



CITY UNIVERSITY OF **NEW YORK**

A Collection of Success Stories

INTRODUCTION —WHY TABLET PCS?

THE CUNY VISION

The City University of New York (CUNY), working with Intel, Agilix Labs, Inc. HP, Blackboard and Microsoft, spent six months exploring the possibilities of Tablet PCs in higher education. CUNY, the nation's largest urban university with more than 450,000 degree-credit students enrolled at 11 senior colleges, six community colleges and three post-graduate schools, offered a wide variety of academic settings in which to explore the Tablets.

Tablet PCs make sense for colleges and universities. They not only leverage all the benefits of complete mobility (for commuter and resident students alike) but they provide for the maximization of other university technology investments.

The idea for a Tablet PC implementation began with a conversation about transformation within CUNY. Intel and CUNY were both interested in exploring a project that could make an impact in the world of higher education. To foster excitement about this potential transformation and to accelerate the use of technology in classroom, CUNY partnered with five companies to make a difference in the way students learn and instructors teach.

The vision borne from the groups' meeting was an image of more convenient and advanced education: commuter students with Tablet PCs in hand could log into a program on their computer that works with additional software to synchronize course information and assignments. This program would automatically populate a students' Tablet PC any time a professor updated their data using the same software.

This new vision of education presented a student-centered learning tool that coincided with curriculum and promised to enhance the learning process. The Tablet PC was one piece of the vision that allowed all technological benefits to coalesce and work best on behalf of students. It was imperative that the technology benefit students because all CUNY students commute and Blackboard and Agilix software had the potential to put students a tremendous advantage.

James Haggard, deputy CIO of CUNY, thought the Tablet PCs were interesting technology and wanted to see how they could impact learning. "I wanted to get people thinking about this new technology and how it fits into the university setting," says Haggard. "To do this, we had to get it in the hands of the faculty and students." Haggard explains that each of the four participating campuses was encouraged to structure the pilot in the way that best fit its particular academic setting. Bronx Community College, College of Staten Island and Queens College selected classroom environments; John Jay School of Criminal Justice selected a post-graduate research project.

The four pilot projects on the various CUNY campuses offered an opportunity to further explore how to build continuous value in Blackboard and Agilix. The Tablet PC pilot was a vital action toward maximizing CUNY's ongoing commitment to its students via technology.

CUNY'S VISION

Expand Offerings

CUNY wants to increase your offerings beyond what is possible and/or affordable with conventional educational delivery systems. This ensures that the university system will continue to attract and keep more students by increasing the value of its programs.

Enhanced Learning Experience; Better Lectures and Presentations

CUNY knows that technology can help hold the attention of learners during lectures and presentations and that a commitment to appropriately use various media to enhance learning rather than just entertain is an effective strategy.

Make CUNY Competitive with the Best in the World

By building a strategic plan and implementing strategic programs, CUNY will continue to set a standard for other universities in the use and availability of education materials and information technology.

THE PARTNERS

This project brought together numerous technology partners, some for the first time. Throughout the project, the partners worked to create a technical environment that would allow CUNY to investigate this new technology. “We wanted to create excitement around integrating Tablet technology into the classroom, but we also wanted to transform learning and teaching to be a collaborative, interactive, student-centered activity,” says Melanie Fekete, Education Programs Manager for Intel Americas. Intel provided funding and assisted in organizing the project. Agilix Labs contributed both GoBinder and GoBinder Mobilizer. Blackboard and Agilix Labs worked together to interface CUNY’s existing learning management system, Blackboard, with Agilix’s GoBinder application through GoBinder Mobilizer, allowing students access to electronic course material while away from the CUNY campus. GoBinder lets students take notes, download instructor lectures and annotate directly on electronic documents. HP provided the Tablet PCs to CUNY at a heavily discounted price. Microsoft also provided funding and contributed Windows XP, Office and OneNote. OneNote, Microsoft’s note-taking and management program, allows users to organize notes and share information in meetings, presentations, brainstorming sessions, phone conferences and classes.

INSTITUTIONAL GOALS AND VISION FOR TABLET TECHNOLOGY

Goal	Why It Matters	Who Did It	The Partners
Classroom & Institution Management	You want the grading and paperwork processes of teaching to be easier and more automated. Students and faculty should be able to do self-service on classroom and institutional processes. You want to know the results of your specific programs and effort with as much cause and effect analysis as possible.	Staten Island	Intel Centrino, Mobile Technology, Agilix, HP, Blackboard, Microsoft
Reflect Work Conditions	You want your learners to learn using the same tools, techniques, and systems they will use in the workplace.	John Jay College Bronx College	Intel Centrino, Mobile Technology, Agilix, HP, Blackboard, Microsoft
Collaborative Learning	You want your learners to work in collaborative teams and networks that are not bound by the walls and grounds of your campus or region.	Queens College	Intel Centrino, Mobile Technology, Agilix, HP, Blackboard, Microsoft

SUCCESS STORIES

College of Staten Island

The College of Staten Island (CSI) is a senior college within CUNY, awarding associate, bachelor's and master's degrees.

Staten Island professor William Bernhardt had been using HP Tablets and Agilix GoBinder for about one year and was familiar with the unique features offered by this solution. Bernhardt recognized the potential in English and composition classes and was eager to try the technology. For the pilot, CSI selected its online freshman composition course, focusing on three basic goals crucial to freshman-level composition:

- Improve students' active reading for online assignments using annotation features of the Tablet and GoBinder.
- Enhance peer interaction, especially for purposes of sharing reading notes and feedback on essay drafts and other assignments.
- Enhance editing and proof-reading for both instructors and students using the digital ink capability.

Students were offered the solution for the duration of the course. Many students already had computers, therefore the Tablets were optional. Seven students used the Tablets.

Students were excited about using the Tablet PCs and the additional capabilities GoBinder provided. Mobility, note taking functionality and the ability to comment directly on documents were among the favorite features of the solution.

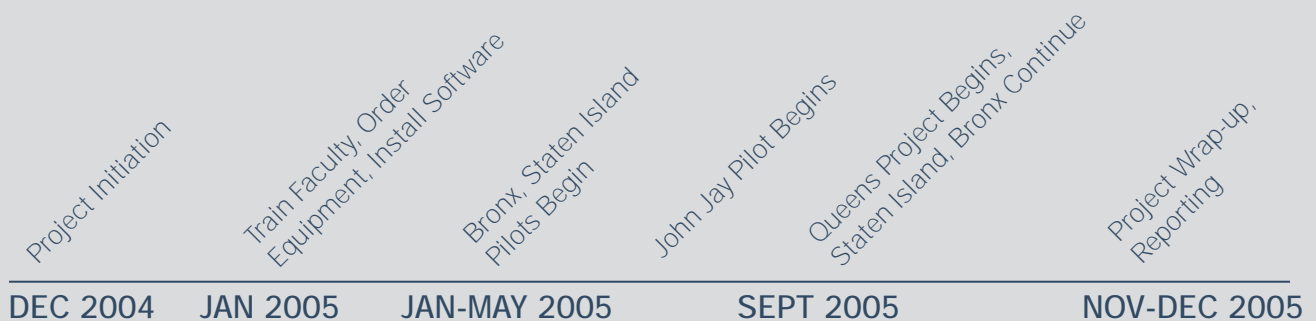
According to Bernhardt, "The students were excited about being able to bring material from Blackboard (and other Web-based content) into GoBinder on their Tablets for work offline, as some had slow or no Internet access from their home or job."

Bernhardt continues, "The students utilized GoBinder for document capture, mark-up and note-taking in connection with course assignments, which most of them were enthusiastic about. I found the quality of their pen annotations (markup and short comments) markedly superior to the work of comparable individuals in the same class who were annotating some of the same documents in a word processing environment with a keyboard and mouse."

Bernhardt explains that making the documents available to students without GoBinder's mobilization and print functions was "considerably more labor-intensive from an instructor's point of view." He also noted that the solution made many of his tasks easier, especially grading and annotating assignments submitted and returned electronically. "I can make tick marks in the margins indicating there was something in that line for the student to correct," he says. "I can also draw attention to words and sentence construction in ways that I can't do with a regular PC."

Staten Island continued the project through the summer with similar success and is currently looking for ways to expand the use of Tablets in other courses.

IMPLEMENTATION TIMELINE



Bronx Community College

Bronx Community College is a two-year college that serves more than 6,000 students. It offers a variety of degrees and certificate programs emphasizing allied health careers, technological training and the sciences. James Kenelly, executive director of Information Technology at Bronx Community College (BCC), saw the Tablet PC pilot as a way to build the college's honors program and recognize the students enrolled in the program. "I wanted to introduce the technology on campus while bringing visibility to our honors

"I wanted to introduce the technology on campus while bringing visibility to our honors program and recognizing the students who choose to do the extra work required by the program."

James Kenelly, executive director of Information Technology, Bronx Community College.

program and recognizing the students who choose to do the extra work required by the program," said Kenelly.

In the Spring 2005 semester, four faculty members and 20 honors students (GPA 3.2 or better) were given Tablet PCs and training. The students enrolled in at least one of four courses offered by participating faculty members from History, English, Music, and Communication Arts. Bronx participants used OneNote as the note management system rather than GoBinder. To provide students information and support, project coordinators created an electronic forum in Blackboard. The forum allowed participants to communicate and provided program information and tutorials. BCC faculty also conducted training workshops and hosted several lunch meetings, bringing the group together in an informal setting to address problems and issues related to the project.

At the conclusion of the semester, project coordinators held a focus group to assess:

- the Tablet PC as a teaching/learning tool;
- lessons learned from the pilot project; and
- possible future use of Tablets for the BCC honors program.

Student responses to the technology were overwhelmingly positive. In fact, one student believed the Tablet PC was "equal to the invention of the telephone" in its significance to students. The honors students also enjoyed the recognition — Tablets clearly identified their academic achievement. Students liked the ability to write directly on electronic documents, whether taking notes, revising papers or commenting on assignments. They were also excited about the ability to draw on the Tablet screen. This was especially

critical in the music course, where a traditional PC or laptop is clumsy at best. The Tablet's mobility, compact size, light weight and the wireless Internet access on campus and ability to work offline through GoBinder all contributed to the students' positive responses and satisfaction.

Queens College

Queens College, located in Flushing, Queens, has almost 17,000 undergraduate and graduate students. Queens trains students to think critically, address complex problems, explore various cultures and use modern technologies and information resources.

The Tablet project was a great fit for college freshman world studies. Dr. Helen Gaudette, acting director of College Preparatory Programs and adjunct lecturer in History, explains that this course is different from traditional courses. "The class uses reactive learning, where students react to historical events recreated in the classroom through research, debates and papers," Gaudette explains. In this course, students work in teams and are required to collaborate to form and articulate positions on historical events.

"The Tablet allows instructors to move around the classroom while lecturing and still have access to the computer."

Sue Henderson, vice president for Institutional Advancement, Queens College.

Tablets were provided to all students in the class. With heavy emphasis on collaboration, the Tablets and Blackboard became tools for creating online communities within student teams. According to Gaudette, the students' work habits changed. Groups of students clustered together with their Tablets, using the tools to create position papers, develop newspapers from the historical period and communicate.

Because the equipment arrived in the middle of the Spring 2005 semester, Queens decided to loan the equipment to faculty members while waiting for the full pilot to start in the fall. Sue Henderson, vice president for Institutional Advancement at Queens College, said mobility in the classroom was a big plus for the faculty members. "The Tablet allows instructors to move around the classroom while lecturing and still have access to the computer," says Henderson.

Queens plans to expand its use of Tablets in the future. Henderson is eager to thoroughly investigate how the technology impacts student learning.

John Jay College of Criminal Justice

John Jay College of Criminal Justice is internationally recognized as a leader in criminal justice education and research. The college offers undergraduate and graduate programs to more than 14,000 students.

The college selected its United Nations/Interpol Crime Data Analysis project as the Tablet PC case study. A team of 13 faculty members and graduate students (both master's and doctorate level) was tasked with validating the data reported to the United Nations on violent crimes in member nations.

Coordinating a project with team members traveling across the nation is difficult. "The best way get faculty to work together is to create a center point where they can easily connect and have a really long tether," says John Jay professor and lead technology team member Peter Mameli. To accomplish this objective, each team member was provided a Tablet PC for the duration of the project. A dedicated project space was created in Blackboard, allowing easy sharing of all project information, including coordination and review of data and the final report.

"I consider the Tablet project a success."

Peter Mameli, *Public Administration professor,
John Jay College of Criminal Justice.*

The common collaboration space accessible from any Internet connection was hugely valuable to the team. The light weight and mobility of the Tablets, coupled with the ease of connecting with all members of the team, helped the group produce a quality report for the United Nations. "The United Nations was happy with our report, so I consider the Tablet project a success," asserts Mameli.

While the U.N. research project did not require field interviews, Mameli saw this as an area where the unique features of the Tablet would be a benefit in future research projects.

The John Jay pilot did highlight a caution to those interested in investigating new technology. The most common technology-related activities of the project – processing and analyzing data, and writing and editing reports – did not require the unique features of the Tablets. Therefore, many advantages of the Tablets such as note-taking, peer review and document annotation were not apparent to some team members.

LESSONS LEARNED AND NEXT STEPS

CUNY's leadership is excited about the success of the project. "We are just beginning to understand how powerful the Tablet is in the university setting," says Haggard. "The Tablet project got the technology into the hands of our faculty and students and helped them understand how they can use the Tablets."

"CUNY is a laboratory equipped to demonstrate different applications of the Tablet PC," explains Colette Wagner, former project manager for CUNY. The breadth of projects reflects the wide diversity of CUNY's campuses and programs and provides an opportunity to examine many possibilities of the Tablets. Both faculty and students were enthusiastic. The Tablets eased note-taking, provided faculty mobility in the classrooms and easier assignment grading, improved peer review for papers, and provided participants the ability to work away from campus. The Tablets lent themselves well to subjects such as music and art where drawing is much more useful than typing. Undergraduate students valued the ability of Tablets to integrate written notes with class handouts.

One challenge for the project team members was the extremely compressed project timeline. It introduced challenges with organizing case studies, acquiring hardware, obtaining approval for human subject research and installing and testing software components. The vendor partners and CUNY staff worked hard to overcome the challenges introduced by the short deadline. When CUNY Deputy CIO James Haggard was asked what he would do differently, he responded that next time it would be essential to give people more time and more exposure ahead of time to the technology

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James Haggard, *deputy CIO, CUNY.*

so when it came time for classroom use, participants would have a better understanding of the resources they have available at their disposal.

CUNY plans to apply the lessons learned from these case studies and expand its Tablet use throughout the campuses. "Next we want to look at ways the technology can be better used in the classrooms," Haggard explains, "and how we can effectively integrate the Tablets into course curriculum." Another important step for Haggard is to publicize what has been done at CUNY and inform educators about the potential of technology resources.

PARTNERS



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