A Message from Clare van den Blink, Director, Academic Technologies

In 2013-14, we made improvements and changes to teaching with technology in face-to-face, blended and online learning environments. We revised our classroom technology taxonomies to be meaningful to instructors, provided more mobile and collaborative tools, supported emerging teaching models, and offered many opportunities for faculty to try out new technologies.

This year Academic Technologies has continued to improve its core “teaching for technology” services. We added several new technologies for increased interaction, collaboration and mobility, and expanded support for new modes of teaching, such as “flipped classroom” models.

We also are providing exemplary support services to faculty, and we have been gratified to receive many complimentary emails like this one.

Your group never ceases to amaze me! Every encounter and interaction I’ve ever had with ATC is better than the last... I’ve never met anyone on campus that hasn’t had a positive experience working with your group. Kudos to everyone in ATC!!

Of course, we continue to look for ways to improve. A spring faculty survey about Blackboard provided information we can use to further improve services and technology options. As we make progress on our strategic goals, the coming year will bring improved learning spaces, more options to experiment with technology, and further development of online courses and MOOCs. Simplify, innovate and transform continue to be our guiding principles for how we approach teaching with technology.
Areas of focus in 2013/2014

Classroom and learning space standards: New framework defines Cornell classroom standards
- Since technology became widely available for use in classrooms and learning spaces, schools have described these spaces in terms of the technologies in them. We reframed Cornell's "classroom tiers" to describe the teaching and learning activities enabled by the use of technologies. This new framework is being used to evaluate and implement innovative and cost-effective technologies in classrooms and learning spaces. The new Learning Technology Room Types document is online at http://www.it.cornell.edu/cms/teaching/upload/RoomTypesMay2014.pdf.

“Experimental classrooms” program: Trying out new technologies through the ATC
- Faculty can borrow new multimedia equipment for teaching and research through the Academic Technology Center. A joint project of Academic Technologies and Cornell University Library, the Equipment Loan Program provides HD camcorders, audio recorders, digital SLR cameras, and classroom presentation tools for faculty use for up to two weeks per loan. The program expands on the Academic Technology Center’s existing offerings of new tools for teaching with technology.
- In response to requests for opportunities to try out new technologies for teaching, Academic Technologies acquired a variety of technologies for people to try. These include a Double Telepresence Robot, a mobile teleconferencing system that allows conversations to happen anywhere and anytime; an Ideum Windows 8 coffee table, a table-format large multi-touch screen; a 55” touch-screen Mondopad that supports videoconferencing, real-time annotating, and touch-screen interaction with on-screen images and objects; and a Wacom Cintiq, a creative tablet. Faculty and academic staff are encouraged to try these items out at the Academic Technology Center.
- In December, Academic Technologies worked with the College of Engineering to host the “Annotation Smackdown.” A variety of software, monitors, and other devices for annotating content for lectures and video were made available side-by-side for faculty evaluations.

New technology options for blended learning, interactive, and flipped classrooms

*i>clicker GO mobile and web-based polling solutions*
Instructors now may optionally allow students to use laptops, tablets, and smartphones to respond to classroom polling questions. The use of *i>clicker GO is completely voluntary, so faculty can decide whether or not they would like to offer it.

Traditional *i>clicker remotes are still supported on campus. Students can use *i>clicker remotes purchased at the Cornell Store or other locations, or they can buy a one-semester *i>clicker GO subscription from the Cornell Store. Both the remotes and *i>clicker GO will work in the same class at the same time.
A feature of i>clicker GO not available with traditional clickers is the ability to ask a question that requires a short answer. Students can submit answers up to 16 characters long.

**WebEx used in support of teaching and engagement**

Web conferencing enables instructors to create an interface between their students and the outside world.

Angela Gonzales, associate professor of development sociology, used WebEx in her department’s new senior capstone course to help students apply the knowledge, theories, and methods they’ve learned, while providing real-world service in support of a community.

Her students worked with three organizations on the Hopi Reservation in northeastern Arizona. The students and Hopi community partners used WebEx to keep in contact, along with email and a face-to-face visit on the Cornell Ithaca campus.

“The ability for students to successfully engage and partner with organizations on the Hopi Reservation wouldn’t have been possible without WebEx,” says Professor Gonzales. The organizations involved were the Hopi Special Diabetes Program, the Hopi Education Endowment Fund, and the Natwani Coalition, which is dedicated to improving the Hopi food system and community health.

“It not only helped to create a sense of community with the three organizations we worked with,” she continues, “but also allowed community partners to communicate directly with students via video conferencing. This deepened the collaborative relationship between students and their community partners, and also helped the partner organizations to share the work with others in the community through recorded WebEx meetings.”

WebEx also helps support other teaching needs, such as enabling Professor Gonzales to continue to meet with students and deliver lectures while traveling away from campus. “WebEx allowed me to maintain the class schedule and provided students with the flexibility to watch the lecture outside of class,” she says. “The flexibility that WebEx provides is critically important for those of us whose research and professional activities requires frequent travel from campus,” says Professor Gonzales.

**Just in time student learning with lynda.com**

In December 2013 Cornell finalized a campus license agreement with lynda.com, and the service was rolled out in March, providing unlimited access to online training courses to Cornell faculty, staff, and students.

Previous to the rollout, lynda.com worked with Cornell on a pilot offering for 1,000 users across Cornell’s faculty, staff and students. Feedback from faculty pilot participants was positive.

- “I reduced the time I would otherwise spend for teaching skills and techniques, thanks to lynda.com.”
- “I can have students do out-of-class tutorials on technical skills, like Excel, and then focus in-class time on the use of those skills to understand their data.”
- “It helped me to show lessons in a new perspective.”
Teaching and research support with digital lab notebooks: LabArchives

LabArchives, an electronic lab notebook tool, was officially offered to campus in fall 2013. LabArchives is used by students and researchers to organize laboratory data, save historical versions of files, share information and collaborate with others. It is used in various types of laboratories, including engineering, chemistry, biology, and more.

Cornell MOOCs (Massive Open Online Courses)

In spring 2014, the university offered its first four massive open online courses (MOOCs), allowing anyone, anywhere, to take Cornell classes tuition-free.

The CornellX team developed an evaluation plan for the four MOOCs that were offered in spring 2014 with the goal of developing baseline information about students’ perceptions of learning in each MOOC. Our evaluation and research plans call for exploring the data and experience of online learning at a larger scale.

To process and analyze the massive amounts of MOOC course data generated from the edX platform, a campus-wide team was created from Academic Technologies, the Center for Advanced Computing, and CIT’s Business Intelligence unit. The team will build processes for exploring “big data” and learning analytics tools for examining the data for each course.

The MOOCs are providing Cornell with an opportunity to raise the general level of visibility and innovation around online learning here, and to engage faculty in ways that we expect to be long-lasting and directly relevant to innovation and best practices for education on campus. — Laura Brown, senior vice provost for undergraduate education and chair of Cornell’s Distance Learning Committee.

Continuous Academic Technologies service improvement

Upgrade to Blackboard

The campus course management system, Blackboard, was upgraded to version 9.1, SP14 on June 3, 2014. New features included in the upgrade are:

- Improvements to the Grade Center.
- New date management feature that allows instructors to adjust availability dates for content and provides tools for transferring content from a previous semester.
- Improved testing options include accommodations for disabled students as well as technology and foreign language differences.
- Course Message notifications allow secure communication between instructor and student.
- The ability for students to upload video.
• An option that allows students to receive course notifications via SMS texts and Text-to-Voice calls.

**CMS survey conducted spring 2014**  
Academic Technologies conducted a faculty survey about course management system use on campus and discovered **two of Blackboard’s features, Adding Content and Announcements/Emails, are particularly useful to many Blackboard users.** Many other features are not used. While faculty are not necessarily clamoring for a switch to a new course management system, they are asking for a drag and drop interface, simpler course recycling for each semester, a cleaner interface, fewer clicks and a tool that focuses almost entirely on the four features that are important to them:

• Adding content materials to courses  
• Grading  
• Collecting students’ work  
• Sending announcements and emails.

**Looking Ahead for 2014-15**  
As Academic Technologies continues to make progress on the strategic plan roadmap, there are several key initiatives for the coming year.

• **Course Management System Evaluation:** As part of our regular cycle of reviewing new developments in teaching with technology, Academic Technologies is initiating an overview of course management systems (CMS). In 2007, at the time of the last review, it was determined that Blackboard would continue to be the course management system supported on campus. Since then, the number of faculty using Blackboard at Cornell has grown and new course management systems have emerged, while the functionality of existing ones have changed, making an updated review worthwhile. The evaluation project will be conducted during the 2014-2015 academic year and at its conclusion, results will be presented to the Cornell community.

• **Learning Space Enhancements Initiative:** This project is an initial step to upgrade instructional spaces at Cornell, by updating and enhancing existing learning technologies in classrooms. With the help of capital funds, this project will implement new technology baselines and introduce a usable classroom control interface to provide a consistent experience for faculty and students across campus, through implementation of standard and easily operated technologies for teaching and learning.

• **Online Courses and MOOCs:** In collaboration with campus partners such as eCornell, Center for Teaching Excellence, School of Continuing Education and the Library, Academic Technologies will continue to develop online courses and experiment with CornellX MOOC development. The goals of these initiatives are to contribute to the worldwide community of online and blended learning through effective deployment of CornellX courses, and broaden institutional presence by demonstrating effective, scalable, and sustainable online learning results.
• **Strategic initiatives:** Academic Technologies will continue to develop a more robust campus support for faculty through collaborations with college IT staff.

Academic Technology services can be found at: [http://www.it.cornell.edu/teaching/](http://www.it.cornell.edu/teaching/)