

**Learning Management System Review Final Report – April 11, 2006**

**Report Submission to EATAC**

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## **1. Executive Summary**

In the fall of 2002, the Vice President of Administration and Finance had requested a learning management system (LMS) review. The following was highlighted:

- Costs for WebCT are increasing
- What are the alternatives, or is WebCT appropriate?
- How do we measure the options?
- What kind of process will this group recommend for the review?
- How often should a review be done?
- Who should be included in the review?
- How should an LMS be supported?
- Recommendation(s) available in March 2003

A group was created which included faculty, staff, students, administration and School District 73, to undertake the review and make appropriate recommendations.

The LMS Review committee (2003) recommended the following:

- UCC (TRU) continue with WebCT until the expiration of the 3 year contract
- Continually review other LMS systems primarily in the Open Source Area
- Review the ability to aggregate our purchase with a provincial buying group
- That recognition is provided to individuals that support the LMS initiative(s). One of the recommendations is for a support person to be entitled to attend an appropriate annual conference.
- LMS initiatives will not enjoy success and implementation unless there is a core group of faculty that is willing and able to support the initiative.
- That a draft report of the findings to be posted to a website for the University Community to comment on.
- A final report created and presented to administration
- That the LMS review should now be moved to a newly planned Education Technology Committee.
- Appropriate positions and/or release created to provide LMS support
- The review should be done again in 2005/2006

### **Implementation of the 2003 Recommendations**

The recommendations implemented included:

- UCC continue with WebCT at the least until the expiration of the contract
- Continually review other LMS systems primarily in the Open Source Area
- Creation of two support positions to assist with LMS. Unfortunately one of these positions (staff) is no longer available, and the faculty support position needs to be reaffirmed.
- The LMS review now reports to EATAC
- Formal funding of individuals that support LMS initiatives has been partly done.

Unfortunately a provincial buying group of BC Universities and College was not created but is currently being reviewed by BC Campus.

### **2005/2006 LMS Review Recommendations**

1. WebCT 6.0 implemented in the Summer of 2007. The current version of WebCT 4.x will no longer be supported by the end of 2008 by WebCT/Blackboard. The current licenses expire on June 30 (TRU-OL) and July 31 (TRU-Kamloops) in 2006 and needs to be renewed for another year.
  2. Consolidate TRU-Kamloops and TRU-OL into one instance of WebCT 6.0 (Summer 2007). This is a major undertaking and will require a dedicated project manager to be assigned as soon as possible.
  3. The staff support position be reinstated and filled for the administration/support of Learning Management Systems as per the previous report.
  4. The faculty LMS instructional support position is reaffirmed. This position provides an important and timely resource for all LMS users.
  5. Ongoing training and support for users including issues such as the effective use of technology in teaching must be continued and expanded. It is suggested that TRU's Centre for Teaching and Learning work with TAG and IDRГ on creating appropriate PD activities.
  6. The Open Source trial LMS called "Moodle" should be continued and supported and provided as an option/alternative to WebCT.
  7. The additional LMS function- Horizon Wimba's "Voice Tools" – should be funded and supported. Further study is required for the use/recommendation/implementation of a Voice/Audio conferencing system.
  8. The LMS review Committee should continue to meet as an advisory group on a regular basis. This group should also determine the next LMS review which should be done within a three year period from this report.
  9. Technical support from the help desk should be extended to cover evenings and weekends for LMS users.
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## **2. Committee Mandate**

In addition to the 2003 mandate, the following also occurred:

- In 2005, TRU Kamloops, and the Open University in Burnaby merged into one operation. Although both institutions use WebCT, the administration and implementation is quite different. The committee is also tasked with examining the possible consolidation into one server.

As part of the 2003 LMS Review recommendations, the LMS 2005 group are to examine the following:

Costs for WebCT are increasing

What are the alternatives, or is WebCT appropriate?

How do we measure the options? How often should a review be done?

Who should be included in the review?

What other options/additions could/should be added to an LMS

How should an LMS be supported?

Recommendation(s) available in March 2006

A group was created to undertake the review and make appropriate recommendations which included reviewing Learning Management System every three years. This report is part of the Mandate.

## **3. Committee Makeup**

It was agreed that a cross section of people should be chosen for the review. this includes: faculty, staff, admin, students and our local school district. The following members have agreed to participate in the Committee:

Faculty: Dan O'Reilly, Bernie Kirkey, Susan Purdy, Gordon Titchener, Lloyd Bennett, Dan Bissonette, Dennis Johnson, Natasha Scott, Doug Baleshta

Admin: Murray Young, Enid McCauley (IDRG), Theresa Spitzer (IDRG)

Library: Kathy Gaynor (Faculty)

Staff: IT Services - Wayne Pinette, Heath Hamoline, Hugh Burley (IT Services)

Staff (IDRG) - Doug Burgess, John Brefitt, J. Lefebvre

School District 73: Don Poelzer, Rainer Schmid

Students: Maureen Muentner-Anderson, Christina Hsu, Michael Broadway (Jan 2006)

## **4. Review Process**

– Timelines:

Nov 2005 - Determine the members of the Review Committee

December 2005 - Develop Evaluation Criteria

Jan 2006 - Review of Evaluation Resources, survey of other institution's LMS use.

February 2006 – Faculty survey of LMS use.

March 2006 - Draft report available to University Community for comments

March 2006 - Final Report

## **5. Historical use of LMS (CML)**

The use of a learning management system at TRU is not something new. A group of faculty in 1986 used a VMS based quiz and progress tracking tool called CML. This tool had been in use until the late 1990's. It provided a method to create quiz banks with basic drawings, administer quizzes and exams and provide a grading and progress tracking system. In 1997, TRU became a beta test site for WebCT which now provided a centralized system for posting electronic material, evaluation, authentication, posting grades, chat line, calendar of events, bulletin board, glossary and a variety of other features. The initial pricing was extremely low and the system requirements were relatively small. At the same time, the trades division was experimenting with an LMS system called The Learning Manager (TLM). TLM had the ability to import the question banks from the CML system. As the TLM project was implemented, it became apparent that this system suffered from support issues both externally and internally. As well, WebCT was becoming the LMS system of choice for most of the faculty. The decision by the trades division to move to WebCT was done approximately four years ago.

## **6. Current use of WebCT and Costs (Kamloops and OL)**

In 1997, UCC became the beta test site for WebCT. There was no cost for the software and this system ran on a 486/100 with the Linux operating system. We had approximately 200 students and six faculty using the software. Through the years, TRU/OL has upgraded the versions several times and is currently running version 4.1 Campus Edition. In the summer of 2002, WebCT pricing was going through significant changes. The company has now been purchased by their competitor (BlackBoard) who has major plans on upgrading and integrating WebCT. The license is now renewed on an annual basis:

TRU - July 2005 - July 2006 - \$28,500 USD

TRU - OL June 2005 - June 2006 - \$19,000 USD. Combined annual cost is \$47,500 USD. We are anticipating a 3%-5% increase for 2006/2007

The WebCT server hardware in Kamloops was recently upgraded (summer of 2005) to accommodate growth.

WebCT 6.0 will require a new server and also needs MS SQL, a database administrator and will cost \$36,000 (hardware/software)

## **7. Integration to a Single LMS.**

It is recommended that the TRU-Kamloops and TRU-OL WebCT server be combined into a single server. It is expected that this could be accomplished during the anticipated move to WebCT 6.0 which should be implemented in the Fall of 2007. This is not a simple task and may be impacted by the following:

1. Choice of the student management system. It will be difficult to implement this initiative if both Colleague and Banner are still operating independently. Kamloops uses a batch process to populate the

WebCT database and this could be done if TRU-OL is still running on Banner.

2. Application Administration and Support. TRU-Kamloops and TRU-OL administer WebCT slightly differently. Kamloops has the faculty do all their own course management including: content creation/editing, student management, and course administration. TRU-OL works on a slightly different model where faculty may not provide the editing/administration functions.

3. Centralized course creation/student management function. One of the recommendations is to restore the WebCT administration position which should be tasked to provide this.

4. A project manager will need to be assigned to this initiative and will provide recommendations in the spring of 2007 on how to implement the changes.

#### **8. WebCT Growth Patterns since the last review (TRU- Kamloops):**

<b>Year</b>	<b>Designers</b>	<b>Courses</b>	<b>Students</b>	<b>Students x Courses</b>
2003	200	450	5000	7000
2006	330	1100	7000	30,000*

\* the large increase in Students x Courses is due to the inclusion of the on-line voting system. An additional 7,000 OL students were added to the Kamloops WebCT database

WebCT continues to grow at approximately 20% per year.

#### **9. School District Review**

The Ministry of Education for British Columbia had also undertaken a review of learning management systems. They began their review in the fall of 2002 and solicited requests for information from various software companies. Approximately 40 vendors replied to the request. From this group, it was narrowed down to twelve companies. The companies went through an extensive review process and were narrowed down to five. This includes: Blackboard, WebCT, Microsoft, Odyssey, and Desire2Learn. After extensive field testing and evaluation, Desire2Learn and WebCT were the finalists.

In 2005, the Provincial Group reviewed 6 responses to their RFP for a Learning Management System. Desire 2 Learn declined to respond to the RFP. The province is moving to WebCT Version 6.0 starting in November (2005) and plan to be finished by May 06. The Vancouver School Board is staying with Desire 2 Learn.

#### **10. Use of LMS in other Institutions including BC Campus**

WebCT is in use by most of the post-secondary institutions in Canada. UCFV, OUC, Douglas, UVIC, UBC, SFU and UNBC and BC campus are also using WebCT. Malaspina and Athabasca University is now moving exclusively to Moodle, and others are either running Moodle as a trial, and/or contemplating a change. The British Open University is moving to Moodle for their 100,000 students

and 2,000 tutors and providing financial support for Moodle enhancements.

## **11. Faculty Survey Results**

A survey was done with faculty to rank the variety of “Tools” available in LMS to determine their relative importance. There were responses from 89 faculty on 42 questions including general comments. The survey results are contained at the end of this document as a reference. Instructors were asked whether or not they used a particular tool, and if they did, use a five point rating scale which ranged from not important (1) to critical (5). Only the Whiteboard is rarely used 5/89 responses and the Real Time Chat – 14/89

Even though some of the tools are not used by all faculty, they are still rated relatively highly. There was a fairly high rating for the ability of being able to “restrict the printing of course files and content”. As well, the ability to have an integrated Video/Audio System with an LMS was rate as being somewhat to very important by 53/89. It is also valuable to read the open-ended comments of the participants. Their comments provide insight into how the LMS (WebCT) is being used and other features/restrictions. It should also be noted that many features in WebCT version 6.0 address some of the problems experienced using our current version.

## **12. Rating of Various Platforms**

Accounts were set up for committee members with Atutor, Moodle and Dotlrn. As well, a variety of internet sites were made available which allowed the rating of various features with a variety of software packages. The sites listed below provide comparisons between LMS vendors and included open source solutions.

[http://www.ibritt.com/resources/dc\\_management.htm](http://www.ibritt.com/resources/dc_management.htm)

<http://cde.athabascau.ca/softeval/>

<http://www.edutools.info/course/index.jsp>

[https://eduforge.org/forum/forum.php?forum\\_id=470](https://eduforge.org/forum/forum.php?forum_id=470)

## **13. LMS Trends, merging of BlackBoard and WebCT**

BlackBoard recently announced that they were purchasing WebCT. The Department of Justice in the US has cleared the merger and expect the arrangement to be finalized in March or April 2006. It is unclear what this will mean, but it is expected that WebCT LMS versions will continued to be updated, they will require continued support and training, and costs will continue to increase.

Open Source. Open Source initiatives continue to make inroads in the LMS area. Moodle is gaining

wide adoption by a variety of institutions and is in use by over 6000 world wide organizations. The British Open University has now adopted Moodle as their primary LMS and will be used for their more than 100,000 students and 2,000 tutors. They are committing a significant amount of support to the project. *“The Open University’s Learning and Teaching Office has started a new programme worth nearly £5 million to build a comprehensive online student learning environment for the 21st century. Dean Taylor, the programme manager of the OU’s Virtual Learning Environment (VLE), says, “We see the development of Moodle applications, along with involvement of the Moodle Open Source community giving our students a great advantage in e-learning. Plus, the innovations added by the OU will be available to the entire Moodle community. It’s a two-way creative street.”*

Our current installation of Moodle is being used for several face to face courses and has received very positive comments (see appendix). Moodle software uses GPL licensing and therefore will never have a cost associated with acquiring it. TRU is also re-using a previous WebCT server for the Moodle trial.

Moodle has outlined an upgrade path that is consistent with our needs including: SCORM and IMS support, improved use of RSS and Blogs, and a database module.

#### **14. Additions to Current LMS and costs**

Two additional add-ons were installed and trialed this semester. This included Wimba-Horizon’s Voice tools and Conferencing Tools. The Voice Tools will cost \$6,875 USD per year plus a one time cost of \$4,000 for a server. We have had several instructors use the Voice Tools and their comments are summarized below:

“I have already started using some voice tools in my CESL 024 class -- both the students and I like it very much. I'll give you a more detailed response near the end of the term,

Thanks,  
Jason”

“I am currently teaching a course for the Animal Health Technology program and I have to say these tools couldn't have come at a better time. I am introducing the Voice email to the class and the students love it. In my course the students are asked to do video demonstrations of certain techniques that they have learned and then I provide them with feedback and either pass them or have them repeat the procedure. This feedback up until now has been typed and I have found it very time consuming. (Approx 1 hour per student per evaluation - and they have 5 evaluations in just my class alone). This provides me with a way to get their feedback to them a lot quicker, but actually easier as well as I can emphasize certain items with my voice and not appear like I am "yelling" at them on paper. I am also going to try your Voice Board and see if I can find a place for that in my course. I like the variety that these tools will give our students and hopefully it will make them feel like there is a real live person at the other end of their computer.

Thank you so much!

Vanessa Toal, RAHT”

**Costs:** \$6,875 USD per year plus a one time fee of \$4,000 for a bundled server. (April 30 2006 – April 30 -2007)

## **15. Recommendations**

The committee recommends the following:

1. WebCT 6.0 implemented in the Summer of 2007. The current version of WebCT 4.x will no longer be supported by the end of 2007 by WebCT/Blackboard. The current licenses expire on June 30 (TRU-OL) and July 31 (TRU-Kamloops) in 2006 and needs to be renewed for another year.
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  6. The Open Source trial LMS called “Moodle” should be continued/supported and provided as an option/alternative to WebCT.
  7. The additional LMS function- Horizon Wimba's “Voice Tools” – should be funded and supported. \$6,875 USD per year plus a one time fee of \$4,000 for a bundled server. (April 30 2006 – April 30 -2007). Further study is required for the use/recommendation/implementation of a Voice/Audio conferencing system.
  8. The LMS review Committee should continue to meet as an advisory group on a regular basis and determine the next LMS review which must be done within a three year period from this report.
  9. Technical support from the help desk should be extended to cover evenings and weekends for LMS users.
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## **16. Support Positions**

Instructional: The faculty LMS instructional support position is reaffirmed. This position provides an important and timely resource for all LMS users.

Technical. This position needs to be reinstated as per the 2003 recommendations and provide the following:

- Provide software upgrades and system administration.
- Provide appropriate backup routines and the ability to restore courses
- Provide quarterly usage statistics
- Explore appropriate procedures/software for integration with other systems
- Maintain a test server for monitoring software upgrades and other LMS
- Ensure system security and integrity and monitor/report for intrusions or other security issues
- Recommend and implement appropriate hardware upgrades
- Explore and test a variety of related Learning Tools.

## **17. Appendix**

### **Comparison of Moodle and WebCT**

<b>Feature</b>	<b>Moodle (current)</b>	<b>Moodle (updated)</b>	<b>WebCT 4.1 (current)</b>	<b>WebCT 6.0</b>
Shared database	Yes	Yes	No	Yes
Messaging System	Yes	Yes	No	Yes
Wiki	Yes	Yes	No	No
Appointment Tool	Yes	Yes	No	No
Gradebook	Poor	Better	Better	Better
Multilingual	Yes	Yes	Limited	Limited
Display Folders	Yes	Yes	No	Yes
Student Pictures	Yes	Yes	Limited	Unknown
File Drag and Drop	Not Implemented	WebDav	WebDav	Yes
License Limitations	No	No	Yes	Yes
Selective Content Release	Limited	Limited	Yes	Yes
Whiteboard	No	No	Yes	Yes
Discussion Ratings	Yes	Yes	No	No
Limit File Size	Yes	Yes	No	Yes
Quiz Tool	OK	Better	Best	Best
Logging	Excellent	Excellent	Limited	Better
RSS	Yes	Yes	No	Unknown
ePacks	No	No	Yes	Yes
Photo Gallery	Display Folder	Display Folder	Yes	Yes

Moodle - Response from Ross Nelson, Assistant Professor, Geography, TRU – Kamloops

Moodle has been great. No stalls, crashes, issues. 27,000 hits to date between the two courses. Easy to load up and manage on and off campus. I really like it that students can load up. My 363 and 499 students post their seminar assignments for others to read. No one complains although a few can't see to find the attachment button. I also use the feature where students can respond to a posting and I grade the response. Group feature here is great. The moodle has really elevated discussions in my 499 class (best seminars ever). Students come to class prepared.

I tried the quiz feature but was a bit baffled. And found students did not like it as a way to practice. They just wanted old examples in hard copy (posted that is in pdf). It would be nice if it accepted more file formats.

I really like the ability to monitor student usage. Helps me pinpoint students who are really trying and

those who need a push. I like having multiple teachers on a moodle. Allows lab demos and other assistants to engage the site without sharing my password, or forcing me to do all of the site management.

Students like to customize the interface.

I have not used the grading features much nor many of the other utilities. It appears that it would take several years to developed a really full featured course moodle site. Just not enough time in the term to explore it all.

Most of my complaints are small: the date display mode can get very long. Why doesn't it show most recent to past, rather than the other way around? The edit profile is not very clear that you need to enter a description to get it to register (much confusion on the students part). Why can't I upload multiple files? or a folder? etc. I'll use it again.

Ross

### **Summary of General Comments from WebCT Faculty Survey.**

**A faculty survey was done to measure the desirable features of a LMS and provide comments.**

**Question: Are there other features you would like to see/use in a LMS? If yes, what are they?**

### **Responses**

2 Equation editor

7 Ability to have co-designers as well as TAs. Please eliminate having to use html code when working with files. Blackboard was much better that way. WebCT is very powerful and has lots of options, but that means that people need help to learn it. Blackboard was more user-friendly, but not as powerful.

8 No and my answer may be due to my limited exposure to other LMS

11 I would like to have an easier system of posting files. WebCT is so clunky, you have to save the file, open webCT, ad, type of file, upload, post.... way too many steps

13 RSS feeds from discussion boards; RSS feeds into courses; student photos with posts on discussion boards; discussion board messages auto-emailed to students; blog; wiki; secure quiz window; adaptive quizzes; more than one glossary; multiple glossary interfaces

15 being able to share information between courses would make my life SOOOO much easier!

16 On line help is important, however, I find Dr C next to useless. I see no reason why a LMS should force a student to use a specific browser.

18 Be able to use quizzes done in MS Word directly instead of having to translate into WebCT language

19 The ability to set forwarding to GroupWise within WebCT email is very useful. Unfortunately replies don't seem to get back to the student.

32 I wish I could upload/download multiple files (without having to zip) I wish there was way to separately update the content tool without disturbing the other tools .... When a new semester starts I find that the shared content tool has been updated so I have to go to the new content but then I lose my personal additions to the classroom and I have to add them all back in again.

38 Combination text and audio conferencing for multiple simultaneous users such as in iVocalize.

39 do not know enough to comment

42 easier ways to put up photo galleries

43 I would like to see faculty given an opportunity to assign passwords to community members. At times it is important to keep community members (professionals) posted about what is happening in a course, how they can get information to help students in applied settings who are involved in service learning....

44 i know that the needs of instructors who teach on-campus would differ from those who teach solely by distance. I would certainly need more features for distance only instruction.

49 When using calculations (eg. Grade Tool), the easier ability to be able to "erase" part of the calculation, even if its in the middle of the calculation. The ability to remove the audit students from your grade averages without removing them from your class list.

51 I would appreciate a "drag and drop" format for moving things around...it's a real pain moving columns and pages one space at a time. There are too many steps involved in a lot of operations.

57 There doesn't appear to be an easy connection between the assignment feature and the calendar feature in WebCT. For example, it would be great if assignment deadlines either automatically or optionally would appear on the calendar without re-entry. (Unless I have just missed this capability.)

68 fits what I need at this time

76 Ease of use should be a consideration. WebCt is very cumbersome and many items are not intuitive.

77 the ability to email several people at a time.

