed to invest in a future LMS. At the conclusion of this evaluation following fall term, 2006, the ITRC will report on the prototyping process and recommend whether ISU should (1) move all current WebCT courses to the Moodle LMS, or (2) continue our investment in WebCT.

Appendix I

Student Best Fit Rubric Results

LMS Strategic Review: ISU Student Best Fit Rubric

Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior	Student 1 Notes/Follow-up	Student 2 Notes/Follow-up	Student 3 Notes/Follow-up	Student 4 Notes/Follow-up	Student 5 Notes/Follow-up
Rubric adopted from CHICO — **Moodle**									
Learning Requirments									
1. Tool Set/Features List (compared with current)								cost of Sakai vs moodle?	
- Login		3	1	1					
- Content		1	2	2	more options in text editing		spell check!	spell check a plus	
- Communication			2	3	calendering tools very good		clalendar plus	like email better, calendar fe	Great Calendar, email lists
- Announcements			1	4	great tools				
- Collaboration			5						peer review , case studies
- Assessment			3	2	flexible in grading				testing options awesome
- e-portfolio					*N/A*	*N/A*	*N/A-- interested*	*N/A*	*N/A*
- Grade Book			2	3					best grading options
2. Ease of use interface (compared with current)									
- Intuitiveness			4	1	back buttons work		back button works	can use back button	OK back button
- Accessibility			4	1	No Java, frames				
- Interface consistency			4	1	great organization, busy				
- Number of clicks			5						
- Searching		1	3	1					
3. Technological issues related to learning									
- cross-platform		2	2	1					Speed
- help feature (robustness)			2	3					
- browser support - plugins			4	1	not required				
	0	7	44	24					

LMS Strategic Review: ISU Student Best Fit Rubric					Student 1	Student 2	Student 3	Student 4	Student 5
Rubric adopted from CHICO		**Sakai**							
Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior	**Notes/Follow-up**	**Notes/Follow-up**	**Notes/Follow-up**	**Notes/Follow-up**	**Notes/Follow-up**
Learning Requirments									
1. Tool Set/Features List (compared with current)									
- Login		4	1						who's online… cool
- Content	1	1	2	1			no spell check?		no spell checker, back button
- Communication	1		2	2				popups/email	teacher's email/class email
- Announcements		1	3	1				like announcment features	all on one page
- Collaboration			3	1	1 WOW, Wiki and HTML editer				RSS, calendar, wikis
- Assessment		5			Audio submissions - quiz				why all three assignments?
- e-portfolio					*N/A*	*N/A*	*N/A --very interested*	*N/A*	*N/A*
- Grade Book		2	2						
2. Ease of use interface (compared with current)									
- Intuitiveness	1	1	2	1					
- Accessibility		1	3	1					
- Interface consistency		3	2						
- Number of clicks		2	3						
- Searching		3	2						
3. Technological issues related to learning									
- cross-platform		4	1		Back button not working				
- help feature (robustness)	1	4							
- browser support - plugins		5							9 on a scale of 1-10
	4	39	24	7					

LMS Strategic Review: ISU Student Best Fit Rubric

Rubric adopted from CHICO

Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior	Student 1 Notes/Follow-up	Student 2 Notes/Follow-up	Student 3 Notes/Follow-up	Student 4 Notes/Follow-up	Student 5 Notes/Follow-up
Learning Requirments									
1. Tool Set/Features List (compared with current)									
- Login		3	2		who's online!				ok, updated
- Content		5			personal storage			great personal storage	
- Communication		4		1	Wiki?		no change in email, who's on	email	
- Announcements		4	1						
- Collaboration	1	3	1						
- Assessment		3	2						
- e-portfolio					*N/A*	*N/A*	*N/A -- interested in portfoli*	*N/A*	*N/A*
- Grade Book		5							
2. Ease of use interface (compared with current)									
- Intuitiveness	1	3	1		back button - broken				
- Accessibility	1	4							
- Interface consistency		5			menu bar - poor design				
- Number of clicks	1	4							
- Searching	1	3	1						
3. Technological issues related to learning									
- cross-platform	1	4			frames				
- help feature (robustness)		4	1						
- browser support - plugins	1	4			poor -- very dependent				
	7	58	9	1					

Appendix I

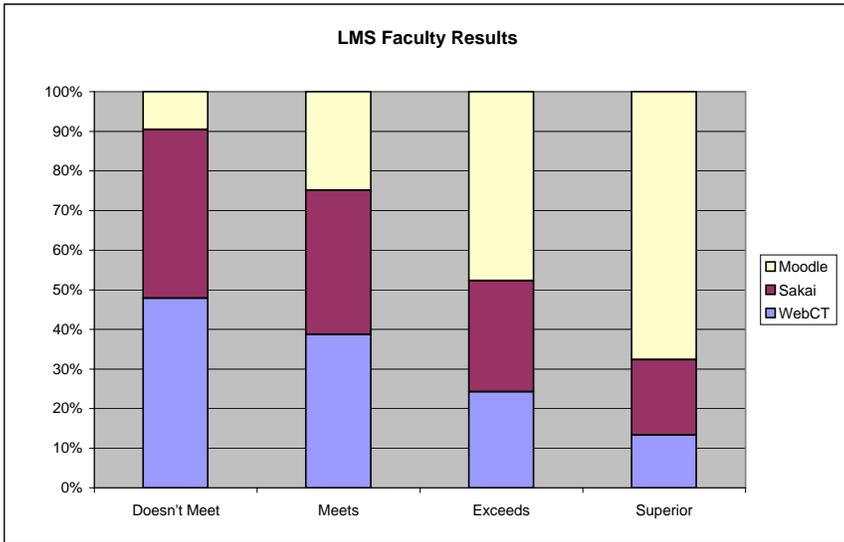|	Sakai	WebCT	Moodle		Staff Notes
Student 1	3	2	1		student concerns - quick access to grades
Student 2	2	3	1		something new should be improved
Student 3	2	3	1		want menu and icons to match - very confusing
Student 4	2	3	1		instructrors need additional training in using LMS
Student 5	2	3	1		Not being able ot identify file types
					most important tools - email, grades, and assignments

Appendix II

Faculty Best Fit Rubric and Reflective Instrument Results

LMS Strategic Review: ISU FACULTY Best Fit Rubric						
based on CHICO rubric		WebCT				
Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior	Notes/Follow-up	
Teaching and Learning						
1. Tool Set/Features List (compared with current)						
- Completeness (tool sets)	1	8	6	2		17
- Content Creation		11	6			17
- Content Management		12	5			17
- Communication	1	10	5	1		17
- Announcements	1	11	4	1		17
- Collaboration	3	12	2			17
- Student Presentations	2	12	3			17
- Assessment	1	10	4	2		17
- Grade Book	2	7	5	3		17
2. Ease of use interface (compared with current)						0
- Intuitiveness	3	9	5			17
- Interface consistency (buttons, labels, breadcrumbs)	1	9	7			17
- Number of clicks	6	6	5			17
- Content Creation		13	4			17
- Content Management	1	12	4			17
- Assessment	2	11	3	1		17
3. E-portfolio - options						0
- current support (course level)	1	15	1			17
4. Blogs/Wiki - options						0
- current support (course level)	1	14	2			17
5. Pedagogical Flexibility						0
- Communication	1	11	4	1		17
- Content	1	10	5	1		17
- Assessment	2	8	6	1		17
- Announcements		13	3	1		17
6. Technological issues						0
- cross-platform (Windows, Mac, etc.)	5	12				17
- help feature (robustness)	5	11	1			17
- browser support - plugins	5	11	1			17
- RSS linking					N/A	0
Totals:	45	258	91	14		

LMS Faculty Results

LMS Strategic Review: ISU FACULTY Best Fit Rubric						
based on CHICO rubric		**Moodle**				
Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior	**Notes/Follow-up**	
Teaching and Learning						
1. Tool Set/Features List (compared with current)						
- Completeness (tool sets)		4	12	1		17
- Content Creation		6	8	3		17
- Content Management	1	4	10	2		17
- Communication	1	6	9	1		17
- Announcements		5	8	4		17
- Collaboration		7	6	4		17
- Student Presentations		9	7	1		17
- Assessment	1	6	6	4		17
- Grade Book	1	9	6	1		17
2. Ease of use interface (compared with current)						0
- Intuitiveness		6	7	4		17
- Interface consistency (buttons, labels, breadcrumbs)		4	9	4		17
- Number of clicks		6	7	4		17
- Content Creation		6	9	2		17
- Content Management		6	7	4		17
- Assessment	1	5	7	4		17
3. E-portfolio - options						0
- current support (course level)	1	15	1			17
3. Blogs/Wiki - options						0
- current support (course level)		11	5	1		17
4. Pedagogical Flexibility						0
- Communication	1	5	9	2		17
- Content		4	10	3		17
- Assessment	1	4	9	3		17
- Announcements		5	6	6		17
5. Technological issues						0
- cross-platform (Windows, Mac, etc.)	1	6	7	3		17
- help feature (robustness)		8	3	6		17
- browser support - plugins		10	5	2		17
- RSS linking		9	6	2		17
Total:	9	166	179	71		

Appendix II

LMS Strategic Review: ISU FACULTY Best Fit Rubric						
based on CHICO rubric	Sakai					
Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior	Notes/Follow-up	
Teaching and Learning						
1. Tool Set/Features List (compared with current)						
- Completeness (tool sets)	5	7	3	2		17
- Content Creation	1	10	6			17
- Content Management	3	8	6			17
- Communication	3	10	4			17
- Announcements	1	10	5	1		17
- Collaboration	1	10	6			17
- Student Presentations	2	11	4			17
- Assessment	2	11	4			17
- Grade Book	3	10	4			17
2. Ease of use interface (compared with current)						0
- Intuitiveness	5	4	7	1		17
- Interface consistency (buttons, labels, breadcrumbs)	2	8	5	2		17
- Number of clicks	1	6	8	2		17
- Content Creation		11	5	1		17
- Content Management	1	9	6	1		17
- Assessment	1	10	6			17
3. E-portfolio - options						0
- current support (course level)		13	4			17
3. Blogs/Wiki- options						0
- current support (course level)		12	4	1		17
4. Pedagogical Flexibility						0
- Content		13	3	1		17
- Assessment	1	12	3	1		17
- Announcements	2	10	3	2		17
5. Technological issues						0
- cross-platform (Windows, Mac, etc.)	1	11	3	2		17
- help feature (robustness)	2	13	2			17
- browser support - plugins	2	13	2			17
- RSS linking	1	11	2	3		17
Total:	40	243	105	20		

Faculty currently using WebCT	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
What do you like best or least about our current LMS programs?	Cummulative database capability. We were able to design an entire curriculum that fit into the WebCT format - it accomodated our needs. Coding exam questions / course assessments.	Layering, Exam questions coding, surveys, selective release, multiple small group activities, flexible design	Best: Flexibility, ease of use Least: Embedded Java code problems lack of a database for multiple course use.		Best: Support from ITRC Least: lack of features and flexibility, endless clicking for simple tasks, lack of new components (eg. Blogs, wikis, disc options)
If you would have to use another LMS product, what would be your biggest concern?	Cost for faculty time to learn and transfere content. Loss of data and data continuity	Loss of the above capabilities.	Easy to use		non-propriatory components / materials for ease of use. Cost, flexibility, ease of transition for others.

Sakai

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
When we looked at the interface, what was your first impression?	Cumbersome testing navigation. Is there really no private communication? No private chat rooms. No overall group seperation.	Boring. Course abbreviations across top are hard to understand. Menu too long, too much scrolling.	Much more like a web page - good	Needs Java and PDF plugins. Upto date and in style. Easy navigation.	Standard LMS appearance, made to appear quite akin to WebCT/Blackboard interface, good with all courses in top menu all the time.
When reviewing the content management tools, what did you like best and what did you like least about the tools?		I like the permissions associated with file management and the RSS Feeds. I didn't like that there is no small group privacy.	Common access to resources - good	the left navigation bar is good. Seems as flexible as WebCT - good.	Multiple sections, module plugins like WebCT content modules, start/stop times a plus, seems to work much faster than WebCT. Unnecessary clicks for quizzes/discussions/etc.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	Likes: Nothing except announcement section ease of use. Dislikes: inflexable chat/discussions, only use one chat at a time, no private messages. Calendar too superficial.	Not enough looking at them to form opinion. Can't grade discussion postings. Can't forward out email.	No Private bulletins and discussions - bad - very bad. Bulletins up front - good. Bulletins easier to edit than text blocks. Private chat - bad. Cannot send email outside Sakai - bad.	Least: can't monitor multiple chats at same time, like WebCT, poor tool. No anonymous.	Lack of private chats/discussion boards for students. Announcements better than WebCT, offers pretty clear "news"/"info" content. Possibility of forced subscriptions. No private messages in Sakai chat. Like: has RSS feeds and wiki tool
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Gradebook is unacceptable. Can upload template	Likes: anonymous grader, audio recording question. Dislikes: no small groups, no grading discussions, hard to use assignment tool to create manual columns, can't ass calculated columns.	Best: sharing questions and catagories between courses. Least: Gradebook - cannot add own calaculated columns - bad.	Gradebook is a HUGE problem.	Tests/quizzes and assignments (like WebCT now) good in there anonymous grading option and audion responses. Gradebook probably the weak point here.
After reviewing this product, what did you like best or least about this product?	Unacceptable	No anonyous survey tool!	Best: Common access to quiz questions and files. Least: inflexible gradebook, no private or small groups bulletins or discussions.	Assignment and gradebook tools are inadequate. Content chare is good. RSS is good.	Open Source product with more options/flexibility than WebCT 4, comparable with WebCT 6. Calendar import - .csv files?? Least => lack of private chats/disc./group work

WebCT 6

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
When we looked at the interface, what was your first impression?	Impressed with upgrades	Clean homepage	Familiar	Looked good	Tabs + drop-downs, + breadcrumbs, + links - very cluttered interface. Blah - same ol', same ol'. Why slower drop-down menu + left side menu + breadcrumbs?
When reviewing the content management tools, what did you like best and what did you like least about the tools?	Excellent! Expands capability for case-based learning.	Likes: love the layers, selective release!! Dislikes: file management screen 2-frame layout takes up too much screen space.	Much better - Fewer clicks, less cuplication. Common content for multiple courses - good!!	Global events in claendar - good. Private group discussions are excellent, linking to discussions is excellent too.	The current product is kludge, this is just more kludge. Still can't upload more than 1 file at once.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	chat rooms - excellent format for group work.	Likes: Private groups, sub topics, links to specific topics. Dislikes: doesn't use external email for mail.	More flexible announcements - good	Chat and discussions very good - separate file for chat	No blogs, no wikis. Have to turn off popup blocks (bad). All chats logged now. Private group discussions. Discussion sorting still lame.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Grade book options very good. Testing categories - very good. Meets my needs for PA Program.	Likes: Same capabilities, Close question type. Dislikes: no sharing questions.	Embedding Java in quizzes still a problem. Much better gradebook.	gradebook view and management is wonderful! Useable!	Same as Sakai - quizzes and assignments. Managers gradebook options finally improved
After reviewing this product, what did you like best or least about this product?		Liked it's ready to go without redesigning, layers in the design, and gradebook.	Best so far. But will it last?	Looks very good. Brower issues will be a problem.	+ gradebook improvement - interface

Moodle

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
When we looked at the interface, what was your first impression?			Busy		Organized on weekly/topic/forum/design. + meta-courst concept (share from course to course). All forums posts @ ? new. Slightly busy, but extremely flexible/adaptable. Interface looks like many wiki/blog sites. Help screens great.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	Doesn't work for PA Program - too hard to format for whole year curriclum.	Too long homepage boring, no layers. Easy to manage layout on homepage.	Metacourse - nice. Nice help menus. Nice content icons. Very flexible		Content modules for WebCT transfer over. Generally fine. Great icon views of file types.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	Private chat with instructor. Peer assessment.	No real differences/advantages	Better than Sakai - not as good as WEbCT. Groups and subgroups - but not very flexible		Has wikis/blogs/rcs by default. Only uploads 1 file at a time. Great for importing data (modules / quizzes). Print charts of whose online 1 M?. Publish chart log to all possible not a survey tool there yet. Forums (3) - general - blog/e-mail - task. Groups (3) course or activity public or private.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Good Quiz tool. No Survey tool! This is unacceptable.	Likes: addaptive mode, hot potato link to gradebook, lesson tool. Dislikes: quiz link confussion, no survey too currently! Single file assigment	Can't upload - Bad		Lots of options. Quizzing - quiz, assignment. Lesson tool is Superb. (Adaptive, flexible). Workshop tool also excellent - Scale, grading = great. Averages per assessment, merges with instruction. + Flexibility. +Learning - centered. - time needed for some to transfer their courses now.
After reviewing this product, what did you like best or least about this product?	Unacceptable	Liked no java script or java to use and metacourse. Didn't like that it was not able to create multiple small groups, no survey tool, layering, selective release, no gradebook upload, no text gradebook column.			

Faculty currently using WebCT	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
What do you like best or least about our current LMS programs?	Best -> Level of Support available through ITRC. Least -> Attempts to idiot-proof WebCT have made it very difficult to quickly and efficiently do day-to-day tasks. Access and tool modifications also poor in terms of modifiability.	No Answer	Best: Web Grading Least: Students post programming assignments with multiple subfolders	No Answer	No Answer
If you would have to use another LMS product, what would be your biggest concern?	Adaptability to user's needs, as opposed to WebCt protocols defining adaptability. Also, ability to import materials from other LMS's.	No Answer	shallow learning curve	No Answer	No Answer

Sakai

	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
When we looked at the interface, what was your first impression?	Clean and uncluttered - Effecicient use of tabs and menus.	No Answer	appears intuative	Bland. Where to begin is not obvious. However - also looks flexible, easy to navigate once you know how.	Tools were convenient, appeared easy to navitgate.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	Course Management - Best -> Ease of adding/deleting tools. Worst -> Inability to specify order/location of tools. Course Content - Best -> Adaptability and access. Manipulation straightforward. Worst -> import module for other LMS's is weak.	No Answer	everything appears in one menu window	Still seems very choppy - How will it handle docs - pdfs? Looks to be applicable to Web-based courses, not as friendly for Web-supplemented?	Appeared simple to use with readily accessible tools.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	Best -> Choice/adaptability/access issues with common tools are well-handled. I also like the Wiki tool quite a bit. Weaknesses -> Lack of ability to create private conversation with course is a hugh weakness. Open/public acess to all course materials and work is also highly troubling.	0 Private Discussion. E-Mail OK. WIKI Tool - Blog OK	best: chat room. Least: email	I like the formatted text options in discussions. I'm not comfortable with the e-mail function as described.	I don't use this with WebCT, but what I saw, what was projected, sounded both smiple and useful.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Best -> Ability to categorize and subcategorize quiz items is particularly useful. Weaknesses -> assessment tools overly skewed to "objective" tools use. More open-ended tools. Gradebook is also weak.	.0 Anonymous Survey Tool. Sub-categories, Question Database, Anonymous Grader Tool. Grade book is not as sophisticated. Assignment - able to type in answer able t Complete Templates by typing. Share question categories.	fix upload assignment tool, grading needs more features added.	I like the apparent flexibility of the assignment tool, and the fact that you can easily share questions with other instructors. The grading function actually seems easier than the current WebCT grading.	I liked the rationale idea for M.C. tests. Lots of options. Some features limited compared to WebCT but overall positive.
After reviewing this product, what did you like best or least about this product?	Best -> Choice and adaptability for the instructor are excellent. Least -> privacy/access issues a hugh concern. Some big holes - gradebook.	No Answer	first impression - intuative	Seems like it would handle evrything I currently do in WebCt. I think the quiz functions are an improvement. The look is still bland. Too much text.	Testing features very positive, appeared to be an easy product to work in. Nothing negative.

WebCT 6

	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
When we looked at the interface, what was your first impression?	High production values but ultimately no more efficient or useful than WebCT 4. More sophisticated version of WebCT interface, but still a WebCT interface. (tongue-out frowny-face !! inserted).	Requires Java Script and Java. Not supported by all browsers. 3 Says to utilize - Build, Teach, Student. Web data upload.	Interface more clear than current - navigation tools.	I like the different tabs with the student view vs teacher view. Looks more open and readably than the "box approach" of Sakai.	Looked easier to use - friendlier, cleaner, liked the 3 options.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	Best -> Nice use of menu bar items under course tools. Left-hand menu, very efficient. Best -> Like ability to share content across courses - My WebCT view	Content Manager share files among courses.	navigation through appears easier than current version.	File manager tool much improved. Looks easier to add, find files than current WebCT.	Improved, simpler to use. Much familiar with current format.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	Best combined whiteboard and chat. Best -> announcement tool is good/ adaptable to the range of course needs. Best -> global counter tool best - nice upgrades to discussion tool but still can't sort beyond WebCT 4.0 - really need this functionality for assessment purposes. Weaknesses -> chat room logs still crude.	Announcements, Pop-up, e-mail, my WebCT, Global Events on calendar - set by. Private Group Discussion. More than 4 groups. Combines whiteboard and chat.	I like annoucement popup windows	I like the fact that announcements can expire, and also that they will pop up - but what about pop up blockers??	Again, I don't use this much but what I saw looked easier to use.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Best - gradebook. Management menus good. Weakness - can't share categories across courses (Big). Best - menu item for each tool is handier, easier to use. Best - categories / subcategories of quiz items. Weakness - No significant functionality upgrade from 4.x. Weaknesses - limited range of tools for open-ended evaluation and assessment.	Grade book - calculated, manual. Quizes. Drop down for tools. New Question type. Subcategories of questions. 0 sharing of question data base. In line typing or upload assignment	appears more intuative than current version.	Seems to be unchanged basically, although the addition of different question types is good. Also easier to see where you are in the quiz creation or editing process.	Easy to use, drop-down convenience features. Test options not as comprehensive or SAFE.
After reviewing this product, what did you like best or least about this product?	Best -> nice attention paid to some longstanding weaknesses/ irritants. Least -> dependece o specific browsers and operating system is a killer…I can't begin to imagine the support issues this will cause at both instructor and student levels. Prettier than 4.0 and somewhat more functional; still maintains standard WebCT weaknesses.	No Answer	more robust but navigation is nor as easy as Sakai.	Improvement over the current interface but worth the money??	Convenient drop down menus, new student grade recording system.

Moodle

	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
When we looked at the interface, what was your first impression?	Best interface of all three LMS examples - intuitive efficient, contemporary. Metacourse content approach is a really cool feature. Central column w/menues/features to left and right is really flexible.	0 Java or Java Script. Outline by week topic. More instructor control. Appears easy to use. Allows individual data. Meta course concept - Documents to share.	Compact with good navigation.	Busy, easy to get lost. Lots of options (could be good or bad). Tracking system is cool. I like the editing on/off mode.	Liked the viewer option, Calendar open on home page good, less for students to open.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	Best user "usability" is outstanding. Very flexible/multiple ways to use/view/see - not limited to either Sakai-like or WebCT like approaches to in-the-box thinking.	Content Organizer. Seemed to convert easier. Indicated full type you are working with. Editing seems easier. Import data from other courses.	Most intuative of the three products. I like the user statistics capability.	This makes more sense - more builder control, at least for those who are inclined to building. Will it get more people to move courses on-line, or be scary??	Very simple editing features, immediacy of on screen help.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	Best - most up-to-date suite, with respect to current web standards and technology. Weakness - Some of the views in central frame a bit busy.	Customized surveys in progress. Forum - Simple, specific - private, subcategories. Ten tools. Group Discussion - Course group - froup at large. RS feed WIKI. Chats are logged - can publish. Chate - private instant message messages. Will show up on calendar. Calendar feature is interactive.	I like the Wiki feature and the calendar seems easier to use.	Peer imput - assessment an interesting touch. I like the calendar tool. The fact that you can add your own survey might be an issue.	Very comprehensive - I don't use this much.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Best range. Quiz tools goes way beyond Sakai and WebCT. Best in terms of assessment, particularly reporting. Moodle is by far the most assessment oriented fro the ground-up. Best - Tabbed reporting based on student profiles is a very useful feature.	Quiz tools. Categories/Subcategories. Acceptable range on math. Adaptive - allowed more than one try - different scoring. Assignments - Single file assignments, workshop-upload-peer-instructo - Weighting 20/80. Random Subset. Interactive -Lesson Tool - Case Study Tool. Hot Potato Tool interface with Moodle. Ablity to grade discussion.	workshop tool should be useful.	I like the randomization of answers and questions. I like the Hot Potato formats. Lots of cool options!	Liked randomized questions & answers, Hot Potato nice feature with the options provided, weighting features on grade sheet good.
After reviewing this product, what did you like best or least about this product?	Moodle is by far the most contemporary and up-to=date with respect to interface, both usability and transferability Ground-up assessment tool. Moodle goes beyond, way beyond, the othr two LM's in terms of offering more than just course management and a course-by-course basis.	No Answer	more robust than Sakai, screen appear more cluttered than Sakai or WebCT	This one seems the most original - It is so flexible that it may appeal to below-average users, but also might have steeper learning curve. Covers the demands from a range of users bettre?	Help tools, great assessment tools, no negatives.

Faculty currently using WebCT	Participant 11	Participant 12	Participant 13	Participant 14	Participant 15
What do you like best or least about our current LMS programs?	Best - E reserves compatibility is great. Discussion tool. Least - Cumbersome grading recording/input. More options for presenting quizzes.	Clunky levels - i.e. moving through the layers for uploading files and placing on namepage - Regrading of quizzes (error in key) is an important fun tion. The fact that web page created – WORD doesn't work on webCT!	It would be good to have announcements that can come up at a predetermined date and time. Best: I think I have finally figured out how to do most of what I need to do. Least: There are too many steps to get things done (Uploaded) and I agree that update is a hassle.	Like: Student access to technology, grade storage, and distribution. Dislike: inflexibility to adaptation based on course needs.	need to update. Inability to really see student view. Big learning curve. The more I learn the more I like.
If you would have to use another LMS product, what would be your biggest concern?	Transition of current courses to new LMS student access w/ "normal" computer technology. Ease of streaming video.	Compatibility with WebCT (ie transition of old course material to new system). A good HTML editor! Compatibility with WORD (see above), HTML (It is great the ITRC will do the transfer of courses!)	The transition costs and time to learn new system.	Cross platform access? Technical frustration with new systems. Overwhelming low end uasers with new system / new programs.	New learning take time - I'm short of time! Students also have to learn - how will they be educated?
Sakai					
When we looked at the interface, what was your first impression?	Supports all browsers - Java script - red ocher for video.	Navigation. Great navigation ability - a big plus. I don't mind "no icons" - looks like file handling is less clunky than WebCT.	It looks very clean and user friendly	Dislike: Too much avaiable at the 'My Workspace' level / How do I get to my course? Like: Instant access to all tools at all times.	Not colorful, dull. Unattractive to the eye.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	I like icons color for aesthetics. Homepage seems a bit "busy" - but it is just different - I'll adapt! Not able to link quiz right in content. One more area for student to find.	WYSYG - The "no student view" is nice (though there is some hope of it I guess). I'd like to ask now how linking is done (eg Breeze Narated).	I like the material organization on the 'front page"	Like: Much more intuative interface. Dislike: new terminology - can be confusing? No icons	No different in student vs. instructor view
When we looked at the communications tools, what did you like best and what did you like least about the tools?	Looks like updating announcements and having ability to see previous ones is easier. Is there a notice when I have a message from student? I don't currently use "chat room" maybe I will now.	Mail Blog. I'd like the personal that's featured to be present, but it's not damning. Mail flag is very important (i.e. I need to see if there is mail, at a glance).	Discussion option seems more useful. Announcement archiving - time releasing good	Like: more control over preferences. Dislike: limits on chat (only one chat at a time?)	you can have multiple instructors so they can receive their own mail. Like, might be useful for students.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Grading is not as "functional". I like WebCT being able to calculate re:excel. The Manage Colums is there in WebCT - cumbersome but it is there.	Password? For monitor proctor. The flexibility of the grading book may be a problem - didn't usually use in WebCT but want to. The quizzes looks more friendly than WebCT.	Gradebook doesn't seems as good. Quiz feature looks useful.	Like: Inline Submissions!! Audion recording! Dislikes: limited gradebook options.	grading can be anonymous. Least - can't have as much choice with grading colums.
After reviewing this product, what did you like best or least about this product?	Not too aesthetic - very clinical. Like that it "appears" user friendly. All I need is on the screen right there. So should we suspect ongoing versions as this is infant stage?	Seems intuitive - I think I could use it easily - I'm ok with bland -- student can handle that ok-! If you could make each page or function a little different in appearance it might make it easier to tell where you are.	Looks very easy to use. Like front page. Like information page.	Like: flexibility of production terms of adaptations. Dislike: somewhat clinical / impersonal in feel	Good - RSSV, automatic update of website - then I won't have to check and see if the links still work.
WebCT 6					
When we looked at the interface, what was your first impression?	Browsers "seem" to be more restrictive esp. for MAC. Appears "writing is on the wall" - we are not going here.	Friendlier interface - cleaner looking than old WebCT.	None	Somewhat cumbersome with 3 views and the homepage default each time.	It's really different than current version
When reviewing the content management tools, what did you like best and what did you like least about the tools?	Navigation tools easier access. Looks similar just updated.	Better navigation in building than old WebCT.	None	Same as WebCT 4	looks easy to use
When we looked at the communications tools, what did you like best and what did you like least about the tools?	Global calendar very helpful for student - not important to me as a designer. HTML editor seems the same.	No real change in my perception of this vs old WebCT.	None	Same as WebCT 4	pretty similar, HTML editor available - easier.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Gradebook significantly improved - much better	Good gradebook function.	None	Same as WebCT 4 freezing columns	looks ok - the colum modifications should be easier.
After reviewing this product, what did you like best or least about this product?	Best - updated gradebook - it is best of 3 so let's integrate.	It would be ok to keep WebCT, but I prefer Moodle.	Wouldn't want to switch again soon - so would discount using this product.	unimpressed with the 'improvements'	somethings are the same, but looks like I'll have to do a lot of learning even if we stay with WebCT. Can't do everything from build.
Moodle					
When we looked at the interface, what was your first impression?	No java script or java - more browser friendly. Meta file for all sources. Needs merged e-mail. Weekly outline more aesthetic and all edit tools right there. Appears we can have all requirements for the week in one content module.	No java, browser friendly. Calendar, meta course (common), easier ?, Pretty busy student screen, spell checker. Nice navigation - better than Sakai, I like "no java" that's clunky on WebCT - Common area is great - the student view is busy looking but balenced. I like better than Sakai	Nicw look - seems easy to use	Like: very user friendly, user - welcoming Dislike: user options seem a bit overwhelming to low end users.	a little busy. Automatic archiving of announcements.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	Symbols seem to be user friendly. Would like to modify the "homepage" if I have no lectures that week, except e-resources and quiz, then would like to only have that showing.	flexible, fast, easy to use	Like all the links on the front page / the button for settings	Like: Very intuitive. Dislike: no conditional release	editors abilities
When we looked at the communications tools, what did you like best and what did you like least about the tools?	I don't use chat. I would assume e-mail is pretty straight forward.	I like close message capability - I assume mail is mail - I want a flag for presence of mail.	Announcements/events - timing/archive Okay!	Like: Private message in chat, scheduled chats. Dislike: N/A	seems pretty similar to WebCT - (I haven't used chat on WebCT ever.)
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Lesson tool way cool! I like peer assessment tool and limitations. Grading tool/page more applicable and does more for me.	Assessment Is Wonderful! - branching (tree) is Great Tool!! Grading looks Great!	None	Like: Lession, Hot potatoes, Everything!	There might be too many flashy choices - bells and whistles that might not really add anything. There does seem to be more options.
After reviewing this product, what did you like best or least about this product?	Aesthetics less clinical as it had color and icons. Grading/assessment tools more to my liking. Like Hot Potato. More similar to WebCT.	I like close message capability - I assume mail is mail - I want a flag for presence of mail.	Editing options in front page looks good.	What's not to love?	Been around onger, more choices overall

Faculty currently using WebCT	Participant 16	Participant 17	Participant 18	Participant 19	Participant 20
What do you like best or least about our current LMS programs?	Tracking is very important - good - would like to see more tracking. Bad - multiple layers of clicking	Best: Once familiar with WebCT it is easy to use and it has a lot of 'tools.' Least: Requirements for update student view - for somethings but not all.	tedious to edit quizzes/etc. in WebCT - too many 'clicks' to do things (database updates after each edit)	Like: it is reliable, anonymous surveys.	None
If you would have to use another LMS product, what would be your biggest concern?	students have a word processor they can use. Tracking, HTML editor.	Ease of student navigation - not distributed like WebCT. When I generate an assignment and make sure the student knows to do it by putting a link within the module, one in an overview, and in the syllabus, since I don't know what tools the student will			None
Sakai					
When we looked at the interface, what was your first impression?	Bland -	Looks easy to navigate - nicely organized	clean/utilitarian looking	Efficient	None
When reviewing the content management tools, what did you like best and what did you like least about the tools?	I don't like the fact that there is not an instructor - student view. I will have to make sure students don't view everything.	Best: seems much easier than Webct - and less time consuming. Least: I still have to learn how to do it! Not really a Sakai specific problem.	Best: ability to grat various group permissions, sections of class managed seperately, ability to all tools. Least: can't tell yet	it looked personable - just different from WebCT	too much information on a single page, but nicely organized.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	I don't know if having students email form outside the course is good? Seems like many layers - for me to keep track of.	Best: I learned about useful tool availability that I was previously unaware of. Least: Rapid notification if I receive e-mail within the course like webct envelope on My WebCT page.	Best: sorting and posting of announcements, email from anywhere, dropbox feature. Least: perhaps email from anywhere.	Although we didn't see it, I like the Wiki	Nice to have the chat capability. Nice to be able to limit that number of messages displayed.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	Only one cummulative column - BAD! Good that students can write assignments.	I like the option to include text anywhere with in the quiz/test tool with multiple choice questions. Least: one cumulative column for entire course in the gradebook.	Best: capability of posting various types of quizzes/etc. Least: gradebook capabilities - should be as programable as a spreadsheet.	I like the 3 different types of assignments - offline, inline, and online	It appears difficult to record homework/exam scores problem-by-problem and then view them in detail. Al I saw was a summary.
After reviewing this product, what did you like best or least about this product?		This looks VERY EAST to use - I like the overall organization - all the info you need is visible - easy navigation	Best: clean look of toolbar on left hand side. Least: ?		Extremely plain.
WebCT 6					
When we looked at the interface, what was your first impression?	None	None	Cleaner looking than current WebCT (I don't like the 'cute' icons	Cleaner, more intuative	Looks more like a commercial product - which, I guess, is should. Would probably result in less eye strain.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	None	None	Best: drop-down menues are better. Least: can you add to the tools?	I like that you can include assignments in content modules	This version looks a lot nicer than previous versions. The inerface is much more familiar - similar to windows.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	None	None	Best: announcements - set as pop-ups. Least: can students access your course email from outside webct?	the tools look fairly familiar - that will make learning easier	I like the availability of the email math editor - there are many times when I need something like that.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	None	None	Best: improved gradebook features. Least: ?	The quiz tool looked easier to use than in version 4.	I still don't see a convenient way to record homework scores by problem, rather than assignment.
After reviewing this product, what did you like best or least about this product?	None	None	Best: elimination of many unnecessary moves. Least: proprietary.		Much nicer
Moodle					
When we looked at the interface, what was your first impression?	More comfortable - looks user friendly	Too much on one page. Nice to have it all in formative - each course could have a lot of scrolling required (there are preferences)	a bit crowded	Powerful	more busy, but well organized.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	None	I like having the icons for making the modules easily accessible - 'editing on' feature	Best: tracking feature! RSS feeds. Least: editing mode a little confusing, but probably will get better when working with it.	I like the ability to view content in different modes - category, weekly, etc.	more intuative than the others.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	Looks good throughout	looks equivalent to Sakai	Best: photos identifying people. Least: ?	I like to rating capability in the discussion tool.	more intuative. Like the individual evaluation capability.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	None	I like the lesson tool option in quizzes	Best: Assignment tools, tool assessment, lesson tool. Least: hard to tell how flexible gradebook is.	Peer assessment would be useful.	Liked peer review capability.
After reviewing this product, what did you like best or least about this product?	More similar to WebCT with great additions.		Best: open source - extension on the way. Least: ?	I like that editing of content can be easily done on the same page you are viewing, (using arrows, etc.)	Appears more configurable.

Faculty not using WebCT	Participant 21	Participant 22	Participant 23
What do you know about Learning Management Systems (LMS)?	None	None	Not a great deal. I haven't used WebCT.
What do you know about our current LMS - WebCT?	None	None	Mainly that it exists!
If your program required faculty to use an LMS, what factors would influence your choices in using such a product?	testing, videos, powerpoint, and photos	Open Source - community driven - no commercial ties	Ease of use obviously, elegance, economy and simplicity
Sakai			
When we looked at the interface, what was your first impression?	None	I like the list of courses across the top, worksite info page looked user friendly.	It looked easy to use, if not especially attractive visually.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	None	indirect link to quizzes seems poor, week by week availability seems useful	Seemed straight forward, organized. Not all was especially intuative. It seemed foreign - in the form presented
When we looked at the communications tools, what did you like best and what did you like least about the tools?	None	Recent announcments I would definitely use. Adobe printable student mats is a plus!	I imagine the management is pretty stright forward. I'm sort of mixed in feeling about the log-in, in-site email.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	honor tool - good. Quiz not linked, won't weigh evaluated assessments.	Testing tool - T/F 'rationale' - good idea. Assignments - like 'honor code.' like students' ability to see own grade.	I like the notion of rationale, this helps develop thinking. I'm not a big fan of getting on-line submissions (I have to print them off myself.)
After reviewing this product, what did you like best or least about this product?	can just use gradebook	Initially, this product appears to be user friendly - I'd like to try it.	
WebCT 6			
When we looked at the interface, what was your first impression?	None	Liked icons and names of side bar stuff, etc., seemed more understandable than Sakai which is more in computerese.	Looks immediately more attractive, maybe too many bells and whistles.
When reviewing the content management tools, what did you like best and what did you like least about the tools?	None	Doesn't have information regarding who is signed on.	It didn't seem immediately as useable, as intuative, it looked difficult.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	None		It seemed to present multiple options for communication. I liked 'virtual office hours.' I don't kown if I'd use many of them.
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	None		Wasn't much to distinguish it, other than the grade book, which I liked.
After reviewing this product, what did you like best or least about this product?	None		Interface seems more awkward. This seems more 'computer speak.'
Moodle			
When we looked at the interface, what was your first impression?	None		I though the downloadable content the RRSP, the calendar was atrractive. 'upcoming events.'
When reviewing the content management tools, what did you like best and what did you like least about the tools?	None	I like the ability to have student pictures!	The modular approach was better, "add an activity" was better. Seemed like 'management' was more intuative, students identify themselves. I like the tracking element. Peer assessment was interesting. These seemed more useful.
When we looked at the communications tools, what did you like best and what did you like least about the tools?	None	Calendar link to activity - good	
When we looked at the assessment tools, what did you like best and what did you like least about the tools?	None	Student tracking tool is neat. The variety of quizzes would be useful, flashcards, etc. very interactive. Gradebook categories would be useful (as well as weighing).	I actually liked the greater flexibility, the branch tool from hot potatoes seemed like a good idea. The gradebook was interesting.
After reviewing this product, what did you like best or least about this product?	None	Well set-up for multiple sections - liked code of conduct.	

Appendix III

Assessment Best Fit Rubric Results

LMS Strategic Review: Assessment Best Fit Rubric

Rubric adopted from CHICO	WebCT			
Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior
Academic Program Assessment				
1. Solid course-level assessment			X Does a good job with typical course-level assessment needs.	
2. Potential for program level assessment (WASC)		X Can meet this needs with work-arounds various staff have developed over time.		
3. Reporting capabilities		X		
- export and aggregate data across courses/programs		X again, with some workarounds necessary.		
4. Potential to support Student Evaluation of Teaching			X	
5. Potential to support departmental periodic reviews		X these needs are fairly consistent or the same as program-level assessment, so the same comment applies.		
- content management/sharing (standards, evidence)			X	
	0	4	3	0

LMS Strategic Review: Assessment Best Fit Rubric

Rubric adopted from CHICO	Moodle			
Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior
Academic Program Assessment				
1. Solid course-level assessment			X	
2. Potential for program level assessment (WASC)				X Moodle has by far the greatest potential of the three LMSs; it's been built from the ground up to go beyond course-level needs and integrate programmatic needs.
3. Reporting capabilities			X with short-term development potential to be Superior.	
- export and aggregate data across courses/programs			X with short-term development potential to be Superior.	
4. Potential to support Student Evaluation of Teaching			X	
5. Potential to support departmental periodic reviews			X same as program-level assessment	
- content management/sharing (standards, evidence)			X	
	0	0	6	1

Randy, there could be some sound reasons to go with WebCT 6 in the short term, but I'm afraid that such a decision would leave us wondering in a couple of years why in the world we didn't go with Moodle. I don't think there's any question that Moodle is far better positioned to serve ISU's greatest common good over time in much stronger and more productive ways than the other two options. I was a little surprised to find that I actually liked WebCT 6 better than Sakai, but was blown away by how far ahead Moodle is than the other two. In a very real sense, WebCT is a product that is near the end of its development cycle, while Moodle's still at the very beginning of its cycle. I worry that choosing WebCt 6 will doom us to a future of hacking workarounds to do what Moodle will increasingly grow into doing natively.

LMS Strategic Review: Assessment Best Fit Rubric

Rubric adopted from CHICO	Sakai			
Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior
Academic Program Assessment				
1. Solid course-level assessment		X		
2. Potential for program level assessment (WASC)		X the potential is there but not fully developed in current version		
3. Reporting capabilities		X		
- export and aggregate data across courses/programs		X		
4. Potential to support Student Evaluation of Teaching		X		
5. Potential to support departmental periodic reviews		X same as program-level assessment		
- content management/sharing (standards, evidence)			X	
	0	6	1	0

Appendix IV

Support Best Fit Rubric Results

LMS Strategic Review: ISU Support Staff Best Fit Rubric

Rubric adopted from CHICO

Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior	Notes/Follow-up
			Moodle		
Support & Sustainability					
1. Migration of courses and content					
- Tools/utilities/process		3	1		
- Ease for faculty			3	1	
- Ease for support staff		3	1		
- Response from reference sites		2	2		
- Migration of content out of product		2	2		
2. Training and support for staff				1	Great help, easiest learning curve
- "Train the trainer" available onsite/online		1	2	1	
- Ease of retraining (5 days)		1	2	1	
- Ease of new training development (out of the box)			2	2	
3. Training and support for faculty/departments				1	Great help, easiest learning curve
- Basic Retraining (8 hours)			3	1	
- Introduction (12 hours)			2	2	
- Advanced Training (30 hours)			2	2	
4. Accessibility (508)		1	3		
5. Platforms, browsers, plug-ins (Mac, PC)			2	2	Best multi-platform support
6. Ease of use for staff			1		
- course design			2	2	very easy to use
- application administration		2	1	1	
- application support			3	1	
- distributed administration		4			
7. Single-sign-on access			1		
- Library systems/subscription services		3	1		
- other campus systems		1	3		
Additional comments	0	23	39	18	Overall better fit for ISU

LMS Strategic Review: ISU Support Staff Best Fit Rubric

Rubric adopted from CHICO

Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior	Notes/Follow-up
Support & Sustainability					
1. Migration of courses and content		1			
- Tools/utilities/process	2	2			
- Ease for faculty	2	1	1		
- Ease for support staff		4			
- Response from reference sites		4			
- Migration of content out of product		3	1		
2. Training and support for staff	1				Poor help files
- "Train the trainer" available onsite/online	3	1			
- Ease of retraining (5 days)	2	2			
- Ease of new training development (out of the box)	3	1			
3. Training and support for faculty/departments	1				Poor help files
- Basic Retraining (8 hours)	2	2			
- Introduction (12 hours)	3	1			
- Advanced Training (30 hours)	2	1			
4. Accessibility (508)		3	1		
5. Platforms, browsers, plug-ins (Mac, PC)		2	2		good multi-platform support
6. Ease of use for staff		1			
- course design	1	3			
- application administration	3		1		
- application support	3		1		
- distributed administration	2	1	1		
7. Single-sign-on access		1			strongest of the LMSs in this
- Library systems/subscription services		4			
- other campus systems		4			
Additional Comments	30	41	8	0	

Sakai

LMS Strategic Review: ISU Support Staff Best Fit Rubric

Rubric adopted from CHICO

Areas of Consideration	Doesn't Meet	Meets	Exceeds	Superior	Notes/Follow-up
		WebCT			
Support & Sustainability					
1. Migration of courses and content		1			
- Tools/utilities/process	1	2		1	
- Ease for faculty		3		1	
- Ease for support staff	1	2	1		
- Response from reference sites	1	2	1		
- Migration of content out of product	1		3		
2. Training and support for staff	1				so-so help
- "Train the trainer" available onsite/online	1	3			
- Ease of retraining (5 days)		2	1	1	
- Ease of new training development (out of the box)	1	2		1	
3. Training and support for faculty/departments	1				so-so help
- Basic Retraining (8 hours)	1	3			
- Introduction (12 hours)	1	3			
- Advanced Training (30 hours)	1	3			
4. Accessibility (508)	2	1	1		
5. Platforms, browsers, plug-ins (Mac, PC)	4				
6. Ease of use for staff		1			doesn't work w/Linux only specific browsers
- course design		3	1		
- application administration		3	1		
- application support		3	1		
- distributed administration	1	2	1		
7. Single-sign-on access	1				
- Library systems/subscription services		4			
- other campus systems	1	3			
Additional comments	20	45	11	4	Have to pay for add-ons that are in Moodle & Sakai from get go.

Appendix V

Financial Evaluation of WebCT, Sakai, and Moodle

Appendix V

	Moodle		Sakai		WebCT	
	yr 1	on-going	yr 1	on-going	yr 1	on-going
Labor						
[1] LMS Administrator - Loaded	$ 70,000.00	$ 70,000.00	$ 70,000.00	$ 70,000.00	$ 70,000.00	$ 70,000.00
3rdParty Support						
[2] Estimated by ITRC	25,000.00	-	50,000.00	-	50,000.00	-
[1]**Vendor/Consortium Fees**	-	-	-	10,000.00	37,500.00	40,000.00
Totals	$ 95,000.00	$ 70,000.00	$ 120,000.00	$ 80,000.00	$ 157,500.00	$ 110,000.00

[1] Labor nor Vendor fees include estimated increases which are both very likely
[2] 3rd Party support fees are estimated based on conversations with vendors and other institutions, as well as experience

LMS Year One Totals

Total Annual After July 2008