

EVALUATING REACTIONS AND TRANSFER OF SKILLS FROM BLACKBOARD TRAINING

Florence Martin, PhD | Robin Freeman Brooks |
Matthew C. Gayford | Herman A. Hall IV | Kimberly Y. Whitfield

This article describes the methods that were used to evaluate the “Blackboard Basics” and “Teaching in Blackboard” courses that are currently being offered by the Office of e-Learning at a southeastern university in the United States. This report includes a description of the background of this course, the purpose of the evaluation, the key questions that were investigated, data collection methods and instrumentation, and limitations.

ONE CAN EVALUATE almost anything, including a person, a curriculum, a student, a process, a product, or a program (Tessmer, 1993). Evaluation is the process of gathering information that will either facilitate improving a program (formative) or help to determine its value (summative). Many experts have analyzed the difference between formative and summative evaluation. Markle (1989) stated that summative evaluation is an evaluation to prove, but formative evaluation is an evaluation to improve the programs or the product. According to Baker and Alkin (1973), summative evaluation is the evaluation for validation while formative evaluation is the evaluation for revision. This article describes how formative evaluation was conducted to improve Blackboard training programs at a midsize university in the eastern United States.

BACKGROUND: WHAT IS BLACKBOARD?

Blackboard is one of the leading commercial learning management systems (LMS) or course management systems (CMS) products used in North America and Europe (Munoz & Duzer, 2005) and is the most widely adopted learning management system among U.S. postsecondary institutions. Blackboard provides a password-protected environment and has administration tools that make teaching online easier (Lowe, 2003). The Blackboard home page is shown in Figure 1.

THE BLACKBOARD TRAINING

“Blackboard Basics” and “Teaching in Blackboard” are courses intended for faculty who would like to implement some or all of the features available through Blackboard Vista, an online course management system. The “Blackboard Basics” course includes introductory instruction on adding course content, user tools, managing accounts, course tools, options, and online tests. “Teaching in Blackboard” is an advanced course that provides instruction and shares best practices on some of the instructor tools in Blackboard, including features such as safe assign, assignment drop box, assessment manager, and grade book. Both courses are designed to teach pedagogically sound methods of implementing a course in Blackboard. These courses are offered by the Office of e-Learning and the courses are designed and taught by an instructional designer.

Formal training sessions are typically an hour to an hour and a half in length. These courses are taught on campus, and each course is offered four times each semester. In the past it has only been available face-to-face. Besides the direct instruction of the course, attendees receive handouts for each session via email and are allowed to ask questions throughout the training. The instructional designer is also available to provide individual support on an as-needed basis.

The evaluation covers both the basic and advanced course on Blackboard and is part of an ongoing effort

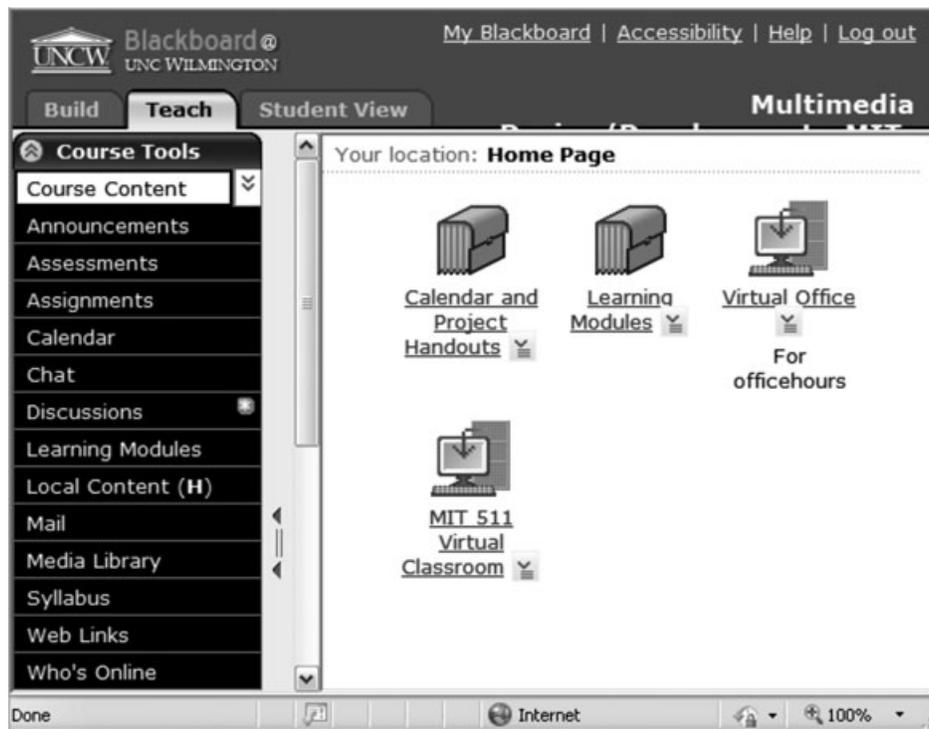


FIGURE 1. BLACKBOARD HOME PAGE

to improve the quality of distance education programs within the university, assist the faculty in the implementation of best practices as they become proficient online educators, and expand distance education course offerings and programs.

PURPOSE OF THE EVALUATION

The purpose of this evaluation was to determine if and how the professors are developing their online and blended courses using Blackboard after attending the training, and the extent to which the professors are transferring their new skills and knowledge. In addition, this evaluation attempted to identify specific components of the training that professors believe are the most beneficial and useful. The results were passed to the e-learning office that will use it to modify the training course content and to determine if any other performance support systems are needed.

The evaluation addressed two key questions:

1. What are learner reactions to the Blackboard training courses?
2. Have the learners been successful in transferring the skills from the Blackboard training to develop their own Blackboard course shells?

EVALUATION APPROACH

Identify Stakeholders

The primary stakeholders in this evaluation were the programs at the university that directly influence, manage, and work with the Distance Education Office including the Board of Governors, Information Technology Systems Division, Division of Academic Affairs, and the Office of e-Learning.

The secondary stakeholders in this evaluation encompass all of the departments on campus that provide distance education programs, and the students who ultimately benefit from these programs.

The tertiary stakeholders were any academic departments that may develop distance education programs in the future as well as any future distance-education students taking the courses after the trainings. Furthermore, professors who offer “blended” courses, utilizing both online and in-person methods, will benefit from this evaluation.

Determine How Results Will Be Used for Decision Making

It was determined that evaluation findings would be presented to the e-learning office to inform decisions about the development of Blackboard training by the

The purpose of this evaluation was to determine if and how the professors are developing their online and blended courses using Blackboard after attending the training, and the extent to which the professors are transferring their new skills and knowledge.

Office of e-Learning. Evaluation findings would enhance instructional design decisions by helping to determine the following:

- What enhancements should be made to the “Blackboard Basics” and “Teaching in Blackboard” training courses to increase the quality of the instruction.
- How to assist faculty in finding pedagogically sound solutions that utilize Blackboard as well as other technologies.
- The feasibility of gathering enough information to show greater learning outcomes due to the use of Blackboard.
- Learner reactions to the “Blackboard Basics” and “Teaching in Blackboard” training courses.

Data Collection

The methods used for this evaluation effort were multifaceted. The first step in data collection was the observation of the “Teaching in Blackboard” course by two of the researchers. The second course, “Blackboard Basics,” was videotaped and viewed online by the researchers.

The second phase of data collection involved the post-course reflection surveys. An email was sent to all of the training course participants asking them to complete a short survey in response to the session. The email contained a link they could follow to complete the survey online.

In the third phase of data collection, researchers observed the content of the learner’s online courses,

referred to as Blackboard course shells. In this phase, the researchers looked for measurable evidence that reflected the tools and skills learned from the Blackboard training courses. Access to the course shells was given on a selective basis, as granted per the learner’s express permission.

The final phase of data collection occurred during face-to-face interview sessions with the same participants who allowed us access to their Blackboard course shells. These interviews were scheduled during the day time, and the researchers asked them the same standard set of questions.

RESULTS

Observation of Training

During the observation of the Blackboard training, the content of each training session was recorded and outlined. Using this data, researchers were able to form a clear understanding of the material being taught in the course. It was also noted at this session that the seven attendees were all faculty and the two instructional designers delivered the course. Overall, researchers noted that the participants of the class were receptive to the content.

Postcourse Survey Responses

“Teaching in Blackboard” Course. The postcourse survey administered for the “Teaching in Blackboard” course received five responses. The majority of the participants’ responses were positive about the outcome of the training session, and they said they would recommend it to other professors. Participants were also asked to describe features or aspects of the Blackboard Teaching Platform that required follow-up help. One participant expressed concern about being able to use some of the tools to their maximum potential and another described difficulty with opening files easily. Despite anticipated and/or actual difficulty utilizing specific features of Blackboard, participants expressed confidence in their instructor.

Postsurvey—Teaching in Blackboard

Areas of curriculum *strength* identified in the postsurvey included participants’ acquisition of new tools to assist with teaching quality. Specific areas of strength are shown in Table 1.

Specific opportunities for improvement in curriculum design identified in the postsurvey included participants’ confidence in applying new tools in Blackboard shells or login/logout features. Specific responses are shown in Table 1.

“Basic Blackboard” Course. Six responses were collected for the “Basic Blackboard” training course. Again, the majority of the participants’ responses were favorable about instructional design, delivery, and content, with only one participant stating that they had no opinion. They all said they would recommend it to others. Specific areas of satisfaction were as follows:

- “Discovering new tools and organizational ideas.”
- “Trainer’s energy, enthusiasm, and infinite patience were a plus!”
- “The teacher was first rate! I can’t wait until the next training session!”
- “Good overview of what is to come.”
- “Building a course and the ease of the software.”
- “Trainer is very helpful.”

Suggestions for improvement were as follows

- “Hands-on is always helpful.”
- “Content outline before course.”
- “Make Blackboard simpler to understand and use.”

The methods used for this evaluation effort were multifaceted.

Postsurvey—Blackboard Basics

Areas of curriculum *strength* identified in the postsurvey included participants’ acquisition of new concepts to assist with building courses in Blackboard. Specific areas of strength are shown in Table 2.

Opportunities for improvement identified in the postsurvey included reports about the low extent to which participants planned to incorporate new concepts. Specific responses are shown in Table 2.

Course Shell Observation Post-Training

“Basic Blackboard” Course. During direct observation of the “Basic Blackboard” shell observations, three

TABLE 1 POSTSURVEY—TEACHING IN BLACKBOARD

TEACHING IN BLACKBOARD POST-TRAINING SURVEY QUESTIONS	STRONGLY AGREE	AGREE	NEITHER	DISAGREE	STRONGLY DISAGREE
This training has helped me understand the Blackboard Teaching Platform in more detail.	40%	60%			
This training has given me new tools to use in my current courses offered.	100%				
This training will help me improve the quality of my courses using the Blackboard Teaching Platform in the future.	60%	20%	20%		
This training was helpful for me as an instructor.	60%	40%			
I plan to incorporate what I learned about the Assignment Dropbox feature in my classes’ Blackboard shells.	25%	50%	25%		
As a result of this training, I now believe I can use the Assessment Manager feature in my classes’ Blackboard shells.		80%	20%		
As a result of this training, I now believe I can use the Grade Book feature in my classes’ Blackboard shells.		80%		20%	
As a result of this training, I now believe I can use the student tracking of login/logout feature in my classes’ Blackboard shells.	20%	40%	20%	20%	

TABLE 2 POSTSURVEY—BLACKBOARD BASICS

BLACKBOARD BASICS POST-TRAINING SURVEY QUESTIONS	STRONGLY AGREE	AGREE
This training has helped me understand the Blackboard Teaching Platform in more detail.	66.7%	33.3%
This training has given me the basic concepts to start building courses in Blackboard.	83.3%	16.7%
This training will help me improve my ability to use the Blackboard Teaching Platform in the future.	66.7%	33.3%
This training was helpful for me as an instructor.	66.7%	33.3%
I plan on incorporating what I learned about adding Content to my Blackboard shell.	66.7%	33.3%
I plan to incorporate what I learned about creating Learning Modules in my Blackboard shell.	50%	50%
I plan to incorporate what I learned about making Stylistic Changes to the Blackboard shell.	50%	50%
I plan to incorporate what I learned about adding Discussions to my Blackboard shell.	33.3%	66.7%

participants allowed researchers access to their course shells. All showed that they had access to the shell to make stylistic changes. Although the learners showed the ability to add components to their course shells, two of the learners added course components without adding any content to the component. It is apparent these two learners were unable to edit or delete unwanted components once added within the shell. The third learner successfully added only desired components that contain well-designed content. Of the three learners, two showed evidence of being able to create learning modules by adding content to the shell and to discussions. On a 5-point rating scale, results for the *quality* of the learner's implementation of stylistic changes, modules, content, discussions, and other features were mixed and ranged from very poor to very good, with the highest rating for participants' demonstrated ability to implement other features and the lowest ratings for participants' demonstrated ability to implement the Discussion tool in their learning module.

“Teaching in Blackboard” Course. Researchers observed three course shells that belonged to learners in the “Teaching in Blackboard” course. It was found that the learners implemented and showed evidence of use with each course component (Assignment dropbox, Safe Assign, Assessment Manager, Grade Book, Login/logout tracking). The learners showed the ability to choose which components they wanted to implement and created content within those components. On the same

5-point rating scale, the *quality* of these implementations was very good for all of the components, with the exception of implementing the assignment dropbox. Several learners went on to implement other features beyond those covered in the course.

Interviews With the Professor

The first interview was conducted with a professor from the Department of English, who had been teaching for 7 years and attended both the basic and the advanced “Teaching in Blackboard” sessions. She described the courses as learner-friendly, and that they did a good job of explaining the tools in Blackboard, but that the delivery was “confusing” due to having two instructors. She went on to say that the Blackboard software requires a good deal of organization skills, but feels that it is accessible to students. She teaches three classes and uses the Blackboard software for 15% of each of the courses.

The second interview was conducted with a professor from the Department of Foreign Language and Literature, who had been teaching for 6 years and attended both Blackboard training courses. He had also attended six other courses related to best practices and other online course development tools. In terms of use, he had been using Blackboard with increasing frequency since the fall of 2009 and is now teaching some hybrid courses and one fully online course. Overall, he was pleased with the training and especially with the additional one-on-one support. He pointed out that the students need more training on the Blackboard

software, as not all of them are comfortable using it. He went on to say that he would continue using Blackboard as long as any other superior solutions do not come along. His usage of the software is quoted as being “sporadic,” as his usage of it depends upon the students’ level of motivation for participating online. Overall, he felt that although the level of technical knowledge that was required to create a viable course is extensive, the benefits of the technology allow teachers to reach students in a way that they could not previously.

The third and final interview was with a professor from the School of Education, who had been teaching for 2½ years at the University. She took both the Blackboard courses offered and had already been using Blackboard for 1 year and currently teaches one course entirely online. She commented that the courses provided real examples and gave hands-on experience. Reported downsides were that the varying levels of previous knowledge could slow down a class, as the experts in the class “dominate” the discussion, making individual support very useful. She also felt that the Blackboard environment was not very conducive to teacher–student relationships. It was reported that students had previously complained about the response times from faculty members because of the Blackboard environment, but that technology such as handheld devices helped resolve the issue. She concluded with positive comments about the courses and specifically noted that the availability of training through face-to-face meetings as well as through archived online sessions was helpful.

DISCUSSION

Overall, the data show us that the faculty members are open and receptive to the Blackboard training sessions. Participants of the “Basic Blackboard” course appear to have more of a spread in terms of their previous knowledge and technical ability, which is evident through the survey and observation results. This is an area where it may be useful to administer a pretest before the start of the course to better adapt the instruction to the learner. This way, the learners with less prior knowledge will not be overwhelmed by the more advanced learners in the class and will have time to have their needs met. Conversely, the more advanced learners can delve further into the technology and use the advanced functions.

The survey results also showed that there were various proficiencies and deficiencies related to specific tools used and implemented after the course. It may be useful for the instructors to create separate modules that focus on one tool at a time. This will serve two purposes: first, learners will be able to listen to one module at a time and focus

their energy in a specific direction; second, it will provide a narrow scope and increased depth of knowledge for each specific tool.

Additionally, the interviews and surveys revealed a great deal of satisfaction with the delivery methods used in this training course as well as the instructors who teach it. Although it was mentioned that having two instructors who provide instruction cooperatively was not optimal, the modeling and hands-on activities used throughout the training were described positively.

LIMITATIONS

Several factors limited the evaluation’s accuracy and utility.

1. Lack of Course Sequence—The participants of the Blackboard training courses volunteered to attend either the “Basic Blackboard” or the “Teaching in Blackboard” course, or both. Because participants volunteer to attend, they are not required to follow a specific sequence or timetable for the completion of the Blackboard training courses, which skewed the evaluation’s data. Currently, although learners may take the “Teaching in Blackboard” course even if they have never used the Blackboard platform, they should take the “Basic Blackboard” course first. This lack of proper course sequence is not adequately meeting the needs of the learners, is unsystematic, and affects the validity of the evaluation.
2. Lack of Assessment—There is no postcourse assessment given by the Office of e-Learning to the learners after their completion of any of the Blackboard training courses. The trainers would like for faculty members to add content to their Blackboard course shell and implement other features covered in the basic course before attending the advanced training as part of a summative evaluation. However, faculty members sometimes disregard this recommendation, which may make it difficult to assess the level of understanding after the basic training (before attending the advanced session).
3. Poor Precision—The purposive nature of the observation sampling provided several limitations. The sampling was not random and participant responses may have reflected a bias, trainer preference, or a precourse proficiency in Blackboard and, as such, may not be indicative of the entire group of participants in the course. Ideally, each of the participants’ Blackboard course shells would have been open for observation, but our evaluation team was given access to only three, which affects the confidence level of the data.

SUMMARY

In this evaluation effort, we focused on measures of reaction (Level 1) and on-the-job behavior or transfer of knowledge/skills (Level 3). Satisfaction measures included feedback about the effect of delivery methods upon learning (Level 2), which suggested that the modeling and hands-on activities used throughout the training were considered effective by most participants. Feedback to enhance learning included focusing on presenting one tool at a time and perhaps incorporating a pretest to assess student learning needs and proficiency levels. The results from the preliminary evaluation helped the Office of e-Learning assess both learner satisfaction and use of Blackboard training material post-training. This information has value for continuous improvement purposes. 🌞

References

- Baker, E.L., & Alkin, U.C. (1973). Formative evaluation of instructional development. *Audio Visual Communication Review*, 21(3), 300–305.
- Lowe, C. (2003). *Open source Weblog CMS's: An alternative to Blackboard*. Retrieved from <http://cyberdash.com/node/view/83>.
- Markle, S.M. (1989). The ancient history of formative evaluation. *Performance and Instruction*, 28(7), 27–29. doi:10.1002/pfi.4170280708
- Munoz, K.D., & Van Duzer, J. (2005). *Blackboard vs. Moodle: A comparison of satisfaction with online teaching and learning tools*. Unpublished raw data. Retrieved from <http://www.humboldt.edu/jdvl/moodle/all.htm>.
- Tessmer, M. (1993). *Planning and conducting formative evaluation*. London: Kogan Page Limited.

FLORENCE MARTIN, PhD, is an assistant professor in instructional technology at the University of North Carolina, Wilmington. She has a BE in electronics and communication engineering from Bharathiyar University, India, and an MA and a PhD in educational technology from Arizona State University. She has worked with the University of Phoenix, Cisco Learning Institute, Intel, and Arizona State University and has expertise in instructional design, performance technology, corporate training, and distance learning. Her current research interests are in virtual classrooms and learning management systems. She may be reached at martinf@uncw.edu.

ROBIN FREEMAN BROOKS is graduate student in the master's of instructional technology program at the University of North Carolina Wilmington. Her anticipated graduation date is December 2010. She earned her bachelor's degree in 1994 at UNC-Chapel Hill and spent a summer studying French language and culture at the Sorbonne in Paris, France. She currently works as a technology facilitator with the Brunswick County School System in North Carolina, where she focuses on providing teachers with pedagogically sound solutions to instructional problems and issues. She was a classroom teacher for 12 years. During that time, she managed to write several grants and directed community-based youth programs. She may be reached at Rfb1445@uncw.edu.

MATTHEW C. GAYFORD is a business and technology applications analyst for the information technology systems division at the University of North Carolina Wilmington (UNCW), where he develops computer applications and solutions for the campus using ASP and VB .Net technologies. He previously worked for the Technology Assistance Center at UNCW, where he assisted faculty, staff, and students with their technical problems. He earned a bachelor's degree in psychology in 2004 from UNCW and a master's degree in instructional technology in 2010, also from UNCW. He may be reached at gayfordm@uncw.edu.

HERMAN A. HALL IV graduated from the University of Colorado at Boulder with a BA in Spanish and English. During the last 5 years, he has taught upper-level Spanish language courses at First Flight High School on the Outer Banks. During the summer months, he manages a kayak tour and surf lesson business. He is currently enrolled in the master's of instructional technology program at the University of North Carolina Wilmington. He may be reached at gayfordm@uncw.edu.

KIMBERLY Y. WHITFIELD is a business systems analyst with the State of North Carolina Administrative Office of the Courts (AOC). She began working with AOC in 1999 and her responsibilities include designing, developing, training, and implementing software applications for judicial branch employees. She also provides both onsite and remote support for software, policy, and procedures. In May 2011, she will complete her master of science degree in instructional technology at the University of North Carolina Wilmington. She has written several software technical manuals for AOC, and coauthored a cookbook *Seaboard to Sideboard* for the Junior League of Wilmington. She may be reached at kyw4137@uncw.edu.