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## ***Distance Education at Bowling Green State University: Challenges, Opportunities, and Promise***

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# Distance Education at Bowling Green State University: Challenges, Opportunities, and Promise

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## Introduction

In 1995, when Nicholas Negroponte stated “Being digital is different” (p.231), he may not have fully understood the prescience such a seemingly generic yet succinct maxim would have on a wide variety of industries, in a wide variety of geographic regions, on an equally wide variety of learners. Admittedly, his landmark text on the coming ubiquity of information and communications technology did not focus specifically on education, training & development, or teaching & learning. Yet there is perhaps no better single phrase that could sum up the impact these technologies have had on distance education pedagogy. For good or bad, when it comes to distance education specifically and computer-mediated learning in general, digital *is* different.

The expectations our students have are different, as they grow accustomed to rich media, on-demand learning environments infused with podcasts, flash-based graphics, RSS feeds, blogs, auto-graded, web-based assessments, 24/7 gradebooks and instructor feedback, and other dynamic course materials and conventions. The needs we have as faculty, as we increasingly become immersed in these environments, are different than those we may have experienced in the hardcopy, analog world many of us comfortably existed in for so long. We are now both teachers *and* technicians by default (to the dismay of some), and we are now more reliant on existing institutional technology policy and infrastructure than ever before. As a result of this reliance, a division is brewing based on these digital technologies. This division centers around

the use of higher education enterprise portals (HEEPs) and related course management tools designed to facilitate computer-mediated learning and the web-based delivery of courses in higher education.

Three points are presented in this text. First, promises implicit in course management tools are explored. Second, issues are examined that need to be resolved to facilitate distance education. A third underlying point is that we as faculty must determine and address our responsibilities for providing such learning.

While these points may also relate to hybrid or “web-enhanced” courses and other activities that are not fully web-based, the primary concern of this text lies with entirely web-based courses. Indeed, when a hybrid course is the goal it would seem to be very difficult to achieve the full advantage and capabilities inherent in the course management tools in question. Perhaps the ultimate opportunities in electronic delivery are actually marginalized by blending traditional classroom systems since persons will never come to fully depend on or achieve full potential, but rather will rely on defaults built into traditional experiences to fall back on (Sinn, 2004a). This also suggests that teaching courses electronically should not require compromising academic freedoms of the teaching and learning process. Ultimately, the question posed asks: Are we empowering faculty and students to go to new levels, or are we holding people back based on systems and tools which are configured as “one size fits all”, dividing based on con-

formity, rather than viewing the full potentials inherent in the technology?

### ***Promises and Challenges Implicit in Computer-mediated Learning and Distance Education***

Distance education offers promise for both faculty and students. Replicating virtually all done in traditional classrooms is doable, and depending on viewpoint, experience, and type of course, digital delivery may even be better. If well organized chat and discussion boards are configured and used, along with custom courseware to replace traditional lectures, supplemented with presentation slides and/or streaming audio and video to explain content, traditional “seat time” oriented classes can be “brought to life” online in robust ways (Sinn, 2004a).

Yet, in many cases instructors who teach web-based courses or desire to do so often do not receive standardized training on how to facilitate an online classroom. Such training should be an essential component of a web-based program (The Board of Trustees at the University of Illinois, 2003). “Experience has shown us that the most successful online course experiences for students and instructors depend on the expertise and dedication of a well-prepared online instructor” (Ko & Rossen, 1998). More and more teachers are being prompted to teach a web-based course with very little preparation (Dickinson, Agnew, & Gorman, 1999). “Many faculty teaching online courses today have no experience or formal training in online instruction, and their courses do not exploit the strengths of the online medium” (The Board of Trustees at the University of Illinois, 2003, ¶3).

Certainly, a solid course design can greatly impact the quality of a web-based course; however, the quality of the facilitation is equally important (Berge & Colins, 1995; Palloff & Pratt, 1999; White & Weight, 2000). That is why training a teacher on effective facilitation is just as important as training a teacher on the software (The Board

of Trustees at the University of Illinois, 2003). Addressing this issue, Schweitzer, Whipp, and Hayslett (2002), leaders in web-based learning, stated, “for this reason, we assure that all online instructors have time to practice and reflect on effective online teaching practices” (p. 151).

Delivering a web-based training module to teach instructors how to be good facilitators puts the teachers in the place of the students and makes the teacher think like the learner, which will help them in developing their own course. According to Ko & Rossen, the instructor development course should imitate as much as possible the actual web-based learning experience, including the software platform to be used, and the general pattern of activities that are integrated into that institutions web-based courses (Ko & Rossen, 1998).

At Marquette University, Schweitzer, Whipp, and Hayslett offer a course via the Internet for all teachers interested in distance education titled, *Facilitating Your Online Classroom*. They state, “By asking them [instructors] to participate in asynchronous discussions, submit assignments, and harness the power of distance technologies, this course encourages instructors to put themselves in the place of online learners and to think about how to teach them” (p. 151). They have discovered that it is important for web-based teachers to establish and foster a collaborative and encouraging environment and use probing questions and modeling to direct discussions to deeper and more complex levels (2002). “This requires changes in pedagogy, with instructors taking the role of facilitators of information while guiding students toward solutions” (The Board of Trustees at the University of Illinois, ¶2).

It is this core idea of teacher as discussion facilitator or moderator that many teachers making the transition from traditional teacher to web-based teacher might not fully realize. Mitra and Hall (2002) stated, “within a distance learning scenario, where the teacher does not occupy a predefined position

of power, it is possible that, instead of being a teacher, the person has to become a moderator to control the flow of the discourse rather than supervise who has a voice in that discourse” (p. 137). It is very important for teachers to be trained on facilitating a web-based course because the role of the web-based teacher is different than the role of the traditional classroom teacher.

Training faculty toward this end, *or at least training those interested in being so trained*, represents one of several challenges associated with distance education. Another would involve media appropriateness, for lack of a better term. Using the right type of media in the right situation is an important component of effectively facilitating a course, as well. In a study on how the use of information technologies benefits student learning by Alexander and McKenzie (1998), they concluded that the use of interactive multimedia animations, simulations and micro-worlds improved understanding of concepts, which students are known to have difficulty with in a range of disciplines. It is also important to know how much content to put in a web-based course. Addressing this issue, David Murphy (2000) states that rather than rushing to put everything online, distance educators need to take advantage of books and other outside sources and use the Internet for what it’s good for: communication through e-mail, discussion groups, assignment submission and feedback. Having sped up communication, instructors need to harness the opportunity for students to engage in collaborative learning through more innovative virtual tutorial arrangements.

Helping students plan their time wisely is another challenge. It is critical to student achievement and needs to be embedded into the learning activities of courses (Alexander, 2001; Chickering & Ehrmann, 1996; Millis, 1999). Chickering and Ehrmann (1996) state that, “learning to use one’s time well is critical for students and professionals alike. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty”

(p. 4). Draves (2002) stated, “It is very important to set a time of day and days of week in which to study online” (p. 178). Students should actually create two schedules to help them plan their time wisely. A schedule for the time they will be online participating in class discussions, downloading information and learning online, and a schedule for the time of study offline, reading the textbook, reviewing notes, writing, and participating in other activities with the computer off (Draves, 2002).

Another key component inherent in the promise and challenge of distance education is, oddly enough, not content, but interaction itself (The Board of Trustees at the University of Illinois, 2003; Draves, 2002). Powerful learning and education take place through student-to-student interchange and student-to-instructor interchange online. (Draves 2002; Palloff and Pratt 1999). Students consistently rate communication and support from faculty and other students as having the major influence on their web-based learning experience (Fredericksen et al., 2000; Hara & Kling, 1999; Myerton, 1999; Rossman, 1999; Weller & Mason, 2000).

According to Mazoué, faculty should “provide timely, context-specific feedback and motivational support” (p. 108). Students value prompt and informative feedback on their work. “Students do not learn much just sitting in classes listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write reflectively about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves” (Chickering & Ehrmann, 1996, p. 3).

Such interaction in the web-based classroom primarily takes place in chat rooms, bulletin boards, discussion forums, and e-mail. The most popular way to create interaction within the web-based classroom is asynchronously through e-mail or discussion boards. Draves (2002) states, “One of the truly remarkable and breakthrough tech-

nologies provided by the Internet is the opportunity to have an asynchronous group discussion. . .” (39).

Assuming well organized, pre-designed threads for posting documents and facilitating long term dialogue are configured in discussion boards, knowledge can be grown and documented in ways not necessarily apparent prior to digital opportunities. Teams of students and others can build assignments and deliverables in courses, consistent with threads, doing highly logical and well-organized dialogues and intellectually stimulating conversations. Problems can be solved, and opportunities for growth and improvement addressed, all consistent with the way organizations and work groups are conducting themselves to define culture currently and increasingly in the future, growing and massaging collective and collaborative knowledge simultaneously.

Of course, this is not to say such structured environments cannot still be problematic for students. Henze and Southard (2005) note that students participating in synchronous web-based chats or asynchronous discussion forums will initially be at the mercy of trying to draw parallels between these forms of communication and those typically associated with face-to-face classroom environments. They argue that:

*Because of the relative novelty of e-discussion in academic settings, students are unlikely to have encountered communication situations precisely like the one that they are being asked to participate in; the genre itself has yet to accumulate the stability of genres such as face-to-face classroom discussions. . . . Because of the absence of clearly relevant precedents, participants must search for relevance in prior situations based on what may be an imperfect understanding of the characteristics of the communication situation—an understanding based upon factors such as what their teachers specifically tell them, as well as their own perspective on the*

*purposes of the course, the purpose of education, the role of discussion in other courses, the physical art of typing and the role of internet [based communications] exchange. (p.31)*

A range of factors could contribute to this search for relevance by students in such communications environments. A “mixed” class comprised of students with previous experience taking web-based courses and those new to the medium would likely pose serious issues associated with comfort level and assumed levels of acceptable participation for both groups. Age, of course, could also result in a potentially polarizing situation if a web-based course had large contingents of non-traditional students intermixed with an equal amount of 18 – 22 year olds. This is not to suggest that the non-traditional students would necessarily be any less technically savvy than their younger counterparts. Rather, the expectations of these older students, who would likely have several external factors (family, career, etc.) pressing upon them, could lead to a certain amount of impatience if the traditional aged students in their discussion groups do not provide consistent, steady feedback and comments online. While such issues might also arise in a face-to-face discussion or small group environment, Henze and Southard point out that “the foreignness of the online environment seems to call attention to itself” (p.35) and perhaps amplify these differences.

Scientists and software engineers suggested that individuals must create mental models to be able to understand and internalize what is happening in this new environment (Brandt, 1997). By defining the student expectations, students will have a better idea of what they need to accomplish. According to Alexander (2001), students value clarity of expectations on their work (2001). One way to set the expectations of the students is to construct an agenda (Draves, 2002).

An agenda will enhance the learning of all the participants because they

will have a comprehensive idea of everything the course entails. Teachers should set the agenda and provide leadership and direction without controlling the class. The leadership model becomes one of active facilitation, which is a shift away from an authoritarian style toward a more democratic style (The Board of Trustees at the University of Illinois, 2003). According to Draves (2002), a good quality agenda would include the following:

- Technical requirements and software students will need in order to participate in the course
- Course goals and objectives
- An outline of the content – topics or modules included in the course – include readings, audio, links and other content pertaining to that module
- The schedule for interaction, dialogue, discussion forums, or chats
- The pre-assessment quiz
- Rules for participating in the course
- What constitutes a substantive post (p. 125-127)

Such an agenda, combined with the flexible use of communication tools, offers opportunities for people to engage electronically in ways which go far beyond traditional brick and mortar paradigms. Use of these at any hour, from most geographical locations (assuming connectivity is available) is a substantial promise in and of itself, and one that allows the possibility of a college education to those that live in too remote an area for a face-to-face education. Consider Schall's distance education research focusing on such efforts in remote areas of Alaska. While this study was conducted in 1998 and there has certainly been an explosion of technological change associated with distance education delivery and associated media since then, the subjects participating in it still viewed the available distance education technology and infrastructure favorably. For these and other geographically isolated students, as well as non-traditional students, who are traveling or working long and variable hours sporadically, the ability to engage with a team or work group

on an as needed basis (realizing this may need to be pre-scheduled) to chat and discuss issues and opportunities, or focus on presentation slides on part of a computer screen while simultaneously chatting, is a powerful approach—and promise.

### ***The “Quality” Question***

One question that continues to linger on in the minds of academic and corporate decision makers around the world is the question of quality in online education. Is the quality of online education equal to or greater than that of the traditional face-to-face education system? In an ongoing mission to study the state of online education in America, The Sloan Consortium, an association of more than 1,000 institutions and organizations of higher education engaged in online learning, has launched three national surveys since 2003. The goal of the surveys and study are aimed at answering some of the key questions about the nature and extent of online education. The first report in 2003, titled, *Sizing the Opportunity: The Quality and Extent of Online Education in the United States, 2002 and 2003* revealed the following:

- A majority of academic leaders (57 percent) already believe that the learning outcomes for online education are equal to or superior to those of face-to-face instruction.
- Even more compelling, nearly one-third of these same academic leaders expect that learning outcomes for online education will be superior to face-to-face instruction in three years, and nearly three-quarters of them expect learning outcomes for online education to be equal to or better than face-to-face instruction.
- Every grouping of institutions expects the same relative improvement in the learning outcomes of online compared to face-to-face instruction over the next three years. This holds true both for institutions that offer online education and those that do not. (Sloan Consortium, 2003)

In the second annual study of the state of online education in America by the Sloan Consortium, over 1,100 colleges were surveyed. The Consortium's report of the survey titled, “Entering the Mainstream: The Quality and Extent of Online Education in the United States, 2003 and 2004” found that “schools that offer online courses believe that their online students are at least as satisfied as those taking their face-to-face offerings” (Sloan Consortium, 2004).

- 40.7% of schools offering online courses agree that “students are at least as satisfied” with their online courses, 56.2% are neutral and only 3.1% disagree.
- Medium and large schools strongly agree (with less than 3% disagreeing).
- The smallest schools (under 1,500 enrollments) are the least positive, but even they have only 5.4% disagreeing compared to 32.9% agreeing.
- Doctoral/Research, Masters, and Associates schools are very positive, Specialized and Baccalaureate schools only slightly less so.

The report proclaims that “schools continue to believe that online learning is just as good as being there” (Sloan Consortium, 2004). According to the survey:

- A majority of academic leaders believe that online learning quality is already equal to or superior to face-to-face instruction.
- Three quarters of academic leaders at public colleges and universities believe that online learning quality is equal to or superior to face-to-face instruction.
- The larger the school, the more positive the view of the relative quality of online learning compared to face-to-face instruction.
- Three quarters of all academic leaders believe that online learning quality will be equal to or superior to face-to-face instruction in three years.

The most recent national survey and report by the Sloan Consortium titled, *Growing By Degrees: Online Education*

in the United States, 2005, indicated that the quality issue had been resolved and focused on other questions such as whether online education is a major part of schools long term strategies. The report mentions that “previous studies have shown that Chief Academic Officers believe, in general, that online courses are of equal quality to face-to-face and that students are as satisfied with online as with face-to-face courses. They have also expressed reservations about their faculty’s acceptance of online education” (Sloan Consortium, 2005).

### ***Fulfilling the Promise at Bowling Green State University***

Given this seeming parity in quality between face-to-face and distance education, assuming the distance education course(s) in question follows best practices associated with the medium, the question then becomes are we as faculty able to fulfill the promise of web-based delivery? It is not only a question of being able to do it, but one of being able to function similarly to how the work of faculty is done in traditional course delivery systems. Several elements observed as specific areas of discussion may help shed light on this important area of questioning.

Bowling Green State University (BGSU), located in Ohio 20 miles south of Toledo, serves a student population of roughly 21,000, with an additional 1,800 students enrolled in the Firelands campus in Huron, Ohio. Roughly 7,000 students at the main campus live in the residence halls. BGSU offers nearly 200 majors, with an emphasis on critical thinking, skilled communication, and ethics infused throughout all programs. (Bowling Green State University, 2005)

While BGSU no longer offers off-campus Internet access, either for free or for a monthly fee, both the main campus and Firelands campus share a robust technology infrastructure revamped in 2000 as part of a combined initiative to modernize the then-existing information technology support and

services on campus, as well as to proactively guard against possible IT failures due to the Y2K bug. The new technology infrastructure, dubbed the BG Supernet project, includes high speed network connectivity. Internet 2 access, pervasive wireless zones, personal web accounts for all faculty, students, and staff, access to on-demand audio and video content by way of a Digital Video Streaming Server (DVSS), and an integrated higher education enterprise portal (HEEP) called MyBGSU.

The MyBGSU HEEP includes an Oracle / Peoplesoft-based portal for members of the BGSU community to pay bursar bills, access and print (if needed) copies of pay stubs, enroll in classes, order parking permits, and accomplish a host of other common tasks. This portal is then linked with a Blackboard-based course management tool. Where students and faculty can access their courses, check their grades, download course materials, etc. While the HEEP does represent the first such effort by BGSU, the Blackboard-based course management tool is a replacement of a previous one from the late 1990s, based on WebCT.

This rapid growth in both the technology infrastructure and distance education capability of BGSU as quite deliberate, having been planned for the university for some time. Yet, a fair amount of consideration was also given to the possible unintended consequences associated with this growth. In 2002, the BGSU Strategic Plan for Information Technology specifically made provisions for such consequences. Authors of the plan, including the Executive Vice President, the Chief Information Officer, members of the Information Technology Committee, and additional faculty and staff, stressed “We also must not forget that our institutional culture, attitudes and expectations . . . are significant elements of the system. For example, ‘technology shock,’ which may be caused by rapid evolutions in equipment and in IT paradigms, must be sensitively and effectively dealt with, just as we must also facilitate ongoing adjustments to our institutional

capacity for providing IT services.” (p.1)

To minimize the likely impact of such “technology shock”, BGSU developed and implemented a broad series of support mechanisms. Some were already in place, including the Technology Support Center, an area that serves as a central point of contact for help with University-owned hardware and software, and the Center for Teaching, Learning, & Technology, an area devoted exclusively to faculty training and professional development. Additional existing areas included Instructional Media Services (IMS), Continuing Education, and Information Technology Services (ITS).

Other areas had to be created from scratch. The Student Technology Center, as the name implies, served as a central area to champion technology literacy for the BGSU student population. The Laptop Loan Program provided a greater, more immediate access to portable computing technology to pre-major advising students. (Hull, 2003) The Technology Education Consulting Specialists (TECS) program offered a “bridge” of sorts to assist less technically-savvy faculty in their transition to digital curricula. A new office, titled Interactive Distance Education for All Learners (IDEAL) was also created, with the dual goal to both “promote distance education and assist faculty and staff with the development and design of web-based and web-centric credit and noncredit courses for BGSU.” (IDEAL, 2005)

Again, these steps taken over a five year period were quite deliberate. The coordination of developing and implementing these efforts helped ensure a minimum level of discomfort among students and faculty in web-based and web-enhanced classroom environments. Yet, in spite of these efforts, challenges still remain. It is unlikely that these problems are specific to BGSU, and this text is in no way meant to highlight any technological shortcomings associated with distance education at BGSU. Rather, these challenges are representa-

tives ones indicative of the larger transition to digital higher education institutions continue to deal with each year.

Perhaps the single largest issue BGSU currently experiences concerning distance education is one of recruitment and marketing. BGSU has two completely web-based degree completion programs currently available, a Bachelor of Science in Advanced Technological Education and a Bachelor of Arts in Liberal Studies. How do program coordinators from these majors go about recruiting students? How will students become aware of web-based programs and courses, given that in many cases these were intended for new and different audiences, as opposed to traditional on-campus residential communities? Is the infrastructure in place, and are we prepared to pursue and bring non-traditional markets to this different type format? BGSU has little experience with this type recruitment, as such efforts are frequently well beyond traditional state-boundaries, and involve targeting different marketing venues (say, information technology-related web sites and blogs) in hopes of tapping into a vein of previously undiscovered, prospective students. The challenge is not insurmountable, but it is still there.

A host of smaller challenges, individually inconvenient but collectively daunting, pertain to the technology itself. Specifically, these challenges deal with access, course configuration, and usability issues associated with both the HEEP and Blackboard:

- *Guest access and authentication*  
Faculty should be able to get persons from outside the university access to Blackboard course shells or community shells, for the purposes of providing “virtual” guest speakers in the Virtual Classroom or in predetermined discussion forums. Doing so should be an easy and convenient way of getting relevant subject matter experts interacting with our students in ways that would typically be too costly or time-prohibitive. At BGSU, while

there are processes for adjunct faculty to obtain a university ID and corresponding email address necessary for authentication into the HEEP and by default Blackboard, there is not yet an established, efficient procedure for doing so with guest speakers for a web-based class. Ideally this needs to be done, by faculty, in a timely manner, without requiring assistance such as has to be done for adjunct persons--similar to the way a traditional faculty member would physically invite a colleague or guest into their traditional physical classroom.

- *Course configuration issues and opportunities*  
Much about how a course is conducted has to do with systems configuration and related practices. As indicated earlier, the goal should be to provide enhanced instruction relative to traditional approaches. Admittedly, some of these issues are not institution-specific, but instead are limitations within the Blackboard environment itself.
- Removal of Course Shells on homepage  
Getting older course shells no longer being used off faculty homepages in a timely manner is a problem, and often results in an unnecessarily large amount of “screen real estate” being occupied by links to unused shells. Likewise, changing the status of course shells to developmental, say, when preparing to teach a new course, cannot be done directly by faculty. At BGSU, deletion of old course shells or changing of their status is handled centrally. This lack of full control over course shells where we serve as primary instructor is the result of both institutional policy and current technological limitations within Blackboard. Our Black-

board System Administrator stresses this current arrangement “prevents the accidental deletion of shells”, and that handling such requests centrally helps “manage the growth of disk usage on the system in order to insure the stability of the system.” (Don Schumacher, personal communication, July 13, 2006)

- o Disk quota ceilings for course shells and FTP

The question of shell size/capacity to work in--particularly based on increasing uploading of video files--demonstrates how different electronic delivery is. Particularly when documenting work in portfolios, in a class which happens to consume more space than was allocated by posting too much information, data, and media, it must be realized that there may be good reason for this. Ideally, the growth of course shells should parallel the growth of knowledge within the respective courses. Ideally, the same would apply toward copying courses, when faculty teach the same course each semester. At BGSU, copying one course into the shell of another involves either pre-requesting a larger disk quota for the new shell, or immediately getting bombarded with auto-generated “Disk Quota Exceeded” email messages.

The disk quota issue also holds true for media files being uploaded into course shells, yet with still another layer of approval required. That is, even if the disk quota for a course shell has been increased (a process that could take hours or days), there is still a default size limitation associated with uploading file to the shell. The choice is to once again go through

the necessary steps required to get this upload quota increased, or in turn figure out a way to decrease the file size. In the case of audio or video files, this would most likely involve further compression which might adversely impact the quality of the file, or segmenting the file into smaller chunks that could be uploaded. When the same course is needed for the following semester, the same course copy issues associated with disk quotas will arise, as if nothing happened.

To be fair, it is understandable that disk quota would need to be implemented. Unlimited storage capacity is a luxury few institutions have and, even with the cost per megabyte of hard drives dramatically decreasing over the past few years, it's probable that no matter how much capacity a university buys toward this end, it will never be enough. Our Blackboard System Administrator echoed this sentiment. He stated that "the implementation of disk quotas is another tool we have in the administration of the system", and that the initial figure was suggested by IDEAL, but had since been doubled. He also added that additional disk space is typically granted on an as-needed basis assuming there is no infringing content (that is, content that falls outside the allowances of the TEACH Act) within the course shell in question. The maximum upload size remains at 16MB per file, and was decided upon within our ITS department. (Don Schumacher, personal communication, July 13, 2006)

Certainly a plausible counter-argument from a faculty

member might even be one of "This is not my problem. I'm here to teach. Someone needs to figure out how to meet my needs toward that end." The solution? Perhaps there is no easy one. Yet, perhaps periodic review of disk quotas with equally periodic, across-the-board adjustments upward, based on the reasonable needs of reasonable faculty, is one way. It might be equally disagreeable to both faculty using Blackboard and IT staff involved with maintaining it. The fact remains, however, that IT staff are not the indentured servants of the faculty, yet nor are they the gatekeepers that can dictate the manner in which faculty choose to teach their courses.

- o Announcements  
System administration announcements placed automatically at course sites may not be adding value to the instructional process (Sinn, 2004b). Rather, these may be a distraction, taking away from the instructional process. Such announcements specifically impact available screen real estate, again for lack of a better term, since announcements generated by the Blackboard system administrator supercede all announcements made by the instructor of record for any given course. That is, Blackboard system administrator announcements occupy the top-most spot on the announcements page itself. Since many faculty tend to make the announcements page the default or "home" page for the course shell, administrator-generated announcements often block some or all announcements specific to the course. This puts the responsibility for even thinking to access addi-

tional announcements on the students, by way of additional vertical scrolling.

What is wrong with making students more participatory in this regard? Certainly we all scroll, through web pages, documents, etc. Yet, compelling students to remember to do this each time they login, rather than simply having them notice instructor-generated announcements that would normally be in plain sight, presents yet another small barrier to access, yet another potential gap in instructor-to-student communication.

As of June, 2006, this issue has been adequately addressed here, by way of a homegrown solution. Now, all announcements from the Blackboard System Administrator appear on the main Courses pages within Blackboard, rather than on the main Announcements page (that is, the main page) with each course shell. This represents an innovative solution to a problem experienced by many using this platform, and could likely be implemented elsewhere with little difficulty.

- *Virtual Classroom issues*  
Starting with the 6.0 version of Blackboard, Virtual Classroom chats are no longer automatically archived. This represents a huge problem for both faculty teaching web-based courses and students taking them. This is particularly important where faculty encourage/require students to do chats without faculty being present to initiate the archive, in the case of small group assignments or activities. Why has this functionality within Blackboard been lost? Was it strictly due to the changeover in version 6.0 to a



home-grown Virtual Classroom solution, in place of the previous one licensed from a third party company? This brings up another issues regarding window size of the Virtual Classroom now: it is difficult if not impossible to expand and/or be able to see many of the previous points of view, track the conversation, refer back to what was stated, and so on. This is particularly true in what is called the large lecture chat room in blackboard--appearing to be fairly inflexible. Since the new version of the Virtual Classroom is Java-based, is the problem also Java-based, or is it merely one of poor usability? The answer remains unclear. The problem persists.

Additionally, at present the best way to view presentation slides or related materials during a Virtual Classroom chat may be to open the browser and course shell for chat in a traditional manner, and then open a slide show presentation previously downloaded or provided in some other manner--but running the presentation outside the course shell on half the screen with the presentation on the other half. This is done since slides actually being viewed are larger this way, and due to limiting features in the text box of the "large lecture" area. But of course all are then free to control where they are (or are not) in the actual slide show, which could lead to pacing problems.

### Conclusion

Of course, while many of the above-mentioned issues are annoyances, they are still quite minor compared to the overall advantages offered by this medium. Platforms such as Blackboard allow us to connect with students we might not normally be able to reach, and allow us to automate some normally time-consuming tasks so we can in turn focus more on the content of the course rather than merely the mechanics. Will there be an on-going nego-

tiation of policies regarding distance education, pitting faculty needs against institutional realities? Certainly. But it is not a polarizing one, where such policies are either "pro-faculty" or "pro-administration", since both sides ultimately want policies and technologies in place that are pro-student, and pro-learning.

Negroponte has long-espoused his optimism for the convergence of information and communication technologies to transform education, the workplace, and the world. He refers to this as "the empowering nature of being digital", and argues that "the access, the mobility, and the ability to effect change are what will make the future so different from the present." (Negroponte, p.231) However unrefined, web-based tools and platforms are collectively bringing this "empowering nature" to higher education, and are transforming it in the process. The ripple effects of this transformation will be felt across numerous different industries, and will impact not only how we teach and our students learn, but how training takes place in business and industry, how knowledge is disseminated in an effective and timely basis, and how policies that indirectly dictate such outcomes are formed.

Digital is different. At times, this difference becomes so pronounced in distance education that one course of action might be to simply forgo electronic delivery and stay with analog and hardcopy, avoiding the divide altogether. But perhaps many people are actually giving up before truly getting started since it may seem to be too much trouble, perhaps just too distressing, with too much change relative to perceived benefits. Yet, while staying within the relative comfort of analog and hardcopy may seem tempting, doing so ignores the promise of distance education: flexible, student-centered learning, dynamic in delivery, for those most likely to be positively impacted by it.

### References

About BGSU Firelands. *Bowling Green*

*State University*. Retrieved November 20, 2005, from <http://www.firelands.BGSU.edu/about/index.html>

Alexander, S. (2001). E-learning developments and experiments. *Education+Training, 43*, 240-248.

Alexander, S. & McKenzie, J. (1998). An evaluation of information technology projects in university learning. Retrieved October 29, 2003, from <http://www.dest.gov.au/archive/cutsd/publications/ex-summary.html>.

Berge, Z.I., & Collins, M.P. (Eds.) (1995). *Computer mediated communication and the online classroom*. Cresskill, NJ: Hampton Press.

BGSU Admissions—About BGSU. *Bowling Green State University*. Retrieved December 19, 2005, from <http://go2.BGSU.edu/choose/about/>

Board of Trustees of the University of Illinois (2003). Instructional strategies for online courses. Retrieved December 6, 2003 from <http://www.ion.illinois.edu/IONresources/instructionalDesign/instructionalStrategies.asp>

Brandt, D. S. (1997). *Constructivism: Teaching for understanding of the Internet*. *Communication of the ACM, 40(10)*, 112-117.

Dickinson, G., Agnew, D., Gorman, R. (1999). Distance education and teaching issues: are teacher training and compensation keeping up with institutional demands. *EDUCAUSE*. Retrieved December 1, 2003 from <http://www.educause.edu/ir/library/pdf/CSD1194.pdf>.

Draves, W. (2002). *Teaching Online*. River Fall, WI: LERN Books.

Frederocks, E., Pickett, A., Shea, P., Pelz, W., Swan, K. (2000, September). Student satisfaction and perceived learning with on-line courses: principles and examples from the SUNY learning network. *Journal of Asynchronous Learning Networks, 4(2)*, 7-40.

Hara & Kling, R. (2000, Spring). Student frustrations with a web-based education course. *Information, Communication, and Society, 3(4)*, 557-559.

Henze, B. and Southard, S. Electronic Discussion as Genre in Distance

- Education. *Professional Studies Review*. 1 (2), 28 – 49.
- Hull, Kara. (11 April 2003). Laptop Program Helps Students. *The BG News*. Retrieved Dec 2, 2005, [http://www.bgnews.com/vnews/display.v?TARGET=printable&article\\_id=3e96c7892ad45](http://www.bgnews.com/vnews/display.v?TARGET=printable&article_id=3e96c7892ad45)
- Information Technology Strategic Plan. 15 Nov, 2002. *Bowling Green State University*. Retrieved Dec 12, 2005, <http://www.BGSU.edu/organizations/itc/itplan.html>
- Interactive Distance Education for All Learners. *Bowling Green State University*. Retrieved October 29, 2005, from <http://ideal.BGSU.edu/>
- Ko, Susan & Rossen, Steve (1998). Faculty development for online instruction: two models for effective training. *Teaching in the Community College Online Conference*. Retrieved January 26, 2004 from <http://leahi.kcc.hawaii.edu/org/tcon98/paper/ko.html>.
- Millis, B. (1999). Managing-and motivating!-distance learning group activities. Retrieved December 5, 2003 from [http://www.tltgroup.org/gilbert/millis.htm#\\_ftn4](http://www.tltgroup.org/gilbert/millis.htm#_ftn4).
- Mitra, Ananda & Hall, Amelia (2002). Distance education as a discursive practice: voice, discourse, and pedagogy. *Distance Education: Issues and Concerns*. New York, NY: The Hawthorne Press, Inc.
- Murphy, David (2000) *Instructional design for self-learning in distance education*. Retrieved December 4, 2003 from [http://www.col.org/knowledge/ks\\_instrdesign.htm](http://www.col.org/knowledge/ks_instrdesign.htm).
- Myerton, J. (1999). Thoughts on what has worked and what hasn't worked for me as an online student. Retrieved October 29, 2003, from [http://www.irn.pdx.edu/~meyertj/resources/what\\_works.html](http://www.irn.pdx.edu/~meyertj/resources/what_works.html).
- Negroponte, N. (1995). *Being Digital*. New York: Vintage Books, (1995).
- Palloff & Pratt (1999). *Building Learning Communities in Cyberspace*. San Francisco, CA: Jossey-Bass Publishers.
- Schall, D. (1998). Firstclass® Distance Education. *The American Journal of Distance Education*, 12 52-67.
- Schweizer, H., Whipp, J., & Hayslett, C. (2002). Quality control in online courses: using a social constructivist framework. *Computers in the Schools* 19(4), 143-158.
- Sinn, J. (2004a, Winter). Electronic Course Delivery in Higher Education: Promise and Challenge. *Journal of Technology Studies*. 30 (1). 39 – 45.
- Sinn, J. (2004b, April). Digital Divide: Can Electronic Delivery Promises be Fulfilled at the University? *Bowling Green State University Committee on Academic Affairs*.
- Sloan Consortium. (2005). Growing by Degrees: Online Education in the United States, 2005. Retrieved March 21, 2006 from <http://www.sloan-c.org/resources/survey.asp>
- Sloan Consortium. (2004). Entering the Mainstream: The Quality and Extent of Online Education in the United States, 2003 and 2004. Retrieved March 21, 2006 from <http://www.sloan-c.org/resources/survey04a.asp>
- Sloan Consortium. (2003). Entering Sizing the Opportunity: The Quality and Extent of Online Education in the United States, 2002 and 2003. Retrieved March 21, 2006 from <http://www.sloan-c.org/resources/survey03.asp>
- Weller, M. J. & Mason, R.D. (2000). *Evaluating an open university web course: issues and innovators*. Retrieved October 29, 2003, from <http://iet.open.ac.uk/pp/m.j.weller/pub/lancs.html>.
- White, K. W., & Weight, N.H. (2000) *The Online Teaching Guide: A Handbook of Attitudes, Strategies, and Techniques for the Virtual Classroom*. Boston: Allyn & Bacon