# The Blackboard Jungle: A Case Study of Instructor and Student Perceptions of the Learning Technology Tool Blackboard

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**Abstract.** Each of our lives has been forever changed by the introduction of new electronic technoligies that help us communicate on a global, instantaneous scale. Nowhere has that change been more felt than in education. College campuses are now wired, and more and more classes are using computers for communicating. One of the most widely used computer programs on the college campus today is Blackboard. But, do students and instructors view it as a helpful tool? Are they well-motivated to use it? If not, how can it be successfully used in the classroom? One would expect to find that students and instructors who perceive Blackboard as a valuable learning tool will be more likely to utilize it, and will do so in more in-depth and complex ways. This case-study conducted on the campus of Wichita State University looks at these questions through the use of instructor and student questionnaires. These are designed to guage their perceptions of Blackboard. Analysis of questionnaire responses finds that students perceptions of Blackboard are generally positive, and that frequent users are more likely to have these positive perceptions than are those who are infrequent users. However, most features of Blackboard are rarely used by these students. Instructors also show a generally positive perception of Blackboard. Their patterns of use also show that most features are utilized only rarely.

## 1. Introduction

Each day millions of teachers and students around the world file into their classrooms and begin anew the time-honored traditions of matriculation. The most often used format of instruction is lovingly referred to as the lecture. However, new paradigms of instruction are emerging that challenge the validity of the lecture as an effective form of transmitting knowledge and, more importantly, understanding, from the instructor to the learner. In a world where knowledge doubles every seven years and 10,000 scientific articles are published every year, the current system where the teacher is the primary source of information is simply inadequate [1].

But what is the ideal learning environment or situation? Foreman points to five learning-theory ideals. He believes that the ideal learning situation 1) is customized to the very specific needs of the individual, 2) provides students with immediate feedback, 3) is constructive, 4) motivates students to persist far in excess of any externally imposed requirements, and 5) builds enduring conceptual structures [2]. One possible solution that has been proposed, and implemented with varying degrees of success, is the integration of Information and Communication Technologies within the classroom.

One way that instruction with these types of technology is fleshed out is known as Computer-Mediated Communication (CMC). Within this venue, students are able to communicate and collaborate on projects regardless of physical proximity. Instructors can post class notes, assignments, exams, announcements, and other evaluative and supplemental materials. Several specialized software packages have been developed to facilitate these types of communication. The two most widely used are WebCT and Blackboard. An examination of the uses of these programs will prove to be invaluable to our understanding of how we can best take advantage of the full potential of CMC as an instructional tool.

## 2. Experiment, Results, Discussion, and Significance

I believe there is a link between instructor and student perceptions of Blackboard and its use. This statement springs from two hypotheses examined in this study. My first hypothesis is that how instructors and students use Blackboard has a direct effect on their perceptions of it. This hypothesis leads us to the second – that Blackboard is perceived as a valuable learning tool by instructors and students
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To test our hypotheses we must answer three research questions.

RQ1: How is Blackboard used?

RQ2: How is Blackboard perceived by instructors and students that use it at WSU?

RQ3: Is the learning technology tool Blackboard perceived by instructors and students at WSU as a valuable learning tool?

The research method chosen for this study was a questionnaire of students and instructors at Wichita State University. Respondents were asked to indicate their level of Blackboard engagement and usage. The questionnaire contained a section that allowed respondents to indicate what features of Blackboard they use, and how often they use them. They were also given an opportunity to answer open-ended questions that more readily reflect the attitudes toward and perceptions of Blackboard.

Both students and instructors were asked to first indicate how often they used any Blackboard feature in conjunction with their classes. Frequency options included daily, 3-5 times/week, 1-2 times/week, and rarely. They were then given a list of Blackboard features and asked to indicate by checking a box which features they used, and how often they used that feature. Frequency options included daily, 1-2 times/week, every other week, and rarely. Finally, only the instructors were asked to indicate which features were most requested or desired by their students.

The sampling method was a purposive one for the students, whereas the instructors who responded make up a self-selected sample. They were asked to take part in the study through a campus-wide email solicitation. Only those who responded positively were used for this study.

So how is Blackboard used? Of 260 student responses 21.2% used Blackboard daily, 38.5% used it 3-5 times per week, 27.3% accessed it 1-2 times per week, and the remaining 13% described their use as infrequent. The most used features by students were Course Description (73.5%), Announcements (65.8%), My Grades (55.4%), and Course Information (40%). With 22 responses, the instructors showed a slightly more robust usage pattern. Daily users were 38.%; 3-5 times per week 19%; 1-2 times per week 33%; infrequent users numbered 10%. Their most frequently accessed features were Course Documents (66.6%), Gradebook (47.6%), Send Email (42.9%), and Announcements (38.1%). This shows a healthy pattern of usage.

However, usage does not automatically suggest a healthy or positive perception of the software by those using it. How do students and instructors perceive Blackboard? Do they see it as a valuable learning tool? The research does suggest that the general pattern of perception is a positive one. Students and instructors were asked to respond to five open-ended questions to rate their perceptions. These responses were then coded on a five-point scale from very positive to very negative in order to get a quantitative sense of that perception. Those measure showed that positive responses consistently outweighed negative ones, both for instructors and students.

The more important factor, however, is what was said in these responses. Interestingly, students who voiced praise did so more readily if their instructor was using Blackboard regularly and consistently. They were most impressed with the ability to keep up with assignments and grades as often as fit their needs. Those whose teachers didn't use Blackboard consistently voiced the greatest frustrations. Instructors also saw the need for consistent use. Some said that they would use Blackboard more if they only knew how to use it. Both instructors and students said that Blackboard was a helpful and effective learning tool that enhanced student performance, provided the student and the instructor were committed to its proper use.

## 3. Conclusions

The results of this research suggest that student and instructor perceptions of Blackboard are generally positive, and they find it to be an effective tool to enhance the learning environment. Whether or not it is effective for any given class is dependent on both instructor and students. Instructors must be committed to learning and putting to good use the features of Blackboard. Students must be motivated to make the most of this tool from an end-user perspective.

## 4. Acknowledgements

[1] Hargis, J. (2001). Can students learn science using the internet? Journal of Research on Computing in Education, 33, 475-487.

[2] Foreman, J. (2003). Next-generation educational technology versus the lecture. Educause Review, 12-22.