Moodle Assessment Summaries – Spring & Summer 2008

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September 22, 2008
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Assessment Summary:

Four differing assessment points are available from the North Carolina State University pilot of the Moodle Learning Management System (LMS) in spring and summer, 2008, as follows:

(a) Course specific – student responses from a Toxicology course
(b) Course specific – student responses from two different sections of a graduate level Education course, one taught in Moodle, the other in Blackboard Vista
(c) Faculty feedback – from ten faculty respondents who taught using Moodle during this timeframe
(d) Student feedback – from students in courses outside of the Toxicology and Education courses previously noted

Overall findings:

• Even though a number of improvements were suggested for Moodle, the faculty members who responded to the Moodle pilot survey (n=10) liked Moodle better than Blackboard Vista, with 90% indicating that compared to Blackboard Vista, Moodle was easier to use and had better performance. Caution: As these faculty chose to participate in the pilot, presumably in some cases because they had concerns about Blackboard Vista, they may not be representative of the overall faculty. More feedback from a broader range of faculty is needed.

• There were some students who either really liked Moodle or really liked Blackboard Vista, and some students who really didn’t like Moodle or who really didn’t like Blackboard Vista. In all three pilot studies involving students, however, Moodle was favorably viewed overall, with 74% of student respondents comparing Moodle favorably in the Toxicology class study, with the mean scores of Moodle’s likeability and ease of use higher in the EAC 580 Distance Education (DE) course study (though no significant difference was found with Blackboard Vista), and with 49% of the remaining pilot student respondents indicating they liked Moodle Better or Much Better (with 30% indicating the systems were, to them, the same). Caution: The three student studies are based on feedback from a total of 103 student respondents, and may not be representative of all students.

• The pilot faculty respondents appeared to be more enthusiastic about Moodle than the pilot student respondents, based on the percentages of respondents who highly favored Moodle across both of these audiences. Students were more likely to indicate that to them, the systems were about the same.
Qualitative comments provide a glimpse of the interplay between the tools themselves and the instructional design/teaching choices; as one student noted “Moodle to me was a lot like Blackboard, as long as the teachers posted the assignments then everything is alright.”

Qualitative comments noted that the ease of use and cross-browser usability is a feature that students generally like about Moodle (though some students found the Moodle home page too cluttered).

Qualitative comments emphasized that there are tools and/or design features in both Blackboard Vista and Moodle that neither students nor faculty like. With either product selected as a long term LMS for NC State University, there will be both user likes and dislikes to address. No LMS will be the “perfect” choice for everyone.

Additional studies should compare perceptions of these systems between DE and on-campus, face-to-face (F2F) students and faculty, and to understand perceptions based on prior use/experiences with these systems.
Assessment Point One:
Student Opinions of Moodle in Upper Level/Graduate Toxicology Courses, Spring 2008

In spring 2008, Dr. Chris Hofelt, Toxicology, was one of the first faculty members to use Moodle to supplement his teaching in his graduate courses, TOX 401/501, across four sections. One section each of these courses was held on campus, supplemented by Moodle (with a total enrollment of 21) and two sections were completely DE courses more dependent on Moodle (with a total enrollment of 14). At the end of the semester, all students were sent an online survey to gather their opinions about using Moodle as their LMS during the spring semester (total number of students, 35; responses, 23, response rate: 66%). No comparison was made between the DE and F2F sections; rather, student data was examined in aggregate.

Around 83% of these students had some prior experience with WebCT or Blackboard Vista, with the remaining 17% of students having no prior experience. 87% of these students rated the reliability and performance of Moodle as Above Average or higher, with 26% finding the reliability Excellent and none of these students rating the reliability and performance as below average. The assessment indicated that approximately 96% of respondents were Generally Positive (@ 44%) or Very Positive (@ 52%) regarding the functionality of the Moodle site. No one was negative regarding the functionality of the Moodle site. Approximately 74% of respondents indicated that Moodle is better, or much better, in their opinion, than Blackboard Vista, with 39% indicating that Moodle is better than Blackboard Vista for most things, but not for everything, and with around 35% indicating a preference for Moodle to be used in their classes. No one compared Moodle negatively to Blackboard, four students found them about the same, and two did not respond.

Qualitative data revealed that Moodle was appealing to these students because of its perceived easy to use navigation, simplicity, and organization. This data revealed that some students found their grades difficult to track, and noted that for two students, quizzing issues occurred. When asked about Blackboard Vista, students noted they also liked Blackboard because of the ease of class discussion forums, grading functions, and folders to organize materials, but that the ease of use, slow load times, and reliability of Blackboard were of concern. Additionally, qualitative comments point to the potential interaction between organizational and instructional choices and the tools within both systems; as one student aptly noted: “It depends a lot on the person responsible for the page if the material is good and well organized.”

Overall, these students viewed Moodle favorably as a potential LMS.
Assessment Point Two:

Comparing Blackboard Vista and Moodle: Experiences from an Online Education Graduate Course, Summer I 2008

During a five-week Summer I session, 2008, Drs. Julia Storberg-Walker and Donna Petherbridge both taught two sections of a completely online graduate course, EAC 580: Instructional Systems Design in Training & Development. Both course sections had very similar syllabi and content (with the exception of selected differentiated readings for some modules of the course). Both courses used WolfWare for static content delivery, whereas the Blackboard Vista (Storberg-Walker) and Moodle (Petherbridge) Learning Management Systems (LMSs) were used for the communication and assessment components of the individual course sections.

An online survey was designed to gather information about student experiences with the LMSs used in these course sections, and emailed to the students. As students in both course sections were given an identical survey, they were first asked which LMS they used, Blackboard Vista or Moodle, which identified the course section and instructor. From Dr. Storberg-Walker’s class of 12 students, 9 Blackboard Vista users completed the survey (75%), and from Dr. Donna Petherbridge’s class of 10 students, 8 Moodle users completed the survey (80%). With 22 total students, and 17 completions, the overall completion rate for this survey was around 77%.

While Blackboard Vista had a higher performance and reliability rating than Moodle based on mean scores (possibly because the Blackboard Vista server had no problems during Summer I, 2008, whereas the Moodle server was unexpectedly down twice), Moodle had a higher mean score rating for both likeability compared to other systems, and ease of use compared to other systems, though none of these scores were statistically significant. There was at least one student in both course sections that did not like their LMS, and at least one student in both course sections who really liked their LMSs.

Qualitative comments revealed a Moodle feature that might be missing for students, the ability to have internal, private, 1-2-1 communications (“email”) within the system. Qualitative comments also reveal a glimpse of the interplay between the various systems and the design approaches to these systems, where one can’t always identify if the tool is the concern, if a pedagogical/instructional design choice impacts the issue, or if timing is a concern (5-week short summer course with a system change when students were not familiar with Moodle).

In only noting these two course sections, there may not be a strong argument to be made either way for one LMS system as preferable to another, from the students’ perspectives, though the mean scores for Moodle were higher (though not statistically significant) in likability and ease of use comparisons.
Assessment Point Three:

Feedback from Moodle Pilot Faculty: Experiences in Teaching with Moodle

During spring and summer 2008, NC State University begin a small pilot of the Moodle LMS. As defined by having updated class roles and active student logins, six courses were taught during spring 2008, with five unique instructors, and six courses/seven sections were taught during summer 2008, with six unique instructors. Thus, there were thirteen actively used course sections, taught by a total of eleven faculty members during this time frame. Courses included primarily face-to-face classes supplemented with Moodle, but also included at least four DE course sections. These live sections included courses in CALS, CHASS, Education and PAMS. In addition to these actively used sections, additional faculty had test sections, with a total of twenty-eight Moodle accounts enabled during spring 2008 and thirteen accounts enabled during summer 2008, with a total of forty potential instructors associated with those accounts in either development or teaching phases.

An online survey was designed to gather information about faculty experiences with using LMSs, and emailed to the forty faculty members who had created a Moodle account for either spring or summer 2008. Nine of the email recipients responded that they had not used their accounts at all for either teaching or exploration, thus the total potential respondent pool for this survey for faculty who had either taught in or explored Moodle during the spring and summer 2008 time frame is estimated to be thirty-one. Ten of the remaining faculty members responded to this survey, resulting in an estimated response rate of 32%.

All ten of the respondents had prior experience using Blackboard Vista. Using a 5-point Likert scale, faculty were asked to compare Moodle with Blackboard Vista along several comparison points, with Moodle favored over Blackboard Vista on all points:

- 90% of faculty either Agreed or Strongly Agreed that Moodle was easier to use than Blackboard Vista/WebCT, with one faculty respondent selecting a Neutral/Not Sure response.
- 90% of faculty indicated that the performance of Moodle was Above Average or Excellent, compared with other LMSs. No faculty felt the reliability and performance of Moodle was below average.
- 100% of the faculty respondents liked Moodle Better (30%) or Much Better (70%) than Blackboard Vista.

Qualitative feedback from these ten faculty indicated that while Blackboard Vista has some features that are liked (for example, a robust discussion board and the ability to organize content via folders and subfolders), and that this particular group were not Blackboard Vista fans (which makes sense in that these faculty were willing to pilot Moodle). Blackboard Vista was described as clunky, slow, awkward, and the faculty respondents noted that some of the tools did not function as expected or desired.
With Moodle, the faculty respondents found that they liked the ease of use and the open source architecture, in that it provides flexibility. Additional features specific to Moodle (e.g. adaptive mode in quizzing, internal wiki, ability to deep link) were noted as plusses. While overall measurements of Moodle’s reliability, likeability and usability were very high, it is important to note that there were elements of Moodle that were not liked and/or needed improvement, including the Topic/Weekly format that keeps a lot of material on the homepage, the fact that the discussion forum is not as robust as Vista, the way the quizzing tool and gradebook work, and the lack of an ability to upload multiple documents. In adding features, these faculty respondents suggested adding an attendance tool, having a more robust discussion board, a better gradebook, a Skype-like communication tool, an internal survey tool, additional rubrics, a multiple file upload feature, and a way to differentiate student times on exams.

Of interest to note, half of these faculty used WolfWare in conjunction with Moodle to deliver the content of their course, to include storage for files and streaming media, as well as the course listserv/email tool. This usage is probably quite reflective of how many faculty already use a combination of WolfWare and Blackboard Vista to teach their classes. With the high usage of WolfWare on campus, addressing WolfWare as part of the LMS equation may be as important as making decisions involving Moodle.

As a final comment, it is important to note that the ten faculty respondents may not be typical of the general faculty population that uses LMSs on campus. As faculty willing to try a new LMS such as Moodle immediately, they may have a stronger inclination to utilize a new LMS, especially since the qualitative comments indicated that the respondents did not like Blackboard Vista. Additional feedback from a broader range of faculty will be needed in this area.
Assessment Point Four:

Feedback from the Summer 2008 Moodle Pilot Students: Experiences in Learning with Moodle

During spring and summer 2008, NC State University began a small pilot of the Moodle LMS. As part of the assessment process, student feedback on their experiences in learning with Moodle was solicited from the students enrolled in the summer section courses. An online survey was designed to gather information about student experiences with using LMSs. Via an email to the instructors who had a Moodle course with enrollments during Summer I, 2008, students were asked to provide feedback on Moodle. Around 271 students could have received the invitation to participate in this survey (it was not clear if all students received the invitation to participate, as all instructors did not confirm passing the email along). Sixty-three students responded to this survey, resulting in an estimated response rate of 23%.

Around 78% of the students had previous experience in using Blackboard Vista and/or WebCT in their courses. Using a 5-point Likert scale, students were asked to compare Moodle with Blackboard Vista along several comparison points:

- Around 48% of the student respondents either Agreed or Strongly Agreed that Moodle is easier to use than Blackboard Vista/WebCT. Around 35% were Not Sure/Neutral if one was easier than the other, and around 6% did not find Moodle easier to use.
- Around 68% of students indicated that the performance of Moodle was Above Average or Excellent. 27% of students indicated the performance was Average, and around 6% found Moodle to be Below Average.
- Around 49% of the student respondents liked Moodle Better (25%) or Much Better (24%) than Blackboard Vista. Around 30% indicated they were about the same. Around 10% prefer Blackboard.

Qualitative feedback from the students indicated that Blackboard Vista has some features that are liked by some students and disliked by others (e.g. navigational structure and layout were either liked or disliked by these students). However, with Blackboard Vista, the perceived slowness and browser issues were disliked. With Moodle, there were some features liked by some students and disliked by others (e.g. again, navigational structure and layout were either liked or disliked by these students – some students liked having everything on a home page, others found Moodle unprofessional and cluttered looking). With Moodle, there were concerns about the wiki tool, and some concerns about the Grades tool (student view) and the forums. For both Blackboard Vista and Moodle, there were dislikes that were related to institutional and instructional choices; for example, students found maintenance windows inconvenient, and choices made for particular tool settings were not always favorable.
With Blackboard Vista, several students liked it because it is familiar to them, and several liked it because they liked the convenience of having all their class materials in one place (the benefit of any LMS). Several students also liked the fact that their other courses were on Blackboard Vista, for convenience. With Moodle, a number of students complimented the ease of use (e.g. simple to use), organizational format (e.g. liked the weekly format), speed and reliability (e.g. worked across computers & browsers). Several tools/features were also liked; for example, RSS feeds and ability to post pictures. Moodle student users also liked having their materials in one place (again, the convenience of an LMS).

No matter the system used, several student comments noted the interconnectedness of the tools and the instructional design/delivery of the course:

- “If the professors know how to use it, then I feel like it is usually pretty well organized.”
- “Moodle to me was a lot like Blackboard, as long as the teachers posted the assignments then everything is alright.”

Comments like these may indicate that the tool (as long as it is quick, reliable and easy to use) is not as important as the way the tool is used.

Feature requests for Moodle included considerations of the functioning of the chat room, forum, wiki and the design of the home page. However, for features to be useful, faculty need to enable them for use in their courses and understand how to best use them.

On a final note, further investigations may check to understand if there is a difference in opinion of these tools between DE and non-DE students, and a difference between those with prior experience in using Blackboard Vista. This may be possible with fall 2008 assessment data.