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# Teaching with Technology: Is the Pedagogical Fulcrum Shifting

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## Teaching with Technology: Is the Pedagogical Fulcrum Shifting?

**ABOUT THE AUTHOR:** Camille Broussard is the director of the Mendik Law Library, a professor of legal research at New York Law School, and the associate dean for Information Services. In transforming her panel remarks from the New York Law School Faculty Presentation Day into this short essay, the author would like to acknowledge that the inconsistencies and generalizations are all hers, but the inspiration and continued challenge to think about teaching research, among other skills, to students and lawyers comes from her New York Law School library colleagues.

Technology continues to change the way we teach law, practice law, perform legal research, and provide library services to the legal community. Technological innovation in the twenty-first century is incredibly fast-paced, and each new generation of tools is often heralded as the one that will have great and lasting pedagogical impact on law schools.<sup>1</sup> Will the new generation of applications and social media tools, popularly referred to as Web 2.0, finally provide the first real impetus in many generations for law schools to change the way the J.D. curriculum is designed and delivered? It is quite possible that these applications will not only be incorporated into the existing curriculum, but, more significantly, they may indeed become the foundation of a new teaching and learning environment.

The use of computers and electronic “gadgets” by students at all levels of education continues to increase.<sup>2</sup> In a 2000 study of students entering higher education, Jason Frand noted that computers are not technology for these new students but instead are “hardwired into their psyche.”<sup>3</sup> Students are not only computer literate; they are exceedingly comfortable with online information and online learning tools.<sup>4</sup> This observation, particularly in the social media arena, has been echoed in subsequent studies.<sup>5</sup> To borrow and slightly modify an excellent question phrased for university education: “Is [Legal] Education 1.0 Ready for Web 2.0 students?”<sup>6</sup> Absorbing the impact of changing technology, already a complex issue, is further complicated by

1. During the last twenty-five years, the technology landscape has changed significantly. Since the establishment of the Center for Computer-Assisted Legal Instruction (CALI) in 1982, see *infra* note 14, some law professors, librarians, and information specialists in legal education have worked to introduce and use technology to enhance the educational experience. Although the tools have become increasingly sophisticated (such as the introduction of personal computers and laptops, the availability of electronic casebooks, the use of e-mail for communication and document sharing, the growth of the Lexis and Westlaw research systems to include Internet-based course management systems, and the widespread adoption of wireless networks and related devices), the basic structure of teaching in law school classrooms has not changed dramatically. For some early predictions on the future of legal education in the twenty-first century, see Ronald W. Staudt, *Does the Grandmother Come with It?: Teaching and Practicing Law in 21st Century*, 44 CASE W. RES. L. REV. 499 (1994).
2. The generational cohort of students born after 1981 has been branded by some as “generation Y” or millennials. They are known for their technological savvy. They have also been called the “net-generation.” See DON TAPSCOTT, *GROWING UP DIGITAL: THE RISE OF THE NET GENERATION* 20–29 (1998); Diana Oblinger, *Boomers, Gen-Xers, and Millennials: Understanding the New Students*, EDUCAUSE REV., July–Aug. 2003, at 37, 38, available at <http://net.educause.edu/ir/library/pdf/erm0342.pdf>.
3. Jason Frand, *The Information Age Mindset: Changes in Students and Implications for Higher Education*, EDUCAUSE REV., Sept.–Oct. 2000, at 15, 16, available at <http://net.educause.edu/ir/library/pdf/erm0051.pdf>.
4. See Marie Stefanini Newman, *Not the Evil TWEN: How Online Course Management Software Supports Non-Linear Learning in Law Schools*, 5 J. HIGH TECH. L. 183, 183–85 (2005); Oblinger, *supra* note 2, at 39.
5. See, e.g., AMANDA LENHART ET AL., PEW INTERNET & AM. LIFE PROJECT, *TEENS AND SOCIAL MEDIA: THE USE OF SOCIAL MEDIA GAINS A GREATER FOOHOLD IN TEEN LIFE AS THEY EMBRACE THE CONVERSATIONAL NATURE OF INTERACTIVE ONLINE MEDIA* (2007), available at [http://www.pewinternet.org/pdfs/PIP\\_Teens\\_Social\\_Media\\_Final.pdf](http://www.pewinternet.org/pdfs/PIP_Teens_Social_Media_Final.pdf).
6. John Thompson, *Is Education 1.0 Ready for Web 2.0 Students?*, INNOVATE J. ONLINE EDUC., Apr.–May 2007, <http://www.innovateonline.info/index.php?view=article&cid=393> (providing an excellent overview of the issues facing institutions of higher education as more digitally savvy students enter colleges and universities).

the fact that the students, the technological tools, and the educational environment itself are all changing simultaneously.

We are entering a very exciting and transitional time in legal education. The discussion about how we teach law students and the place of technology in teaching becomes more critical with each new class of entering students. The goal of this short essay is to add context to the developing discussion by exploring a few of the surrounding questions. How is the definition of “teaching with technology” changing? Have we arrived at a definition to sufficiently explain the concept of Web 2.0 technology so that we can begin to comprehend its impact on legal education? Have we already met the Web 2.0 generation of law students? The brief exploration of these questions is not an attempt to answer every question about preparing law students in and for a more digital world. Rather, it is simply to encourage continued discussion.

#### I. TEACHING WITH TECHNOLOGY: A TIMELINE

What do we mean by the phrase “teaching with technology”? The impact of technology on legal education has created a large bibliography of articles, conference papers, essays, books, and book chapters.<sup>7</sup> A quick search on Lexis and Westlaw, the two most popular legal research databases, will retrieve many journal articles that include the phrase “teaching with technology.”<sup>8</sup> Legal educators use the phrase to mean both that we are teaching students to use computers as they will when they enter law practice<sup>9</sup> and that we are using technology as a learning tool in the classroom. The thrust of many of these articles is an evaluation of how a tool is used in the traditional teaching setting, with the pedagogical implications for a broader curriculum integration or reform discussed only by inference.

The availability of Lexis and Westlaw for law school students is assumed and the skill set for using these databases is considered basic knowledge for all lawyers. Students are now being encouraged to explore using blogs, wikis, and other software

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7. See Pearl Goldman, *Legal Education and Technology II: An Annotated Bibliography*, 100 L. LIBR. J. 415 (2008) (supplementing Pearl Goldman, *Legal Education and Technology: An Annotated Bibliography*, 93 L. LIBR. J. 423 (2001)).

8. The “quick” search used was as follows: (teaching /3 technology) /50 ((law /3 school or student) or classroom or pedagog!). On Westlaw, the database searched was “Journals and Law Reviews”, and this search retrieved 122 documents. On Lexis, the database searched was “U.S. Law Reviews and Journals,” and this search retrieved 121 documents. To account for the vagaries of online searching and connectors, perhaps the final article count should be around 100. Approximately 80 of the articles retrieved were published in the year 2000 or later.

9. For background on orienting students to the changing nature of legal practice and lawyers’ use of computers, see generally William T. Braithwaite, *How Is Technology Affecting the Practice and Profession of Law?*, 22 TEX. TECH L. REV. 1113 (1991); Ethan Katsh, *Digital Lawyers: Orienting the Legal Profession to Cyberspace*, 55 U. PITT. L. REV. 1141 (1994); William R. Slomanson, *Electronic Lawyering and the Academy*, 48 J. LEGAL EDUC. 216 (1998). Learning to use time management or billing software are classic examples of teaching students to use technology for the practice of law. See Braithwaite, *supra*, at 1133–36.

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programs that some argue soon will be required knowledge for the practice of law.<sup>10</sup> The discussion has only just started on how best to incorporate these technology tools into classroom teaching.<sup>11</sup> The use of technology in law school teaching is increasing; however, technology has not *yet* forced the legal academy to change the structure of the curriculum.<sup>12</sup> To date, emerging technologies have not forced law school professors to challenge the pedagogical underpinnings of the methods used in delivering legal education. If at least part of our educational mission is training law students to be practice-ready,<sup>13</sup> then many things about the way we teach law may be about to change.

In 1982, the Center for Computer-Assisted Legal Instruction (CALI) was established.<sup>14</sup> CALI is a “nonprofit consortium of law schools that researches and develops computer-mediated legal instruction and supports institutions and individuals using technology and distance learning in legal education.”<sup>15</sup> The interactive instructional lessons for students, written by law faculty at member institutions, remain a core offering from CALI, but many additional tools are now available to help professors use technology effectively in teaching their students. “Classcaster” makes it very easy for professors to create podcasts and blogs for classroom use.<sup>16</sup> Another tool, “eLangdell” offers a set of tools to help faculty collaboratively create and share teaching materials and student course packs.<sup>17</sup>

The use of course management systems such as the Blackboard Learning System, LexisNexis web courses, and The West Education Network (TWEN) have become

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10. For some examples of using technology in law and legal education, see New York Law School Institute of Law and Information Policy, Do Tank and the Democracy Design Workshop Legal Education Technology Series, <http://dotank.nyls.edu/newsletters/index.html> (last visited Jan. 31, 2009).
  11. See, e.g., Beth Simone Noveck, *Wikipedia and the Future of Legal Education*, 57 J. LEGAL EDUC. 3 (2007) (addressing the developing importance of wikis); Symposium, *Bloggership: How Blogs Are Transforming Legal Scholarship*, 84 WASH. U. L. REV. 1025 (2006); see also WILL RICHARDSON, *BLOGS, WIKIS, PODCASTS, AND OTHER POWERFUL WEB TOOLS FOR CLASSROOMS* (2d ed. 2006). Richardson’s book is not written about law school teaching nor does it discuss the use of these tools in the law school classroom. Interestingly, the author discusses the use of various collaborative tools in kindergarten through high school education, see *id.* at 67–70, a point the legal academy should heed as we prepare to welcome and teach new classes of law students.
  12. I use the term *yet* knowing that some law schools, including New York Law School, are beginning to consider new ways of teaching the first-year curriculum. New York Law School introduced an “iSection” in the fall semester of 2008. See *infra* note 52 and accompanying text.
  13. WILLIAM M. SULLIVAN ET AL., *EDUCATING LAWYERS: PREPARATION FOR THE PROFESSION OF LAW 22* (2007); see also AM. BAR ASS’N SECTION OF LEGAL EDUC. & ADMISSIONS TO THE BAR, *REPORT OF THE TASK FORCE ON LAW SCHOOLS AND THE PROFESSION: NARROWING THE GAP*, at ch. 7 (Robert MacCrater ed., 1992), available at <http://www.abanet.org/legaled/publications/onlinepubs/macccrate.html>.
  14. CALI, <http://www.cali.org> (last visited Jan. 31, 2009).
  15. *Id.*
  16. See CALI Classcaster, <http://www.classcaster.org> (last visited Jan. 31, 2009); *Classcaster: Podcasting Meets the Classroom* (CALI), Sept. 15, 2005, <http://www2.cali.org/static/files/classcasterwp20050915.pdf>.
  17. See eLangdell, <http://w.cali.org/category/keywords/elangdell> (last visited Jan. 31, 2009).

part of the teaching arsenal of many, if not most, law professors.<sup>18</sup> Course web pages can complement classroom learning, supplement the course text, and create a structured interactive environment that fosters out-of-class discussion and collaborative learning. These programs allow professors to post announcements, syllabi, and course materials in various formats, and to link to various online databases, including Lexis and Westlaw content and CALI lessons that supplement course materials. Students can consult the course site at anytime to get notices, class documents, or other important information. Each system automatically creates e-mail distribution lists to facilitate communication with students. The professor can respond to student questions individually, send a message to all students in the class, and create smaller e-mail groups for class projects. These course management systems also support discussion forums and live chat features for extending classroom discussion. Students and professors can share files easily through e-mail attachments or the more protected digital drop-box features.

In 2004, New York Law School adopted a policy requiring that all classes have an accompanying course web site.<sup>19</sup> The only mandate was that the professor must post the course syllabus and first class reading assignment on the class web site.<sup>20</sup> Faculty assistants are trained and able to assist professors in posting reading assignments and other documents, as well as sending e-mail messages to the class at a professor's request. The true power of the technology, however, is realized when the professor takes control of the page, develops the structure, and inserts the content appropriate to reach the desired learning outcomes for the class.<sup>21</sup> Although professors use the systems at varying levels of technological sophistication, some professors are increasingly using the more complex tools offered and supported by these course management systems.<sup>22</sup>

The wide use of CALI programs and course management systems suggest that we have crossed a threshold in our use of electronic technology in the law school classroom. These tools do not, however, adequately represent the future of the use of technology in the law school setting. Web 2.0 is the catchphrase that is rapidly

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18. I requested from both Lexis and Westlaw an actual number of web course pages used by law school professors. Vendor representatives replied to confirm that their course management systems are being used in every law school. They did not, however, provide exact numbers.

19. Other law schools also encourage or mandate the use of course management software for law classes. For a discussion of the benefits of using course management software in the classroom and for a description of the Pace University School of Law program, see Newman, *supra* note 4. In the appendix to her article, Professor Newman includes the results of her survey of the Pace Law faculty on their use of TWEN. *Id.* at 228–33.

20. E-mail from Jethro K. Lieberman, former associate dean for Academic Affairs, New York Law School, to the faculty of New York Law School (July 14, 2004) (on file with the author).

21. Faculty adopting ownership of their course pages was the topic of a faculty discussion in September 2004. See Camille Broussard, *Using Class Web Pages: From Posting to Pedagogy* (Sept. 14, 2004) (handout accompanying discussion on file with author).

22. Many professors are now posting PowerPoint presentations, Portable Document Format (PDF) files, and video and audio links from their course web sites. The use of blogs and wikis also continues to grow. For more examples and discussion of other tools, see *supra* notes 10–12.

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becoming shorthand to describe the next generation of communication and organizational tools. What then is Web 2.0 and what does it mean for legal education?

### II. WEB 2.0

Wikipedia,<sup>23</sup> an excellent example of a Web 2.0 application, provides the following definition:

The term “Web 2.0” describes the changing trends in the use of World Wide Web technology and web design that aim to enhance creativity, communications, secure information sharing, collaboration and functionality of the web. Web 2.0 concepts have led to the development and evolution of web-culture communities and hosted services, such as social-networking sites, video sharing sites, wikis, blogs, and folksonomies.<sup>24</sup>

This definition is striking in two regards. First is the emphasis on “collaboration” and “information sharing.” Second is the fact that no explicit mention is made of the importance or existence of hypertext links. The movement through cited information and the connection to related information by using hypertext links is just assumed. Both the development of Internet-based collaborative learning tools and the transparent incorporation of hypertext linking in documents and web pages stand to have a profound impact on legal education and practice.

#### A. *Web 2.0 Tools for Collaboration and Collaborative Learning*

Web 2.0 is an Internet-based platform constructed on an underlying architecture of user participation. As John Thompson notes in *Is Education 1.0 Ready for Web 2.0 Students?*, the medium has changed from one in which information is merely transmitted and consumed (“read-only”) to a platform of applications “in which content [is] created, shared, remixed, repurposed, and passed along.”<sup>25</sup> This ability to use the Internet to work collaboratively as students, teachers, and lawyers in ways more powerful than legal education has seen before will begin to transform our teaching and learning in law school. In a report for *EDUCAUSE Review*, Bryan

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23. Wikipedia is a free Internet-based encyclopedia that anyone with access to the Internet can edit. It is written collaboratively by volunteers from around the world. See Wikipedia FAQ/Overview, <http://en.wikipedia.org/wiki/Wikipedia:FAQ/Overview> (last visited Jan. 31, 2009).

24. Wikipedia, Web 2.0, [http://en.wikipedia.org/wiki/Web\\_2.0](http://en.wikipedia.org/wiki/Web_2.0) (last visited Jan. 31, 2009). The term “folksonomy” is used to describe the practice of collaboratively annotating and categorizing content. Thomas Vander Wal coined the term in 2004 by combining the terms “folk” and “taxonomy” to denote user-created bottom-up categorical structure development with an emergent thesaurus. See Folksonomy Coinage and Definition, <http://www.vanderwal.net/folksonomy.html> (last visited Jan. 31, 2009).

25. Thompson, *supra* note 6 (quoting Stephen Downes, *E-learning 2.0*, eLEARN MAG., <http://www.elearnmag.org/subpage.cfm?section=articles&article=29-1> (last visited Jan. 31, 2009)).

Alexander notes that “the label ‘Web 2.0’ is far less important than the concepts, projects, and practices included in its scope.”<sup>26</sup>

The Internet as we know it today—Web 1.0—is “read-only” and, as such, is not particularly interactive.<sup>27</sup> A user goes to a web site to find and read information as presented by the site’s host. New applications that will become part of legal education and the lawyer’s tool bag are more dynamic and sophisticated. The next generation of web tools is predicated on user modification of, contribution to, and enhancement of shared information. Described below are four Web 2.0 tools that will have a significant impact on the teaching and practice of law.

Social writing is one prominent tool that will impact the legal field. For example, wikis will allow lawyers to create documents through shared input writing with peer-editing privileges accorded to members of the working group.<sup>28</sup> Whether they are in the office or classroom, or across the continent in a branch office, lawyers will be able to work collaboratively to produce memoranda and other documents. As Professor Noveck noted in discussing wikis and Wikipedia in legal education, “[t]hese dynamically and collaboratively produced works are going to become a permanent fixture of our media landscape.”<sup>29</sup>

The second tool is blogging. Writing articles for blogs and responding to blog posts will become more mainstream in legal classrooms and offices. Students will write about classroom discussions and reading materials in online forums. Lawyers will use blogs increasingly to reach their clients. Blogs may even replace some law firm newsletters. Though the chronological structure of blogs may have a different rhetorical purpose than other kinds of classroom writing, learning to write within the blog context will help students prepare for this new way of writing and communicating.<sup>30</sup>

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26. Bryan Alexander, *Web 2.0: A New Wave of Innovation for Teaching and Learning?*, EDUCAUSE REV., Mar.–Apr. 2006, at 33, 33, available at <http://net.educause.edu/ir/library/pdf/ERM0621.pdf>.

27. See *id.* at 33 (offering the front page of CNN’s website as a current example of a static or database-driven web page); Thompson, *supra* note 6 (noting the one dimensional nature of Web 1.0).

28. See Citizendium, Wiki, <http://en.citizendium.org/wiki/Wiki> (last visited Jan. 31, 2009) (“A wiki (sometimes wikiwiki) is a website that allows anyone (with permission required or not, according to wikis) to edit any page and to add new pages. Wikis are unusually collaborative because all participants can, in the typical case do, edit all, or nearly all, pages on a wiki. This is true of the best-known wiki, Wikipedia.”).

29. Noveck, *supra* note 11, at 7.

30. For example, in the fall 2008 semester, New York Law School offered for the first time a new course titled Legal Writing for New Media. As stated in the course description:

The course begins with the premise that all lawyers are now journalists. Whether they are updating case information on a firm website, maintaining a blog, or communicating by email, today’s lawyer must not only be familiar with the tools and skills of journalists, but must use them in the fast-paced, loose-limbed, world of new media. This course will prepare our students for this paradigm shift, and teach them how to convey legal information in a clear and meaningful way.

New York Law School, Legal Writing for New Media, <http://old.nyls.edu/pages/6638.asp> (last visited Jan. 31, 2009).



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Third, students and lawyers will use research tagging tools. Many new applications allow users to bookmark, index, annotate, describe, and arrange web sites and research materials. Using folksonomic applications like “delicious,”<sup>31</sup> researchers can find, organize, and share materials with colleagues not only by subject, but also by context. Groups can also add tags and descriptors to the bookmark descriptions to make the collection more meaningful for the research project. Delicious is not the only social bookmarking site. Wikipedia lists more than twenty sites.<sup>32</sup>

Lastly, the enhanced ability to share information, data, and media easily among a group will benefit lawyers and increase their productivity in numerous practice activities. The ability to not only write, edit, and produce documents collaboratively, but also to share supporting research, visuals, videos, and related audio will provide a tremendous advantage to a legal team. For example, increased collaboration and integration of various media formats will facilitate the writing of trial memoranda and appellate briefs, organizing interrogatories and discovery materials, and preparing trial exhibits.

### *B. Hypertext: The “Killer App”*

The Wikipedia definition of Web 2.0, and in fact most other definitions, do not reference explicitly the underlying use of hypertext linking throughout the new technologies.<sup>33</sup> Perhaps, this definitional omission is based on the fact that hypertext features are very much a part of Web 1.0 applications and therefore to mention them seems redundant.

Hypertext linking gives the reader the ability to move around in a digitized textual document by opening a limitless array of additional links to other digitized material. The links are not defined by the reader but by the writer or web site creator. Of course, in a collaborative world, different writers, including the reader, can add links to explain or provide more context to the original writing. In 2002, Rogelio Lasso discussed the differences between hypertext and printed text, describing it as the “second communication revolution.”<sup>34</sup> He noted that hypertext provides the essential learning tool when using electronic technology as a teaching vehicle. “Hypertext helps us become aware of the intimate relation between learning and technology, because it reminds us that printed text is linear and hierarchical . . .

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31. Delicious is a web-based social bookmarking tool that allows a user to store and share information with others. See Delicious, About, <http://delicious.com/about> (last visited Jan. 31, 2009).

32. See Wikipedia, List of Social Software, [http://en.wikipedia.org/wiki/List\\_of\\_social\\_software#Social\\_bookmarking](http://en.wikipedia.org/wiki/List_of_social_software#Social_bookmarking) (last visited Jan. 31, 2009).

33. See *supra* text accompanying note 24.

34. Rogelio Lasso, *From the Paper Chase to the Digital Chase: Technology and the Challenge of Teaching 21st Century Law Students*, 43 SANTA CLARA L. REV. 1, 6–12 (2002).

With printed text, 'the writer controls the text, the text controls the reader, and convention controls the writer.'"<sup>35</sup>

Hypertext removes the linear nature of reading. It gives readers more control over the way they read. Enabled hypertext linking also takes away the writer's control as to when and how a reader sees particular pieces of information. Freed from the writer-controlled environment of paper casebooks, students using electronic casebooks and online materials will be able to add research notes and context to the readings as they prepare for class. The ability to integrate additional material, both textual and graphic, with just a few clicks can create a rich learning environment. However, we should realize that this may present an organizational challenge for some students. In adding multiple hypertext links to related information, at least as that relatedness is defined by the student, the student runs the risk of diluting the pedagogical intention of both the casebook's author and the course professor. The student may also run the risk of getting lost in an uncontrolled netherland and on a path to total information overload.

What does the hypertext revolution mean for lawyers and the way we train lawyers today? Hypertext linking, and the mental processes students develop because of its infrastructural existence, will no doubt have a profound impact on the way students approach and learn the law. Perhaps we are witnessing a shift in cognition and reasoning from a predominately linear or serial manner, i.e., "conducting research, developing an outline, and composing the essay from beginning to end," to a processing schema much less sequential.<sup>36</sup> It is legitimate for us to question and explore whether students entering law school in 2009 and beyond will process information and reason differently from those who have come before—and, particularly from the professors who teach them.

The way we read and communicate is indeed changing; but, critical reading of core legal texts—in paper or online—is still, and hopefully always will be, required. To survive in the fertile world of hypertext distractions and Web 2.0 cross-pollination and seamless integration, students will need to blend the traditional skills of reading, writing, and analysis with a well-developed understanding of nonlinear and multidimensional reading strategies.<sup>37</sup> We cannot, and more importantly should not, assume that all new students will come to law school prepared with the skills we consider important or imperative to the successful learning and practice of law.

The speed with which new technologies are developed has increased continually over the last few years. The rate by which the various technological tools are adopted by society, and students in particular, has also increased. Because of these changes, we are quickly approaching a major demographic shift in the law student population.

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35. *Id.* at 9 (quoting Alan Purves, *Flies in the Web of Hypertext*, in HANDBOOK OF LITERACY AND TECHNOLOGY: TRANSFORMATIONS IN A POST-TYPOGRAPHIC WORLD 242 (David Reinking et al. eds., 1998)).

36. TAPSCOTT, *supra* note 2, at 102–03.

37. For an interesting popular discussion, see Nicholas Carr, *Is Google Making Us Stupid?*, THE ATLANTIC, July–Aug. 2008, available at <http://www.theatlantic.com/doc/200807/google>.

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When the “digital natives”<sup>38</sup> begin to arrive in larger numbers, we must be ready to change the way we teach critical reading and analysis.<sup>39</sup>

### III. THE DIGITAL NATIVES ARRIVE

The term “digital natives” refers to the generation of young adults who have come of age online and who are totally comfortable with emerging technologies.<sup>40</sup> Many law professors and librarians could be classified as “digital immigrants”—the term used to indicate that the land of web-based applications and technology, in general, is not their native soil.<sup>41</sup> As Francis Jacobson Harris noted in 2005, students today are “serial multitaskers.”<sup>42</sup> They probably will study for class tomorrow while listening to music; using the Internet to search for topics of interest; uploading pictures to share with friends; toggling between the web, their Facebook or LinkedIn or MySpace page, and their e-mail; talking on their cell phones; and sending text messages. They will do all of these things without thinking about how to do them. Increasingly, students entering law school are coming from the group of multi-tasking students described by Harris.

During “First Week 2007,” New York Law School’s orientation week for first-year students, the library staff asked the entering class to answer five questions regarding their use of digital communication tools.<sup>43</sup> Although we were not attempting to establish a baseline data set for comparing future classes, the results provide interesting comparative data. The New York Law School survey results are reported below, followed by observations from the Beloit College “Mindset List.”<sup>44</sup>

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38. JOHN PALFREY & URS GASSER, *BORN DIGITAL: UNDERSTANDING THE FIRST GENERATION OF DIGITAL NATIVES* 1 (2008); see also FRANCES JACOBSON HARRIS, *I FOUND IT ON THE INTERNET: COMING OF AGE ONLINE* (2005).
  39. Debra Moss Curtis & Judith R. Karp, *In a Case, On the Screen, Do They Remember What They've Seen? Critical Electronic Reading in the Law Classroom*, 30 *HAMLIN L. REV.* 247 (2007); see also Debra Moss Curtis & Judith R. Karp, *In a Case, In a Book, They Will Not Take a Second Look!* *Critical Reading in the Legal Writing Classroom*, 41 *WILLAMETTE L. REV.* 293 (2005); Lasso, *supra* note 34.
  40. See Marc Prensky, *Digital Natives, Digital Immigrants*, *ON THE HORIZON*, Oct. 2001, available at <http://www.marcprensky.com/writing>. The consensus seems to be that students born after 1980 would be considered digital natives. See PALFREY & GASSER, *supra* note 38, at 1.
  41. Prensky, *supra* note 40, at 2 (discussing the fact that digital immigrants speak with a different accent). Prensky uses the examples of someone printing out an e-mail in order to read it and calling people to see if they received an e-mail to demonstrate having a thick accent. The accent is a serious issue because, as Prensky argues, digital immigrant instructors are struggling to teach students who speak an entirely different language. *Id.*
  42. HARRIS, *supra* note 38, at 55. But certainly, a legitimate question is whether we really can (or should) multitask. See, e.g., Walter Kirn, *The Autumn of the Multitaskers*, *THE ATLANTIC*, Nov. 2007, available at <http://www.theatlantic.com/doc/200711/multitasking>.
  43. See New York Law School: First Week—Library Tours Survey Results, <http://www.nyls.edu/index.php?cID=1640#2007> (last visited Jan. 31, 2009) [hereinafter Library Survey] (survey on file with author).
  44. See Beloit College: Mindset List, <http://www.beloit.edu/mindset> (last visited Jan. 31, 2009) [hereinafter Mindset List].

Beloit compiles the Mindset List annually to help Beloit faculty members understand the worldview of incoming college students.<sup>45</sup> Read together, the New York Law School survey and the Beloit list can provide interesting insights and clues about the life experiences of the next generation of law students. The information provided might be used as a brief introduction to future law students. This introduction should raise questions about what pressures, if any, the arrival of the law school class of 2009 and beyond will put on law schools, law libraries, and law professors.

The members of the New York Law School class of 2010/11 overwhelmingly prefer e-mail to either instant messaging (IM) or text messaging. E-mail is the primary communication tool for 67% of these students, as opposed to text messaging for 24% and IM for 8.3%. Four hundred twenty-four students belong to an online social network, while one hundred twelve students responded that they do not have such an account. By a margin of almost two to one, Facebook was the social networking site of choice over MySpace. Only 14%, or seventy-seven students, responded that they subscribed to any blogs or RSS feeds.<sup>46</sup>

A sampling of the observations from the Beloit lists for the years 2003 to 2007 provide a comparative baseline of experience for students entering college during those years. The actual Mindset List is much broader in scope, and it makes clear that technology has entered every realm of daily activity. Students entering college in 2003 could have entered law school in 2007. With each subsequent year, we are given a glimpse of the digital natives soon to be entering law school classes.

A quick glimpse of the Mindset List informs us that students entering college from 2003 to 2006 have always had cable, have never really thought of “cookies” and “spam” as just food items, have never “dialed” a telephone, have never had to use a bottle of “White Out”—much less had to retype an entire page—before handing in a paper, have always seen CD players in cars, and have always seen a woman on the U.S. Supreme Court.<sup>47</sup>

Students entering college in the fall of 2007, to become the college class 2010 and 2011, add these additional characteristics: they have always used “Google” as a verb, have probably never “rolled down” a car window, have never thought that “off the hook” had anything to do with a telephone, and have always considered DNA fingerprinting as admissible evidence in court.<sup>48</sup>

#### IV. CONCLUSION

The students who will comprise the law school class of 2009 and beyond will have different expectations regarding the use of technology in their educational programs. Although they may not be skilled in the use of the standard legal

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45. *See id.* (The Mindset List, while acknowledging that student’s backgrounds vary, is “an effort to identify the worldview of 18 year-olds” and “identif[y] the experiences and event horizons of students.”).

46. *See* Library Survey, *supra* note 43. The survey results were reported to New York Law School on September 25, 2007.

47. *See* Mindset List, *supra* note 44 (providing data for the classes of 2003, 2004, 2005, and 2006).

48. *Id.* (providing data for the classes of 2010 and 2011).

## TEACHING WITH TECHNOLOGY

databases, they will be more comfortable with all types of technology. Law schools will need to adapt to these changing expectations to reach and teach the digitally comfortable student. All segments of the law school program will be pressured to change, but it is perhaps the classroom that will be most vulnerable to student demand for a more technology-rich educational experience.

The changing electronic environment and its impact on all of life's activities should prompt a re-examination of the methods for developing and delivering the law school curriculum. New students will arrive with a different set of cognitive skills and developmental experiences. Many current law professors use the traditional lecture-based Socratic method in their classroom. Students respond to the professor's developing hypothetical by employing their knowledge of the doctrinal body of legal concepts. Though the Socratic method is different from the strict lecture method, the professor remains the primary source of the knowledge transmitted to the students. This "sage on the stage" approach, however, may not suit the needs of a generation of students whose primary education has occurred in more interactive environments.<sup>49</sup>

The proliferation of Web 2.0 technologies is igniting new discussions of transforming pedagogy "to meet the needs of a generation of learners who seek greater autonomy and connectivity as well as opportunities for socio-experiential learning."<sup>50</sup> For example, college professors are considering how the new tools and the connectivity they engender can be applied to formal learning spaces to create Web 2.0 pedagogy, or what Catherine McLoughlin and Mark Lee called "Pedagogy 2.0."<sup>51</sup> Similarly, law professors need to be prepared to incorporate new and varied approaches to the traditional lecture in order to engage their students. Defending traditional pedagogical approaches will become increasingly difficult.

In an effort to initiate Web 2.0 pedagogy, New York Law School gave the fall 2008 entering class the opportunity to join the newly created iSection.<sup>52</sup> The iSection, developed by the faculty of the Institute of Law and Information Policy,<sup>53</sup>

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49. See Alison King, *From Sage on the Stage to Guide on the Side*, 41 C. TEACHING 30 (1993). King explored the constructivist theory of learning, including guided peer questioning and cooperative learning, to encourage professors to engage students more actively in the classroom experience. Recognizing the changing needs of students, she encouraged professors to become a "guide on the side" and facilitate "students' interaction with the materials and with each other in their knowledge-producing endeavor." *Id.* at 30.

50. Catherine McLoughlin & Mark J. W. Lee, *Future Learning Landscapes: Transforming Pedagogy through Social Software*, INNOVATE J. ONLINE EDUC., June–July 2008, <http://www.innovateonline.info/index.php?view=article&id=539>.

51. *Id.*

52. See New York Law School: iSection, <http://old.nyls.edu/pages/6232.asp> (last visited Jan. 31, 2009).

53. The Institute of Law and Information Policy is one of the seven Harlan Scholar Centers at New York Law School. The Institute encourages its participants "not only to understand the interplay of law and technology but to influence its development." See New York Law School Institute for Information Law and Policy, [http://www.nyls.edu/centers/harlan\\_scholar\\_centers/institute\\_for\\_information\\_law\\_and\\_policy](http://www.nyls.edu/centers/harlan_scholar_centers/institute_for_information_law_and_policy) (last visited Jan. 31, 2009). The Institute's distinguished faculty includes Professor Beth Noveck, Professor Richard Sherwin, and Visiting Professor David Johnson. See New York Law School Institute

is an experimental section of the first-year class that uses technology such as wikis, blogs, podcasts, social networking tools, interactive learning tools, online simulation exercises, and games to teach the law and allow students to practice their developing legal skills. The iSection students and faculty work in small groups and experiment with technology inside and outside the classroom to learn legal concepts and analysis.

The New York Law School iSection is an important first step in creating an innovative legal education model. It will give the faculty and the law school a platform for developing and discussing new ways of teaching the law and legal skills. The iSection will provide a valuable way to test and evaluate technological innovations that can be incorporated into the law school's curriculum infrastructure. As the next generation of students enters law school, legal educators must engage in new discussions about effective teaching methods. The iSection will provide professors a forum to experiment with ways to engage students fully in the educational process. Subsequent evaluation of the various initiatives explored within the iSection will provide guidance to the faculty as they determine how best to prepare students for the ever changing legal marketplace.

Embracing technology to develop new educational models for presenting the J.D. curriculum is the only viable option for moving forward. Legal educators should lead the way in developing effective teaching styles that incorporate and integrate new technological and communication tools into the curriculum. Whether or not we, as professors, librarians, and administrators choose to participate fully in the ever-evolving world of Web 2.0, Web 3.0, Web 4.0, and beyond, the next generation of law students and lawyers undoubtedly will create new models of learning and practicing law. We can choose to lead, follow, or simply get out of the way!

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for Information Law and Policy: Faculty, [http://www.nyls.edu/centers/harlan\\_scholar\\_centers/institute\\_for\\_information\\_law\\_and\\_policy/people/faculty](http://www.nyls.edu/centers/harlan_scholar_centers/institute_for_information_law_and_policy/people/faculty) (last visited Jan. 31, 2009).

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