

Application for Provost's Awards of Excellence: Teaching with Technology

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When my colleagues ask me about teaching with technology, they usually refer to pedagogical applications of networked computing, electronic communication, and new media. I do spend hours writing, teaching, and thinking about these things. But I spend more considering, and asking others to consider, what “technology” really means. Paradoxically, because our world is saturated with technologies, it’s easy to ignore their effects, and it’s even easier to forget that technologies aren’t always external tools like printing presses or automobiles. Complex technologies like writing combine tools and cultural forces in ways we have only begun to understand. Where do we draw the line between “human” and “technology,” as far as writing is concerned? Can we draw it at all? To paraphrase Marshall McLuhan, technologies are extensions of and into human beings, and they affect our very consciousness. This is nothing new; the ancient Greeks lamented the deleterious effect of writing on memory, and it’s important to have a sense of history when thinking about “the next big thing.” Odds are it’s not so big, or so new.

Given this view, all teaching involves technology; we should not ask, “Do we teach with technology, but “Do we acknowledge technology as we teach?” As Walter Ong writes, this is another paradox: we artificially extend ourselves so well, it comes naturally. Consequently, my first step in teaching is denaturing the technologies involved by examining their relationships to human agency. Introducing “user-centered technology” frames this discussion. Who makes decisions about pedagogical technologies? For whose benefit? Based on what assumptions? Because of what evidence? Foregrounding these questions often provokes students (and faculty) to wonder why few technologies are designed by people actually using them.

This denaturing leads to my second core movement in teaching, striving for a carefully cultivated knowledge, both practical and theoretical, of the operation of technology. Cynthia Selfe calls this “critical technology literacy.” As she demonstrates, those who lack this knowledge open themselves up to abuse from those who have it—or more frequently in my experience, they seldom feel the return on technology is worth the investment. I aim to avoid this sinking feeling in my own use of technology, and hope that those I teach, both students, co-workers, and readers of my research, can use the skills and knowledge I help them develop to use technology efficiently and effectively.

Given my extensive work in writing studies, new media, and technical communication, these two movements appear in my teaching in many ways, both in and out of the classroom.

Awareness and understanding of technology (criteria 3)

As I do in this narrative, I begin classes which deal with new media, electronic communication, or other technologies by asking students to consider how “technology” is defined. These discussions often shape the entire semester. For example, in 480/Computers & Writing, a course I have taught many times, we have investigated the “and” in “computers and writing”—how are the two connected? What draws and keeps them together? In the course 481/New Media, collective definition of “new media” took up much of the first four weeks.

I also acknowledge the complexity and difficulty of understanding technology, relying on my knowledge of the history of writing to deliver this lesson meaningfully. As an analogy, the difficulty of writing helps explain the difficulty of learning and understanding any technological system. For example, in 483/Professional Editing, I begin discussion of techniques for computer-

based editing by asking students to recall their frustration learning old-fashioned copyeditors' marks earlier in the course. On a curricular level, I ensure that reading loads allow the hands-on work necessary to learn new tools and ways of working and thinking, and I explain the most frustrating or challenging differences in class. For example, learning to work with networked computers requires a very different sense of place than keeping files on a thumb drive. This takes time, and I am patient but insistent. In evaluations, multiple students have observed this time and my one-on-one assistance made a huge difference in their learning. One wrote, "It actually put into practice the things we learned and provided an open learning environment."

Of course, I want this awareness to be sophisticated, as I write above—I want both students and colleagues to engage technology meaningfully and efficiently, not for its own sake. I encourage that people consider the stakeholders involved, themselves and others: who benefits from this practice? How? Will it be successful one or five years from now? As one student wrote, "Any class can teach technology, context, facts, memorization ... but this class made me think ... and want to think." True understanding requires reflection, and my assignments (see appendices 2 and 3) include this in both evaluations (discussion, my assessment) and components (reflective reports and peer reviews).

Inclusion of current and emerging technologies (criteria 1)

As a geek, I enjoy experimenting with new things, and I really get excited when I find useful applications for them. And I share my experiences widely. My extensive work with web applications has been integrated into courses: the photo-sharing service Flickr, in 481/New Media; the social bookmark manager del.icio.us, in 480/Computers & Writing; and the citation manager CiteULike, in 615/Collaboration. My web page (<http://faculty.wiu.edu/CB-Dilger/>) provides direct access to my accounts with these services, providing not only examples from which interested parties can learn, but showing my commitment is genuine; I use the services I recommend. Because Western is often slow to adopt new tools, I provide access for courses, interested students and faculty via my off-campus server.

My use of the del.icio.us social bookmarking service to structure 480/Computers & Writing course readings (appendix 1) is interesting in this regard. I organized the course under a series of important keywords, found suitable online readings for each keyword and tagged them accordingly, and created web pages directing students to the bundles of readings for each week. The links in del.icio.us connected students with readings, and the associated tags provided more on each subject, from me or all del.icio.us users. With this approach, students quickly extended their reading on course topics outside of assigned texts and began the research process necessary for semester projects and other scholarship. Students with del.icio.us accounts made the process two-way, recommending texts to me for inclusion in my bookmarks or course readings.

Addressing emergent technologies often demands moving outside the traditional boundaries of English studies. For example, in 381/Technical Communication and 483/Professional Editing I've included Edward Tufte's seminal work on effective visual presentation of data. 480/Computers & Writing often includes learning rudimentary programming skills such as modularization and iterative development. As one student wrote, "I greatly appreciated learning how to use HTML. I feel that it gives us a new view of the world ... it also serves as a great example of interacting with technology." The use of emergent technologies boosts awareness and helps with outcomes as well.

Enhancing student learning outcomes through technology (criteria 4)

Many of my courses include assignments which connect students to real problems and constituents. Spring 2007 381/Technical Communication students worked with issues related to their academic disciplines, solving problems with appropriate uses of technology such as operating audiovisual equipment, the development of creative rooms, documentation for changing computer motherboards, and managing a television installation business (appendix 3). Similarly, in a recent 480/Computers & Writing course, students planned and began the redevelopment of the First Year Experience website. Like internships, this direct contact with stakeholders provides a much richer educational situation than hypothetical scenarios. For the user-centered model of technology I promote, it is essential.

I always provoke students to envision the use of technology so it's not just an exercise preceding multiple-choice tests. One student commented, "It was tough work but like I said at the mid-term evaluation, I have never felt like the assignments were busy work. I was able to get something out of everything I did." My investment in technology produces real changes in students' attitudes toward it and allows them to develop new skills and methodologies, especially communicative strategies. For me, the best outcome of teaching is students asking, "What are you teaching next semester?" I'm glad to say that happens all the time.

Importantly, I measure the outcomes of my courses by carrying my calls for user-centered technology into evaluations. I have created surveys (appendix 6) to supplement Western's course evaluations and provide me data which help me determine what I can do better—and I take the comments on them very seriously, shaping courses based on midterm and final evaluations.

Sharing expertise in workshops (criteria 2)

I've offered a strong variety of workshops to Western students and faculty, many dealing with web accessibility, the art and craft of ensuring web pages are available to every user. In particular, I helped develop the promotional material and the program for "Best Practices: Teaching Students with Disabilities," and presented one of its sessions, "Thirty minutes to better web accessibility" (appendix 4). I've followed up these presentations with one-on-one consultations with staff at the University Registrar and other campus units. Other workshops have educated web developers (item AI) and doctoral students (item AE).

In my department, I've repeatedly hosted résumé and vita workshops (item AG) which include hands-on instruction in visual design and efficient word processor formatting—construction which makes job materials easy to update and transmit electronically. This work builds on similar content in 381/Technical Communication and 383/Public & Persuasive Writing, courses where I've asked students to ponder the appearance of their writing. Students often realize this can be very fruitful. One student wrote, "The *Non-Designer's Design Book* is probably going to be the most useful book to me in my future ... I like the design aspect and the chance to be creative."

Recently, through an open source software users' group I chair (item S), I began a series of annual workshops at a national conference, the first focusing on open source equivalents to expensive proprietary software—for example, Audacity as a replacement for ProTools. At Western I have provided similar instruction to faculty members, training colleagues to use the Nvu web editor instead of Adobe Dreamweaver. "Thanks for getting me on the web," wrote a colleague, "and thanks for the continuing help. My students are already (!) using my pages."

Creating online learning environments (criteria 5)

While I don't use traditional online learning environments like WebCT or Blackboard, I've never had trouble generating effective online learning by aggregating other tools. In fact, I think avoiding courseware contributes to my success. I combine the emergent (instant messaging, web services, weblogs, wikis) with comparatively venerable technologies like email. This allows each student to find the most appropriate technology, as opposed to the one-size-fits-all approach of monolithic courseware. Furthermore, my environments don't require "browser compatibility tests"—they just work.

I build web pages for all courses, some simple lists of news and links to online versions of handouts (as in 180/Composition or 383/Public & Persuasive Writing), but many extensive multi-page sites which integrate weblogs and links to del.icio.us and other services (480/Computers & Writing, 481/New Media, 483/Professional Editing). In these courses, web sites serve as the core of online environments, though sometimes wikis and weblogs replace static pages. At the very least, web sites provide convenient student access to course information. My colleagues have praised my decision to use web pages instead of courseware, because they can easily access my course materials, both current courses and those I've taught in years past.

Wikis and weblogs help me realize my commitment to user-centered technology and student-centered education by facilitating constant feedback and intensive participation. Indeed, these spaces integrate students' input and content with mine—another way to practice what I preach. It's one thing to say education is student-centered; wikis and weblogs make it so, since my voice literally becomes one among many. Weblogs have provided the central discussion spaces in some iterations of 480/Computers & Writing. My students and I used wikis to build a collectively designed course syllabus in 481/New Media (appendix 2), to complete a semester project in 480/Computers & Writing, and for small assignments in other courses.

Using many technologies particularly benefits distance education students; I've often thought my success in the Quad Cities begins with my commitment to communicating often with students online. A student wrote, "It's awesome how personal you are with giving everyone feedback via email and how you remember what topic everyone in the class wrote about." In graduate advising, especially, these exchanges have proven indispensable.

Research in effective teaching with technology (criteria 6)

The synergy between my research and teaching is powerful: as noted above, my engagement with web accessibility has helped improve Western's ability to serve all users of its web sites. I have spent hundreds of hours educating myself about best practices in web accessibility and working directly with users of assistive technologies, and I've presented my findings at multiple national conferences. For example, at STC 2006 (item F), I discussed the need to differentiate between accessibility and usability. C&W 2005 organizers asked me to speak about web accessibility because they felt other conference events neglected it (Item K). There's no doubt effective teaching should begin by ensuring every student access to course materials. By conducting workshops (items AE through AI) and serving on multiple committees (items Y, Z, AA, AC, and AD), I've brought that knowledge back home to Western as well. Western recently recognized my work with a President's Excellence in Diversity award (item AJ).

I've also written formally about my use of social bookmarking and library catalogs (item A) and searching weblogs (item C). Informally, I've shared my day-to-day experiences on my weblog (<http://wrecking.org/cbd/>) and in conversations with my colleagues. My user- and student-centered approach to teaching with technology pushes me to use technology effectively; these

and other publications share what I've learned from students' feedback about the technologies I use pedagogically.

Other activities (criteria 7)

Finally, I continue to publicly argue that the University must prioritize individual human agents and human interaction over the preservation of the technological systems and cultures which shape it. That is, I contend that where technology is concerned, Western must embrace the student-centered values honored by awards such as this one. Unfortunately, the prevalent attitude favors the opposite approach. Too often, students are acknowledged only as sources of problems to be addressed by University policies. Very few technology decision-makers are faculty members. Technology is more often shaped by addressing systemic preservation than by considering, "What's best for our students and faculty? What's best for learning?" This suppresses innovation and discourages students from embracing University-provided technology.

Changing the way the University shapes technology policy means changing the very culture of the University, and that's a massive undertaking. The strategic planning process has begun to move us in the right direction, but we need to ensure faculty engagement. I have repeatedly called for radical change, and I will continue to. I do so because I believe there's a gap between what Western can achieve with technology, and what it currently achieves. I know we are making progress. But we have much to teach and learn about how we teach and learn.

Works Cited

- McLuhan, Marshall. *Understanding Media: The Extensions of Man*. Cambridge: MIT University Press, 1964.
- Ong, Walter J. *Orality and Literacy: The Technologizing of the Word*. London: Routledge, 1982.
- Selfe, Cynthia. *Technology and Literacy in the Twenty-First Century: The Importance of Paying Attention*. Carbondale: Southern Illinois University Press, 1999.

Appendix: portfolio activities related to teaching with technology

My full vita is available at <http://faculty.wiu.edu/CB-Dilger/>. Given the length limitations of this application, I was not able to address all the activities listed here in the preceding narrative.

Publications

- A) “Ubiquitous Cataloging” (co-authored with Bill Thompson). *Radical Cataloging*. K.R. Roberto, ed. McFarland, 2008. (In press.)
- B) “Redefining Ease for Electracy.” *New Media/New Methods: The Florida School*. Jeff Rice and Marcel O’Gorman, eds. Parlor Press, 2008. (In press.)
- C) “Searching Weblogs” (co-authored with Bill Thompson). *Teacher Librarian* 34.2 (December 2006).
- D) “Extreme Usability as Technical Communication.” *Critical Power Tools: Technical Communication and Cultural Studies*. J. Blake Scott, Bernadette Longo, and Katherine Willis, eds. SUNY Press, 2006.

Conference presentations

- E) “Getting Started with Open Source Software.” Computers & Writing Conference, Wayne State University, Detroit, May 17, 2007.
- F) “Defining Accessibility (and Usability).” Society for Technical Communication 53rd Annual Conference, Las Vegas, May 2006.
- G) “Thirty Minutes to Better Web Accessibility.” Conference for College Composition and Communication, Chicago, March 2006.
- H) “Accessibility Mandates and Institutional Factors.” Computers & Writing Conference, Stanford University, June 19, 2005.
- I) “The Logic of the Default.” Convergences, North Carolina State University, November 12, 2004.

Invited speaking

- J) “Getting Published Online: Journal Editors’ Roundtable.” Computers & Writing Conference, Wayne State University, Detroit, May 18, 2007.
- K) “Composition Beyond Words.” Computers & Writing Conference, Stanford University, June 19, 2005.

Courses designed and taught, Western Illinois University

- L) ENG 180, College Composition I (Spring 2006 and Spring 2007).
- M) ENG 381, Technical Communication (Spring 2007).
- N) ENG 383, Public & Persuasive Writing (Fall 2004).
- O) ENG 480, Computers & Writing (Fall 2004, Fall 2005, and Fall 2006).
- P) ENG 481, Topics in Rhetoric & Composition: New Media (Spring 2006).
- Q) ENG 483, Professional Editing (Spring 2005 and Spring 2006).
- R) ENG 615, Seminar in Rhetoric & Composition: Collaboration (Spring 2005).

Professional activities

- S) Chair, CCCC Free and Open Software Special Interest Group, July 2006–present.
- T) Web editor, *Composition Forum*, August 2005–present.
- U) Session chair, “Aligning Rhetorical Purposes and Accessible Web Design.” Computers & Writing Conference, Wayne State University, Detroit, May 18, 2007.
- V) Focus group respondent, Bedford St. Martin’s New Media Publishing, March 2007.
- W) Coordinator, Position Statement on Free Software and Open Source, NCTE/CCC, August 2005–March 2007.
- X) Reviewer, Sidney I. Dobrin, *Technical Communication for the 21st Century*, May 2006.

Professional activities, Western Illinois University

- Y) Web Accessibility Committee, September 2006–present.
- Z) Online Class Information Database Committee, April 2006–present.
- AA) CAS Deans’ Technology Advisory Committee (DTAC). March 2006–present.
- AB) Judge, Excellence in Teaching with Technology Award, November 2005.
- AC) Computer & Information Technology Committee (CIT), August 2004–May 2005.
- AD) CIT Web Standards Committee, August 2004–May 2005.

Workshops, Western Illinois University

- AE) “Web Accessibility for Educators.” Presented for EDL 518, Administrative Applications of Educational Technology. May 27, 2007.
- AF) “Best Practices: Educating Students with Disabilities.” For Disability Support Services. April 4, 2007.
- AG) “The Vita.” Presented for English & Journalism students. February 6, 2007, March 20, 2006, October 10, 2005, and December 2, 2004.
- AH) “Introduction to Web Accessibility.” For Faculty Development. October 4, 2005.
- AI) “Illinois Web Accessibility Standards.” For Web Standards Committee. April 14, 2005.

Honors, awards, and scholarships, Western Illinois University

- AJ) President’s Excellence in Diversity Award for Accessible Course Design, May 2007.
- AK) Outstanding Teaching with Technology, College of Arts & Sciences, May 2007.

Supporting documentation

- (1) ENG 480, Fall 2005: Handout explaining use of del.icio.us
- (2) ENG 481, Spring 2006: Gaming unit project assignment (“Big assignment”)
- (3) ENG 381, Spring 2007: Semester project assignment
- (4) Handout “Thirty minutes to better web accessibility” from “Best Practices: Educating Students with Disabilities” workshop
- (5) Letter of support from Dr. David Boocker, chairperson, English & Journalism
- (6) Course evaluation instrument used in multiple classes