

# Online Teaching and Learning in Transition: Faculty Perspectives on Moving from Blackboard to the Moodle Learning Management System

By Brian Beatty and Connie Ulasewicz

Online teaching and learning has been in transition for its entire existence. The number of courses offered at a distance has grown rapidly. According to the National Center for Education Statistics (Waits & Lewis, 2003), in 2000-2001 more than 56% of four-year colleges and universities in the United States offered distance education degree programs. In the academic year 2000-2001 alone, there were an estimated 3,077,000 enrollments in all distance education courses offered by 2-year and 4-year institutions, most of these offered online (Phipps, 2004). Many classroom based higher education programs, which meet in person regularly throughout a semester, use online technologies as well. Students and instructors use these “distance education” technologies to share files, present content, communicate with each other between class meetings and conduct other teaching and learning activities.

According to the Coordinator of Online Teaching and Learning at San Francisco State University (SFSU), Kevin Kelly, 70% of all courses at SFSU use online technologies (personal communication, September 23, 2005); most of these courses are taught in a traditional face to face delivery mode. Approximately 90% of SFSU faculty who use online technologies use the Blackboard Learning Management System (LMS) (Blackboard, n.d.) and the rest are engaged in a scalability test of an alternative to Blackboard, using a local installation of the open source Moodle LMS which SFSU calls “ilearn.”

This paper presents selections of our experiences using the Moodle LMS for the first time in a recent semester at SFSU. For one of us, Connie, this was the first time using any online learning management system to support classroom teaching and learning. For the other, Brian, the new system was a change from using the Blackboard LMS. This paper presents some of our most meaningful experiences and the reactions we had concerning the others’ experiences. Our purpose in reporting this is to provide a glimpse into some of the factors that may be important considerations as more universities transition from commercial LMSs to open-source systems such as Moodle.

## *What is Moodle?*

In the words of the Moodle creators (2004): “Moodle is a course management system (CMS) — a free, Open Source software package designed using sound pedagogical principles, to help educators create effective online learning communities ... You can download and use it on any computer you have handy (including webhosts), yet it can scale from a single-teacher site to a 40,000-student university. Moodle has a large and diverse user community with over 50,000 users registered on this site alone, speaking 60 languages in 120 countries.” Moodle (see Figure 1) is the leading open source LMS (or CMS) software package used by North American and European universities (Itmazi & Megias, 2005; Munoz & Van Duzer, 2005).

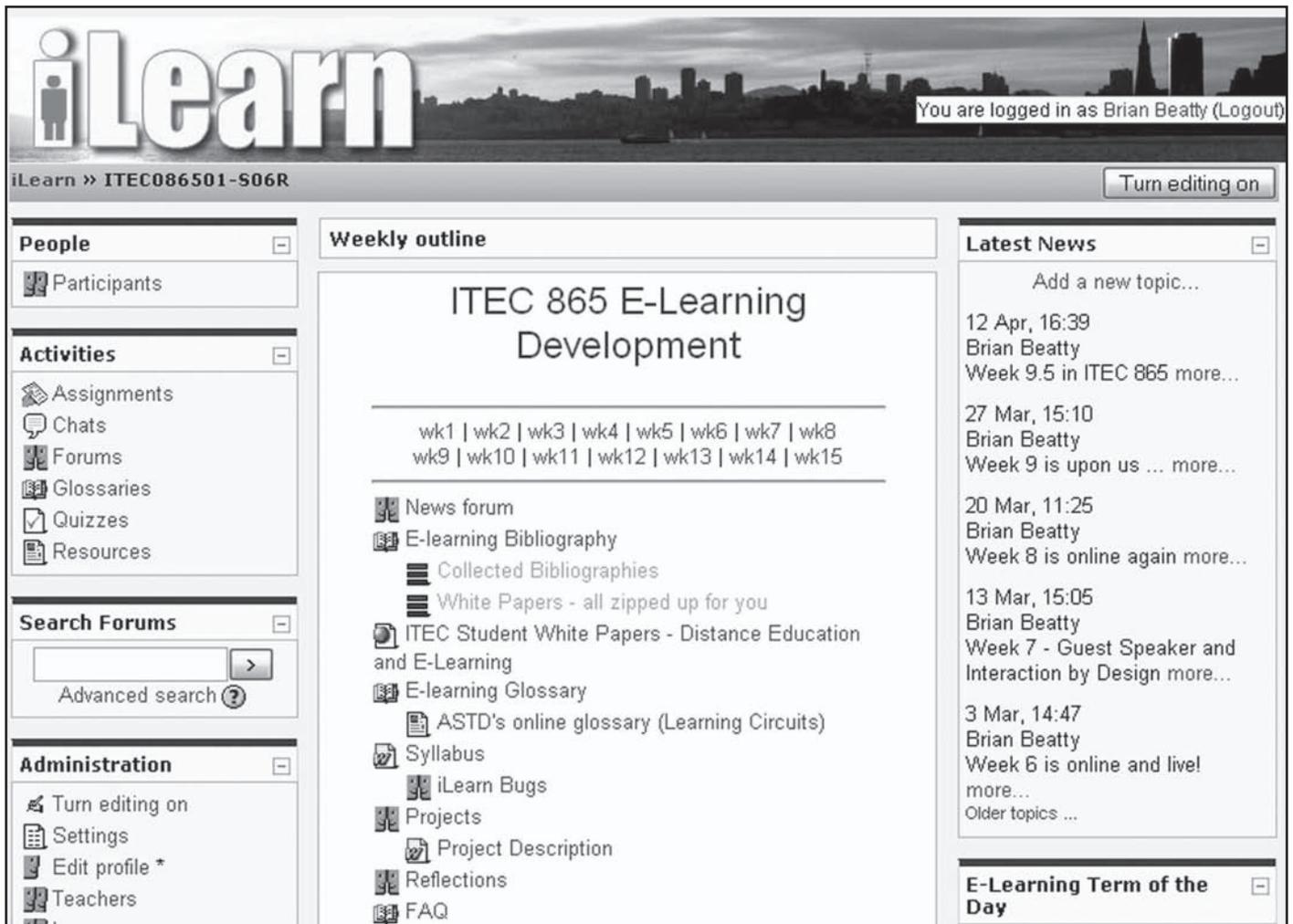


Figure 1. Example Moodle course opening page

### What is Blackboard?

Blackboard is one of the leading commercial LMS (or CMS) software packages used by North American and European universities (Itmazi & Megias, 2005; Munoz & Duzer, 2005). In the words of Blackboard, Inc. (n.d.): “The Blackboard Learning System™ is a world-class software application for institutions dedicated to teaching and learning. Intuitive and easy-to-use, this product has powerful capabilities in three key areas: Instruction, Communication and Assessment” (see Figure 2).

Next we discuss our experiences with Moodle and how it relates to transitions in our online teaching and learning practices.

### Connie’s experience

*My background, philosophy and course description*

As an educator in the discipline of apparel design and merchandising I teach students who are visual learners, who must communicate via words, drawings, colors and fabrications. My

pedagogical style is to create an environment where open and active participation in discussions and projects leads to self-discovery and learning. My desire in using an online tool was to further facilitate interaction and create a venue for the one hundred students in my Social Psychology of Clothing class to connect and continue to dialog outside of the classroom. My experience with other online tools such as Blackboard for online discussions is limited. I participated in two Blackboard seminars but found the tool was not intuitive, interactive or creative enough to grab my attention. A one-week Moodle workshop inspired me — two weeks before the beginning of the spring semester — to speculate how I could best restructure and enhance the discussion format for my class. What initially attracted me to Moodle was the visual presentation of the screen with the three columns of information that could easily be manipulated and updated throughout a semester. Our instructor’s mantra was to take small steps, focus on experimenting with one or two activities, rather than changing the entire course; I was ready!

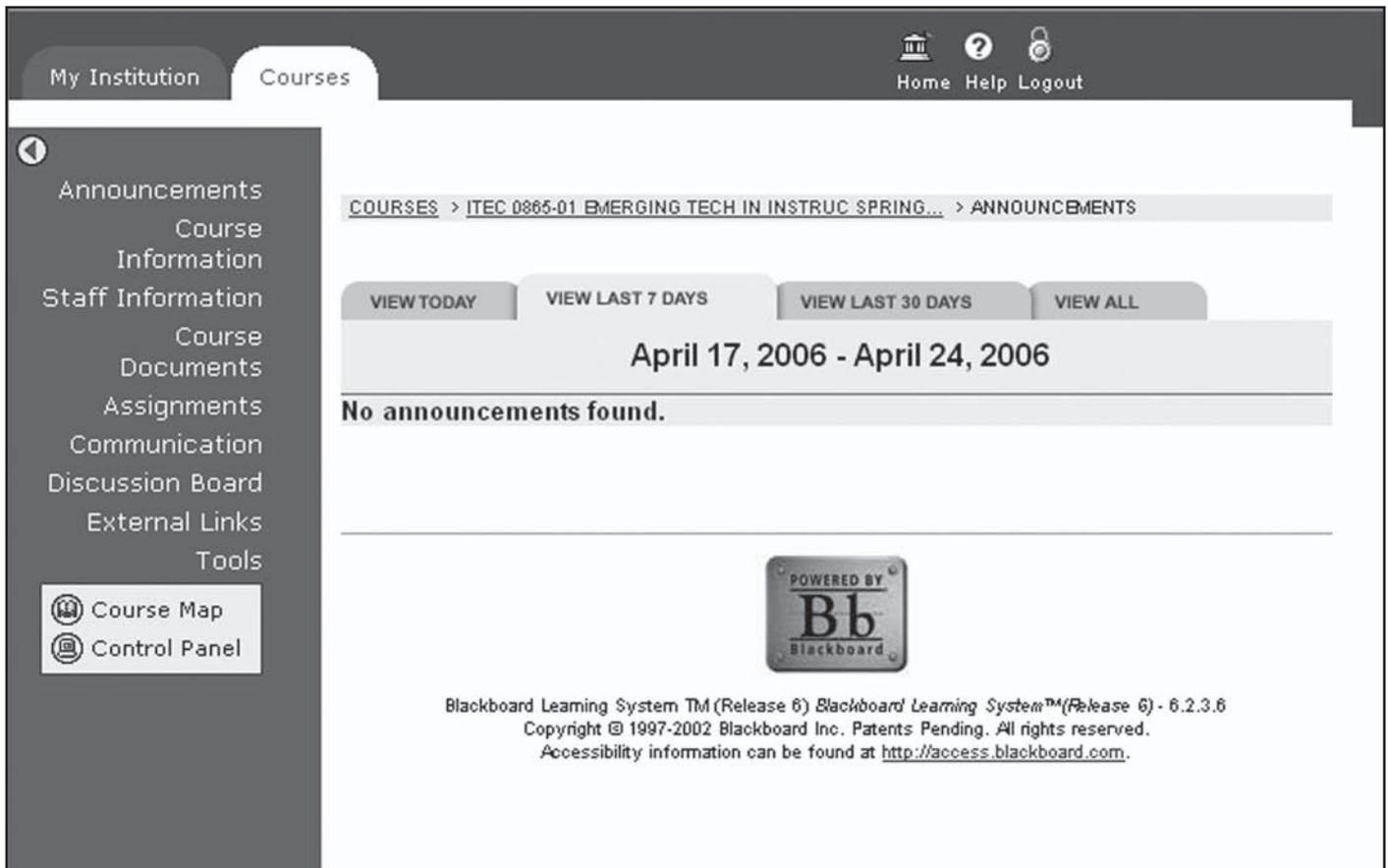


Figure 2. Example Blackboard course opening page

*Brian's comment.* It is interesting that Connie decided to avoid using Blackboard for asynchronous class discussions and collecting assignments, since Blackboard and Moodle provide similar forum tools (with group features) and both provide a way to collect student assignments. Interface matters!

*Why Moodle for this portion of the class? How I anticipated it working*

In ADM 360, 10% of a student's grade is based on class discussion. A topic or reading is presented and students break into their pre-assigned groups to discuss ideas and share personal reactions to questions regarding the readings. Although the groups are small, the quiet opinion is still not always heard; the louder voice often dominates. Group dynamics change dramatically with a member absent; students miss the opportunity to participate. Also these in-class discussion assignments do not always allow for fair and equitable evaluation by me for each individual; rather groups are generally evaluated and assigned the same grade.

Moodle has several options for group Forum participation. My focus was to keep the integrity of the same small, pre-assigned groups in class and online, with 10% of each

student's grade still based on group discussion. Some of the discussions would occur online, with each individual within the group writing a response to a question, posting this response and then responding to postings from other group members. The problem of class absence would be removed as postings could occur throughout the instructor-determined period of time. The further challenge of louder voices dominating a conversation would no longer be an issue when all postings are silent. Only those within the groups were able to comment on posted topics from fellow group members, but class members had the ability to read all postings. A 10-point rubric grading scale was developed to assist in my evaluation of students posted discussions. Because I wanted Forum grades to go into the Moodle grade book, I also created an Assignment that corresponded to each Forum. A posted Assignment allows the instructor access to a grade book where individual grades can be posted. The actual assignment includes all of the requirements a student needs to actively participate in the Forum. They include the readings, questions, the total possible points, and the start and due date for postings.

*Brian's comment.* I read here how Connie used several of Moodle's activities to implement

The screenshot shows a Moodle forum interface. At the top, the 'iLearn' logo is visible on the left, and a 'Jump to...' search bar is on the right. Below the logo, the breadcrumb path reads: 'iLearn » ADM036001-S05R » Forums » Critical Thinking Exercise Week 4 » uniform in a dance group'. A 'Search forums' button is located to the right of the breadcrumb. Below this, there are three dropdown menus: 'Separate groups:' set to 'Group 7', 'Display replies flat, with oldest first', and 'Move this discussion to ...'. The main content area shows a post by 'Monica Olmo' dated 'Wednesday, 2 March 2005, 11:01 PM'. The post text reads: 'I wore a uniform when I was in a Mexican dancing group back in elementary school. The uniform identified my role in the group because everyone in the group had to have a main color that they would wear when doing performances. For example my color was royal blue so no one else in the group could wear that color when we would do performances. Our uniforms would express our ideal in the group by wearing the uniform of the region we were dancing. Wearing the uniform definitely gave me a sense of belonging specially because it was a performance costume, so it was very evident that I belonged to a group. I attached a picture of one of the uniforms I would wear when I would dance.' Below the text is a small image of a person in a traditional Mexican folk dance costume. The image has a file name '713-862-9410' and a size of 'M2-21'. To the right of the image are 'Delete | Reply' links. Below the post is a reply by 'Juana Rodriguez' dated 'Monday, 7 March 2005, 10:08 PM'. The reply text reads: 'I think it is so nice that you got to dance Mexican Folk Dance. I really wished I could have done something like that. Although the dresses are very bright colored I love the way they look when worn on and when people are doing the dance.' To the right of the reply are 'Show parent | Split | Delete | Reply' links.

Figure 3. Example Moodle discussion

the teaching and learning method she desired. She needed a group-based discussion that could be easily graded, with grades automatically reflected in the online gradebook. To my knowledge, neither Blackboard nor Moodle provides this specific functionality in a single activity. Perhaps this is the kind of activity the open-source community could build without much effort. I also wonder if the combinations of activity and grading would have been simpler or more complex if Connie had been using Blackboard.

#### *How I introduced Moodle into the class, my parameters and what actually occurred with student postings*

During the second-class meeting I projected our Moodle class site onto the screen, explained the logon process and gave students three days to log on and create their personalities. I also assigned the small groups for the semester, explained their first online assignment and showed them how to navigate the Moodle site to post. I anticipated my students to be much more computer savvy and knowledgeable. I thought they would easily logon, maneuver the site and start posting; a scenario that occurred for maybe 15% of my class.

When two weeks had passed and only 70% of the students seemed to understand the

Moodle strategy of online discussion forums, I needed some intervention. I found an open computer lab, divided the class by their groups and assigned a non graded discussion that we could view and participate in together. This session allowed students the opportunity to get personal assistance from other group members on how to physically navigate our Moodle site and gain confidence in posting and responding to postings.

As their confidence grew and their understanding of the options available to them in posting responses grew, the actual content of the responses changed. Some students uploaded pictures; others created links to websites and the Forum became much animated (see Figure 3). Students who were normally shy or reserved in class were quite verbose in a written format. Students were given the tool to communicate at whatever time in the day worked within their busy schedule. I would read over the postings and often bring up in our formal class meeting something I had read online and clarify a concept not understood or bring new knowledge from an article or website posted.

With 100 students posting responses, the quantity of reading was at times overwhelming.

Grades were based more on following the instructions of posting an original 8-10 sentence response to a question or situation than the actual content of the response. With a clear rubric, if the students chose to submit a 2-4 sentence response, they would receive 2-4 of the possible 10 possible points. I was timely in submitting my grades and providing additional written comments to exceptional or non-exceptional students. There were the students who complained that they could not respond in time, but with clear directions posted for the weeks of discussions, these excuses were unwarranted.

*Brian's comment.* Connie is reporting a common experience among faculty and students using online tools for class activities for the first time. I know that it is very helpful to conduct an in-class, non-graded activity to allow students (and faculty) practice with the new tool in a safe environment with adequate technical support only a brief plea for help away. I think it is interesting that Connie's main teaching goal was to use the online tool to improve in-class discussions. I find this a bit surprising, given the report of how well the online discussions were developing on their own, outside of class. I also wonder if her perspective changed over the course of the semester – whether or not she saw instructional value in developing out-of-class online discussions as a valuable teaching and learning activity, and not just as a way to improve in-class discussions.

#### *My evaluation plans for following semester, students' evaluations*

The last Forum discussion assignment of the semester was an evaluation of the Moodle tool. Representative positive quotes clustered around the ease of expressing ideas and reading others opinions. An estimated 90% of the affirmative responses related directly to the Forum tool and 10% suggested other areas of using Moodle that students found helpful. A sample of comments:

- People could express true insights to the readings in the book as well as true insights to themselves; it provided a kind of safety net atmosphere.
- It lets me articulate ideas that I might not have time during lectures to bring up.
- Being shy, it made it easier to express my opinions on the topics. Moodle also was good because it helps to show participation in the class and actually forces you to participate and reflect on the chapters.

- I liked the fact that I could do the assignments at my own convenience.
- It is so much easier to use than blackboard, way more features.

Negative comments related to how the course was structured, grades calculated, discomfort or confusion with using the Moodle site, or the amount of time required participating in online discussions as represented in the following quote:

- Class should have been canceled a few times to make up for the amount of time required on Moodle. Balancing Moodle and 8 am lecture twice a week was like having 2 different classes; one being online Moodle and the other being the lecture.

*Brian's comment.* I hear many of these same comments from students when I ask them to evaluate the use of online tools in my own classes. I believe we are faced with many online teaching paradoxes, such as: finding the balance between structure (to avoid confusion) and flexibility (to accommodate varying learner needs and preferences), providing more than enough rich learning activities and resources so that all are challenged and supported without overwhelming learners with “way” too much reading and thinking material. My opinion is that instructors and students have to experience these paradoxes (and others not identified here) and struggle to find a workable balance for themselves and their course contexts. As my own experience builds, I create and revise key structural elements for online activities and try to set realistic expectations for course workload so I do not overload my students or myself.

### **Brian's experience**

I have been teaching and using online tools to support face to face instruction since 1990. The growing availability and ease of use of online collaborative tools was a major influence in my career progression from high school science and math teacher to professor of instructional design and technology. At SFSU, I teach graduate courses in instructional design, project management, distance education and e-learning development, and I mentor students working on culminating instructional projects in a Masters degree program. I use online tools such as Moodle in all of my courses to share information with students and facilitate student participation and collaboration.

SFSU has been providing the Blackboard online course support tool to faculty for several

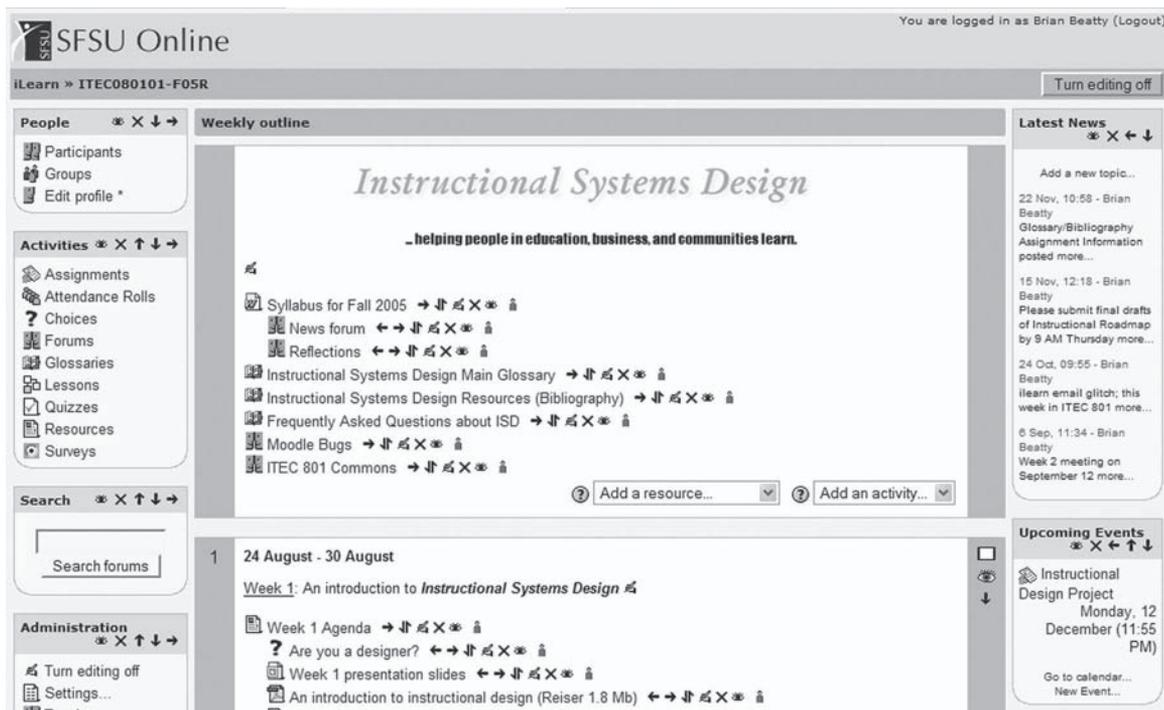


Figure 4. Example instructor interface for Moodle

years. Currently, the academic technology group is evaluating other systems, such as Moodle, which might replace the Blackboard tool for various reasons (which will not be addressed in this paper). This past semester I was one of several instructors selected to test the Moodle online course support system with my classes. Previously, I used Blackboard with my students every semester in every course over the last two years.

In using Moodle for the first time, I had the opportunity to compare my experiences with Blackboard and Moodle systems. If the open-source software movement continues to grow — as many expect it to (Open Source Initiative, 2006; Wiley, n.d.) — my experience may help others if they consider shifting from a commercial system such as Blackboard to an open-source system such as Moodle. In my part of this paper, I will address four main issues of comparison: interface and usability, discussion forum tool use, assignment posting and sharing among students and the promise of new features.

#### *Interface ease of use: I prefer Moodle*

When using online instructional tools in teaching, I have always set up my own course pages or modified a provided course template so that the course site supported my teaching practices and met the learning needs of my students. While I have not researched this extensively, I suspect that most college or university instructors also create or modify their own course websites to support their students'

learning experience. When this is the case, the ease of use of the online tool's interface for setting up and administering a course site is an important factor in the instructor's experience, which most likely translates to impacting the student experience as well. I found the instructor interface for Moodle much more intuitive and easy to use than the instructor interface in Blackboard (see Figures 4 and 5).

One of the most important differences between these interfaces is that the Moodle interface shows the instructor what the student sees with the addition of a common set of editing tools to the right of each course activity (see Figure 4). The editing tools allow for quick re-ordering, indenting, editing, deletion, (de)activation and allow for student grouping for each activity separately. In contrast, the Blackboard system requires a minimum of three "clicks" to view an editing page, which looks nothing like the content web page presented to the student. After making a change to a page, to make additional changes the instructor must reenter the editing screen each time. With Blackboard, changes to the course site from the student's perspective are not readily apparent until the instructor leaves the editing mode.

Another important interface usability issue is the general organization of course content and activities. The default Blackboard course organization follows a "form" arrangement; all elements of the same type are grouped together; all course documents are grouped together, all

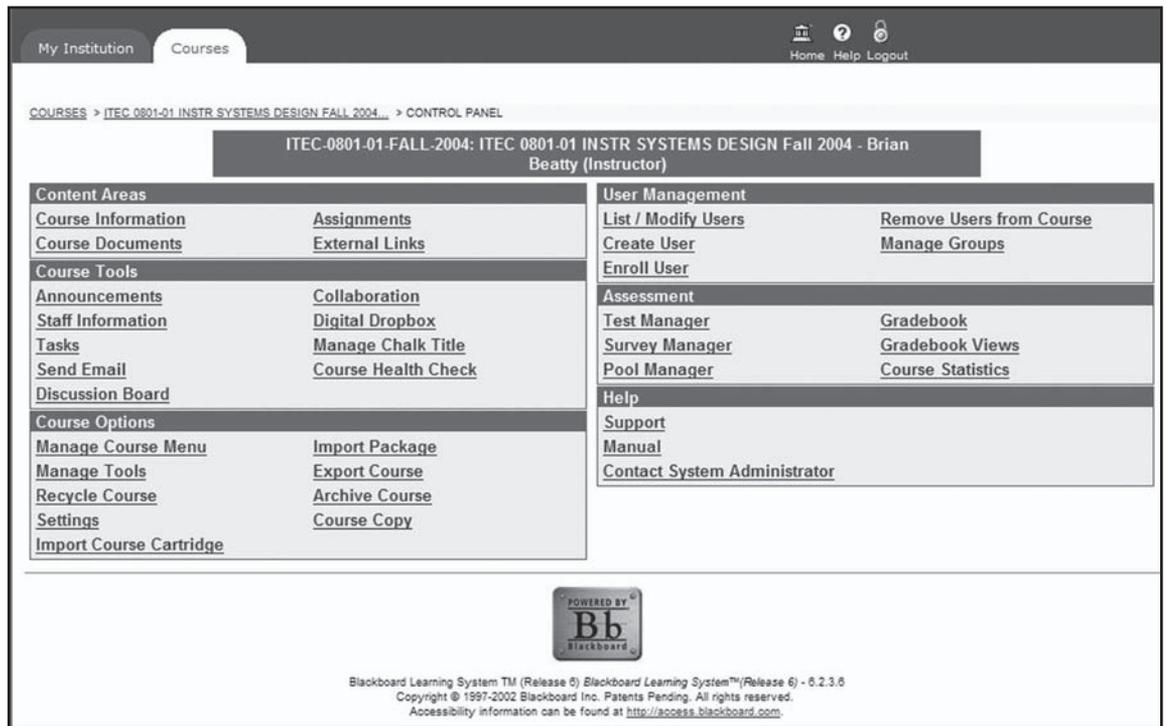


Figure 5. Example instructor interface for Blackboard

discussion forums are grouped together, etc. (see Figure 6). In Moodle, however, course information and activities are typically grouped by calendar week or by course topic (see Figure 4). Every course element for a particular week or topic is located in the same section of the screen. In this way, instructors can quickly add elements to specific weeks or topics in a course without worrying about whether or not students will be able to find each of the related learning activities and tools. Students need only look for the current week or topic and find all related content and activities. If an instructor prefers, the system can easily be setup to display only the current week or topic, simplifying the interface even more. Furthermore, the Moodle system also provides a way for instructors and students to view all activities of a certain type by listing the activity types from one of the boxes on the left side of the screen. When an activity type name is clicked, all the activities (of that type) for the course are displayed.

To summarize, I found the Moodle system interface far easier to use and to organize for student use. In course evaluations, I asked students to comment on the use of Moodle. Their comments included: "better interface," "ease of use," "easy to access course materials," "extremely easy to use, fun design, good navigation, seems extensible." Many of these students had used the Blackboard system in previous courses, so it seems that students find the Moodle interface easier to use than the Blackboard interface as well.

*Connie comments.* It is clear to me from reading Brian's comments that I too was challenged with the Blackboard system interface. (This is an "aha" moment for the nontechie; I have learned the correct terminology to describe my frustrations!) The Moodle system interface is far superior as it can easily be modified by changing fonts, background colors or adding photos to make the learning experience more visually pleasing. Brian's descriptions now seem intuitively obvious. I believe most visual learners will appreciate the flexibilities of the Moodle interface.

#### *Author control of posts: I prefer Blackboard*

One of the important advantages of online asynchronous discussion is the opportunity for students to create reflective and meaningful posts, since initiating and responding posts can be prepared with time to think and prepare posts carefully. Unfortunately, not every student takes the time to carefully prepare a post before posting, especially when replying to another's post in a discussion. In my classes, students wanted to revise posts they had made after reflecting some more on a particular topic. With the Moodle system, they could not. When students were asked about difficulties using the Moodle system, several commented about the inability to edit posts. Specific student comments included: "not being able to edit threads that had been posted more than 15 minutes ago" and "15 min cutoff for editing."

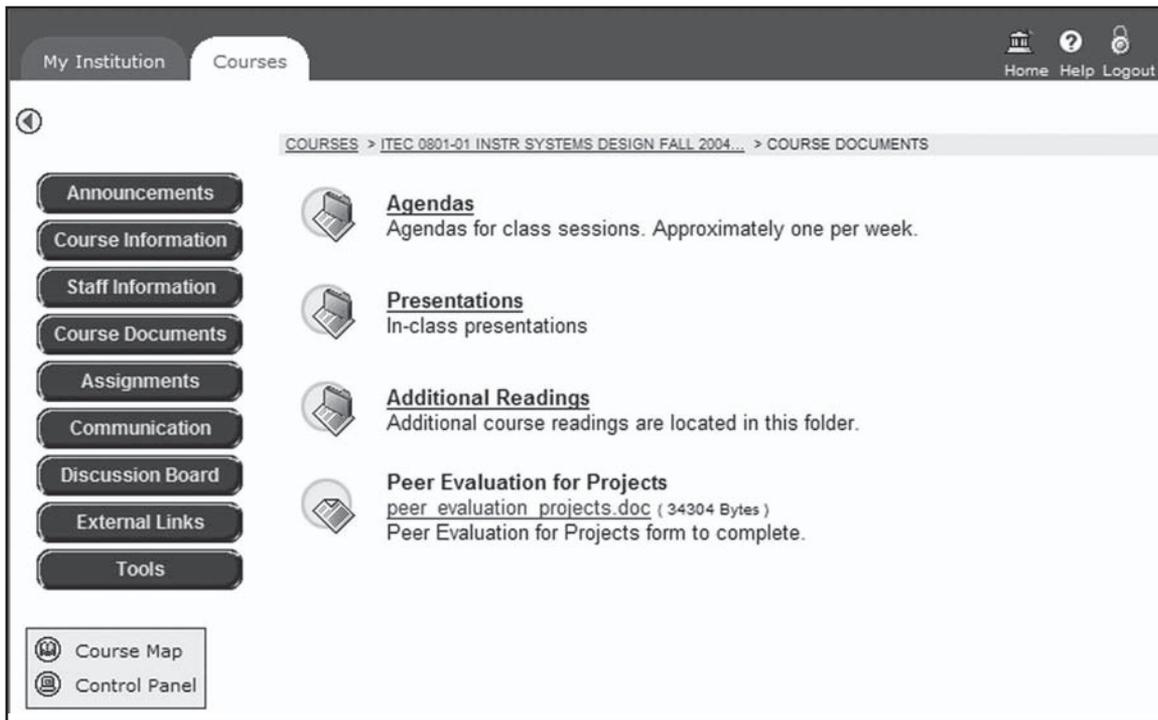


Figure 6. Sample Blackboard course content arrangement

An instructor using the Blackboard system can easily allow post authors to modify their own posts by selecting the appropriate setting when a forum is created. When using Moodle, I could find no way to allow post authors to edit (or delete) their own posts at any time. Of course, it is possible that a Moodle system administrator could make this change through a programming modification, but that level of change was beyond the scope of my interest in attempting to change during this pilot phase. (I have subsequently raised this issue with my local Moodle system administrator, but it has not been resolved yet.)

*Connie's comments.* My "aha" moments continue with Brian's terminology of "online asynchronous discussions." My students were pleased with the 15 minutes to edit, as they had not experienced online asynchronous discussions with other options; the lack of the ability to edit was not encountered.

#### *Difficulty sharing student work: I prefer Blackboard*

One of the instructional activities I use when teaching is to have students prepare drafts of assignments (usually papers or sections of reports) and upload to the course website for peer review and commentary. Most students use peer feedback to revise their work at least once before turning it in for my evaluation and grading. In the Blackboard system, I used a dedicated discussion forum for each assignment. Students posted their work, often with a brief explanation

or request for feedback on specific aspects of their work, and waited for replies from their peers. I reviewed their work after they uploaded a revised assignment based on their peers' feedback. In most cases, I added comments directly in their assignment document (a digital file) and uploaded this commented version for them to review.

The Moodle system includes an activity called an "Assignment" (see figure 7). This activity provides a place for students to upload an assignment and a place for instructors to view, evaluate and grade individual assignments, all within the "Assignment" activity. Grades entered into the "Assignment" activity are entered into the course gradebook directly. When I discovered this activity, I was eager to try it out with my students. I created an "Assignment" activity for each of the course assignments and asked students to turn their work in through the appropriate activity.

Unfortunately, when students upload files into an "Assignment" activity, they are not able to view each other's work, which prevents them from easily giving each other constructive feedback and learning from what others have written. Another drawback for me was that I could not repost a commented file for the student to review. Both of these problems are easily overcome by using email or a discussion forum, but it was an inconvenience for both students and me, and I observed less student sharing of drafts (leading to less peer feedback)

Assignment name:

Description:  1 (8 pt)  **B** *I* U ~~S~~  $x_2$   $x^2$

Write carefully ?  
Ask good questions ?  
About the HTML editor ?

**Design Project Objective (from Syllabus)**

Practice applying a specific systematic ID model by completing a comprehensive instructional design project. This project will be selected by you; possibly working in conjunction with a small group of your peers. Your team will complete a formal design plan as the major assignment for the second half of the course.

Your major responsibility for this course is to complete an instructional design project, in which you, either individually or as part of a small group, design instructional activities for an instructional setting based on

Path: body » table.generalbox » tbody » tr » td.generalboxcontent » form » table » tbody » tr » td » input

Assignment type:  ?

Allow resubmitting:  ?

Grade:  ?

Maximum size:

Due date:    -

Figure 7. Sample Moodle assignment activity

and I provided less feedback for some assignments than I would have if the file exchange had been integrated into the “Assignment.”

Near the end of the course, several students (who had experience with assignment discussion forums in Blackboard) requested a separate forum to post assignment drafts for peer review. I created and announced the forum to the class, but few students took advantage of the opportunity for peer review — perhaps due to the system-driven “Assignment” protocol I had established for earlier assignments. In the future, I will create a discussion forum for each course assignment and revert back to the file exchange protocol I used with Blackboard.

*Connie’s comments.* With no history in Blackboard, I started with the online forums for posting drafts of documents and also created an assignment posting as a place holder for the student grades. As Brian explained, creating an “Assignment” activity for each of the course assignments allows the option for posting all course grades for offline activities such as quizzes, tests, drawings or other 3 dimensional projects. The ability to comment on offline assignments with written comments is a terrific feature.

*Hoping for new features: I prefer Moodle*

One of the nice things about open source software systems is the opportunity for local developers to fix problems and build new components without waiting for full release changes. At our university, staff programmers have already built software to convert Blackboard courses into Moodle courses, which is a key part of our local transition plan, should Moodle be adopted. There are a few major upgrades our faculty have asked for, including a better gradebook and a survey tool which allows survey creation. When will my students and I realize the teaching and learning benefits of these new features? I honestly have no idea. Revision efforts are limited by resources (skilled people and sufficient budgets) and progress as fast as competing priorities allow.

One potential advantage of an open source LMS such as Moodle over some commercial systems is that there are many, many developers working on building new LMS components (in Moodle’s case, developers across the world in over 120 countries). With this amount of programming expertise and effort, we hope that software fixes will happen more quickly

and new useful features will be developed more rapidly. Additionally, since Moodle installations have direct control over their local system source code, any extra funding that becomes available could be directed toward local development efforts. It is even possible to enlist the support of students with programming skills to push development forward without substantial resource commitment. An open source LMS environment such as Moodle makes the possibilities grow.

For example, during a recent winter break, I attended a faculty development workshop on using the Moodle LMS at SFSU. At the close of the first day, I remarked to the workshop facilitator — who happened to be the technical administrator of learning management systems at SFSU — that it would be nice to have a spellcheck capability when posting a comment to a discussion forum. Overnight, he searched the online Moodle community and found a spellcheck module, installed and tested it in the SFSU Moodle implementation, and proudly unveiled it to the workshop participants the next morning. Certainly I do not expect all bug fixes or new feature requests to be found and implemented so quickly, but this example showed me the positive potential for local control of an LMS.

*Connie's comments.* As Brian and his students are in the instructional technology field, I can understand how the fixing software problems and developing new features are of interest. I refer students to the school Moodle help desk when they experience problems.

## Conclusion

### *Concluding thoughts from Connie: First-time LMS use*

Moodle is very much an interactive tool for both student and faculty. If a student is not self motivated, or if getting online is considered a challenge or inconvenience, the use of Moodle will be difficult. I enjoyed the flexibility of reading comments and posting assignments as fit into my schedule. It was much easier to read

typed assignments, rather than the handwritten class work. Not wasting time collecting or handing back assignments created less stress for me and being ecologically minded, not wasting paper was another benefit. For first time users I would stress teaching in a classroom that has an Ethernet connection for your laptop. Using the Moodle LMS as the teaching platform during class allows students to ask navigation questions and become familiar with all aspects of this superior learning management tool.

### *Concluding thoughts from Brian: Moving from Blackboard to Moodle*

When shifting from a commercial online tool, such as Blackboard, to an alternative online tool, such as Moodle, there are many complex factors to consider. Instructors alone do not normally make a decision to switch. Hopefully, information technology and instructional design (instructor support services) and faculty advisory committees are integrally involved. If the decision is made to switch, a transition plan must be developed and carried out to help IT staff, instructional faculty and students (!) make the switch with as little disruption to teaching and learning as possible. As an instructor, it has been my goal to improve the learning experience for my students by switching early to a different online system. If you find yourself in the same place, consider whether or not the new system better enables and supports the learning activities most important to you and your students. If not, you may not want to switch. Does the new system provide additional features or the opportunity to develop new features which will improve the teaching and learning experience in important ways? If so, you may want to switch.

In the end, the online system you use will probably not be the most important factor influencing what your students learn, but the “right tool for the job” should certainly make your teaching more effective and your students’ learning more successful.

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*Dr. Connie Ulasewicz is an assistant professor in the program of apparel design and merchandising at San Francisco State University. Her areas of specialization include textiles, visual merchandising, product development and the social psychology of clothing. Her research areas include social responsibility in the apparel industry, specifically social justice and sustainability. Dr Ulasewicz feels technology is imperative to her pedagogy; student-centered with much collaboration and sharing of student knowledge and skills. The Moodle system is supportive of her innovative approach toward the apparel curriculum and enhances the engagement of her diverse student population. Dr. Ulasewicz may be contacted at [cbu@sfsu.edu](mailto:cbu@sfsu.edu).*

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