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Changing Needs, Changing Models:
Instructional Technology Training at Bronx Community College
by Howard Wach

Like all higher-education institutions, Bronx Community College (BCC), a unit of the City University of New York (CUNY), has moved rapidly into the age of digital education over the past decade. Along the way, institutional planning and investment decisions have shaped the environment in which instruction is delivered and faculty are trained. In 2000, for example, CUNY adopted the Blackboard course management system, and in 2005 moved to the enterprise version, reflecting steady growth in use and the need to accommodate new applications. During the 2002-2003 academic year, CUNY instituted a student technology fee, a tuition surcharge dedicated to improving the quality of IT infrastructure on all of the university's seventeen campuses. At BCC the fee generates slightly under $1,000,000 per year, and has permitted badly needed investments in lab facilities and available hours, classroom equipment, and IT personnel. A campus-based strategic plan, first developed in Spring 2003 and revised in September 2006, has laid out a framework for comprehensive and effective use of these resources, including the integration of academic and curricular planning with faculty development. Infrastructure investment, commitment to a course management system, a predictable funding stream, and strategic planning—with these elements in place, one might believe that devising effective faculty development should be easy.

However, determining the most effective mode of any faculty development effort is a tricky business, and technology-based programs involve an even greater degree of trial and error, requiring flexible accommodation to such key variables (and moving targets) as the prevailing campus culture, specific academic program needs, and fluctuating resource availability (Covington, Petherbridge, and Warren 2005; Bullock and Schomberg 2000). At BCC, training efforts have led to a specific model that promises to leverage institutional momentum into more effective, extensive, and purposeful uses of instructional technology. This article describes BCC's three-stage evolution toward this program, in which an intensive week-long summer session is followed by mentoring and structured activities the next academic year.

Three Faculty Development Models

The One-Shot Workshop

Faculty development in instructional technology at BCC began in the late 1990s with the one-shot workshop approach. Instructors interested in learning specific software skills attended two-hour sessions scheduled during the week, absorbed some point-and-click lessons, and were sent on their way with a hearty "good luck." That format was sometimes enough for the select, committed early adopter—for example, the faculty member determined to create a class Web page or to bring e-mail, word processing, or visual presentation more deeply into instruction. But for most faculty members in those early days, one instructional session with no systematic follow-up or help was not sufficient to effect any more substantive change. This became increasingly apparent after CUNY adopted Blackboard and the university's chief training focus shifted to that course management system. Whether employed as a Web-enhanced adjunct to classroom instruction or in a distance learning mode, using a CMS represented a much greater challenge and commitment of time and planning than single-use software (designing Powerpoint presentations, for example, or an Excel grading spreadsheet). Conceptualizing the redesign of a 15-week course and integrating it into a structured online environment requires a deeper and more sustained level of reflection (Katz 2003). Once Blackboard assumed center stage, the limits of a stand-alone, two-hour workshop became evident.

The Semester-Long Workshop

The single workshop format may have been the only plausible approach when virtually all faculty members were instructional technology neophytes, and when campus IT administration, training infrastructure, and university support were truly works in progress. I became involved in faculty development planning just when these structural conditions had begun to change and when new grant funding made another training modality possible. The program I designed, which began in Spring 2003 and ended in Fall 2006, represented the second stage of BCC's instructional technology training. This Blackboard-based, semester-long workshop, called Content and Method in Online Teaching, was offered to faculty from BCC and Lehman College, our grant partner, Bronx neighbor, and the most frequent City University transfer destination for our graduates. The workshop, which met every other week (typically six or seven times), had two fundamental goals: first, to provide more systematic exposure to Blackboard than the single two-hour workshop can supply, and second, to integrate that more substantial technology training with the kind of sustained pedagogical reflection that the single workshop cannot support.

As a faculty member, I arrived at this concept through years of classroom teaching, workshop design and delivery, and steadily greater use of online technologies (Wach 2002). That experience convinced me that instructional technology training without a strong pedagogical foundation is a bit like learning to use very good kitchen equipment with no knowledge of food. The purpose of instructional technologies should be to improve teaching and learning. However improvement is defined or measured, instructional needs—not merely knowledge of technology but a thorough consideration of how it serves underlying learning goals—should be central to faculty training. So the full-semester approach asked faculty to bring existing course materials and objectives into a Blackboard site and to use the time afforded them (grant funding provided a modest amount of released time from teaching) to think through approaches that marry course content, appropriately redesigned, to the new learning possibilities Blackboard provides. The central rationale was for instructional needs to drive technology use, rather than the other way around. As Diana Laurillard (2002) has stated, "[d]esign has to be generated from the learning objectives and the aspirations of the course, rather than from the capability of the technology" (22).

The full-semester program began with consideration of a fundamental question: Given the teacher's instructional goals, what online teaching mode will be employed? In posing this question to our participants, we mapped out the full range of teaching modes currently available to them in their instructional design (Table 1). No particular approach (fully online, blended or hybrid, or Web-enhanced) was mandated, but the act of deciding on a modality itself encouraged deeper pedagogical reflection. Participants were then exposed to the work of outstanding practitioners such as Randy Bass (2003) and William Pelz (2004). Bass's empirical and theoretical explorations of using online technologies in American Studies courses and Pelz's systematic description of "presence" in online instruction are models of engaged pedagogy. Participants were also provided structured opportunities to explore and adapt resource models from repositories such as Merlot . Specific workshop tasks were linked to widely accepted pedagogical approaches such as Chickering and Ehrmann's (1996) technology-focused adaptation of the Seven Principles. As participants made their way through the program, they constructed a prototype Blackboard site by building a bank of online course materials in their discipline, devising online discussion topics and strategies, and designing specific assignments, resources, and assessments that incorporated these or other Web-based materials (Exhibit 1). During workshop sessions, participants proceeded through hands-on practice with specific Blackboard features and demonstrated the materials they designed for their courses. On occasion, sessions evolved into wide-ranging discussions, with lots of talk not only about Blackboard and broader technology/pedagogy issues, but also about related campus-based concerns such as student and faculty technology proficiencies, institutional policies, and funding decisions. I was sometimes unsure about how much latitude to give such discussions. While I wanted to keep the workshop on task and avoid free-for-all gripe sessions, I also recognized that safe, structured opportunities to raise important or provocative questions and to see how they fit together are pretty rare. Most participants valued these discussions, and I have come to consider them a legitimate—if unofficial—part of faculty development.

As the program ran its grant-funded course, the experience opened new challenges, and ongoing assessment helped to define new possibilities to pursue. A changing distribution of participant skill levels, for

example, has clearly altered training needs. The program was designed to accommodate interested faculty regardless of skill level. Four years ago, hardly any participants had taught online and few had incorporated Web sites into course content. But the continuum of skills and experience within each semester's cohort became increasingly skewed in a faculty version of the digital divide. In Fall 2003, for example, none of the 12 workshop participants had used Blackboard. By Spring 2005, 5 of 12 had some exposure when they started the workshop. In the most recent cohorts (Spring and Fall 2006), 9 of 13 had some level of Blackboard exposure or experience. Ancillary skill levels—such as managing a college e-mail account, word processing, Web page authoring, using presentation software, or even file management—also show a wider distribution than they did several years ago and generally correspond to the degree of experience in using online resources for instruction and other professional activities. Consequently, some participants, primarily younger faculty, entered the workshop and quickly took off. Having arrived with a strong understanding of the online environment and considerable experience using it as researchers, teachers, and indeed as students, these academic "digital natives" (Prensky 2001) quickly grasped new possibilities and began to devise inventive new materials and approaches.

Others, often (though not always) older faculty members, struggled with basic tasks, which complicated their ability to conceptualize and integrate new methods and sometimes left them feeling as if they had been tossed into the deep end of the pool. Needless to say, under these circumstances the workshop became more challenging to direct. Although the numbers of relatively unskilled participants are shrinking steadily, this evolution showed me that the college needs to accommodate differentiated skills with differentiated training. Last year, for example, our Center for Teaching Excellence offered a technology boot camp designed to address novice-level training needs.

Other issues emerged as well. While the semester-long workshop offered more opportunity for reflection and curricular work than the stand-alone session, its greater length and school-year calendar intensified conflicts with other faculty responsibilities. Two hours' release from teaching leaves the CUNY community college instructor with anywhere from ten to thirteen contact hours of weekly class time. All other academic-year commitments—departmental and college committee responsibilities, advisement, class preparation, and grading—of course remain the same. Anyone who has worked to put instruction online knows how the effort swallows all available (and unavailable) time. It is a juggling act even for efficient time managers. Finally, there is the tricky question of motivation and accountability. The workshop was always offered on a first-come, first-serve basis. Reasons for enrolling in compensated faculty training programs are as variable as the personalities of enrollees. Clearly, some choose to participate for the right reasons: to explore and eventually practice new instructional methods that promise to improve student learning. Just as clearly, others are less motivated by the desire to improve than by the prospect of one less course to teach. If a participant—particularly a tenured participant—decided not to work in good faith, there was little I or anyone else could do about it. This was frustrating both to me and to good-faith participants.

The Summer Program

Anticipating the end of grant funding and hoping to improve both the quantity and quality of faculty participation, I began planning a summer-session training model during the 2004-2005 academic year. Institutional budgeting processes had reserved a small portion of the technology fee allocation ($50,000) for faculty development, and this became the resource base for the new program.

How does this program change the faculty development equation? In essence, the formula I devised combined attention to our particular experience and circumstances at BCC with a search for best practices. The latter was not difficult. Two sister institutions within the CUNY system, Borough of Manhattan Community College and LaGuardia Community College in Queens, had already mapped out promising territory. Each had launched faculty training programs that tied technology use to serious pedagogical reflection and revision, and each included mentoring and sustained group activities. Like another nearby institution, Bergen Community College in New Jersey, they incorporated the most important underlying rationales into training design: putting pedagogy first, sustaining the effort beyond the limits of workshop sessions, compensating

participants fairly, and adding a level of accountability through the attention of peer mentors and clearly defined expectations (Shapiro 2006).

After considerable lobbying, the new program was inaugurated in June 2005. Campus administration had needed to be convinced that this modest sum would be effectively invested. Complicating matters, the incumbent provost moved on to a college presidency in the midst of these negotiations. Resulting delays meant that final approval and subsequent recruitment was conducted on very short notice toward the end of the Spring 2005 semester. To maximize the program's impact and to nudge the entire process toward more intentional planning, the call for participation included a request that departments send faculty teams (rather than individuals), and that emphasis be placed on multi-section courses. Not all departments responded to the call, and of those that did, not all answered that request. In the end, ten faculty members, representing six departments, participated in the first cohort. Each was required to write a one-page project description, approved by their department chairperson, and to commit to attending follow-up meetings the next academic year. Compensation was $1,000 for the week, plus another $400 for the follow-up meetings. Like the semester-long workshop, the summer program had a dedicated Blackboard site, and all participants had their own shell site for course development. I recruited three additional workshop leaders, all experienced and savvy faculty technology users, to help design and direct the activities.

The program's week-long agenda was essentially split into two unequally divided parts: presentations by workshop leaders designed to establish practical work goals and demonstrate skills and resources, and hands-on development time for participants, during which the leaders were constantly available to troubleshoot, advise, and maintain group focus. The workshop met from 9 a.m. to 4 p.m. each day. Excluding a quick breakfast and a lunch break, there were about 30 hours of active, intensive working time. Presentations took up about one-third of that time, leaving each participant with roughly 20 hours of dedicated, supervised hands-on time for course development. The week concluded with participants reviewing and critiquing colleagues' course sites.

Three basic principles informed workshop goals and tasks, each of them a logical and desirable outcome of redesigning instruction for an online environment (Exhibit 2). Each goal merited a full day's work and each was presented and demonstrated to participants with resources and instructions (the Web-Based Assignment worksheet in Exhibit 1, for example), including a comprehensive information literacy session hosted and led by BCC library staff. Each then cumulatively carried over into subsequent planning and design time.

Taking Stock

Results of the 2005 workshop provided a good barometer of the evolving scope of faculty skills, the promise of the program, and the specific difficulties created by late and hurried organization and recruitment. The prior technological experience of participants ranged from nil to very advanced. Project proposals reflected the same disparities. At the high end of the spectrum, two departments, chemistry and history, sent teams that not only created individual class sites, but also built Blackboard-based resources to serve instructors across multi-section courses. The historians created a "skeleton course," housing materials drawn from a number of instructors, for the world history survey taken by nearly all BCC students. An individual instructor could then copy the entire skeleton into their own site and choose, by elimination, whichever materials they deemed appropriate for themselves (Exhibit 3). The chemists, whose introductory general chemistry course serves students in all the Allied Health disciplines, built a resource base of common materials, reflecting the greater uniformity of instruction in their multi-section course and the department's goal of increasing this standardization (Exhibit 4). Both the historians and the chemists took full advantage of the Web-based platform, including many links to online sources of every description, from reproductions of manuscript sources to lab experiment simulations (Exhibit 5).

At the other end of the spectrum, two participants entered the program with such limited computer skills that they became overwhelmed despite the workshop leaders' constant attention. Another participant, a dance instructor, determined that Blackboard was unsuited to her instructional needs, though she was able to

identify useful online resources and, with the help of workshop leaders, to design strategies for video recording student performances. Remaining participants fell into a middle range, neither neophytes nor advanced technology users. They worked hard, ended the week with much greater knowledge and proficiency than they had going in, and put their new knowledge into practice when the new term began in September. Perhaps most significantly for the future of the program, two of the workshop leaders received reassigned time to serve as peer mentors during the fall semester. Increasingly recognized as a key dimension of faculty development (Baker, Redfield, and Tonkin 2006; Reilly 2005), peer mentoring emerged as a critical part of our program. The mentors maintained frequent contact with workshop participants, helped to establish Blackboard sites, urged greater efforts where necessary (sometimes with department chairpersons), collaborated with IT staff when problems surfaced, and assisted with course design and instructional strategies throughout the term, all of it highly labor-intensive work that garnered universal praise. Once per month during that term, the entire group reassembled to report on progress and problems.

As we prepare to meet the 2007 summer cohort, program results are visible in the Fall 2007 course schedule, which lists five online course sections to be taught by the "class of '06" as well as three more by 2005 participants. Several other participants are forging ahead with Blackboard enhancements to face-to-face sections. More effective recruitment, steady efforts to demonstrate successful program outcomes like the Chemistry course site, and lessons learned (routing less-prepared applicants to "boot camp," for example) promise to bring more of the same in the future. Without question, peer mentoring has created the greatest "buzz" and impact. In small but noticeable increments, faculty are entering the program with stronger motivation and modestly better skills.

Conclusion

Where do we go from here? What have we learned along the way? Procedural mechanisms are slowly changing as we build institutional experience. The first year taught us that prospective participants need to meet a higher skill standard, for example, and we learned to scrutinize project descriptions with a keener eye. In addition, the 2007 cohort, unlike the first two groups, will be expected to teach either a partially ("hybrid") or fully online course section in Spring 2008, and the program has been redesigned to lead systematically toward that goal over six months of course development. In effect, we have raised the bar. Moreover, while there are no magic bullets, certain principles have come into clearer focus. A consistent focus on pedagogy, while maintaining the necessary attention to technology skills, demands constant monitoring to ensure the right balance as faculty aptitudes evolve. Along the same lines, differentiated training environments have begun to emerge and will continue to define themselves, not only for novices but, perhaps more crucially, for active technology users who have mastered the basics. Concurrent summer programs serving these differentiated needs are doubtless in the cards. Peer mentoring is an essential, effective, and well-received method with many existing models out there. It will surely continue and should be expanded and formalized, with its costs recognized as institutional necessities, in order to increase dissemination of training outcomes and recruit new leadership.

But perhaps the most promising aspect of our current program is its potential to integrate technology training with academic planning. College administration is now convinced that such integration must take place. The logic is clear and two years' experience seems to point the way. If departments, and not a relative handful of individual faculty members, build technology-based teaching (with or without actual online instruction) into courses, curricula, and resource requests, the value, necessity, scale, and outcomes of well-designed faculty training stand to become exponentially greater. The disparate elements for a fourth stage of training program—integrating infrastructure improvement, resource allocation, and academic planning—are indeed in place. All we need to do now is put them together.

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