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9-2018

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Randy J. Diamond

Darin Fox

Kenneth J. Hirsh

Heidi Frostestad Kuehl

Michael Robak

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# LET'S TEACH OUR STUDENTS LEGAL TECHNOLOGY... BUT WHAT SHOULD WE INCLUDE?

Five law library directors who teach legal technology share their thoughts and advice.

BY RANDY J. DIAMOND,  
DARIN FOX, KENNETH J. HIRSH,  
HEIDI FROSTESTAD KUEHL  
& MICHAEL ROBAK

A “renaissance” is often described as a cultural rebirth, a movement ushering in a modern age and leaving behind the old ways of doing things. There is every indication that we are entering a technology-driven renaissance in the legal profession. Artificial intelligence (AI), “big data,” document automation, e-discovery tools, cloud-based case management systems, and communication and collaboration tools are just a few of the ways that technology is transforming the practice of law in the twenty-first century.

Certainly, technology has played a key role in the practice of law for almost 50 years. However, there are several indicators that technology is becoming an increasingly important part of law practice. Thirty-one states now require lawyers to understand the risks and benefits of technology in accordance with Comment 8 of Rule 1.1 of the American Bar Association



The Legal Technology Core Competencies Certification Coalition (LTC4) is an international organization of law firms, legal departments, and legal nonprofits “that has established legal technology core competencies and certification.”

(ABA) Model Rules of Professional Conduct. One state, Florida, has even added a continuing legal education (CLE) requirement for technology, similar to the annual ethics requirement in most states; Pennsylvania and North Carolina are also considering adding the requirement.

In addition, the professional literature is awash with articles about the importance of technology in the practice of law. Noted legal technology expert Jim Calloway summed up this idea in his article “Every Law Firm Is a Technology Business.” He notes that “[a]lmost everything a law firm does involves the retrieval, analysis, processing, manipulating, storing, and dispensing of information.” These are all tasks at which technology excels. He concludes by stating that lawyers can choose to be Flintstones, or they can choose to be Jetsons going forward.

The ABA challenged law schools to focus on teaching technology skills to law students in 2013. The ABA Task Force on the Future of Legal Education, in its final report, stated that “although changes in the delivery of legal services have made competence in the use and management of law-related technology important, only a

modest number of law schools currently include developing this competence as part of the curriculum.”

Law schools have responded to this challenge with a wide variety of programs designed to equip students with the technology skills required by modern law firms. *Above the Law* recently published its “Directory of Law School Innovation Centers” in its Law2020 feature to highlight law schools with innovation-focused missions.

In addition, the media is now recognizing these efforts with various ranking systems and indices. In 2017, *preLaw Magazine* highlighted the “20 Most Innovative Law Schools” as well as the “Top Schools for Technology and Law,” and Michigan State College of Law introduced its Law School Innovation Index to highlight U.S. law schools that prepare students to deliver legal services in the twenty-first century by providing programs focused on “legal-service delivery innovation and technology.”

#### **Certification and Assessment**

As the need for technology skills in law firms grows, and as law schools continue to ramp-up programs designed to teach technology skills to law students, there will be an increasing need for

assessment and certification tools. Law schools will want to assess whether students can repeat a technology skill (such as legal document preparation or courtroom presentation), and law firms will want graduates to demonstrate that they possess technology skills.

Assessment and certification of technology skills has been evolving over the past five years. Casey Flaherty was perhaps the first lawyer to call attention to this need with his technology competency audit. He developed this audit as corporate counsel for Kia Motors to test the Microsoft Word, Excel, and Adobe Acrobat skills of the attorneys in the firms Kia planned to hire. Unfortunately, he found that associates required five hours on average to complete tasks that took him thirty minutes. As of today, there is no clearly established industry leader in this area, though there are options available for law schools.

The Legal Technology Core Competencies Certification Coalition (LTC4) is an international organization of law firms, legal departments, and legal nonprofits “that has established legal technology core competencies and certification that all law firms can use to measure ongoing efficiency improvements.” A few law schools around the world, including the University of Oklahoma College of Law, are using LTC4, along with its vendor partner, Capensys, to certify law students in a variety of technology skills, including legal document preparation, collaboration, security, and presentations.

Flaherty continues to work on solutions in this area. He recently established a company called Procertas to develop a Legal Technology Assessment (LTA) “to assess legal professionals’ proficiency with the basic technology tools of their trade: Word, Excel, and PDF.” Procertas offers a law school edition of their LTA that can be implemented into technology-related courses or made available to an entire law school.

#### **The Impact of Social Media on Twenty-First Century Lawyering**

Social media is drastically affecting the practice of law, and attorneys should

anticipate the use of social media by their clients. Further, ABA Model Rule 1.1 and its Comment include the requirement of technological competence for an ethical practice. The ABA Comment notes that this encompasses knowledge and understanding of the associated risks and benefits of certain technologies. The impacts of social media on litigation and infiltrations into our domestic and world markets are undeniable, and areas of technological competence keep expanding to ethical use of technology, e-filing, social media, prominent web presence and virtual lawyering, cloud computing, courtroom technologies, e-discovery, and more. Best practices for lawyering in an era of social media include informing clients about responsible use of social media during representation and developing firm-wide social media policies. Lawyers must grapple with social media use in a variety of contexts, including the courtroom with myriad parties, and they will have to alter their traditional framework of lawyering to include social media from the initial intake of clients to fruition of a case in both civil and criminal case settings.

Attorneys must carefully consider: 1) whether to use social media in their practice of law; 2) creation of a business plan or policy for the ethical use of social media to align with the ABA guidelines; and 3) preserving social media as e-discovery evidence and advice to clients on social media use and preservation during the case's lifetime. Upon intake of each case, attorneys should conduct careful client counseling about social media in the digital age. This includes recommendations about not posting on social media in the context of the case and pending litigation, the legal implications of social media activity, and the duty to preserve evidence. Recent CLE programs for attorneys and law and technology courses in law schools often include social media tips. The current guidelines and best practices include obtaining social media discovery at an early stage of the case, updating a law firm's definition of Electronically Stored Information (ESI) to include

social media and social media in document preservation letters (to clients and adversaries), and requesting social media content in document requests and third-party subpoenas. According to recent ABA rules and guidance on technological competence, lawyers should: 1) follow employer guidelines on social media; 2) include appropriate disclaimers on social media sites used for their work; 3) stay current with ABA and State ethics opinions; 4) consider court decisions on social media use and social media sites' "Terms of Service" agreements; 5) be professional while using social media; 6) always exercise client confidentiality; 7) make sure LinkedIn endorsements are appropriate; and 8) use social media as an apt discovery tool while following the appropriate e-discovery norms. The landscape is constantly changing in the field of legal technologies, but social media is here to stay, and attorneys must adhere to the new social media professional requirements for their ethical practice.

### **Electronic Communications: Balancing Risk and Reward**

The wide-scale adoption of email usage in the 1990s eventually found its way to lawyers. This in turn was followed by an explosion of social media usage after the turn of the millennium. Email provides an efficient and relatively low-cost way of communicating with clients, opposing counsel, and anyone else whom a lawyer needs to reach. Social media can be part of a lawyer's marketing efforts, helping to develop clients and a reputation among lawyers and other professionals. These e-communication platforms introduce substantial risks that were not common with using postal mail and even fax machines. Those of us teaching technology to law students need to familiarize them with the risks attendant to these technologies.

Perhaps the biggest ethical challenge in using e-communications is adhering to the duty to protect the confidentiality of client communications, as mandated by Rule 1.6 of the ABA Model Rules of Professional Conduct. Without going

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into technical details, email is subject to interception during its transmission. Additionally, clients who store their email messages on devices accessible to third parties, such as an employer-owned computer or one used by family members, may lose confidentiality when third parties read the messages.

Beginning in 1999, the ABA Standing Committee on Ethics and Professional Responsibility issued three formal ethics opinions on an attorney's duty when communicating with clients by email. The committee originally stated:

A lawyer may transmit information relating to the representation of a client by unencrypted email sent over the internet without violating the Model Rules of Professional Conduct (1998) because the mode of transmission affords a reasonable expectation of privacy from a technological and legal standpoint. The same privacy accorded U.S. and commercial mail, land-line telephonic transmissions, and facsimiles applies to internet email. A lawyer should consult with the client and follow her instructions, however, as to the mode of transmitting highly sensitive information relating to the client's representation.

Next, the committee addressed the issue of clients storing their email in potentially unsecure locations. The Committee asserted a duty for attorneys to explicitly advise clients of the risk of placing email messages where other parties could read them: *"A lawyer sending or receiving substantive communications with a client via email or other electronic means ordinarily must warn the client about the risk of sending or receiving electronic communications using a computer or other device, or email account, where there is a significant risk that a third party may gain access."* The committee cited examples of employees whose computers and email accounts could be accessed by employers, and, in a domestic relations case, where spouses or other family members shared home computers.

Last year, in Formal Opinion 477R, the committee updated its advice

about the risk of email interception: *"A lawyer generally may transmit information relating to the representation of a client over the internet without violating the Model Rules of Professional Conduct where the lawyer has undertaken reasonable efforts to prevent inadvertent or unauthorized access. However, a lawyer may be required to take special security precautions to protect against the inadvertent or unauthorized disclosure of client information when required by an agreement with the client or by law, or when the nature of the information requires a higher degree of security."* The opinion includes guidance for attorneys on steps to make those reasonable efforts:

1. Understand the nature of the threat.
2. Understand how client confidential information is transmitted and how it is stored.
3. Understand and use reasonable electronic security measures.
4. Determine how electronic communications about client matters should be protected.

In practice, attorneys have relied on two means of reasonably protecting e-communications—by encrypting email messages and by limiting such communications to a client intranet or portal. Encryption makes messages unintelligible to anyone other than the intended recipient, and a portal may be accessed only by the client if the system credentials are kept private. Portals use TLS (Transport Layer Security), the successor to SSL (Secure Sockets Layer), to protect internet traffic from interception. (URLs that start with "https:" use this protocol.) Until early May 2018, most authorities would have considered either method in compliance with making a reasonable effort. However, at that time, vulnerabilities in the widely used email encryption protocols PGP (Pretty Good Privacy) and S/MIME (Secure/Multipurpose Internet Mail Extensions) were exposed, initially casting some doubt on this method. As of this writing, security experts are debating the impact of the vulnerability. Some recommend using client portals or other encrypted applications.

Law students and attorneys need to be cognizant of what it takes to make a "reasonable effort" to protect client confidentiality when using e-communications.

## Electronic Discovery

It has become trite but accurate to say that electronic discovery has replaced paper discovery. Electronically stored information (ESI), already ubiquitous in emails, texts, productivity software, databases, social media, video, phone records, digital photos, and GPS, is growing exponentially with the connection of "everything" to the internet (IoT, or the Internet of Things). As the scope of discoverable ESI expands, the competency bar rises. Lawyers must account for ESI stored in their clients' personal devices and business systems. Commingled personal and business information complicates a lawyer's concurrent obligation to produce relevant, responsive information while not disclosing confidential or privileged information.

Recurring discovery mistakes and misconduct can range from simple human or technical error to negligence or intentional spoliation of ESI. Perfection is not the standard. Given the volume of discoverable ESI, some human and technical error will occur. Negligence may warrant monetary sanctions but can often be reduced with education and training. A spoliation finding based on intent to conceal or deprive the opposing party of the use of relevant ESI will result in a harsher sanction, such as striking pleadings, an adverse inference jury instruction, dismissal, or default judgment. Prompt issuance and ongoing monitoring of litigation holds provide baseline protections against client loss or spoliation of ESI.

Lawyers must be technologically competent to handle electronic discovery, but do not have to be technology experts themselves. Knowing when to enlist, and how to communicate effectively with client IT personnel, outside vendors, and forensic experts is key.

Librarians with related experience or acquired knowledge may want to consider teaching an electronic discovery



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course, guest-lecturing on the subject, or developing guides and instructional material.

The Electronic Discovery Reference Model (EDRM) provides a visual representation of the process, starting with information governance (including litigation readiness). Identification, preservation, and collection of ESI follow when a credible threat of litigation triggers the preservation duty. Processing, review, and analysis using an online review platform is next. Catalyst and Relativity are two legal software vendors who provide educational access to their systems. Production of ESI must be in a form specified and agreed to by the parties consistent with the FRCP (Federal Rules of Civil Procedure) and other applicable court rules. Presentation at trial, authentication, and admissibility conclude the EDRM.

E-discovery law essentials include the 2006 and 2015 FRCP amendments and foundational cases such as *Zubulake* and *Qualcomm*. *Ediscovery Daily Blog* is an excellent way to keep current on these issues.

The Sedona Conference principles and commentary are essential best practice sources. Attorney Craig Ball, a technology trailblazer and adjunct

professor at the University of Texas, maintains highly useful teaching materials on his website. View the materials at [bit.ly/SO18cb](http://bit.ly/SO18cb).

### Artificial Intelligence

Artificial intelligence applications are burgeoning with far-ranging legal, economic, and social implications. As AI offers opportunities for reducing or eliminating routine, time-consuming tasks in electronic discovery, contract review, and other traditional lawyer functions, innovative lawyers adapt to seize new opportunities. Improving prediction of legal outcomes is an example of leveraging AI in the legal profession to better understand data.

Predictive coding uses machine learning (a form of AI) to speed up the identification of relevant documents. Lawyers wanting to use predictive coding instead of or in conjunction with traditional keyword searching must satisfy judges (and opposing counsel) of their competence to oversee the process, including quality control and vendor supervision. A judge may want the attorneys (and their technical experts) to explain enough about “the black box” behind the technology to understand how it works and how reliable it

is compared to other search methods, before the court approves its use.

Unanswered legal questions about AI abound in tort, insurance, employment discrimination, and other contexts. In March 2018, *MIT Technology Review* asked what laws should apply, when, in a hypothetical set in 2023, “self-driving cars are [on] city streets and for the first time, one of them has hit and killed a pedestrian, with huge media coverage” ([bit.ly/SO18MIT](http://bit.ly/SO18MIT)). This question has arrived five years ahead of time with the recent Uber self-driving car accident. Legal scholarship on the law of AI and robotics is at work on answering some of these questions.

Law librarian scholars are contributing their expertise to further understanding of AI applications in legal research. Professor Susan Nevelow Mart puts legal research “black box” technology to the test by calling for greater vendor transparency in the algorithms and methods used. Mart’s study and Jamie Baker’s AI and technology competency writings are prime material for Advanced Legal Research and Law and Technology courses with AI components.

### Big Data and, Yes, Coding

Big Data—what is it and why should law schools care about whether such a thing belongs in the curriculum? The answer is not complicated. According to *Google Dictionary*, Big Data is “extremely large data sets that may be analyzed computationally to reveal patterns, trends, and associations, especially relating to human behavior and interactions.” But Big Data also entails a series of skill sets surrounding the development and analysis of the data. Viktor Mayer-Schönberger and Kenneth Cukier provide an easy-to-digest yet well-done primer on the subject. (Learn more at [bit.ly/SO18bigdata](http://bit.ly/SO18bigdata).)

For example, they point out that “[a]t its core, big data is about predictions. Though it is described as part of the branch of computer science called artificial intelligence and more specifically an area called machine learning, this characterization is misleading.

Big data is not about trying to ‘teach’ a computer to ‘think’ like humans. Instead, it’s about applying math to huge quantities of data in order to infer probabilities.”

Ed Walters, among others, has presented on the topic of data as the “new oil,” namely, an economic reality where lots of jobs and lots of opportunities for jobs will be created by the world’s increasing ability to generate more and more data. Data may be a by-product of other information systems and processes, but it is clearly also the foundation for a whole host of new applications.

This shift though, as always, has implications for the law. Not just in how we develop uses for the data but also for how these uses are regulated and monitored. Many dystopian novels and movies seem to begin at the point where humanity has somehow lost its way with the rise of technology because the law didn’t keep up. And while this may be a compelling reason for law schools to enter the Big Data game, it’s not a rationale we’re suggesting.

The reason for why law schools should develop courses around Big Data is not complicated. Put simply, graduating law students who, in addition to having subject-matter expertise, can distinguish correlation from causation and who have some semblance of a data scientist background and skill set, will be extremely employable. Proof here is not hard to find. For example, the chief knowledge officer of a nationwide law firm said he would hire as many law students with data science skills as we could produce. Even more telling, just look at a couple of weeks’ worth of AALL KnowItAALL newsletters that appear in your inbox each day. Recent headlines have included “Big Data Meets the Constitution in New Originalism Project,” “Lex Machina Expands Analytics Insights Into Remedies Grant/Deny Rates and Trends,” “Gavelytics Expands California Judicial Analytics With Rulings Research Capability and Adds Arbitrator Archive,” and so on.

But the last two headlines above about Lex Machina and Gavelytics add fuel to the fire for creating curriculum

around Big Data: our vendors are already there. Reed Elsevier, particularly with its acquisition of Ravel, has taken a huge lead in this area. And a word for law librarians—nobody owns this space ... yet. We must and should make this part of our DNA.

So how do we get there? In no small part related to this is the question: To Code or Not to Code, should we teach law students how to code? Yes! Coding is a crucial part of the data scientist skill set and will make our law graduates more employable.

Any doubt of this notion can be immediately erased by following the work of David Colarusso, now clinical fellow and director of the Legal Innovation and Technology Lab at Suffolk Law. It isn’t just Colarusso’s work, it’s also the work of Daniel Katz and Michael Bommarito, who taught the programming language R and made their work open source for anyone to use. (Learn more at [bit.ly/SO18Katz](http://bit.ly/SO18Katz).)

### Law Librarians Leading the Charge

Law librarians have many opportunities to make this a point of conversation in our schools. We can craft these courses and the pedagogy (and throw in the word heuristics to make traditional faculty more or less think it has merit). We have many opportunities in any given year to discuss how this can happen and to move it forward. For example, we have an information hub to collocate all this information at the Legal Technology Laboratory. (Learn more at [bit.ly/SO18legaltechlab](http://bit.ly/SO18legaltechlab).)

While working with legal information is old hat to lawyers, law librarians, and law students, the rapid and broad spread of technology over the past three decades demands our rethinking about how and what we teach law students. The world is on the cusp of profound change, and now is the time to bring law students to the forefront.

 Teaching + Training

#### AALL2go EXTRA

Watch the 2017 AALL Annual Meeting program “Teaching and Implementing Emerging Technologies in Legal Practice” at [bit.ly/AM17legaltech](http://bit.ly/AM17legaltech).



**RANDY J. DIAMOND**  
DIRECTOR OF LIBRARY AND  
TECHNOLOGY RESOURCES  
LEGAL RESEARCH PROFESSOR OF LAW  
University of Missouri School of Law  
Columbia, MO  
[diamondrj@missouri.edu](mailto:diamondrj@missouri.edu)

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**DARIN FOX**  
ASSOCIATE DEAN, DIRECTOR OF  
THE LAW LIBRARY  
PROFESSOR OF LAW  
University of Oklahoma College of Law  
Norman, OK  
[darinfox@ou.edu](mailto:darinfox@ou.edu)

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**KENNETH J. HIRSH**  
DIRECTOR OF THE LAW LIBRARY  
PROFESSOR OF PRACTICE  
University of Cincinnati College of Law  
Cincinnati, OH  
[hirshkh@ucmail.uc.edu](mailto:hirshkh@ucmail.uc.edu)

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**HEIDI FROSTESTAD KUEHL**  
DIRECTOR & ASSOCIATE PROFESSOR  
OF LAW  
David C. Shapiro Memorial Law Library  
Northern Illinois University College of Law  
DeKalb, IL  
[hkuehl@niu.edu](mailto:hkuehl@niu.edu)

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ASSOCIATE DEAN FOR TECHNOLOGY  
& INFORMATION SERVICES  
DIRECTOR OF THE SCHOENECKER  
LAW LIBRARY  
University of St. Thomas School of Law  
Minneapolis, MN  
[michael.robak@stthomas.edu](mailto:michael.robak@stthomas.edu)

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