

My E-Semester: New Uses for Technology in the Legal Research and Writing Classroom

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Technology for Teaching ... is a periodic feature of Perspectives designed to introduce and describe the ways in which teachers of legal research and writing are using technology to enhance their teaching. Through Volume 9, this column was edited by Christopher Simoni, Associate Dean for Library and Information Services and Professor of Law, Northwestern University School of Law. Readers are invited to submit their own “technological solutions” to Mary A. Hotchkiss, Perspectives Editor, University of Washington School of Law, William H. Gates Hall, Box 353020, Seattle, WA 98195-3020, phone: (206) 616-9333; e-mail: hotchma@u.washington.edu.

By Kristen E. Murray

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Law schools have been grappling with the topic of technology in the classroom for more than 10 years.¹ When I started law school, the conversation was just beginning, as we experimented with taking class notes and exams using laptop computers. The debate has intensified in recent years, as today’s students are highly conversant in technological media and expect to see it integrated with in-class education.²

¹ See Anna Williams Shavers, *The Impact of Technology on Legal Education*, 51 J. Legal Educ. 407 (2001); Shelley Ross Saxer, *One Professor’s Approach to Increasing Technology Use in Legal Education*, 6 Rich. J.L. & Tech. 21 (2000); Maria Perez Crist, *Technology in the LRW Curriculum—High Tech, Low Tech, or No Tech*, 5 Legal Writing 93 (1999); Lucia Ann Silecchia, *Of Painters, Sculptors, Quill Pens, and Microchips: Teaching Legal Writers in the Electronic Age*, 75 Neb. L. Rev. 802 (1996).

² See Joan MacLeod Heminway, *Caught in (or on) the Web: A Review of Course Management Systems for Legal Education*, 16 Alb. L.J. Sci. & Tech. 265, 283 (2006) (“Many 21st Century law students expect the use of technology in legal education because they grew up with technology and use it in nearly every aspect of their daily lives.”). But see Andre Hampton, *Legal Obstacles to Bringing the Twenty-First Century into the Law Classroom: Stop Being Creative, You May Already Be in Trouble*, 28 Okla. City U. L. Rev. 223 (2003) (discussing copyright and right of privacy issues attendant to bringing technology into law school classrooms); David M. Becker, *Some Concerns About the Future of Legal Education*, 51 J. Legal

At George Washington University Law School, all of our classrooms have smart podiums and wireless Internet access; a classroom computer with full Microsoft® Windows and Office capabilities and Internet access; a VCR, a DVD player, and a video camera; and a camera that projects the images from the computer and video equipment onto an in-class screen.³ In addition, all incoming students are required to purchase laptop computers. According to the 2006 survey of legal writing programs conducted by the Legal Writing Institute (LWI) and the Association of Legal Writing Directors (ALWD), 123 legal writing programs (of the 184 survey respondents) make use of similarly wired classrooms.⁴

I am no technophobe in my nonprofessional life: I have and use the technological advancements that are now considered standard (laptop, cell phone, iPod). I have also used technology in its most basic forms in support of my courses, but have been hesitant to adopt more advanced methodologies. I could not, however, figure out why. Upon reflection, I narrowed it down to two related reasons: my view that technology is often unreliable, and the tight scheduling that was embedded in all of my lesson plans. I did not want to compromise my credibility

Educ. 469 (2001) (expressing concerns about overuse of technology in legal education); Molly Warner Lien, *Technocentrism and the Soul of the Common Law Lawyer*, 48 Am. U. L. Rev. 85 (1998) (encouraging thoughtful use of technology because of its potentially negative impact on legal education and analysis).

³ We have access to low-tech options including a TV-VCR stand and an ELMO, but I have limited my description of the classrooms to the capabilities most relevant to the technologies I explore in the article.

⁴ See Association of Legal Writing Directors/Legal Writing Institute, 2006 Survey Results 27, <alwd.org> (accessed March 6, 2007) [hereinafter 2006 ALWD Survey]. Of these, “all faculty” use smart classroom technology in 39 programs; “most” faculty use smart classroom technology in 29 programs; and “some” faculty use smart classroom technology in 55 programs. *Id.* Twenty-nine programs involve no use of smart classrooms. *Id.* The average effectiveness rating for smart classroom technology was 4.07 (out of 5.0) for 2006. *Id.*

(inside or outside the classroom) by demonstrating a lack of proficiency with the technology that my students found so easy to use. Furthermore, I did not want to waste valuable classroom time trying to make a stubborn piece of equipment function as it should.

I realized, however, that my students were openly and seamlessly embracing technology in their everyday educational activities. For example, when I asked my students to “swap papers” in class, they either e-mailed the documents to each other or switched laptops at their seats; even printing word-processing documents seemed obsolete. I decided I needed to think critically about increasing and intensifying my use of technology in and in support of my courses, a project I called my “e-semester.” I focused on six technology-based enhancements: using my course Web site to eliminate paper from my class distributions; designing PowerPoint-based lectures with student note taking in mind; encouraging class discussion through a threaded discussion forum; grading electronically; integrating audio and video technology in class lectures; and implementing advanced in-class writing exercises.⁵

Using the Course Web Site to Eliminate Paper from My Class Distributions

The wide availability of user-friendly software has made the class Web page a natural companion to many legal writing courses.⁶ I have used a course Web page for all of my courses for as long as I have

been teaching.⁷ This use, however, was rather limited: I posted my course syllabus, policies, and local rules on one of the document pages, and used another document page to post my class notes and exercise handouts following each class. I also had students sign up for mandatory conferences through the Web page. Essentially, the Web page’s major function was as an electronic depository for files so that students had access to them at all times. This gave my students the ability to access the documents whenever they needed them, and meant that I did not need to keep extra copies of my syllabus on hand. Thus, the Web page was useful, but did not demonstrate any real creativity on my part.

In recent semesters I noticed that few students accessed paper copies of documents during class; when I asked them to refer to the syllabus or previous class handouts, they opened the documents on their laptops. When I distributed a handout, there was almost always a student who did not have a pen. And when signing up for individual conferences, almost all of the students checked their calendars online rather than in paper form.

Because the students seemed comfortable in a paperless medium, I decided to use the course Web page as the sole method of distribution for class materials. The syllabus and course policies, documents related to our class assignments, and cases for our closed research writing assignments were posted on the page. Rather than post my class notes and handouts on the page following class,

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⁵ Some, but not all, of these suggestions use modes of technology that are not available in all law schools. Where possible, I have included modifications for less-wired classrooms.

⁶ Class Web pages are a user-friendly way to begin to experiment with class-related technology. See generally Heminway, *supra* note 2. According to the 2006 ALWD Survey, this is the most popular method of incorporating classroom technology: 93 programs make some use of course Web page software. 2006 ALWD Survey at 27. Use of this technology has increased steadily since 2003. “All faculty” at 36 law schools use such software, as do “most” faculty at 9 law schools and “some” faculty at 48 law schools. *Id.* However 42 law schools report that no faculty use course Web pages. *Id.* Faculty report a 3.97 (out of 5.0) effectiveness rating for this technology. *Id.* The number of programs using a Web course utility product such as TWEN® (The West Education Network®), WebCT, or Blackboard is higher, at 153 programs in 2006. *Id.* “All faculty” at 76 law schools use such software, as do “most” faculty at 22 law schools and “some” faculty at 55 law schools. *Id.* Only 12 law schools report

that no faculty use course Web pages. *Id.* Faculty report a 4.26 (out of 5.0) effectiveness rating for this technology. *Id.* See generally Lori Shaw, *Lori Shaw and the Search for the Golden Snitch: Using Class Web Sites to Capture the Teachable Moment*, 11 Perspectives: Teaching Legal Res. & Writing 101 (2003); Joan Blum, *Why You Should Use a Course Web Page*, 10 Perspectives: Teaching Legal Res. & Writing 15 (2001).

⁷ Many law schools have infrastructure to support these Web pages; in addition, both Thomson West and LexisNexis® offer electronic classroom options. The Thomson West course software is TWEN, <lawschool.westlaw.com/twen>, and LexisNexis has Web Courses, <www.lexisnexis.com/lawschool/webcourses/>. Blackboard, <blackboard.com>, is also available at many academic institutions, as is WebCT, <webct.com/>. These two entities recently merged. Press Release, *Blackboard.com, Blackboard Inc. Completes Merger with WebCT, Inc.* (Feb. 28, 2006), <investor.blackboard.com/phoenix.zhtml?c=177018&p=irol-newsArticle&ID=822607&highlight=>.

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I posted them in advance so that the students could access them electronically during class.⁸

Nervous about the lack of a paper trail, I decided to ensure the integrity of the documents I posted by converting them to Portable Document Format, or PDF. This would prevent formatting errors that might occur in the upload/download process. Some documents, such as the cases for our closed packet memo assignment, were already available in PDF. To convert other file formats to PDF, I downloaded a PDF distiller, which installed a printer driver on my computer so that I could do the conversions from my desktop.⁹

With the exception of submitting their final appellate briefs, I allowed my students to go paperless as well.¹⁰ I used the assignment submission feature on my course Web page, which allowed students to upload their papers to the Web page when they were completed. Once submitted, I received an e-mail with a time stamp noting the time the assignment was submitted, and with an electronic copy of the document attached. This meant that I did not have to be in my office to collect papers when they were due, and also facilitated the electronic grading discussed below.

This was the quietest of my technological experiments—I did not announce it to my class, and no one commented on the shift to a paperless classroom. This confirmed to me that most of the

⁸ This was also part of my e-semester experiment and is discussed further below.

⁹ The PDF distiller installs a printer driver so that the user can create PDF documents from other formats. For example, from within a Word document, I clicked File, Print and chose the PDF option from the printer menu. Instead of actually printing it, the distiller opened the document in PDF using Acrobat Reader, and allowed me to save the new PDF document as its own file. I then had the documents in both Word format, for future edits, and PDF, for posting. Adobe has its own PDF distiller online, <createpdf.adobe.com>; there are also free versions of this software such as PrimoPDF, <primopdf.com>, and PDF Online, <pdfonline.com>.

¹⁰ Because part of our pedagogy contemplates the physical construction of an appellate brief, with formatting and binding requirements under our “local rules,” I required the students to submit and exchange briefs with their “opposing counsel” in hard copy. I also asked them to submit electronic copies so that I could grade the papers electronically (another facet of my e-semester discussed below).

students considered the paper distributions superfluous; their main reference for all course-related documents had been the electronic copies anyway. After an initial slow start converting all of my course documents to PDF, I came to appreciate this innovation as well, and found myself looking for electronic instead of hard copies of documents when I needed them.

Encouraging Class Discussion Through a Threaded Discussion Forum

Most course software packages include options for teacher-student communication through e-mail and threaded discussions. I have always enabled the discussion forum feature on my course Web page, but made little use of it: I posted class-wide announcements that did not require immediate attention such as job postings and activities at the law school. Almost everything class-related went out through e-mail.

My new course policy this year was that all assignment-related questions should be posted on the discussion forum so that all the students would have the benefit of my answer. I monitored the forum each day and paid particular attention to it in the days before major assignments were due.

Though active in the days—and particularly the hours—prior to a major due date, the discussion forum did not catch on as well as I hoped it would. For the most part, students posted assignment-related questions, but occasionally I would get an e-mail from a student who thought his question was “too personal” or “too silly” to ask in the forum. (Sometimes they were right that it was too paper-specific to post; however, where the student’s self-consciousness alone prompted the e-mail, I would post the question anonymously along with my answer.)

A colleague had a much more successful engagement with his students through the discussion forum: before his first class, he sparked an online discussion by asking students to comment on the baseball playoffs. All the students were required to respond, and I think this casual, nonclass conversation made them more comfortable with the forum and kept the

discussion going through the semester even on class topics. I am considering the adoption of this type of strategy next fall.

Grading Electronically

I have always used word-processing programs in grading major legal writing assignments. I typically handwrote margin comments and provided each student with a page-long sheet of feedback specific to his or her work product. I provided handwritten comments on shorter homework assignments. In my e-semester, I decided to do all of my grading, for both major and minor projects, electronically.

Most word-processing programs allow users to embed electronic comments in a document.¹¹ Users can also track changes, highlight text, and draw text boxes and diagrams within the document. All of these tools can be used to grade papers; I used only some of these features in my grading. I do not typically offer line edits as part of my comments, so I did not enable tracked changes—I wanted to avoid the temptation to alter sentences within the document. I made margin comments, along with a global note at the end of the paper, and used highlighting to draw attention to issues of phrasing and word choice so that the students could look critically at these passages later. I then converted the papers to PDF (as discussed above) and returned the papers as e-mail attachments.

Cosmetically, the graded papers looked much nicer than my usual handwritten comments did: there were no issues of legibility or erased or crossed-out comments. Electronic grading can also be more efficient than handwritten comments, because commonly used phrases can be cut and pasted from one document to another. I also found that I had an external limitation on my comments: without pen in hand, I was less tempted to line-edit grammatical and spelling mistakes; instead, I used the highlighting feature.

¹¹ In both Microsoft Word and WordPerfect®, the user can place a margin comment in a document by placing the cursor at a point in the document and choosing Comment from the Insert menu.

This grading methodology was easy to adopt, especially because I can type faster than I can write, but I was not immediately ready to commit to electronic grading. I usually grade away from my desk, far from computer-related distractions, and electronic grading meant that I was bound to my computer. I felt that the comments looked less personal than they did in my own handwriting. I also missed the ability to make random markings on the page (such as circling text or drawing arrows to connect examples) that were far easier to do with pen in hand (though arguably the comments I made were clearer than my graphic markings might have been).

My students, however, universally praised the switch to electronic comments.¹² They loved both the format and the substance. At our post-paper conferences, they brought their laptops and pulled up the attachment I had sent them instead of toting the papers as they had at previous conferences. Because the purpose of my comments is, obviously, to benefit the students, I will continue to grade this way.

Designing PowerPoint-Based Lectures with Student Note Taking in Mind

PowerPoint presentations can be an extremely effective classroom tool, but only if used correctly. Using a presentation as a method for delivering content that would take a long time to dictate or write on the board can save a lot of time.¹³ However, I have seen many student evaluations involving complaints about PowerPoint-based class lectures where the professor read from the slides.

I have always taught using PowerPoint presentations where I thought that it could save time in class, or where I thought students would benefit from having my outline of the material.

¹² When two former students saw that I was experimenting with electronic grading, one burst into actual applause and the other told me that “paper is so 2003.”

¹³ For a useful discussion of how to construct an actual PowerPoint presentation, see Wanda McDavid, *Microsoft PowerPoint: A Powerful Training Tool*, 5 Perspectives: Teaching Legal Res. & Writing 59 (1996).

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My slides did not contain too much content, and I always posted them on my course Web page after class.

This year, a student requested that I post the presentations prior to class, so that she could use the slides as a template for her class notes. I acquiesced without thinking there would be any pedagogical implications to this decision; however, when reviewing my lesson plans, I found myself editing the content of the presentations with student note taking in mind. I imagined the students engaging with the text of the presentation, rather than starting with a blank page for their own notes, and this allowed me to change the way I presented the information. For example, where I would normally include elements in a list, such as the parts of an office memorandum, I included only a list of numbered elements so that the students could fill in the content themselves. Where I wanted a slide to inspire class discussion, I left the slide blank and asked the students to answer an open question (for example, “what is persuasion?”) themselves, and then supplement their answer with the information ascertained through class discussion. Thus, the slides framed the discussion, but the students’ own words filled in the content. Practically speaking, because I teach in a classroom with a wired projector, I was able to run the presentation on the classroom computer, while students could access the file online and take notes on their laptops.¹⁴

I do not think my students appreciated the nuanced differences in my presentations; I would not expect them to, having not seen other, earlier versions. However, at least one of my students commented on the convenience of having all her class notes in a single electronic file at the end of the semester. And I think that I advanced the level of class discussion and student engagement with the material by restructuring my class presentations. Finally, I also believe that advanced PowerPoint users (a group that does not include me) can

design even more interactive and thoughtful classroom exercises using PowerPoint.¹⁵

Implementing Advanced In-Class Writing Exercises

In-class writing exercises existed well before technology arrived in the classroom. However, technology can add a layer to these exercises. For example, a peer-editing exercise may involve an electronic exchange of papers (via e-mail or a disk transfer) and students may employ some of the capabilities (discussed above) with respect to electronic grading. Students may also start a writing assignment in class and build upon it later—for example, I introduce one of our memo assignments through a client interview, and the students take notes on their computers during the question and answer session. Their follow-up assignment is a summary of their interview notes, and many of my students convert their in-class notes to the assignment that they ultimately turn in. Finally, I have used a combination of in-class writing and course software to allow class-wide brainstorming; I had my students pair up and develop search terms for one of their assignments and then post their results on our discussion forum so that everyone had the same information. I have used all of these techniques for years, and used them again in my e-semester.

I also used classroom technology to engage in some new group-writing exercises. Students have long requested “smaller stakes” writing assignments, and I now ask them to turn in short memos based on the examples in our textbook. I gave them this assignment, and then told them we would start by writing an introductory paragraph together as a class. Using the in-class computer projected onto the large screen in the front of the class, I opened a new word-processing document and asked for contributions to our opening sentence.

¹⁴ In a non-wired classroom, one could e-mail or post the presentation for students before class, and teach using printed notes to the same effect.

¹⁵ Our teaching assistants have brought research and citation to life by using PowerPoint to create truly interactive and high-tech class exercises. For example, our dean’s fellows have constructed review sessions where students play “Bluebook Jeopardy,” with hyperlinked slides and a true *Jeopardy* board.

This was an effective class exercise, though I did not care for it personally. The students were able to negotiate their sentence structure and word choices, and dictated them to me as the class typist. I am generally a fair and fast typist, but either because I was both listening and typing at the same time, or because I had all my students' eyes on me while I was typing, I faltered at the keyboard and felt much like I was performing at a recital. In the future, I will probably ask my teaching assistant to be the class scribe so that I can devote my full attention to the class discussion (and avoid the self-consciousness I felt when my many typographical errors were projected onto an 8-foot screen).

Smart classroom software can also facilitate the use of technology in the classroom.¹⁶ For example, some programs allow students to log in to a class session so that the instructor can share their desktop views or project each desktop onto the projected screen. Students can then critique each other's work and have a group discussion about their classmates' writing.¹⁷ Classroom instructors can replicate the benefits of such programs in a somewhat crude way even absent such software. For example, in one class I had my students do an in-class writing exercise and wanted them to critique each other's work product in class. I had them post their paragraphs on the discussion forum on our class Web page, and then I logged on to the page using the classroom computer and pulled them up on the projector screen.

Thus, I have had many successes with incorporating technology into in-class writing exercises, and I will continue to use these techniques in the future.

Integrating Audio and Video Technology in Class Lectures

The Internet has many common uses in a legal research and writing class: exploring legal research

online; visiting court Web sites to explore local rules and decisions; and using vendors' citation quiz services such as the LexisNexis Interactive Citation Workshop and Thomson West's CiteStation. For the most part, Internet resources fall within the jurisdiction of my teaching assistant and I did not use the Internet for demonstrative purposes in class. This semester, I built up a library of audio and video clips to illustrate concepts that complement the substance of a class discussion. For example, abstract concepts such as oral argument can be made tangible to students through the use of in-class video presentations. User Web sites such as YouTube¹⁸ and Google Video¹⁹ can provide examples of common concepts such as depositions and oral argument.

Many courts have made audio materials available through their Web sites. For example, the U.S. Court of Appeals for the Seventh Circuit uploads audio clips from its oral arguments along with the documents filed with the court.²⁰ Audio recordings of Supreme Court oral arguments are now posted on the Oyez Web site, with certain cases receiving expedited treatment.²¹ Many state courts now have similar recordings available on their Web sites.²²

Recording students' own presentations can also be an effective teaching tool. Most wired classrooms also have video cameras that are professor-controlled. I had my students bring in blank videotapes to tape their in-class oral arguments so that they can view them at home for self-critiquing.

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¹⁸ <youtube.com/> (last visited Mar. 6, 2007).

¹⁹ <video.google.com/> (last visited Mar. 6, 2007).

²⁰ <www.ca7.uscourts.gov/fdocs/docs.fwx?dname=arg> (last visited Feb. 8, 2007).

²¹ Oyez, <www.oyez.org> (last visited Mar. 6, 2007). The Web site recently paired Supreme Court oral argument transcripts with the audio files and photos of the speaker, for a more interactive experience. See Meredith v. Jefferson County Board of Education—Oral Argument, <www.oyez.org/cases/2000-2009/2006/2006_05_915/argument> (last visited Mar. 6, 2007).

²² See, e.g., Delaware, <courts.delaware.gov/Courts/Supreme%20Court/audioargs.htm>; Wisconsin, <wicourts.gov/supreme/scoa.jsp?docket_number=&begin_date=&end_date=&party_name=marder&sortBy=date>; and Texas, <www.supreme.courts.state.tx.us/oralarguments/audio.asp> (last visited Mar. 6, 2007).

¹⁶ “Smart classroom software” refers to products such as SynchronEyes, <www2.smarttech.com/st/en-US/Products/SynchronEyes+Classroom+Management+Software>, which create an in-class network for teachers and students.

¹⁷ Such software can also serve a policing function, should instructors want to monitor nonacademic, in-class computer use.

Watching their own stance and tone at the podium helped them internalize what they needed to do to improve.

This is the area in which I have felt the greatest increase in student engagement in the classroom. Students connect well to the multimedia presentations and appreciate the juxtaposition of the introduction to a concept and an audio or video demonstration to accompany it. Because of the wide (and increasing) availability of these materials on the Internet, these are easy to find and bring to the classroom.²³

Upon first use, my experience with these technological methodologies was mixed: some I embraced right away, while I was less comfortable with others. However, I will continue to use all of these technological tools in future semesters because ultimately they enhanced my students' learning experience and were well-received by the students. Thus, following my e-semester, I have made a long-term commitment to seek ways that I can bring technology to the classroom in an appropriate and user-friendly way.

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Another Perspective

"Technology is fast (and getting faster), and the 21st Century law student has come to rely on its speed. Television, once the cutting edge of communication, is no longer fast enough in many situations. Many people, law students included, get their news and information from the Internet. Students today can turn on the computer or one of many 24-hour cable news channels and find any information that they want in a matter of minutes. Although law professors do not compete directly with these sources of information, the methods and tools of legal education invariably are perceived by law students through a lens that factors in the speed and nature of mass media communications. If a law student can gain instantaneous information with minimal effort in one aspect of his or her life, then a long, drawn out, 'hide-the-ball' Socratic dialogue on a narrow legal principle may miss its pedagogic mark. Many law students expect instantaneous results, clear answers, and easy access to information."

—Joan MacLeod Heminway, *Caught in (or on) the Web: A Review of Course Management Systems for Legal Education*, 16 Alb. L.J. Sci. & Tech. 265, 286–288 (2006).

²³ Professors in non-wired classrooms can use clips to augment class discussion by sharing them with the class through the course Web page, a discussion forum, or an e-mail to the class.