Blackboard Advisory Committee: Status Report, fall 2010

JQ Johnson, 22 Nov 2010 (for meeting scheduled 1 Dec 10)

Overview and Background

Welcome to the 2010-11 Blackboard Advisory Committee. The committee meets approximately quarterly and provides policy guidance to the Libraries. It ensures that Blackboard remains responsive to the needs of the faculty and the university community. Members of the committee for this fall include (new members starred*):

Deborah Bauer <djbauer@lcbsmail.uoregon.edu> Finance (LCB)
Louise Bishop <lmbishop@uoregon.edu> Honors College
Tim Boshart <tboshart@uoregon.edu> Library
Helen Chu <helenc@uoregon.edu> * Information Services
Katie Dwyer <kdwyer@uoregon.edu> * (student member)
Sue Eveland <seveland@uoregon.edu> Registrar
John Fenn <jffenn@uoregon.edu> Arts & Administration (AAA)
Pedro Garcia-Caro <pgcaro@uoregon.edu> Romance Languages
Grace Golden <graceg@uoregon.edu> Human Physiology
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Anne van den Nouweland <annev@uoregon.edu> Economics
Robert Voelker-Morris <mrnorr1@uoregon.edu> Teaching Effectiveness Program
Eric Wiltshire <esw@uoregon.edu> Music

The most significant change in membership since last year was the addition of several student members. We expect that the composition of the committee will change slightly for winter term, and that we will attempt to add several more instructional faculty members.

Some background for new members:

The UO Blackboard course management system is managed by Scholarly Communications and Instructional Support (SCIS) in the Libraries, in collaboration with UO Information Services (IS). It provides a central location for online course materials and a tool for implementing online components in UO courses. The system is managed on a day to day basis by Tim Boshart, the SCIS Blackboard Coordinator. Overall project leader is JQ Johnson. Additional major support includes database management (IS, especially Stephany Freeman), faculty training (Nargas Oskui, CMET), pedagogical support (TEP, Robert Voelker-Morris) and a variety of other support organizations around campus.

The UO initially adopted the Blackboard system in 1999. A major upgrade of the system occurred in 2003. Further upgrades have occurred several times since then. In spring 2010 a major architectural change was implemented, moving all servers to Information Services (as part of the VMware virtual
server system). The production system hardware currently includes database servers, file storage on the
IS SAN and application servers. Users interact with the application servers, which sit behind load
balancing front ends. All of these components are dual redundant for reliability and rapid recovery from
failures. In addition, the configuration includes a staging/test system and a development system. The
UO licenses Blackboard Learn (up to 50,000 users) from Blackboard Inc.

**Blackboard usage, 2009-10**

During the 2009-10 academic year we supported a total of approximately 6400 CRN\(^1\) coursesites (versus 6190 the previous year), a
3.4% year-to-year growth in the number of coursesites (courses using blackboard). As
noted in the summer Advisory Committee
report, we had a total of 1.03 billion webserver
hits and 3586419 user logins (about
10,000/day) during the period 1 Sept 2009-24
Aug 2010. We had a total of 2135 “instructors”
in these sites. In addition to these class-related
sites, we had 24 sites in use for specific
undergraduate majors, 51 sites for academic
units, 26 sites from previous terms (in most
cases made available to allow access for incompletes), about 200 test and development sites, and about
140 other sites, for a total of 2573 available sites. Among sites in the “other” category were special-
purpose training sites (e.g. “Student Data Warehouse Training” or “Introduction to Banner”), and sites
set up to foster small group communications (e.g. “Mindfulness Discussion Group,” “Student Affiliates
of the American Chemical Society,” or “Registrar's Reports and Documents”).

Data for fall 2010 reflects continued growth in instructional usage. For example, total number of active
(available) CRN coursesites in fall 2010 was 2248 as of 14 November, a 9.1% increase over the
previous fall numbers. Other data for this fall includes:

<table>
<thead>
<tr>
<th></th>
<th>Fall 2009</th>
<th>Fall 2010</th>
<th>growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active CRN coursesites</td>
<td>2061</td>
<td>2248</td>
<td>9.1%</td>
</tr>
<tr>
<td>Users in at least one coursesite</td>
<td>21598</td>
<td>22105</td>
<td>2.4%</td>
</tr>
<tr>
<td>Student enrollments in active coursesites</td>
<td>79386</td>
<td>86422</td>
<td>8.9%</td>
</tr>
</tbody>
</table>

In addition to collecting data on users and courses, we also collect web server performance data.
Committee members are encouraged to look at [https://blackboard.uoregon.edu/local/awstats/awstats.pl](https://blackboard.uoregon.edu/local/awstats/awstats.pl) (available on-campus only).

Among other things, our web server data allows us to track browser and OS usage, and provides perhaps
the best data available on campus about student browser and OS usage patterns. For example, we
observe that the percent of Mac usage keeps growing; this November for the first time Mac usage was
equal to Windows usage. It is also
interesting to note that the most common
screen size reported is 1280x800 (the size
for MacBooks and other laptops) at 39%.

<table>
<thead>
<tr>
<th>OS</th>
<th>Hits</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>73,869,651</td>
<td>49.8%</td>
</tr>
<tr>
<td>Macintosh</td>
<td>73,143,544</td>
<td>49.3%</td>
</tr>
</tbody>
</table>

\(^1\) This number actually includes sites corresponding to a single CRN, “merged” sites corresponding to
multiple CRNs, and sites for AEI non-credit courses.
and the top 3 screen sizes – all typical of laptops and not desktop systems – account for 60% of total usage.

We also observe that Firefox now accounts for 46% of all usage (up from 39% a year ago). Despite our having had to strongly discourage Safari use this term (see below), it remains very popular at about 30% of all usage. By comparison, Microsoft Internet Explorer now accounts for only 17% of total usage, compared with about 60% five years ago. For October 2010 (with Oct 2009 percentages for comparison):

<table>
<thead>
<tr>
<th>Browsers</th>
<th>Hits</th>
<th>Percent 2010</th>
<th>2009 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firefox</td>
<td>68,487,734</td>
<td>46.2 %</td>
<td>39 %</td>
</tr>
<tr>
<td>Safari</td>
<td>43,868,962</td>
<td>29.6 %</td>
<td>35 %</td>
</tr>
<tr>
<td>MS IE</td>
<td>25,102,122</td>
<td>16.9 %</td>
<td>22 %</td>
</tr>
<tr>
<td>Chrome</td>
<td>9,327,679</td>
<td>6.2 %</td>
<td>3 %</td>
</tr>
</tbody>
</table>

**Budget notes**

Central Blackboard support is funded through an index with a recurring budget allocation of (2011 budget year) $179,826. Expenses on this index include the UO BlackboardLearn license, salary for Tim Boshart, database administration, and a small amount of additional S&S. It does not include other expenses that might arguably be considered part of central Blackboard support, including salary for JQ Johnson (about 30% of that FTE is blackboard-related, and paid from the general library index), the cost of providing faculty support through CMET Consulting, and some expenses incurred by Information Services.

The Blackboard index has been in the black in most recent years and has some carryforward. However, expenses are expected to exceed recurring budget in 2011 (the current budget year), and carryforward will eventually be exhausted resulting in a deficit starting in 2013 or 2014. Reasons for the change include unfunded step and COL salary increases, and a Blackboard license that has been inflating at an average of 4.5% per year.

**Some events of note in the past quarter**

This section focuses mostly on events since our last Advisory Committee meeting, Sep 13.

The new academic year brought to campus – as usual – a large number of new faculty. Teaching Effectiveness Program, CMET Consulting, and SCIS collaborated to offer almost a dozen workshops in the two weeks before the start of fall term, ranging from basic orientation for new instructors to more in-depth examination of particular Blackboard features such as the discussion board.

There have not been many significant software changes in the Blackboard system this term. On Sept 11 we installed Blackboard 9.0 service pack 4, which included a number of bug fixes but only minimal user-visible changes. Tim is working on a major software upgrade, from Blackboard 9.0 to 9.1, which we have scheduled for December 22-23. For the current projected downtime schedule through 2011, plus criteria we use to schedule downtime, see [http://libweb.uoregon.edu/scis/blackboard/schedule.html](http://libweb.uoregon.edu/scis/blackboard/schedule.html).
We conducted our first formal survey of faculty attitudes towards Blackboard. On Nov 5, surveys were sent by email to 1503 UO users – the complete list of people with “instructor” roles in fall term coursesites as of that date. As of Nov 15 we had received more than 300 responses. Results will be discussed in more detail below.

We experienced some unscheduled downtime so far this fall:
- Intermittent F5 configuration problems 9/11-9/12 from around 10:00pm until noon. Partial but widespread unavailability, 14 hours.
- Database problems 11/13 from around 9:30-12 with the system completely down for about 25 minutes from 11:00-11:25.
- Database failed to restart after maintenance 11/16. Unscheduled downtime about 25 minutes from 6am to 6:25.

In addition, some specific components of the system experienced unusual outages. In particular, the SafeAssign plagiarism detection servers run by Blackboard, Inc. were very heavily used this term, and as a result students and faculty at UO and other universities saw periods of very slow response time. In some cases it would take days for a SafeAssign submission to be scored for originality, and in a few cases attempts to submit papers generated errors as our Blackboard server was unable to contact the SafeAssign servers.

Perhaps most noticeable to users, though, was not downtime but browser compatibility. During the summer Apple released a new version of Safari, version 5.0, without having provided any opportunity for other vendors or the public to test it beforehand. The new version caused substantial problems for our Blackboard system, since it over-aggressively cached web pages. Safari users at the UO had a wide variety of problems as a result. For example, they might visit a blackboard site and not see recently added information since the browser continued to display an old stale page. Problems were particularly severe for students attempting to take online quizzes using Safari and for faculty trying to post materials. The situation became so serious that we posted stern warnings that users should not use Safari with blackboard and should switch to Firefox instead. Safari usage did go down slightly, but many people didn’t heed the warnings and instead had problems using Blackboard. We have been working on fixes for the problems, and have recently made some progress. We expect that Safari will once again be a supportable web browser when we upgrade to the next version of Blackboard (winter break).

**Upgrade plans for the rest of the year**

We have a tentative downtime schedule for the rest of this academic year.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Details</th>
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<tbody>
<tr>
<td>Tues.-Wed. Dec 21-22 (winter break)</td>
<td>Blackboard 9.1 upgrade</td>
</tr>
<tr>
<td>Wed.-Thurs. Mar 23-24 (spring break)</td>
<td>Bb 9.1 SP5 upgrade; possible database server upgrade to Oracle 11G R2</td>
</tr>
<tr>
<td>Sat. July 30 (tentative; might be July 23)</td>
<td>Oracle RAC</td>
</tr>
</tbody>
</table>

If the Advisory Committee sees any reasons for concern with this schedule we will discuss and adjust. For more detailed schedule information see [http://libweb.uoregon.edu/scis/blackboard/schedule.html](http://libweb.uoregon.edu/scis/blackboard/schedule.html).

The 2-day upgrade during Winter Break will be our long-awaited conversion to Blackboard 9.1. Blackboard 9.1 is a major change behind the scenes, though it represents only a fairly small change to user interface. Still, we plan documentation plus a series of workshops for instructors to introduce the new system. One document to view is “[UO Blackboard 9.1 Upgrade Notes for Instructors](http://libweb.uoregon.edu/scis/blackboard/upgrade_notes.html). We are planning training sessions for the week of Nov 29-Dec 3, with additional training sessions during the first week of winter term, Jan 3-7. Advice from the committee on the adequacy of this training
schedule, on documentation needs, and perhaps most importantly on how we should be communicating with instructors to advertise training and documentation, would be most appreciated.

**Blackboard Survey**

As noted above, we conducted our first survey of Blackboard instructors this fall. Invitations to participate were sent to 1503 fall term instructors on Nov 5, with a reminder sent Nov 15. The survey officially closed Nov 19 (after a total of 2 weeks), with 526 responses (509 completed), a 34% response rate.

We asked about academic discipline, with results that reflected the high diversity of our population. Most subjects were represented. One surprise among respondents was the very high number of instructors (29) in Mathematics. We also asked about academic position, with a third of respondents reporting they were tenured or tenure track faculty, a quarter GTFs, and about 15% each reporting NTTF and adjunct faculty. Modal length of time having used Blackboard was 3 to 4 years, with 40% of respondents reporting they had used the system for at least 5 years.

We asked about experience with other course management systems. 74% of respondents had none. Other systems mentioned included WebCT (6%), Moodle (6%), WebAssign (4%), WeBWorK (3%), and a variety of other CMSs and web collaboration tools.

We asked respondents to rate various aspects of the Blackboard system using Lickert scales (1 = Excellent, 2 = Above Expectations, 3 = Average, 5 = Below Expectations, 5 = Poor). Results were:

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Responses</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your overall satisfaction with the UO Blackboard system</td>
<td>35</td>
<td>160</td>
<td>187</td>
<td>74</td>
<td>51</td>
<td>507</td>
<td>2.89</td>
</tr>
<tr>
<td>Ease of use for instructors</td>
<td>30</td>
<td>97</td>
<td>192</td>
<td>117</td>
<td>73</td>
<td>509</td>
<td>3.21</td>
</tr>
<tr>
<td>Ease of use for students</td>
<td>26</td>
<td>109</td>
<td>202</td>
<td>69</td>
<td>16</td>
<td>422</td>
<td>2.86</td>
</tr>
<tr>
<td>System availability and reliability</td>
<td>91</td>
<td>179</td>
<td>163</td>
<td>49</td>
<td>16</td>
<td>498</td>
<td>2.44</td>
</tr>
<tr>
<td>Adequacy of network connections to system</td>
<td>76</td>
<td>156</td>
<td>152</td>
<td>38</td>
<td>9</td>
<td>431</td>
<td>2.42</td>
</tr>
<tr>
<td>Currency (up to date?) of software version</td>
<td>53</td>
<td>113</td>
<td>124</td>
<td>24</td>
<td>9</td>
<td>323</td>
<td>2.45</td>
</tr>
<tr>
<td>Integration with other UO systems (email, Banner, DuckWeb, etc.)</td>
<td>35</td>
<td>100</td>
<td>131</td>
<td>66</td>
<td>23</td>
<td>355</td>
<td>2.84</td>
</tr>
<tr>
<td>Trouble ticket system (promptness/quality of responses)</td>
<td>64</td>
<td>87</td>
<td>70</td>
<td>20</td>
<td>10</td>
<td>251</td>
<td>2.30</td>
</tr>
<tr>
<td>Faculty input in system policy making (Blackboard Advisory Committee)</td>
<td>12</td>
<td>25</td>
<td>67</td>
<td>14</td>
<td>22</td>
<td>140</td>
<td>3.06</td>
</tr>
<tr>
<td>Documentation (including on line materials)</td>
<td>20</td>
<td>88</td>
<td>122</td>
<td>79</td>
<td>57</td>
<td>366</td>
<td>3.18</td>
</tr>
<tr>
<td>Face to face training workshops (Library, Teaching Effectiveness Program)</td>
<td>32</td>
<td>67</td>
<td>90</td>
<td>27</td>
<td>17</td>
<td>233</td>
<td>2.70</td>
</tr>
<tr>
<td>Technical support and individual training (CMET Consulting)</td>
<td>63</td>
<td>85</td>
<td>73</td>
<td>28</td>
<td>12</td>
<td>261</td>
<td>2.39</td>
</tr>
<tr>
<td>Technical support for Blackboard (other IT support units on campus)</td>
<td>59</td>
<td>89</td>
<td>84</td>
<td>35</td>
<td>11</td>
<td>278</td>
<td>2.46</td>
</tr>
</tbody>
</table>
All of these satisfaction questions had mean (and modal) responses in the “Above Expectations” or “Average” ranges, and a median value of “Average.” Respondents showed a wide range of opinions, but included both “Excellent” and “Poor” ratings in all categories. There is clearly a wide variation in how instructors who actually use the Blackboard system perceive it.

Satisfaction was highest (small values) for the trouble ticket system, CMET Consulting and other technical support, and hardware/network reliability. Satisfaction was lowest for “ease of use for instructors” and for documentation. Perhaps most informative was the “overall satisfaction” scale, which had a mode of “3” or “average,” a slightly positive mean response (2.89), but a somewhat asymmetric distribution – with a low number of “excellent” and high number of “poor.” In several cases respondent awareness was clearly very low – for example, less than a third of the respondents were aware enough of the Blackboard Advisory Committee to be willing to comment on it.

We also received a wide range of positive and negative comments to the open ended questions. To the optional question inviting expansion of “poor” ratings on the Lickert scales 152 users responded; 93 responded to the “additional comments” question. Sample comments included:

**Sample positive comments**

In the past my answers would not have been so positive, especially after upgrades like last year. However, knock wood, the system has been remarkably trouble free this year, so far, and has been a very useful tool. For one of my courses, I could not live without the Discussion Board which has allowed me to expand our "class time."

Overall-- I love it. I use the blog, I love the grade center. I love being able to post documents for students in one place, and that it keeps it simple for me.

Blackboard appears to be a wonderful set of communication tools! I look forward to learning how to improve students' learn through my use of Blackboard.

It has helped me to use less paper, to be more flexible in my teaching (because I don't create a packet in advance), and to be more responsive to students. SafeAssign has been a valuable tool. In general, I am grateful for Bb.

**Sample negative comments**

The interface is not up to par with modern programs. It is not intuitive, things are hard to find, when you have a different starting page the functions are nearly hidden, anyone who uses this ought to be able to see it's shortcomings and it's puzzling why they have persisted.

Overall, I find Blackboard to be awful, and have spent many hours battling it. … I get the sense that Blackboard never tested this on "real" people.

Blackboard is ridiculously, needlessly complex! The interface needs to be simplified dramatically. In addition, it is very difficult to accurately set timed release of materials. Frankly, if I didn't have to use it, I wouldn't. I loathe Blackboard. Its incomprehensible user interface is software malpractice. To cite just one example: to make a course available -- the system's most basic function -- one has to "customize" it by navigating to a menu with that title which is in turn buried beneath other menus. This is like locating a car's ignition under the hood and inside the engine.

I have been very disappointed with the latest version of blackboard - it's inability to support browsers other than firefox and the continued upgraded versions that add more bells and whistles but prevent me from finding and using the features I have in the past.

There were noticeably more strongly negative than strongly positive comments. Many respondents expressed high levels of frustration with the system. Most of the frustration seemed to focus on complexity or lack of intuitiveness in the user interface, especially in comparison with modern web applications. One common complaint, for example, was difficulty in locating the command to make a
coursesite available. Some respondents had very specific gripes about bugs or what they consider bugs in the software.

We looked more closely at the subgroup of 51 who answered “poor” on the overall satisfaction question. Although there were some differences, none apart from satisfaction measures appeared to be statistically significant. There was no obvious pattern in subject discipline distinguishing this group (except perhaps that Mathematics was underrepresented, with only 1 of 29 respondents rating Blackboard overall “poor”). The number of tenure-related faculty was slightly higher than in the full group. The subgroup had slightly more experience with other course management tools than the full group (39% vs 26%). The subgroup tended to make less use overall of blackboard tools, notably announcements, content items with attached files, and the grade center, though the general pattern of tool use was quite similar. A “poor” on overall satisfaction correlated with low ratings on other criteria – this subgroup gave on average poorer ratings on every criterion than did the full group of respondents, evidence that this subgroup is overall disaffected rather than concerned with specific addressable issues.

Tim and I were somewhat taken aback by the high levels of negativity expressed, and would like advice from the Blackboard Committee on how to respond. We need the assistance of the Blackboard Committee in coming up with an action plan.

**Non-Blackboard CMS systems**

As we have previously discussed and as indicated in our Blackboard survey, there is some interest on campus in alternatives to Blackboard coursesites. Two contenders for such alternatives seem to be WordPress MultiUser (which is not really a course management system, but offers some communications capabilities that overlap with Blackboard), and Moodle. Interestingly, though, only 32 survey respondents indicated that they had ever used Moodle, and even fewer mentioned WordPress.

What should the relationship be between Blackboard and other UO website tools such as WPMU?

As we have noted previously, it seems very unlikely that in the short run the UO would on balance benefit from completely converting from Blackboard to a different CMS, and we are also very conscious of the risks and costs associated with having competing enterprise systems. Even a pilot project requires a significant personnel investment that would come at a cost of reduced services in some other area. As long-time committee members may recall, our plan last year was to take advantage of a Building Block being developed by Iowa State U to integrate Blackboard and Moodle, but that addon is still in development and may not offer much functionality. We proposed last year to offer a few experimental Moodle coursesites, but did not get any takers. Given this, we need advice on whether to actively pursue experiments with alternative systems, and if so what to cut back on and how to structure the experiments so they are more productive this year than they were last year.

**Issues for consideration this year**

Looking forward to the current year, how should the committee function to best utilize limited faculty time while improving the quality of educational technology support? Should we continue to focus largely on status reports and a few specific decisions such as upgrade schedules? Is the committee interested in becoming more involved in detailed technical decisions? Is it interested in putting in time evaluating new and alternative technologies?

Perhaps most importantly, what are the (other) issues that the Committee members feel are most important for consideration this year?