

Blackboard at Duke, 2007-2008

Highlights

- Nearly 60% of course sites auto-created are activated by the instructor; over 70% of courses in Arts & Sciences, Law, Divinity, Nursing, and NSOE use Blackboard
- Web-based audio recording with Wimba Voice Tools was added for all Spring 2008 Blackboard courses
- A course retention policy under consideration for several years was implemented in Fall 2007
- Library resources and services in Blackboard were increased through a pilot to integrate custom library resource pages and the addition of an "Ask a Librarian" button
- The rate of new disk space consumed has declined and file size upload limits were increased to 100MB with no adverse system effects

How is Blackboard used at Duke?

Blackboard supports teaching and learning at Duke in a wide variety of ways. Factors that significantly influence which features are used for course support include class size, the extent to which the course is "paperless", the use of multimedia materials, and the presence of teaching strategies that emphasize interactivity among students (e.g. peer review, group assignments). While uses of Blackboard are found in most active course web sites (posting syllabi, announcements, and lecture notes/slides), particular tools or features are often adopted and used in related courses or programmatically. Programmatic examples of Blackboard use include:

- Wimba Voice Tools used across a wide range of courses in Romance Studies for collecting audio assignments
- Frequent use of the Assignment Tool to collect student work in Writing 20
- Frequent gradebook use by TAs in lab sections of Science courses

Nearly 3200 Blackboard web sites were activated by instructors for course use in 2007-08 (Fall 1605, Spring 1586). In Fall 2008, 2800 Blackboard course sites were created; a majority (59%, 1631) have been activated. Unused course spaces are frequently those auto-created for schools or programs that rarely use Blackboard (e.g. Fuqua, Medicine) or for single-enrollment credits (e.g. independent study, practicum, residency credits). Overall, using Blackboard varies by division from 54-91% for course offerings with multiple students enrolled [Figure 1]. Usage by Medicine and Fuqua (not pictured) is very low (<5% overall) since these schools use alternative systems.

Blackboard course sites can include:

- Course materials (100MB per file)
- Announcements & discussion boards
- Online gradebooks
- Assignment submission tools
- Individual and class blogs & wikis
- Course email tools
- Self-graded quizzes

Using Blackboard as a portal, faculty and students also have access to:

- Web-based Wimba recording tools
- Video annotation with Voicethread
- Lectopia recordings
- Library e-reserves
- iTunesU course spaces
- Streaming media content

**Percent of Courses using Blackboard by School
Fall 2007**

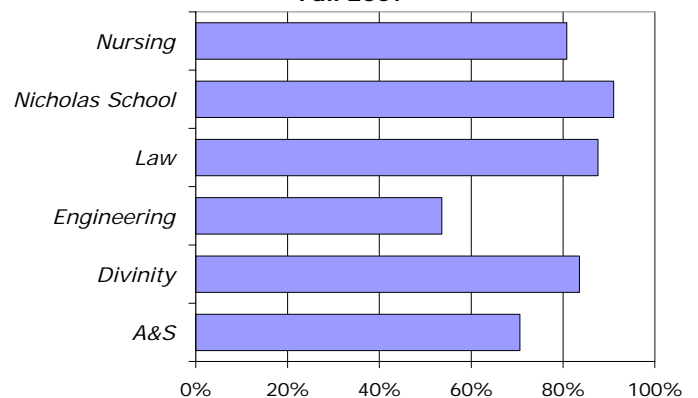


Figure 1

The majority of Blackboard use supports regular semester courses. However, nearly 400 "Organization" web sites have also been created on request to support a variety of co-curricular and administrative needs. These web spaces are typically used as a convenient solution to provide private file sharing and communication in support of university and departmental committees, special Duke initiatives, academic programs, research projects, and student groups.

Policy updates

The Blackboard Course Site Retention Policy (implemented Fall 2007) defines how long a course site will be retained (<http://blackboard.duke.edu/about/retention.html>). No courses are scheduled for deletion until Spring 2012. In collaboration with Trinity Deans, a new document entitled, "Best Practices, Policies & Guidelines for Use of Undergraduate Teaching Assistants (UTAs)" including specific guidelines about Blackboard was developed (<http://t-reqs.trinity.duke.edu/uta.html>).

Storage updates

The trend of rapidly increasing consumption of disk space observed during 2005-06 appears to have reversed. Despite increased upload size limits for all courses (100MB per file), new disk space consumption has decreased overall [Figure 2, below]. Storage did surpass the 1 terabyte mark, but the rate of storage consumed has decreased by 25%. A "long tail" pattern exists in course usage of disk space, with fewer than 10% of active course sites consuming over 2/3 of new space [Figure 2, right]. Blackboard test and failsafe environments were moved to OIT Tier 2 storage resulting in significant cost savings with no negative impact on system performance.

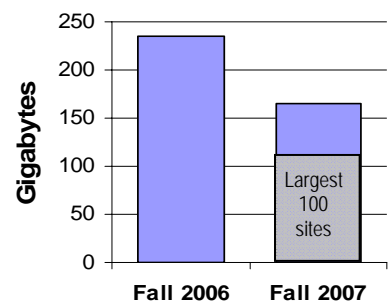


Figure 2 shows the cumulative effect of a decrease of 57GB/month to the current rate of 42GB/month

- The largest 100 Blackboard course sites accounted for 68% (112 GB) of all new space consumed in Fall '07 [Fig 2] and 62% (85GB) of all new space used (138GB) in Spring '08
- The single largest Blackboard course sites in Fall 2007 used 10GB of disk space, and 8GB in Spring 2008.
- Nearly 60% (n=59) of the 100 largest courses were language courses, typically heavy creators and users of multimedia content.
- Most courses use relatively little disk space; only 50 Blackboard course sites in 2007-08 consumed >1GB

User Support and Needs Assessment

In 2007-08, approximately 2750 help tickets were submitted by Duke Blackboard users. The majority (~75%) were handled by the OIT Help Desk, and the remaining tickets required Tier 2 or Tier 3 support provided by CIT Blackboard administrators and Academic Technology consultants. To streamline the process of keeping the Blackboard help site (blackboard.duke.edu) up to date and enable more distributed authorship, this site was migrated into the Cascade CMS in August 2007. The web form for requesting custom Blackboard course and organization sites is being redesigned, and process changes have already been implemented to minimize the amount of staff time by Tier 3 support required to process these requests.

The Blackboard Advisory Group conducted series of traveling meetings at different campus locations to gather feedback and input from faculty in various disciplines. Meetings were held at the School of Law, with the University Writing Program, and with languages departments.

Agenda items included the new course retention policy, ongoing investigations into new features and add-ons, and feedback on the current system. A list of Advisory Group members and notes from these meetings are available on the Blackboard support site:
<http://blackboard.duke.edu/about/advisory.html>

Related academic tools

The Blackboard team partnered with Arts & Sciences to investigate replacements for the Brownstone EDU online testing tool, which no longer has reliable vendor support. Maple TA was identified as the tool which best combined desired features and vendor support. OIT is currently piloting Maple TA with faculty in engineering.

Plans for 2008-09

Planning is underway for a much-needed upgrade in 2009. This upgrade would encompass the Blackboard software, operating system, database software, and server hardware, as well as migration from WebAuth to Shibboleth, the OIT-supported authentication standard. Other projects include exploring expanded use of Tier 2 storage for production data, redesigning the Blackboard help site to better meet user needs, and implementing an automated process for adding librarian-created subject guides into Blackboard course sites.