CHAPTER 7

TEACHING LITIGATION TECHNOLOGY

Synopsis

§ 7.01 A Brief History of Legal Education

[1] Traditional Legal Analysis—"Thinking Like a Lawyer"

For the last 100 to 150 years, law schools have been teaching law students how to "think like a lawyer" by: (1) using the case method to analyze legal issues; (2) demonstrating how to reason from precedent and by analogy; and (3) exploring legal doctrines and legal argumentation through a sophisticated in-class utilization of the Socratic Method. Many law students learned the law, or at least they learned how to learn the law, and they went on to pass bar examinations and eventually practice law. Although the goal of teaching legal analysis is still an important part of what we are trying to accomplish in legal education, there have been substantial waves of concern and reaction over the years that have caused legal education to adapt significantly to various developments both in society at large and in legal practice. By making periodic adjustments in legal education, law students continue to obtain many of the necessary skills to practice law in a rapidly changing world.

[2] Legal Research and Legal Writing

For many years, the ability to engage in legal analysis was all that was believed to be necessary to prepare a law student to become a practicing lawyer, as, traditionally, much of the practical training and development of legal skills was learned on the job. One of the first and most noteworthy disconnects between actual law practice and legal education occurred just a few decades ago. It was the realization of the need for law students to be able—on the first day of their first job—to research the brisk growth and development of the law competently, as well as write legal memoranda and legal briefs effectively. But almost stubbornly, legal educators did not immediately respond to that need. Instead, the academy rationalized that employers should be the ones to teach those more "rudimentary" practice skills as part of a new lawyer's professional development.

Yet employers' complaints continued, so law schools began to realize that in order to prepare students to practice law adequately, legal research and legal writing would need to become a meaningful part of the law school curriculum. Today, virtually every law school has a very well-developed research and writing course during the first year, and often in the second year, so that law students can "hit the ground running" after graduation when it comes to drafting legal documents, both concisely and persuasively, as well as researching the law thoroughly and efficiently. Instead of leaving the teaching and development of these very important lawyering skills almost entirely to employers, law schools eventually assumed their pedagogical responsibility in developing their students' writing and researching skills. Law school curriculums now reflect a crucial practice element that emanated from the legal profession.

[3] Clinical Programs and Experiential Learning

Another area where legal education was failing to address the evolving needs of the legal profession was the recognition that although law students were being provided a strong academic grounding during law school, most law students were still graduating with a grave deficiency in actually dealing with clients, and knowing how to address real-world legal problems in a practical setting. As a result of feedback from the legal community, more clinical programs began to be integrated into law school curriculums and now they are a staple of the second and third year course offerings at law schools across the country. Just like medical schools' residency programs give future doctors the opportunity to apply their knowledge in the role of a real caregiver-patient relationship, while still under supervision and receiving useful feedback, law school clinical programs similarly provide law students the opportunity to apply their knowledge in the role of a real advocate-client relationship, while still under supervision and receiving helpful feedback. Such out-of-the-classroom learning is extremely important for law students to develop practical legal skills, as well as build confidence in their evolving professional identities as future lawyers. As a result, externship, internship, and various field placement programs now formulate a vital part of the law school curriculum at most law schools.

Again, this critical step forward in the law school curriculum was yet another direct response to the hiring trends of, and feedback from, law firms. Given the client demands of the legal profession for more complex legal services at competitive rates, and the time it takes to become a skilled enough lawyer to answer that call, law schools could not depend entirely on employers to provide this kind of extensive and expensive early career training and meaningful legal experiences. Clients also began to refuse to

pay for this kind of attorney mentoring time for new lawyer hires, and over the last couple of decades, that market reality has become an even more acute concern. Of course, all lawyers, especially new ones, are constantly gaining experience and learning how to practice law more effectively, and will continue to do so, or so they should, throughout their careers. However, the important realization by law schools was that law students should at least *begin* that essential professional developmental journey *while in law school*; it should not be delayed until the first day of their job as a new attorney. Just like future patients will want their surgeons, on the day of their surgery, to actually know more than just "how to think like a surgeon," the same is true with future clients who will want their attorneys, on the day their case is presented, to actually know more than just "how to think like a lawyer."

[4] The MacCrate Report and the Carnegie Report

The "MacCrate Report" of over 20 years ago, and the recent "Carnegie Report" just a few years ago, explain the disquieting call for law schools to do even more of this kind of practical legal training so that there is not such a wide gulf between what law students are learning in law school, and what law graduates need to know to competently practice in a modern legal construct of growing complexity, with exceedingly high client expectations, and elevated professional demands. Some of the key observations and findings from both of those reports are:

(1) Among the ten areas identified by the MacCrate Report as gaps between what law schools teach and what graduates need to know, were skills such as factual investigation, communication, counseling, negotiation, litigation, and alternative dispute resolution procedures, organization and management of legal work, and recognizing and resolving ethical dilemmas.

(2) The Carnegie Report found that three lawyering "apprenticeships" are necessary for a strong legal education. The first is instruction in legal doctrine and analysis; the second, in practical and lawyering skills; and the third, in professional identity and purpose. The report concluded that law schools were doing well only in the first apprenticeship, but failing in the second two. As a result, students spend their time reading about cases instead of gaining experience working with clients and gaining many of the practical legal skills demanded by the legal profession. The report exposed the insufficient "bridge" between the traditional learning of legal doctrine and the dynamic realities of practice.

[5] Globalization and Technology

With this history in mind, law schools are now facing similar additional challenges to ensure that what our law students are learning in law school is what lawyers will need to know in order to practice law both now and into the future. Two key areas in which law schools are adapting to current fast-developing changes in society are globalization and technology.

Although these two areas are obviously different, they are also actually very much interrelated and interdependent. The globalization we see in the practice of law has been, and continues to be, largely facilitated by the internet, e-commerce, international shipping, and other technologies in society at large, which, along with the international cooperation between companies, and between governments, is currently allowing globalization to take place on an unprecedented economic scale that is certain to continue to grow in both size and complexity. Many law schools not only have developed or enhanced their existing international law programs in response, but more recently, they have begun to appreciate the value and benefit of globalizing the entire law school curriculum so that in virtually every class, students get to encounter international legal considerations. That is, instead of just one class or subject area called "International Law," there are international law components incorporated into virtually every legal course in the curriculum to the extent economic or societal activities include more and more trans-border aspects that affect virtually every sub-area of the law. For example, at the University of the Pacific, McGeorge School of Law, where I teach, most faculty have made such international law coverage adjustments in their classes, and many have written companion short casebooks in the Thomson West "Global Issues" series in order to supplement substantive courses with relevant intentional law coverage.

Given the foregoing concerns, the focus of this chapter is on the growth of technology in the practice of law as a necessary next step in the evolution of law school curricula, and in particular, the growth of technology in all aspects of litigation, e-discovery, and the use of technology in modern courtrooms. It is crucial for law students, especially those wanting to seek careers in any aspect of litigation, to learn these essential skills in order to practice law more effectively and competently. One of the most important set of litigation skills for a modern attorney is finding, retaining, retrieving, reviewing, and producing electronically stored information ("ESI"). Such is the foundation for adequately handling e-discovery matters and disputes, and being able to navigate the admissibility and effectual presentation of ESI and other computer-generated and enhanced exhibits in various advocacy settings.

Although the technological prowess of modern law students may be legend compared to most of their professors and even many lawyers, it is important that we do not get lulled into a false sense of security by simply telling ourselves something such as, "*Law students today are so much more tech-savvy than we ever were! They can easily learn the latest litigation technology once they actually start practicing law and therefore we do not need to teach it to them in law school, especially if we do not even know it ourselves.*" Although law students may be very adept with technology in general—as they grew up playing computer games, using cell phones, routinely downloading movies and music, uploading content on Facebook, Twitter, and YouTube, and rapidly texting and e-mailing—that does not mean that they do not require any guidance to master litigation, modern e-discovery, or the use of display technology in an automated courtroom. Law students of today obviously have general technological know-how and digital familiarity and therefore they often possess great potential to learn litigation technology. But referring to their basic exposure to general computer technology is just not enough of an adequate response by law schools to the current demand by the legal profession for litigation tech-savvy law school graduates.

Accordingly, just like the legal academy was once met with the challenges of upgrading its core curricula, first with legal research and writing courses, and then with experiential learning programs, and the growth of international law, so is it now faced with the demands of improving its program to include courses on modern litigation technology. We have arrived at another important crossroads with respect to whether we are adequately preparing students to practice law with the critical litigation skills that most of them will need in some form in the future. Thus, law schools, once again, must rise to the occasion and adapt and expand their curricula in order to provide law students with the latest technological skills in order to become competent in modern litigation. By starting now to integrate these courses aggressively into the mainstream of the law school curricula, no major gap will develop between what law students are learning and what they need to know upon graduation.

Legal educators need not fear a takeover by legal technology. It is not that computers will someday replace lawyers; it is just that lawyers who use computers, will replace lawyers who do not. That replacement process is already happening. We therefore should not fear computer technology; we should instead embrace it, and start teaching our students how they will need to use it, both competently and strategically, in their future litigation practice.

§ 7.02 The Demands of Modern Litigation: Are We Currently Teaching Law Students What They Need to Know about Litigation Technology?

[1] Pretrial Litigation

[a] The Explosion of ESI

Most documentary evidence and information today exists in electronic format on some type of digital device. The amount of paper documents is still growing, of course, but the growth of ESI is astounding. For example, a major corporation often has over 10,000 tapes of information where just one tape can contain a trillion bytes of information or more (the equivalent of a stack of paper 200 miles high). Information is not just in documentary form that would dwarf brick-and-mortar libraries, but also can exist as: voice mail messages, security videos, GPS systems logging travel routes, computers with records of search engine requests, records of visits to various websites, and, of course, e-mail messages and cell phone text messages, and their related "metadata" storing such information as which computers/phones sent and/or received the messages, the replies with additional embedded messages and/or attachments, forwarded copies of such messages, reply exchanges, and a history of edits or other manipulations. Information is created more quickly than it can even be requested as it is often continuously updated, such as business information containing data on worldwide sales, payroll information, upstream manufacturer and supplier transactions and invoices, economic forecasts, etc., making it virtually impossible for a lawyer or junior associate reviewer to gather, retain, control, review, and then produce all of that information in a traditional litigation discovery context where there used to be perhaps just a box or a few boxes of relevant documents. The standard desktop computer is only one source of such data which can now also include personal laptops, PDAs, iPods, iPads, cell phones, telephone calls made through the internet, instant messaging, personal thumb drives, etc., all of which might contain relevant, redundant, and hard to access information that may be involved in litigation.

In 2002, it was estimated that print, film, magnetic and optical storage media produced five exabytes of new information,[1] where five exabyte's of information is equivalent in size to the information contained in 37,000 new libraries the size of the Library of Congress' book collections, if the 17

---

§ 7.02

[1] *See* Peter Lyman & Hal R. Varian, *How Much Information? 2003*, available at http://www2.sims.berkeley.edu./research/projects/how-much-info-2003/execsum.htm.

million books in the Library of Congress were digitized with full formatting. Another way to put it is that for the 6.3 billion people in the world, each year, 800 megabytes of information is created, or the equivalent of a 30-foot stack of paper per person, per year, and that rate is growing each year.

Lawyers can no longer just ask to see a company's files in order to review potentially relevant documents in a dispute, but law school professors often still teach litigation as though that is the extent of the volume of discovery. Even when discovery exploded in the 1970's and 80's with vast amounts of paper documents, we still were talking about "boxes of documents" in conference rooms or warehouses that were potentially relevant, instead of the tremendous amount of ESI common in modern litigation, which may be stored in new ways.[2]

In short, many lawyers are simply at a loss to know what ESI to ask for; many also do not know how to respond to or produce whatever ESI is being asked for; and finally, many do not know what to do with the vast amounts of ESI they may have unwittingly requested once they receive it. And through it all, many current lawyers lament to themselves, "*They never really taught us any of this ESI, e-discovery, stuff in law school; all we ever learned about were the basic discovery rules and potential problems in having to review many boxes of documents.*"

[b] Document Retention/Storage/Destruction/Production

Given the vast amount of information out there, and thus, the vast amount of potential digital evidence in virtually every case, a modern litigation attorney needs to know several aspects about technology in order to competently practice law. At the most basic level, an attorney needs to know how electronic information is stored and retrieved. Do individuals create data using local applications or are enterprise applications used that may automatically capture computer-created data? Is the information stored in computer hard drives online through the internet, or on a special server located somewhere else? Is the lawyer knowledgeable about each of her clients' records management policies? Does the lawyer know where to look for backup information if the requested data is claimed to be no longer

---

[2] *See* Kenneth J. Withers, *Computer-Based Discovery in Federal Civil Litigation*, 2000 FED. CTS. L. REV. 2, 3–4 (2000), available at http://www.fclr.org/fclr/articles/html/2000/fedctslrev2.pdf ("Potentially discoverable records are stored according to computer logic, as opposed to business-record logic, and can be difficult to locate and untangle from irrelevant and privileged records. The combination of multiple locations, tremendous volume, and arcane and non-existent records management practices is potentially explosive for defending counsel.").

available—such as local backups made by individuals, or enterprise backups made either by formal IT departments, or paid internet backup providers or disaster recovery data specialists? Do lawyers understand that they might need to hire a computer forensics expert in order to obtain critical evidence they may have been deleted, on purpose or otherwise, just the way they would need to hire a DNA, ballistics, or accounting expert in order to competently and professionally obtain and/or analyze critical evidence and information?

Lawyers also need to understand that they cannot simply ask their clients about their clients' digital records retention policies, but instead may have to assist their clients to formulate an adequate retention policy that is consistent and would be free from charges of intentional or negligent spoliation of evidence. Lawyers need to understand a litigant's duty to preserve information that might be the subject of litigation over and above any document retention or routine records destruction policies. Attorneys need to know and inform their clients of the applicable "trigger date" when the "duty to preserve" ESI attaches, and when to issue "litigation holds" directing their clients' IT departments of their clients' legal duties during litigation. Attorneys need to not only issue litigation holds, but also actively monitor their clients' compliance with those litigation holds. They need to know when to make a request for an order that their opponents preserve data and make such preservation orders applicable to all parties or witnesses in the possible possession, custody, or control of ESI, which potentially can be many individuals when data is now so easily transferable.

Lawyers also need to know what is required and expected of them in the "meet and confer" conferences under federal or many state rules where they are expected to specifically discuss and make critical decisions about e-discovery, the capabilities and compatibilities of the litigants' respective ESI, the ability to obtain and review that ESI in a common file format, as well as other forms of production issues, such as what search methods will be used, to what extent will metadata be relevant and included, and will there be on-site inspections or simply production of copies of all relevant ESI. Cost information must also be decided: such as who will pay for the search and production; will the parties be required to pay for and produce expensive, not reasonably accessible, but potentially relevant, information; and when should a lawyer request cost-sharing or cost-shifting regarding all or part of the discoverable ESI? Further, what constitutes spoliation of evidence, what kind of sanctions are appropriate, what sort of privilege issues are associated with ESI, such as the risk of waiver and the high costs of pre-production review? And finally, what are the traditional as well as the

new ethical issues arising in e-discovery, and how should lawyers conduct themselves in terms of civility and other professional responsibility aspects as they arise in the context of e-discovery?

These are just a sampling of very important questions and issues that an attorney needs to be able to address in modern litigation. Accordingly, we should not leave such a critical aspect of modern litigation practice for students to learn on their own, or hope they will learn from their employers or from continuing legal education programs. Just as we now teach law students how to conduct legal research by using computer programs such as LexisNexis and Westlaw—that go far beyond the traditional methods of using various book digests to conduct legal research—so too should we teach law students the types of litigation technology and software programs that they will need to know in order to be effective attorneys in a digital age.

[c] Case Analysis & Case Management Software: "CaseMap" ~~and~~ "Summation," and Catalyst Solutions ("cloud computing")

A critical component of knowing what ESI to ask for in discovery, how to produce discoverable ESI, and how to review and use ESI once it is produced, is to know how to use litigation software programs to efficiently and thoroughly accomplish those tasks. There are many litigation technology software programs available to attorneys today, and although it may not make sense or be practical to learn every such program, law students should at least be exposed to some of them and learn how to use them so that such programs are not completely new to law students once they begin to practice law.

For example, LexisNexis has a program called "CaseMap" that allows attorneys to input all witnesses, facts, events, applicable law, key evidence, chronologies, etc., about the case, and use the program to categorize the issues and associate documents and key evidence with each element, and then formulate legal or factual queries that assist the attorney in thoroughly analyzing the case from various perspectives. "Summation" is another product that allows attorneys to manage all of the documents and evidence in their cases and immediately search and retrieve important information. There are also web-based, "cloud-computing" litigation software programs such a ~~"Relatively" or~~ "Catalyst" when all case documents and software review programs are stored off-site and not in the law firm's computer network. Also, a full copy of Acrobat from Adobe has some litigation oriented features: redaction, OCR conversion, and Bates numbering. Attorneys are now using these kinds of software programs in order to help them solve various litigation problems. For example, assume an opponent produces the equivalent of even just 100 boxes of documents in a case

(which is a relatively small amount of information by today's e-discovery standards). If the information is the equivalent of 100 boxes of documents, then that would be about 300,000 total pages (assuming 3,000 pages per box x 100 boxes = 300,000 total pages). It is revealing to consider the ways an attorney could manage such a case both from a pre-litigation technology (paper) perspective and then compare it to a post-litigation technology (digital) perspective.

First, if all of the documents are printed out and copied, it would be expensive and unwieldy to categorize and review 300,000 pieces of paper manually. Using the old "Bates" stamped number system, each document would have to be numbered, #1 through #300,000. Although uniquely numbered, these paper documents would be unmanageable, they would be out of any order other than their arbitrarily assigned Bates numbers, and there would be no real way to systematically and comprehensively search through the documents other than by manual review by a lawyer or a legal assistant. Whenever key documents would be identified, they have to be marked (perhaps with yellow tab "post-its"), and possibly the attorney might have to make yet another hard copy subset for storage. With every new litigation query that might develop through the case, the entire document set might have to be manually searched through again.

But if the documents were all digitized, then they could be better and more efficiently managed. There would be immediate advantages: (1) there would be a huge physical space savings, as a hundred boxes of documents could easily be stored on one laptop, with massive amounts of disc space to spare: (2) there would be a virtual elimination of all potential deterioration concerns about the documents (as the documents could be backed up and stored off-site in case of any loss or data corruption); (3) the authenticity and reliability of the documents could be enhanced, if they are encrypted; (4) the documents would be easily transferable (making them accessible for multi-user access/review and remote access over the internet); and, (5) there would be significant financial savings by eliminating unnecessary photo-copying (on-site imaging) and unnecessary storage of physical paper documents.

Without litigation technology, the attorney, an associate, or legal assistant, would have to manually inventory & organize all of the documents. Although they might create a Word document list, or table of contents, with corresponding Bates numbers, and might even make an Excel list of the table of contents, the documents still could not be searched or instantaneously organized by any more meaningful criteria. However, if all of the information were digitized, then a software case management system could be used

to index and categorize each document which would connect that specific document, with the particular code (such as the date of the document, the type of document, who wrote the document, to whom was it written, who may have received it and when, for what purpose, concerning what potential relevant information, how might it strategically help or hurt a claim or defense, etc.). Once described and categorized ("tagged") for later retrieval using the litigation software programs, those codes could be searched; much like a Westlaw head note search can locate applicable cases, only it would be for the applicable documents in the case. Once the documents are digitized, a lawyer can also perform a full-text "Boolean" search of every term or word contained in all of the documents in order to find all responsive documents containing those key search terms, much like a LexisNexis or Westlaw full-text search for any special relevant term can locate all particular responsive cases containing that term.

With litigation technology, an attorney need not ever miss an important document or fact either due to a manual searching error going through boxes of documents, or due to an economic decision that it would simply not be worth the time and effort to chase down a particular idea or lead regarding the documents. Also, special attorney electronic "notes" could be left for each document, by whatever attorneys or legal assistants are working on the case, so that important thoughts and strategies about the particular document would not be lost.

If an attorney is preparing for a deposition without the aid of litigation technology, she or her legal assistant would have to manually search all of the documents in order to find the relevant, applicable ones, and review them in order to prepare for the deposition. But with litigation technology, there already would be a way to obtain an instantaneous organization of any and all responsive documents according to the particular litigation strategy query. So instead of having a legal assistant search all 300,000 pieces of paper for the documents, or even have to search through any pre-written lists or table of contents, these documents could instead be located instantly. Thus, attorneys really need to learn how to practice law with technology, not simply for the speed, convenience, and economic advantages that are now demanded by fast-paced litigation and cost-conscious clients; but also, and even more importantly, to help the attorney *substantively* prepare for depositions and other important steps in litigation, as well as better and more quickly react with crucial information that is literally at their finger tips.

Another important litigation concern is providing all of the relevant documents to an expert witness for review, and the development of the expert witness' testimony. Without technology, this means an additional

photocopied set of the documents would need to be sent to the expert. For example, assume that in a construction defect case, the attorney has hired a stucco siding expert. Assume that the stucco expert needs to see all of the stucco-related documents, which would mean that the expert might not be provided with any, say, electrical wiring documents, or plumbing-related documents. That expert would have to then organize and review the additional set of copied paper documents in order to prepare an opinion. But with litigation technology, the experts could easily be given an electronic copy of all the documents, including all of electrical or plumbing documents. It would not be expensive to make sure that the expert got a complete set of all of the documents, and was able to analyze them (because there would be no extra hard copy costs or concerns). As a result, the expert could not be cross-examined on how the expert only had access to "some," but not "all," of the potentially relevant documents in arriving at the expert's opinion. Also, the documents could be given to the expert in organized fashion so that it would reduce the expert's overall review time and costs, since he could utilize the search capabilities just as the lawyer and legal assistants do.

In short, attorneys need to understand ESI, and they need to know how to use litigation software in order to: (1) Identify what ESI and other information is out there, and what the attorney will want, and why; (2) Preserve and Collect the ESI and other relevant information in order to make sure neither the attorney, nor the opposing attorney, start deleting information ("spoliation of evidence"); (3) Process the ESI and other relevant information so that it is all converted to common file format (so that all parties can access and review the ESI without costly delays and disputes over formatting and conversion); (4) Review and Analyze the ESI and other relevant information in order to determine what data are relevant, what are key documents and files, what may be privileged, how the ESI can and should be coded, indexed, then searched, and given to experts, etc.; (5) Produce ESI and other relevant information, both internally for the attorney's use in the self-assessment of how strong or weak the case is, and to be able to eventually create a responsive discovery production set for an opponent (being careful to avoid the possible inadvertent production of privileged data, or confidential data that may be protected by a protective order); and, finally, (6) Present ESI and other relevant data at the trial stage if the litigation gets that far (see below).

[2] Trial Litigation

[a] The Persuasive Power of Display Technology

There is nothing new about attorneys using visual aids, such as flip charts,

photographs, and diagrams, during trial so that judges and juries can understand and remember significant facts and legal issues involved in a case. But modern lawyers now use sophisticated computer graphics and animations with automated display systems in order to connect with and to persuade decision-makers (jurors) in an ever-increasing visual communication and computer-enhanced society. This is an especially major concern when one considers the competition for shortened attention spans of individuals, and how those individuals are being exposed to much more visual information than ever before. Of course, regardless of how high or low tech visual aids may be, honing the persuasive presentation of an attorney's arguments and evidence remains the paramount objective of the advocate. Even if courtroom technology can greatly assist in understanding a case, and even help to make the presentation of that case more persuasive, it does no good if jurors cannot remember crucial information about the case. However, numerous studies demonstrate that recall is improved when oral presentations are coupled with visual presentations. Whether or not that is true, modern trial attorneys believe that it is true. And jurors, in polls, often claim that they prefer the assistance of visual aids, especially when there are many and/or complex issues involved in a case. So providing law students with practical experience and meaningful learning opportunities with cutting-edge courtroom technology is part of the necessary skills development that leads to success as a modern litigation attorney.

[b] Opening Statements and Closing Arguments ("PowerPoint")

Lawyers need to learn how to make effective visual presentations, which means not only knowing how to operate simple technology like PowerPoint, but also, much more importantly, how to create and present effective and persuasive visual images during trial, and simultaneously, how not to over rely, and/or abuse, PowerPoint during trial. Recall that "Trial Advocacy" courses at one time in the past used to be called "*Oral* Advocacy" courses, largely because advocacy involved mostly oral presentation of material. But Trial Advocacy actually encompasses all that goes on during trial, not just the persuasive *oral/verbal* presentation, but also the *visual/demonstrative* presentation of exhibit and arguments (Timelines, economic bar charts, photographs, videos, computer animations, cast of characters, key events, key relationships, diagrams of physical spaces, comparisons of language used, etc., are all duly emphasized and highlighted). It is imperative that legal educators do not focus on the former, to the unfortunate exclusion of the later.

[c] Enhancing Direct- and Cross-Examinations ("Sanction" and "Trial Director")

PowerPoint presentations are good for opening statements or closing arguments, where the attorney is providing a straight, uninterrupted presentation and is in control of that presentation. However, when an attorney is conducting a direct examination, and especially a cross-examination, that exchange is a much more fluid and dynamic question and answering presentation, where the attorney does not have complete control, as a good deal of the information is coming directly from a witness rather than an attorney's prepared presentation. With that in mind, trial presentation software such as "Sanction" or "Trial Director" allow the attorney to access any and all exhibits on the fly and then make any necessary (or, within limits, rhetorical) enhancements, highlights, call outs, and blow ups. This technique at trial allows an attorney to emphasize important language or other key aspects of exhibits while questioning a witness. It also allows an attorney to quickly respond, and make any notation or emphasis that is necessary in light of the witness' testimony, or the lawyer's desire to focus the testimony in order to make an important point during questioning.

Visual presentation tools can be especially effective when cross-examining a witness and impeaching them by confronting them with a prior inconsistent statement. For example, if the attorney had previously taken a video recorded deposition of the witness, and then digitized it so that it would be synchronized with the transcript of the deposition so it could be immediately pulled up and displayed during trial using litigation software, then a witness could be impeached on the spot, not only with a verbal reading of their prior deposition testimony, but could be impeached much more powerfully and effectively, with the exact portion of their video recorded deposition making the prior inconsistent statement. The attorney could immediately access the relevant portion of the videorecorded deposition for playback to the jury, either with or without the synchronized verbal text. This is much more effective than the attorney simply reading, or even having the witness read back the deposition testimony, because the jury gets to see and experience the "demeanor" evidence of the witness saying one thing at trial, and then saying the opposite in their deposition, presumably with the same demeanor, suggesting a lack of credibility. Jurors are used to seeing "gotcha" journalism interviews on television where these techniques are used, and so when used properly in an actual trial, they can be very effective and dramatic.

Law students need to learn how to use visual technology, especially if they will be expected to use such technology in cases involving complicated

information because it improves the jury's ability to understand, remember, and ultimately be persuaded. Law students should also be aware of e-admissibility issues when it comes to computer generated exhibits and other ESI. Attention and basic preparation regarding admissibility issues and presentation style should eliminate most presentation mistakes and will help in overcoming many objections.

[d] Practice Management ("Abacus" or "Amicus Attorney")

It seems too obvious to point out, but future lawyers also should be taught how law firms basically operate in actual practice. One benefit of teaching law students how to use a practice management software system is that law students get a sense of the practical elements involved in setting up, or at least being part of, a law practice.

[e] Client Information/Conflicts Checks/Billing

Lawyers can either manually input all client information into client files and logs to contact their clients and do a manual conflicts check whenever they consider taking on a new client matter, or they can quickly, inexpensively, and thoroughly do the same things using practice management software. Also, instead of wasting time manually recording an attorney's time for billing purposes, lawyers can simply refer to the client for whom they are doing work, while they are doing it, and the computer will keep their time automatically. Even just being exposed to this kind of software in law school gives law students familiarity with such programs and provides a structure of elements that law students should know about when setting up their own law practice or when working in almost any type of law office.

[f] Calendaring ("CompuLaw")

One of the biggest challenges for lawyers is to correctly calendar significant deadlines and make sure not to overlook or miss any of them. Lawyers have relied on any number of "tickler" systems, "list of things to do," "important dates," "personal calendars," and perhaps the most effective manual time deadline keeper of all time—a very good, organized, and detail-oriented personal secretary or legal assistant (for lawyers that can afford that kind of assistance). But technology provides very inexpensive and quite reliable systems, so that lawyers focus on the strategy of their cases instead of worrying about calendaring issues. Software like "CompuLaw" will automatically calculate all specific litigation deadlines and time within which to consider various types of motions or actions according to whatever jurisdiction the lawyer's case happens to be located in. Lawyers should understand how they can, and might be required by economic realities to, free themselves of such important but mundane laborious tasks, in order to

focus on the law of their cases, litigation strategy, and other professional challenges. They should understand how they can focus on the more challenging aspects of litigation, and learn how not to be required to spend any significant amount of time on the non-computerized and time-consuming administration and management of their cases when there are software programs that can easily handle those matters. There are also discipline specific calendaring/docketing tools where procedure dictates many deadlines which extinguish client rights if not strictly adhered to. For example, there are a number of docket application tools (both local and cloud versions) for patent prosecution that student could be made aware of.

[3] The Need for a Litigation Technology Class in Law School Curriculums

As our law students graduate and enter the legal profession, they will increasingly embark on careers in a world where obtaining, manipulating, and arguing about digital information reigns supreme. Businesses want to enhance their technological capabilities and information systems for efficiency purposes, advertisers want to boost their ability to use the internet to profit more from directed advertising, and individuals are doing more and more in their lives that leave "digital footprints" (and therefore evidence) wherever they may travel or do business, both virtually and in the physical world. Moreover, information specialists and computer scientists are constantly working to develop and improve technology and software programs which will only augment the digital world in which our students will live. However, our students will not be adequately prepared to face that world as legal professionals if their legal education does not at least introduce them to the vast legal issues and skills that will be an integral part of their professional world.

That is why a course covering litigation technology and digital age issues should be a part of every law school curriculum. Students need to learn not only very important analytical skills in the advanced litigation context, but they also need to obtain a strong working knowledge of, and marketable background in, litigation software and technology display systems that are now expected of law school graduates, and certainly those going into litigation. The claim of adequately preparing students to be effective advocates as "21st century lawyers" (especially since we are now over 10 years into this 21st century) should include offering at least one course in law school that exposes them to cutting-edge case management and trial presentation software and prepares them to use that technology as they enter the practice of law.

[4] Exposure to Litigation Software in Law School and in Practice

Although modern students may be very adept and familiar with technology in general (word processing, e-mail, text messaging, Facebook, Twitter, downloading music, video gaming, YouTube, and using Google and other internet search engines), they are often very unfamiliar with the *professional use of litigation technology* in the practice of law (CaseMap, Total Litigator, CompuLaw, Amicus Attorney, Summation Blaze, Trial Director, Sanction, Online Dispute Resolution, e-filing, secure client networks, etc.). The modern student needs to learn this software, and more importantly, develop the technical and legal skills to use it strategically before they even begin the practice of law in a digital age. Lawyers are expected to have learned this technological competency in law school so that they can competently and professionally address e-discovery and e-admissibility issues when they graduate, as well as be proficient in basic case management and case practice software.

Catalyst Solutions

Given the colossal in litigation practice vis-à-vis technology, employers are beginning to desire law school graduates who have been exposed to the new technology. Just as employers of today expect law students to have exposure to, and a working knowledge of, LexisNexis and Westlaw research software/technology (not just an understanding of how to use manual digests), so too are employers increasingly expecting our graduates to be familiar with the new technology used in litigation. This is an especially good opportunity for law schools to give their students a competitive edge in hiring as many existing lawyers who are automating their practices and are scrambling to find lawyers who are well trained and can interface with the technology as skilled litigators.

[5] Clients Do Not Want to Pay for Law Firms to Teach/Train their Litigation Associates

Money not only makes the world go around but it also changes everything. As clients demand even more cost savings in legal services, particularly e-discovery and general litigation, attorneys are choosing to learn (or are being forced to learn) how to use content management systems, tagging, sampling, and other efficient searching techniques that can save time and money in discovery by competently formulating effective data search requests. Students will also need to understand how the trend toward "cloud" computing will require lawyers to see their place and participate in a much larger information world. And attorneys, as well as other information professionals, ultimately must cooperate to address other seemingly countless technology challenges, such as privacy concerns, hacking, viruses,

worms, data security, and other related problems.

[6] Creation of the "Computer-Assisted Litigation" Class

[a] Course Coverage

What follows below is a course description for just such a course I developed almost ten years ago:

> **Catalog Course Description**:
>
> **"Computer-Assisted Litigation (3 units).**[3] This course will cover technical, procedural, and evidentiary issues related to computer-assisted litigation and the use of litigation software and trial display technology. Students will learn how to use pre-trial and trial litigation support software technology by organizing a document intensive case and preparing key exhibits for trial presentation."

In the course, students learn the fundamentals of a rudimentary initial setup and general document and exhibit management of an automated case from the beginning of the case through the trial. The goal is for students to learn tactical pre-trial case analysis, case management, e-discovery, online dispute resolution, law practice management, and trial presentation technology, including evidentiary, advocacy, and visual persuasion issues associated with using cutting edge courtroom technology.

The first portion of the course is spent on complex computerized document and case management systems. The legal focus is on Civil Procedure and Pre-Trial Litigation. During this portion of the course, students learn a case analysis program, called "CaseMap," ~~and a~~ case management program, called "Summation," for use in various aspects of pretrial litigation. Students also work with a LexisNexis product called "Total Litigator" in order to assist them in drafting complaints and answers to complaints as well as various motions to dismiss.

The course then takes a brief excursion into software for law practice management. A lawyer must manage client relationships, track key court and agency deadlines, identify potential client conflicts of interest, and more, in order to keep customers happy and informed, move cases forward efficiently, and avoid committing ethical violations and legal malpractice. The software programs that are demonstrated are a practice management application called "Amicus Attorney" and a case calendaring product called "CompuLaw."

---

[3] Although the course I teach is entitled Computer-Assisted Litigation, other schools may use the term Litigation Technology. The two titles are used interchangeably in this chapter.

The final portion of the course covers the preparation and the presentation of exhibits for trial and before other legal decision-makers (such as opposing counsel in settlement negotiations, judges in hearings, as well as mediators, arbitrators, referees, etc.) using display technology systems. The legal focus is on Evidence, Trial Advocacy, and Visual Persuasion Skills. A National Institute for Trial Advocacy ("NITA") case file is used. This part of the course focuses on learning two trial presentation software programs, "PowerPoint" and either "Sanction" or "Trial Director."

[b] Course Pedagogy and Methods

I consider the course to be: (1) an advanced Civil Procedure course (e-discovery issues, use of case analysis and case management software); (2) an advanced Evidence course (e-admissibility issues, authentication of computer generated exhibits); and (3) an advanced Trial Advocacy course (persuasive and skillful use of trial presentation software).

In addition to teaching the substantive areas of the law and the litigation technology software and skills, I am now offering the class in a "blended" format, which means it meets in-person half of the time, and meets the rest of the time online in a webinar format. I do this for a number of pedagogical and logistical reasons. First, I want students to get experience meeting in a professional setting online to learn general online meeting etiquette. Second, I want students to get a real sense of what communication techniques work well, and not so well, online. This provides them with a sufficient experience and knowledge base for engaging in such client or court meetings in the future. Finally, there are many side benefits to offering a class that is partially online—such as being able to allow judges, practicing attorneys, and litigation software vendors a logistically convenient method to participate in classes and make special online presentations from their computers. It is also possible to offer the course as an entirely online course either to law students from other law schools or to practicing lawyers as a Continuing Legal Education course. Having classmates that are from other law schools and that are actual practicing attorneys is made possible by the online format.

[c] Course Goals

The goal of the course is to introduce students to software programs that can assist them in pretrial litigation (case analysis, case management, practice management, e-discovery, online dispute resolution) and will enhance the students' advocacy and presentation skills (evidentiary issues at trial, as well as strategic, tactical, and persuasion considerations). The class requires a substantial amount of time and patience working with the software and students are given ample opportunity to experiment and navigate the

software on their own laptop computers.

A key objective of the class is for students to compare and contrast litigation practice as it relates to both the traditional paper document world, and the exploding ESI world. Many litigation concepts, doctrines, and strategies apply equally to both worlds, but other areas raise very different and unique issues in the context of the ESI world, such as metadata, document retention policies and spoliation issues, computer forensics, how modern jurors receive and process digital and visual information, and the proliferation of ESI (GPS systems, jump drives, printers, copier machines, cell phone communications and texting, etc.). Too often key differences between paper documents and ESI are ignored or overlooked, while other times many of the Rules of both Civil Procedure and Evidence do not need to be completely rewritten. Students need to experience differing litigation scenarios where sometimes the medium of information (paper documents or ESI) makes no difference to the underlying policy justifications for the rules; while other times, it makes all the difference in the world. Law students need to understand those differences and develop their legal judgment through experience and analysis in order to recognize the differences and similarities.

[7] Overcoming Potential Initial Faculty Resistance

Change can be sometimes difficult, even painful, especially for a cautious lot such as law professors, with our respect for precedent, and time-tested teaching and learning techniques used in time-honored classes and course subjects. Often colleagues raise legitimate concerns, some more legitimate than others, but it is wise to go through the process of giving such concerns full airing and due respect, if the goal is to change hearts and minds about expanding the curriculum in a new and a bit of a different way.

unbold, formatting of paragraph

[a] Grading/Assessment

During a faculty meeting, a colleague initially expressed a concern about the appropriateness of my decision that the course should be a graded course, rather than a "pass-fail" course, which also led to a larger discussion about the general academic content of the course.

Regarding grading, I grade students on a number of issues. First, I give students four short "quizzes" on basic information as the course proceeds in order to provide formative assessment feedback on basic issues. Second, they have two essay exams, one is a mid-term given during the middle of the course and a final exam is given toward the end of the course. The first exam is an advanced Civil Procedure exam in that it tests the students' knowledge of e-discovery, pre-trial litigation, and case management issues as they are applied when using various software programs used to manage the case and

used during discovery. The second exam is an advanced Evidence exam in that it tests the students' knowledge of how to make and overcome various objections to the e-admissibility of computer generated exhibits, such as foundation, substantive v. demonstrative exhibits, unfair prejudice, hearsay, relevancy, best evidence, etc.

For example, in the past, one of the questions on the final exam involved showing a computer animation that was a reconstruction of the Princess Diana automobile accident in France in which the creators of the animation argued that had Princess Diana been wearing a seatbelt, she would have not been killed. I asked the students to assume Princess Diana's estate was suing various defendants who defended by arguing that it was contributory negligence on the part of Princess Diana to not wear a seatbelt. The defendants wanted to admit this computer animation at trial. The exam question required the students to draft a comprehensive motion in limine arguing against the admission of the animation and to discuss how a judge would likely rule. I have used similar issues for final exams based not only on these types of exhibits, but other scientific and forensic exhibits that are created or use computers in their generation and/or display, such as the easy manipulation of digitized photographs and video clips, long thought to be excellent sources of evidence which can now be easily altered. There are significant scientific and expert testimony issues that are addressed as well. We also compare all of these admissibility arguments to non-computer generated traditional exhibits and explore the similarities and differences in the evidentiary and admissibility issues. I show these animations or other computer-generated exhibits in class live as part of the exam. The mid-term is very similar only it addresses discovery and tactical issues in a document intensive case.

I also use graded computer software interface exercises. For example, students are given a mock case file with thousands of documents. Students are able to see how the documents were produced and arranged by the lawyers in the actual case and we discuss the strategic and tactical reasons for such. We then have discovery exercises, such as determining which documents would have to be produced and why and how requests for production and interrogatories could be formulated that would require production of some of the documents and not others. We learn how to image and code documents so they can be instantly arranged and rearranged according to specific factual or legal issues. We also learn how the documents can be OCR'd[4] and then a full text search can be done for any

[4] OCR refers to Optical Character Recognition, a process by which physical documents

term located in any document. We also do exercises asking questions in a deposition and then have the deponent give an untrue or incomplete answer during the deposition. It is then up to the student to locate important documents that would undercut the deponent or require them to give a more complete answer. We focus on the purpose of the deposition and remind students that in discovery we are not trying to impeach the deponent but instead are just gathering information and possible admissions that can later be used at trial or for a summary judgment motion or a motion in limine.

[b] Class Pedagogy and Academic Content Concerns

The academic content that is being taught and assessed is learning and applying both the Federal Rules of Civil Procedure and of Evidence in an actual real world situation, much like "Legal Research and Writing" or "Remedies," or a whole host of other such courses, are a means to develop legal skills in a rich academic context. Students also learn the power and value of performing these academic, lawyerly functions with the aid of a computer. The computer can assist the lawyer in performing his or her function in a way that simply cannot be done without technology.

For example, if a deponent unexpectedly states that he or she is aware, or unaware, of the contents of certain documents relating to a key issue in the case, an examining lawyer might want to follow up with the deponent to pin down the story and identify every relevant document bearing on that issue. If the deponent becomes evasive or feigns a lack of memory as to when documents were written or when they might have been seen, to whom those documents were written or sent, if they referenced other documents, events, if they are privileged or work product protected, etc., the lawyer must rely on his or her own memory as to what all of the documents contain, or on linear written summaries of such. In a small case without many documents this may be possible, but in a large document intensive case, where tens or hundreds of thousands of documents are involved, as well as tens or even hundreds of depositions, the lawyer, no matter how well-organized with manual indices, replete with yellow sticky tabs, and teams of associates and paralegals at the deposition, cannot instantaneously locate documents after a comprehensive search, arrange them chronologically, organize them by author, recipient, content, subject type, privilege, etc., so that the deponent is more thoroughly and successfully deposed than without such computer assistance.

---

which have been scanned into a computer file format may be converted to a form which is searchable for key words or phrases. Scanned documents which have not been "OCR'd" are generally stored as simple images and may not be searched.

Students learn the legal theories behind discovery rules and pretrial litigation in an applied setting, an actual case, and they further learn how to accomplish their litigation objectives using technology. It is impossible for lawyers to do a comprehensive, thorough and instantaneous search for particular documents manually because such instantaneous manipulation and control of a document-intensive case requires a computer. Students learn the value of being able to control and retrieve that information and not have to reconvene depositions days or weeks afterwards because all of the relevant documents had to be manually searched. As with any course that cuts across the spectrum in an applied way, this course draws upon the student's basic legal knowledge of Civil Procedure and Evidence principles and solidifies it by having the students apply that knowledge in a real-world setting with real-world examples so that they can successfully mesh theory with practice.

I also assess the students' performance in advocacy settings, and in particular I focus on how, in certain situations, the display technology can "get in the way" of practicing law. This is a very important lesson for students to learn, especially for students who would be drawn to a class such as this and are very interested in using technology. For example, one exercise I give is assigning famous speeches from history and requiring the students to formulate and give a Power Point presentation of that speech. The purpose of this oral/computer exercise is to get the students to see how technology can "take away" from the strength or persuasiveness from a presentation in certain situations or that the over reliance on the technology can be distracting instead of emphasizing a point. Students, especially those that are very computer-oriented, learn an extremely important lesson—one they may not be expecting to learn in a course such as this—about not making "the medium, the message." I emphasize how cases are still won and lost by good facts, good law, and good lawyering. Technology is just a tool, albeit an important and critical one, in marshalling those facts and law. Attorneys must be aware of the unique legal and tactical issues of applying technology in their work. I also have them give there presentation online, so they get experience in presenting on a computer, not just live.

Another area of assessment is done during the last portion of the course that involves display technology in advocacy settings. Because litigation involves so much more than just a trial (pleadings, motion practice, discovery, etc.) and because litigation also often involves other non-trial situations such as private negotiations, plea bargaining, mediations, arbitrations, etc., it is important for students to see the benefit of using display technology in all of these contexts that do not involve a trial. For example, I have a component of the course addressing the use of online dispute

resolution services between litigants in different states. It requires students to determine, which law would apply and where litigants would be subject to personal jurisdiction for transactions made in cyberspace? We focus on solving the personal jurisdiction and choice of law problems by having the litigants sign an online dispute resolution agreement whereby the dispute will be resolved online through a website. That way, individuals from different states, and even from different countries, can eliminate travel costs and disputes about personal jurisdiction and choice of law issues as they solve their dispute remotely online using the text of the UCC. Thus, the course focuses on case presentation in a variety of settings completely outside of trial. Teaching the course partially online is a very helpful way to explore the advantages and disadvantages of attempting to resolve disputes and engage in other litigation activity online.

At the very end of the course, students have their final presentations in a federal courtroom in downtown Sacramento. It is exciting for law students to go to an actual federal courtroom and engage the computer hardware and software available in those automated courtrooms. The students are able to go to the courtroom and work with the courtroom clerks and IT computer specialists in setting up the courtroom. They are then given the opportunity to do a short opening statement or closing argument and a short direct- or cross-examination of a witness, using computer hardware and software in the process. The focus, however, is not on oral advocacy. Instead, the focus is on the students' ability to engage the available hardware and software and their ability to present a persuasive statement, argument, or examination using that hardware and software.

For example, students create a PowerPoint opening or closing argument using key photographs, documents and other exhibits from a NITA case file (most of which now contain digital documents and exhibits and other media such as video clips and animations). Students put together their visual presentations with the computer while other students have the opportunity to object to those exhibits. The focus is both on advocacy and the admissibility of these exhibits. Much of the grading is determined by how well students prepare these technology driven and accessed exhibits for the mock trial and importantly, how well and quickly they can react and interface with the technology while questioning a witness.

Students also have the opportunity to cross-examine a mock expert witness (played by other students). I often play the judge and rule on all evidentiary objections. The point is for students to ask about some issues that the witness previously admitted in his or her deposition. At trial, the witness will spontaneously contradict the previous deposition testimony. Students

then are equipped with a digitized video clip of his previous deposition testimony that has been coded to the subject matter about which the witness was testifying. The students are not told where or on what subject matter the witness would give live contradictory testimony. Once they identify it, student must then search for the subject matter and retrieve the deposition testimony—scrolling text with a video clip of the witness contradicting himself—so that the student can then immediately impeach the witness with the video recorded deposition testimony and do so in accordance with the rules of evidence. The focus is on the preparation for the cross-examination and the ability to use the software to accomplish the task. Again, such impeachment simply cannot be done without a computer that can search an entire deposition instantaneously and then cue up just that portion of a digitized video clip. The students learn how to impeach not only with verbal deposition text, but also with powerful demeanor evidence that is captured on video, digitized, and then played back for the jury right as the witness is being impeached.

In sum, this is not simply a "how to" class where students merely learn how to "point and click" with various software programs; however, to the extent they must learn software, much of it is learned on their own using prepared learning modules we have constructed for the student to go through on their own at their own pace. Just as Legal Research and Writing courses, for example, are graded courses, that are not simply "how to" classes on writing skills that lack academic content, so too does this kind of course on litigation technology have sufficient academic content that tests the law of Civil Procedure and Evidence in a modern, realistic applied setting with which modern law students should be familiar. The class also contains academic elements of many other classes taught in the curriculum in addition to Civil Procedure and Evidence, such as Pretrial Litigation, Trial Advocacy, ADR, Appellate Advocacy, and even Law Office Management. But the unifying themes are how computers intersect with and affect all of those academic areas and subjects, how technology raises special legal academic issues, and how the course provides students with the knowledge and experience to successfully use computers in all aspects of litigation practice.

Many courses in the legal curriculum contain elements of other courses. "Federal Courts," "Complex Litigation," and "Pre-Trial Litigation," are all basically "Civil Procedure" courses; "Sales and Leases" is a Contracts course, "Wills & Trusts" and "Copyright," are "Property" courses, "The First Amendment" is a "Constitutional Law Course," as are "Gender and the Law," "Sexual Orientation and the Law," and "Anti-Discrimination Law,"

although these particular courses also have statutory elements as well. The point is that simply because a course contains elements of another course, or courses, does not render the synthesized course void of academic content as a simple, redundant academic experience. The same holds true for this course—there are applied situations and legal issues raised in this course that students will not receive in any other course, but they will be able to draw upon the knowledge gained in other courses.

[c] Course Prerequisite Concerns

Some faculty might have concerns about whether a course about litigation technology should have any course prerequisites. First, I believe there should be no prerequisite requiring any special knowledge or any even experience with any particular computer programs. Part of the reason for offering the course is to bring law students who may be afraid of technology (and, believe it or not, there are some, at least a few, even in today's generation) into the fold both "in an interesting and fun way," and in a challenging and rigorous way. That purpose is defeated if students believe they must already be "computer experts/whizzes" in order to take the course. I like to use an analogy that I have often heard about how one need not know how a clock works, in order to tell time, or need not know how to fly an airplane in order to take a flight overseas. Accordingly, so too do I like to tell students that they need not become software engineers in order to take a litigation technology course.

This is important to keep in mind. Lawyers currently do not have to become expert DNA scientists, in order to effectively use DNA evidence during trial. However, the reality is that they need to know at least something about the basic concepts of DNA, how it works theoretically, and how one should not spoil DNA evidence samples. So to continue with the simple clock metaphor, although students may not need to know exactly how digital clocks work in order to tell time, they still need to know a few things about how a clock operates or may fail, such as why it might stop sometimes, or whether it automatically adjusts to different time zones, or whether it needs to be reset, whether it operates underwater, of the fact that a broken watch is still correct twice a day, etc.

However, that said, there are a couple of courses that should be considered as possible prerequisites: (1) Civil Procedure; and (2) Evidence. As a practical matter, this is not an issue regarding Civil Procedure because students already will have taken Civil Procedure in their first year before they have an opportunity to take any upper-level, second or third-year course electives. A student who has not taken Civil Procedure and Evidence would be at a disadvantage in the class because a litigation technology class should

be taught at a level that assumes the students have taken those courses. On the other hand, regarding Evidence, so long as a student is currently enrolled in their second semester of Evidence, they could also take the Litigation Technology class. Because I usually teach the Litigation Technology course only in the 2nd semester, at a minimum, students will already have had a semester of Evidence. I believe at that point, students would not be at any real disadvantage if they take the Litigation Technology course simultaneously with their last semester of Evidence.

Much of the class covers pretrial litigation, discovery, alternative dispute resolution, case organization and case management, which is essentially applied Civil Procedure. The course also involves software systems to help organize an office, and deal with calendaring, billing, and client relations. Another aspect of the course deals with appellate practice and the use of "E-briefs" on appeal: "E-briefs" allow attorneys to put all referenced cases, materials, transcripts, exhibits, in a digital format so that each side's appellate briefs can hyperlink all referenced materials and therefore an appellate judge or clerk can read the brief and all of the legal and factual citations therein from one source.

There was also a concern that this course would take away from Trial Advocacy and so Trial Advocacy, it was thought, should be a prerequisite for a Litigation Technology course because as one professor commented, "students are not prepared to be assisted by the computer, if they have not yet learned the basic tools of oral persuasion." But trial presentation is something not considered or taught for the entire first part (50%) of the course, not to mention the fact that the trial presentation portion focuses almost entirely on *visual* advocacy (showing of demonstrative exhibits, visual aids, videotaped testimony, written text, and organization, manipulation and fast retrieval of such exhibits), *not oral* advocacy.

Also, in my Evidence courses I have students participate in mock trial presentations and mock motion in limine hearings even though they have not, nor are they required to, take Trial Advocacy first because pedagogically it is not necessary. It is possible to experiment in an Evidence course using applied settings (mock opening statements and closing arguments, mock direct and cross-examinations, mock hearings, etc.) without finding a pedagogical problem in trying to teach Evidence students this way without them first having taken Trial Advocacy. Even though I use mock trial situations in Evidence, and now I even teach Evidence integrated with Trial Advocacy (so that my students can apply what they are learning in Evidence in their Trial Advocacy course), it does not mean I am usurping ground that should be the exclusive province of Trial Advocacy, or that students who

have not taken Trial Advocacy are somehow hopelessly unprepared to participate in the mock exercises. I suppose the opposite could also be argued, that students might be unprepared to perfect their oral advocacy and trial persuasion skills, if they do not first know how to use the basic tools of modern lawyers—a computer display system.

But in many respects, this prerequisite issue ended up being "much ado about nothing" because students who are heavily involved in litigation and want to concentrate on trial work often take BOTH Trial Advocacy and Computer-Assisted Litigation, in either order, or simultaneously. Thus, there has been no appreciable loss for Trial Advocacy. That said, what we are really talking about when it comes down to it are a few students who might be interested generally in litigation and the use of computers in the practice of law and therefore might want to take a course on that general subject, but who do not want to be required to take three hours of Trial Advocacy to get there. Moreover, such a student probably would not take Trial Advocacy in any event, and if not, then they should not be "punished" for that personal academic decision by being denied the opportunity to take Computer-Assisted Litigation. So I do not believe Trial Advocacy needs to be a prerequisite for the course.

[8] "A Little Help from One's Friends"

Finally, my particular students have been extremely fortunate to have the special expertise and practical knowledge supplied by three experts who routinely contribute to my class. I strongly suggest having such individuals share their knowledge, expertise, and vast experience with students. First, I suggest partnering with a Legal Technology Consultant. I have Tim Piganelli CEO of Legal Technology Consulting, based in Phoenix, AZ, to help work with the students on software training and learning modules and often team teaches with me. Next, I suggest also partnering with an expert attorney in e-discovery to provide a real work perspective on modern litigation. I have Aaron Crews, national e-discovery counsel for the law firm of Littler Mendelson who provides invaluable insight into class discussions. I also have Joshua Gilliland, an attorney who is an e-discovery and e-admissibility expert and is the developer of the "Bow Tie Blog," recognized by the ABA Journal as one of the best e-discovery blogs in the country. Students benefit enormously from the expert opinions and perspective of these individuals and their participation makes the class even more connected to actual practice and the real world.

[9] Conclusion: Continued Growth

Clients are demanding efficiency and competence at a time when law

firms cannot afford to extensively train new lawyers, especially if many of those lawyers move on before there is time to realize a return on the law firm's investment in them. As a result, law schools need to provide more meaningful practical training in order for their graduates to be seen by firms as worthy of hiring sooner, rather than later, in their legal careers.

Although modern students may be very adept and familiar with technology in general, the modern student needs to learn various litigation support software programs, and even more importantly, needs to develop the practical and legal skill to use that technology competently and strategically in order to gainfully practice law in this digital age. Lawyers are now, or soon will be, expected to have learned this technological competency in law school, so that they can competently and professionally address e-discovery and e-admissibility issues when they graduate, as well as be proficient in basic case management and case practice software.

As important as technology is for law students to obtain in preparation for the practice of law, legal digital know-how will not turn a bad future lawyer into a good one. However, legal software proficiency and knowledge of legal techno-strategy will make a good future attorney a great one.