Summer 2013

Access to Justice and Technology Clinics: A 4% Solution (with Andrew P. Medeiros) (symposium)

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ACCESS TO JUSTICE AND TECHNOLOGY CLINICS: A 4% SOLUTION[1]

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INTRODUCTION

The Great Recession of 2008 caused widespread law firm layoffs, falling salaries, and hiring freezes and may leave a generation of young attorneys searching for work.[2] The economic crisis included significant reductions in banking, finance, corporate restructuring and real estate transactions and reduced the need for high-priced legal services. As large law firm revenues fell, firms protected profits by reducing labor costs.

Large clients demanded discounts, fixed fee arrangements and sought efficiencies to reduce their legal spending.[3] As the customers of lawyers demanded "more for less,"[4] new technologies were introduced

1. William Henderson urges a 12% solution arguing that law schools should begin to introduce competency based courses at a rate of one course per year. *See* William D. Henderson, *A Blue Print for Change*, 40 PEPP. L. REV. 461 (2013). We offer here a proposal for one of the three new courses, a 4% solution.

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2. *See* Leigh Jones, *Vanishing Act: Year II*, NAT'L L. J. (Nov. 8, 2010), http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202474471365&Vanishing_Act_Year_II&slreturn=20130401140537; Leigh Jones, *2009 Worst Year for Lawyer Headcount in 3 Decades, Says 'NLJ250' Survey*, NAT'L L. J. (Nov. 9, 2009), http://www.law.com/jsp/article.jsp?id=1202435276422&2009_Worst_Year_for_Lawyer_Headcount_in_3_Decades_Says_NLJ_250_Survey; Debra Cassens Weiss, *40% of Firms Cut Starting Associate Pay, While 44% Consider 2010 Cut*, A.B.A. J. (Dec. 1, 2009), http://www.abajournal.com/news/article/40_of_firms_cut_starting_pay_for_associates_while_44_consider_2010_cut/.

3. It is still unclear if these changes mark a short term market correction or the permanent restructuring of the legal services market. *Compare* Bernard A. Burk & David McGowan, *Big but Brittle: Economic Perspectives on the Future of the Law Firm in the New Economy*, 2011 COLUM. BUS. L. REV. 1 (2011), *with* Larry E. Ribstein, *The Death of Big Law*, 2010 WIS. L. REV. 749 (2010).

4. *See* RICHARD SUSSKIND, TOMORROW'S LAWYERS: AN INTRODUCTION TO YOUR FUTURE 3-5 (2013) (hereinafter *Tomorrow's Lawyers*). Susskind uses this phrase to describe how the economic

and old technologies revived to increase the effectiveness and efficiency of law practice.[5] In our view these new technologies are not the cause of disruption in legal markets, but rather the tools that creative lawyers and legal consultants are using to adapt to the demands of customers of lawyers at all market levels.[6] But these new efficiencies and new technologies are here to stay. Even if the gross domestic legal product returns to pre-2008 levels, the work will be forever changed.[7]

The ironic twist is that despite this oversupply of lawyers, we are failing to meet the legal needs of ordinary people, especially people with low or modest incomes. Every serious study of the legal needs of the poor shows that eighty percent of these needs go unmet.[8] Legal Services Corporation funded legal aid offices turn away a million eligible prospective clients every year because they lack the capacity and the lawyers to serve these legal needs.[9] In addition, millions of modest-income people who are not eligible for legal aid cannot afford the fees charged by lawyers. The economic downturn starting in 2008 exacerbated this legal services gap, driving more modest-income people into poverty and more employed people into unemployment and foreclosure.[10]

changes of the recent past have repositioned the expectations of lawyers' customers across all legal services markets.

5. *See infra* Part I.

6. Even the ABA has decided that professionalism demands that lawyers keep abreast of the changes in the practice of law "including the benefits and risks associated with technology." *Resolution 105A Revised (Technology & Confidentiality)*, AMERICAN BAR ASSOCIATION, (August 6, 2012) *available at* http://www.americanbar.org/content/dam/aba/administrative/ethics_2020/20120808_revised_resolution_105a_as_amended.authcheckdam.pdf. The American Bar Association Commission on Ethics 20/20 recommended revisions to the ABA Model Rules of Professional Conduct to provide guidance to lawyers regarding the use of technology in a professional practice. *See ABA Commission on Ethics 20/20*, AMERICAN BAR ASSOCIATION http://www.americanbar.org/groups/professional_responsibility/aba_commission_on_ethics_20_20.html (last visited Apr. 28, 2013). These recommendations were adopted by the ABA's policy-making House of Delegates and include the instruction that attorneys should keep abreast of changes in the law, "including the benefits and risks associated with relevant technology." *Resolution 105A Revised*, *supra*.

7. *See Report on the State of the Legal Market (2013)*, GEORGETOWN LAW CENTER FOR THE STUDY OF THE LEGAL PROFESSION, https://www.law.georgetown.edu/continuing-legal-education/executive-education/upload/2013-report.pdf.

8. *See*, *e.g.*, *Documenting the Justice Gap in America: The Current Unmet Civil Legal Needs of Low-Income Americans*, LEGAL SERVICES CORPORATION 1 (Sept. 2009), http://lsc.gov/sites/default/files/LSC/pdfs/documenting_the_justice_gap_in_america_2009.pdf; THE LAWYER'S TRUST FUND OF ILLINOIS, ET AL., THE LEGAL AID SAFETY NET: A REPORT ON THE LEGAL NEEDS OF LOW-INCOME ILLINOISANS 45 (2005), *available at* http://www.ltf.org/docs/legalneeds.pdf.

9. LEGAL SERVICES CORPORATION, *supra* note 8, at 9.

10. *See* Sylvia A. Allegretto, *The State of Working America's Wealth, 2011: Through Volatility and Turmoil, the Gap Widens*, ECONOMIC POLICY INSTITUTE (2011), http://www.epi.org/page/-/BriefingPaper292.pdf; *Fewer, Poorer, Gloomier: The Lost Decade of the Middle Class*, PEW

The oversupply of legal talent triggered attacks on law schools from all angles. Critics charged that law schools accept too many students, saddle them with massive amounts of debt, and do not adequately prepare them for a legal job.[11] The reduction in job opportuni-opportunities for law school graduates and negative publicity already have cut deeply into the number of law school applicants.[12] If law schools maintain admissions standards, fewer applicants should cause a parallel reduction in the number of law students in the professional pipeline; the supply of new lawyers should "right size" to match legal industry needs.[13] These new lawyers will need new skills. The technology changes triggered by the economic shock have changed the tools lawyers use to deliver legal services. New lawyers entering the profession must be ready to practice in today's more efficient and more technology-driven workplace. For the most part, law schools are not currently equipped to teach these new skills and technologies.[14]

This article is targeted at the criticisms of the quality of legal education, criticisms that law schools fail to prepare graduates to succeed

RESEARCH CENTER 20 (Aug. 22, 2012), http://www.pewsocialtrends.org/files/2012/08/pew-social-trends-lost-decade-of-the-middle-class.pdf.

11. *See* Paul Lippe, Structural Change in the Legal Market: Using Engagement to Turn Crisis into Opportunity at the 2013 ABA Deans' Workshop (Feb. 15, 2013); BRIAN Z. TAMANAHA, FAILING LAW SCHOOLS (2012); PAUL CAMPOS, DON'T GO TO LAW SCHOOL (UNLESS): A LAW PROFESSOR'S INSIDE GUIDE TO MAXIMIZING OPPORTUNITY AND MINIMIZING RISK (2012); Peter Lattman, *9 Graduates Lose Case Against New York Law School*, N.Y. TIMES (March 22, 2012), http://dealbook.nytimes.com/2012/03/22/9-graduates-lose-case-against-new-york-law-school/; Elie Mystal, *NALP 2010: NALP Executive Director James Leipold Talks to the 'Lost Generation,'* ABOVE THE LAW (May 3, 2010, 1:48PM), http://abovethelaw.com/2010/05/nalp-2010-nalp-executive-director-james-leipold-talks-to-the-lost-generation/; Gerry Shih, *Downturn Dims Prospects Even at Top Law Schools*, N.Y. TIMES (Aug. 26, 2009), http://www.nytimes.com/2009/08/26/business/26lawyers.html?pagewanted=all&_r=0.

12. According to the Law School Admissions Council, the number of prospective law students rose somewhat consistently throughout the 2000s, but has dropped precipitously in the last few years. In the 2007-08 admissions cycle, the LSAT was administered 142,331 times. The number of LSAT takers peaked in the 2009-10 admissions cycle, with the test being administered 171,514 times that year. The number of tests administered dropped 9.6% in 2010-11 and another 16.2% in 2011-12. So far in the 2012-13 testing cycle, the number of tests administered is down another 10-15%, with this being the lowest number of tests administered since 2000-01. *Data: LSATs Administered*, LAW SCHOOL ADMISSION COUNCIL, http://www.lsac.org/lsacresources/data/lsats-administered.asp (last visited Apr. 28, 2013).

13. Reducing the quantity of law graduates will be painful and cause some serious dislocation. Law schools will get smaller or at worst graduate students less qualified when they applied to law school than their predecessors were a few years ago.

14. *See* Jeanne Eicks, *Educating Superior Legal Professional: Successful Modern Curricula Join Law and Technology*, *in* EDUCATING THE DIGITAL LAWYER § 5 (Marc Lauritsen & Oliver Goodenough eds., 2012), *available at* http://www.law.harvard.edu/programs/plp/pages/digital_lawyer_book.php; Stephanie Kimbro, *What Should Be in a Digital Curriculum: A Practitioner's Must Have List*, *id.* at § 10 (hereinafter "Kimbro, *Must Have List*").

in the profession. We propose a modest improvement to the law school curriculum that may make graduates more capable to serve their clients.[15] We propose that law schools add a new type of clinical course that teaches law students how to use and deploy technology to assist law practice. The changes we propose will affect about four percent of the average law school curriculum. If widely adopted, the changes we propose will help law students to learn core competencies needed in an increasingly technological profession, while they build tools and write content to help low-income, self-represented litigants overcome serious barriers in their pursuit of justice.

Specifically, we propose that law schools offer a new clinical experience—the Access to Justice Technology Clinic, or A2J Clinic for short.[16] The Center for Computer-Assisted Legal Instruction (CALI®), in partnership with IIT Chicago-Kent College of Law, has launched its Access to Justice Clinical Course Project to develop and refine A2J Clinics. In these courses law students build web tools and other interactive content to help low-income people achieve their justice goals.[17] Courses of this type have been taught by several law schools during the past decade.[18] This CALI initiative builds on those efforts, organizes faculty across the country into a team of collaborators, and establishes a structured process to share new insights, tools and curricula with all law schools.

Law school clinics are not the only feasible home for our proposed courses. Legal writing faculty and traditional podium teachers could

15. *See* Henderson, *supra* note 1.

16. *See infra* Part III (discussing the Access to Justice Clinical Course Project). A catchy name for such courses is not easy to coin. We offer Access to Justice Technology Clinic as a poor first choice, shortened to A2J Clinic. Our model course taught at IIT Chicago-Kent College of Law is called the Justice and Technology Practicum. The project that the Center for Computer-Assisted Legal Instruction (CALI®) has launched to promote these courses is called the Access to Justice Clinical Course Project. The software that we use in our practicum course, written by CALI programmers to help low income people get access to information and forms on the web, is called A2J Author®. When A2J Author is used by a lawyer or law student it produces an A2J Guided Interview® for use by low-income people on legal aid websites.

17. CALI, *Law Schools Team Up with CALI to Harness Skills of Law Students, Develop Online Tools for Low-Income Litigants*, ACCESS TO JUSTICE CLINICAL COURSE PROJECT (Dec. 27, 2012), http://a2jclinic.classcaster.net/aals_announcement/.

18. Faculty members teaching courses like these include Conrad Johnson, Mary Zulack and Brian Donnelly at Columbia University, Larry Farmer at Brigham Young University, Marc Lauritsen at Suffolk University, David Johnson at New York Law School, and Oliver Goodenough at Vermont Law School. *See* Brock Rutter, *Survey of Existing Courses in Lawyer Use of Technology*, *in* EDUCATING THE DIGITAL LAWYER, *supra* note 14, at §6 (discussion of other courses that teach technology tools to law students). New courses built on a similar premise, that law students equipped with technical tools can break down barriers to justice, continue to be developed. *See, e.g.*, LOYOLA LITIGATION AND TECHNOLOGY CLINIC, http://www.loyolalawtech.org/ (last visited May 3, 2013).

also teach these courses if they were so inclined. But clinical educators are predisposed to focus on skills that go beyond legal analysis. Clinical educators are also deeply committed to access to justice and they, with their students, already provide a huge contribution to help meet the legal needs of low income people.[19] Like the clinical movement triggered by CLEPR in the 1960's and 1970's, we think that this new type of course will fit comfortably into the clinical curriculum of many law schools and that such additions will improve legal education and simultaneously reduce barriers to justice for low income people.[20]

In Part I, we describe several new examples of technology deployed by law firms, in-house legal departments, small law firms, and legal aid organizations. This expanding use of new technology requires that law students learn new lawyering skills and competencies to become competent professionals.

Part II presents a detailed description of the Justice & Technology Practicum from IIT Chicago-Kent College of Law. This course serves as the model for the Access to Justice Clinical Course Project. We suggest that this course has achieved success in teaching established lawyering competencies and offering instruction in new core competencies, while simultaneously lowering barriers to justice for low-income people.

Part III charts a path into the future. The A2J Clinic Project is a collaboration of seven law schools and the CALI team to build shareable curricula, tools and resources for teachers and law students. This concluding section describes the participants and the process they will use to start a growing number of A2J Clinics across the country.

19. In 2002, David Luban estimated that law students produce nearly three million hours of legal services for the poor in a year. David Luban, *Taking Out the Adversary: The Assault on Progressive Public-Interest Lawyers*, 91 CALIF. L. REV. 209, 236 n.108 (2003) ("These assumptions (which are no better than educated guesses), imply 7,500 clinical students per semester, each contributing 200 hours of indigent representation, for a total of 1.5 million hours, or three million hours in an academic year.").

20. The Council on Legal Education for Professional Responsibility (CLEPR) was established in 1968 to encourage law school faculty members to experiment with clinical legal education to better teach law students practical and ethical skills. William Pincus, *A Statement on CLEPR's Program*, *in* CLINICAL LEGAL EDUCATION IN THE LAW SCHOOL CURRICULUM 1, 2 (1969). By 1980, when CLEPR concluded its mission, nearly every law school had integrated clinical legal education into their curriculum and continue to this day to provide free or low-cost legal services to Americans who need them the most. *See* J.P. "Sandy" Ogilvy, *Celebrating CLEPR's 40th Anniversary: The Early Development of Clinical Legal Education and Legal Ethics Instruction in U.S. Law Schools*, 16 CLINICAL L. REV. 1, 16 (2009). The success of the clinical legal education movement under CLEPR demonstrates a model to be emulated by the Access to Justice Clinical Course Project.

I. EXPANDING USES OF TECHNOLOGY HAVE FUNDAMENTALLY CHANGED LAW PRACTICE

The relentless march of technological change and invention has been affecting lawyers and legal institutions for at least forty years. Beginning with LEXIS in the early 1970's, new technologies have been created and adopted by lawyers and used in the practice of law.[21] From 1983 to 1992, Chicago-Kent tracked the adoption of computer technology by the largest law firms in the United States and the changes from terminals that accessed external word processing systems to personal computers on lawyers' desks to the networks that tied lawyers' computers together.[22] In that era, single purpose machines became multipurpose machines as the lawyer's PC ran word processing software, communications software to dial into LEXIS and WESTLAW, and email software to communicate within the firm. The Internet emerged in the mid-1990's and clients were added to the email systems.

A small group of lawyer/technology evangelists wrote about these developments and speculated about the changes in legal practice that such powerful changes in technology would bring.[23] Some of us thought that pervasive personal computers linked to one another and able to access all the primary law of the country would drive inevitable changes in the practice of law and the teaching of law. We were convinced that fundamental change would naturally emerge from the ability of every lawyer to have every case and statute at the touch of a key, supplemented with all prior work product of the firm and enhanced by personal productivity tools like word processing and outlining.[24]

21. *See* Ronald W. Staudt & Bernard J. Farber, *Survey Shows Big Firms are Big on Computers*, A.B.A. J., Apr. 1, 1986, at 100.

22. *See, e.g.*, Ronald W. Staudt, *Annual Survey: Attorneys Make More Use of PCs*, NAT'L L. J., Mar. 23, 1992, at 6; Ronald W. Staudt & Valerie F. Mayer, *Annual Study: Surveyed Firms Report More Than Half Their Lawyers Use Computers*, NAT'L L. J., Apr. 1, 1991, at 5; Ronald W. Staudt & Wan Hwang, *Firm Computer Use Is Increasing Steadily*, NAT'L L. J., Apr. 1990 (special issue), at 26; Ronald W. Staudt & Wan Hwang, *Computer Use by Lawyers in Firms Still Increasing*, NAT'L L. J., Dec. 4, 1989, at 6; Ronald W. Staudt, *Large Firms Overwhelmingly Favor IBM and Clones*, NAT'L L. J., Oct. 12, 1987, at 23.

23. *See, e.g.*, Edwina L. Rissland, *Artificial Intelligence and Law: Stepping Stones to a Model of Legal Reasoning*, 99 YALE L.J. 1957 (1990); Ethan Katsh, *Law in a Digital World: Computer Networks and Cyberspace*, 38 VILL. L. REV. 403 (1993); M. ETHAN KATSH, THE ELECTRONIC MEDIA AND THE TRANSFORMATION OF LAW (1989); David R. Johnson, *Building and Using Hypertext Systems*, 17 L. PRAC. MGMT. 28, 28-29, (1991); I. Trotter Hardy, *Project CLEAR's Paper Choice: A Hypertext System for Giving Advice About Legal Research*, 82 L. LIBR. J. 209 (1990).

24. Ronald W. Staudt, *Legal Mindstorms: Lawyers, Computers and Powerful Ideas*, 31 JURIMETRICS J. 171, 184 (1991) ("Hypertext knowledge bases and annotation tools may help students use the computer as a powerful environment to organize, link, synthesize, identify relationships, and learn legal concepts in law school.")

We tested this idea at Chicago-Kent from 1983–85 by providing special instruction in the use of personal computers to a test group of entering students as part of a curriculum combined with Torts and Legal Writing.[25] Preliminary analysis of the students in the pilot study showed that frequent computer use was positively associated with GPA in the first year of law school and that this effect was stronger among those with lower LSAT scores.[26] We thought that the ability of computers to capture ideas, stimulate legal analysis, and foster collaboration presented an opportunity for us to improve legal education.[27] This pilot led us to establish a full section of the first year class called the eLearn Section. We equipped each student in this special section with a personal computer loaded with digital versions of all their casebooks.

When we taught students to use computers in the 1980s and 1990s, our pedagogical target was to teach the core competencies we knew that law students needed: primarily legal analysis and reasoning as well as legal research and writing. At the time we did not make an argument that computer skills would themselves become core competencies for lawyers. In the years since those early experiments some broad-based computer skills have become a requirement for all knowledge workers.[28] As we speculated when we reported on this experiment, the computer revolution in society and business made it less important to teach the specific techniques taught in the eLearn section.[29] After ten years the eLearn section experiment quietly faded away. The pre-law school educational system had caught up to the

25. *See generally* David J. Maume, Jr. & Ronald W. Staudt, *Computer Use and Success in the First Year of Law School*, 37 J. LEGAL EDUC. 388 (1987). This work sparked a controversy from faculty who thought this instruction would distract students—a preview of the laptops in the classroom debate that is still going in law schools today.

26. *Id.* at 398.

27. *Id.* at 389 ("We believe that the power of the computer to capture ideas, stimulate analysis, foster comparison and analogy, facilitate synthesis of concepts, increase communications between faculty and students, store and sort bibliographic material and simulate a complex and random world offers great opportunities to improve legal education.").

28. The hypertext analogies were true, we believe, as mental models of the way lawyers think and learn, but the same insight is now true for most professions.

29. Ronald W. Staudt, *Computers at the Core of Legal Education: Experiments at IIT Chicago-Kent College of Law*, 35 J. LEGAL EDUC. 514, 516 (1985) ("Law schools and their students face a short-term need that will soon be solved by others. Today, most law students are unfamiliar with computers. Those few who do have some computer knowledge tend to be those with technical, scientific, or engineering backgrounds. But courses in computer literacy and use are sweeping grade schools, high schools and undergraduate schools. Engineering schools are moving toward universal microcomputer access. Within five years or so, law students will matriculate as knowledgeable computer users. Law schools must then be ready to teach special legal applications of the technology.").

times and students entering law school were computer literate and already knew the basic computer skills we once taught. The core competencies specific to lawyers remained much the same as when all the lawyer's work was done with paper. Computers and software became common tools used to research, write, keep track of documents and communicate, but the law specific competencies did not seem to be significantly changed by these new electronic tools.

We are now a generation removed from these early experiments. Some technologists have again predicted that the use of technology in legal services will grow, that these new tools will change the way law is practiced, and that new competencies will be demanded of law professionals.[30] Many innovative tools—like pervasive internet connectivity, mobile technologies and social networking—seem similar to pervasive use of personal computers and universal access to LEXIS of the 1980s and 1990s and, therefore, are unlikely to force changes in core skills needed to practice law. On the other hand, automated document assembly, project management and work flow tools, predictive coding and artificial intelligence tools may be technologies of a different kind. These tools may work significant changes in the practice of law, demanding that lawyers master new competencies and develop new models for delivering legal services.

If these tools and techniques come to dominate the legal services industry like some predict,[31] law schools have a responsibility to prepare their graduates to obtain the skills needed to succeed in the changed workplace.[32] Next, this section examines several examples of the use of these advanced technology tools to provide legal services. We describe some of the innovative technologies now employed by in-house counsel, law firms, and legal aid organizations to provide more efficient legal services as examples of early adopters working to integrate law and technology. Some large law firms are wringing out excess costs and increasing efficiency using proprietary legal process

30. *Tomorrow's Lawyers*, *supra* note 4; Daniel Martin Katz, *Quantitative Legal Prediction—or—How I Learned to Stop Worrying and Start Preparing for the Data Driven Future of the Legal Services Industry*, 62 EMORY L. J. (forthcoming 2013).

31. *See Tomorrow's Lawyers*, *supra* note 4.

32. Even if, in the future, document assembly and predictive coding will become widespread productivity tools, taught in high school and college, law schools must prepare graduates for these technologies now—at least unless and until students enter law schools with a firm grasp of the techniques. There is a growing movement, among technology professionals and others, to start teaching programming skills to students throughout their life to prepare them for new jobs in all fields that require a basic understanding of programming. A new, non-profit website has been launched to advocate for computer programming education. CODE.ORG, http://www.code.org (last visited Apr. 28, 2013).

management systems based on popular business and manufacturing tools,[33] while smaller, personal legal service firms are using the powers of document assembly and the ubiquity of the Internet to compete with venture-funded enterprises for the latent legal market.[34] Even the lawyers serving the civil law needs of low income people are tapping new technologies to deliver A2J Guided Interviews® over the web for streamlined online intake, referrals, and simple document preparation for their clients. After reviewing these new developments we argue that legal education must adapt to prepare students for these new technologies and to teach students the new core competencies required to use these technologies to practice law.

A. Large Firms and E-Discovery

For decades, a key driver of the size and profitability of large law firms was fees derived from discovery in complex litigation and the need for a continuous supply of young talent to perform document review.[35] In 1968, Cravath, Swaine, & Moore was in the middle of the decade long *U.S. v. I.B.M.* anti-trust suit. The firm needed to attract "the best and the brightest" young attorneys from the top law schools to review hundreds of thousands of documents produced in discovery in the suit. To attract young attorneys to do this dull and repetitive work, the firm began to offer large bonuses and high salaries. Other firms followed suit to compete for the talent.[36] A long upward spiral of starting salaries ensued culminating in the unsustainable heights of the early 2000s when lawyers at these firms commanded $160,000 to start.

Even before the shock of the 2008 recession, clients and law firms were applying technology and alternative staffing models to lower the cost, increase the efficiency and improve the quality of document review. Legal process outsourcers began turning these tasks over to lower-cost lawyers and paralegals in India and Malaysia. Firms and their litigation consultants hired contract attorneys fresh out of law school,

33. *See Seyfarth*Lean, SEYFARTH SHAW, http://www.seyfarth.com/SeyfarthLean (last visited Apr. 28, 2013).

34. *See, e.g.*, ROSEN LAW FIRM, http://www.rosen.com (last visited Apr. 28, 2013); KELSEY & TRASK, P.C., http://www.kelseytrask.com (last visited Apr. 28, 2013); BURTON LAW, LLC, http://www.burton-law.com (last visited Apr. 28, 2013).

35. *See* Marc Galanter, *Mega-Law and Mega-Lawyering in the Contemporary United States*, *in* THE SOCIOLOGY OF THE PROFESSIONS: LAWYERS, DOCTORS, AND OTHERS 152, 165 (Robert Dingwall & Philip Lewis eds., 1983).

36. Tamar Lewin, *Big Name Firms: A New Breed of American Aristocracy*, 5 STUDENT LAW. 19, 20 (1976–77); Galanter, *supra* note 35, at 164.

but at much lower salaries than they paid associates, and developed electronic systems to handle the tasks more efficiently.[37]

Technology-assisted review (also known as "predictive coding") now allows litigation support teams quickly and effectively to sort through the massive quantities of documents, emails and other potentially relevant material in the discovery phase of civil litigation.[38] Studies show that these predictive coding systems are more effective than human reviewers alone and massively less expensive. [39] Courts are beginning to approve their use as standard techniques in discovery.[40]

While industry reports show that the sheer volume of discovery work will continue to grow,[41] more and more firms have established e-discovery and litigation support practice groups that include a senior partner and multiple associates dedicated to the tasks associated with

37. *See* Courtney I. Schultz, *Legal Offshoring: A Cost-Benefit Analysis*, 35 J. CORP. L. 639, 642-46 (2010).

38. *See* Jeremy Pickens, *Predictive Ranking: Technology Assisted Review Designed for the Real World*, EDRM WHITE PAPER SERIES (Feb. 1, 2013), http://www.edrm.net/resources/edrm-white-paper-series/predictive-ranking; David Grossman, *Measuring and Validating the Effectiveness of Relativity Assisted Review*, EDRM WHITE PAPER SERIES (Feb. 2013), http://www.edrm.net/resources/edrm-white-paper-series/measuring-and-validating.

39. *See* Maura R. Grossman & Gordon V. Cormack, *Technology-Assisted Review in E-Discovery Can Be More Effective and More Efficient Than Exhaustive Manual Review*, 17 RICH. J.L. & TECH. 1 (2011) (comparing the effectiveness of Technology-Assisted Review with exhaustive manual review and concluding that the practice of using computers to assist with e-Discovery was not only more efficient, but was also more effective).

40. *See* Richard Acello, *Beyond Prediction: Technology-Assisted Review Enters the Lexicon*, A.B.A. J., Aug. 2012, at 37; Da Silva Moore v. Publicis Groupe, 868 F. Supp. 2d 137 (S.D.N.Y. 2012); Nat'l Day Laborer Org. Network v. U.S. Immigration & Customs Enforcement Agency, 877 F. Supp. 2d 87, 111 (S.D.N.Y. 2012); Global Aerospace Inc. v. Landow Aviation, 2012 WL 1431215 (Va. Cir. Ct. 2012); *see also* Maura R. Grossman et al., *Some Thoughts on Incentives, Rules, and Ethics Concerning the Use of Search Technology in E-Discovery*, 12 SEDONA CONF. J. 89 (2011), http://www.wlrk.com/webdocs/wlrknew/AttorneyPubs/WLRK.21324.11.pdf (discussing ethical considerations involved with the use of different e-discovery techniques).

41. According to the *Seventh Annual Litigation Support Salary Report* by The Cowen Group, which surveyed the AmLaw200 about litigation support compensation practices in 2012 and anticipated changes in 2013, most law firms and litigation support vendors saw moderate growth in 2012 and more than 70% expect to expand their litigation support departments in 2013. Compensation for these positions also increased by about four to nine percent and, in some situations, firms were willing to increase salaries by as much as $15,000 to $50,000 to fill an urgent need with an experienced professional. The number of primarily technology jobs in this field is actually expected to decrease over time. Instead, firms and vendors are expected to hire associates who can advise clients and generate billable hours while also leading a project team using a combination of legal, technical and project management skills. *See Seventh Annual Litigation Support Salary Report*, THE COWEN GROUP 1–5 (Jan. 18, 2013), http://www.cowengroup.com/documents/survey.salary.2012.pdf; *see also* David Cowen, *Job Market Heating Up for e-Discovery Technologists, Managers, and Attorneys*, E-DISCOVERY TEAM (Feb. 17, 2013), http://www.e-discoveryteam.com/2013/02/17/job-market-heating-up-for-e-discovery-technologists-managers-and-attroneys/.

discovery and management of litigation.[42] For example, Drinker Biddle created an independent subsidiary corporation to perform these tasks for the firm and its outside clients.[43] There will not be hundreds of partners and associates on the partner track in these growing discovery departments. However, lean teams of lawyers now rely on predictive coding and modern information technology tools as a central part of their practices.

B. Legal Process Management

Process management systems, like Six Sigma and Lean Six Sigma, built around data-driven efficiency and the removal of all elements of waste from a production method, have become commonplace in manufacturing, banking and many business settings.[44] For the most part, law firms have not adopted these systems despite the fact that many of their clients use these methods. However, Seyfarth Shaw has developed its own version of these systems, which it calls SeyfarthLean, with acclaimed success.[45]

SeyfarthLean applies these systems to legal processes throughout the firm.[46] Teams of lawyers and process experts have built process maps for key legal products, such as litigation defending a client company in a wrongful termination suit brought by a key executive who

42. *See* Gina Passarella, *Expanding e-Discovery: Law Firms Are Institutionalizing Electronic Discovery Workers Activities into Formalized Practice Groups*, PITTSBURGH POST-GAZETTE, May 9, 2012, at A8.

43. Gina Passarella, *Law Firms as E-Discovery Vendors? Could Be*, LEGAL INTELLIGENCER (Sept. 27, 2012), http://www.law.com/jsp/pa/PubArticlePA.jsp?id=1202572729762; DRINKER DISCOVERY SOLUTIONS, http://www.drinkerdiscoverysolutions.com/ (last visited Apr. 28, 2013).

44. The term "Six Sigma" originates from the statistical quality control goal in manufacturing which tolerates no more than 3.4 defects out of one million products. "Lean Six Sigma" seeks to achieve this aspirational measure of success by focusing on the process of accomplishing a goal and removing all wasted steps that do not add value to the final product. *See* ELIZABETH A. CUDNEY & RODNEY KESTLE, IMPLEMENTING LEAN SIX SIGMA THROUGHOUT THE SUPPLY CHAIN (2011); MIKEL HARRY & RICHARD SCHROEDER, SIX SIGMA: THE BREAKTHROUGH MANAGEMENT STRATEGY REVOLUTIONIZING THE WORLD'S TOP CORPORATIONS (2000).

45. *See, e.g.*, Scott M. Pearson, *American Banker Lauds Seyfarth's Use of Lean Six Sigma as "Big Idea for Banking in 2013"*, SEYFARTH SHAW (Jan. 7, 2013), http://www.seyfarth.com/news/2124; J. Stephen Poor, *Seyfarth Shaw Named to Top Five in BTI Client Service A-Team Annual Report*, SEYFARTH SHAW (Dec. 3, 2012), http://www.seyfarth.com/news/2103; J. Stephen Poor & Lisa J. Damon, *Financial Times Recognizes Seyfarth Among Top Innovative Law Firms*, SEYFARTH SHAW (Nov. 29, 2012), http://www.seyfarth.com/news/2102; J. Stephen Poor, *Seyfarth Shaw Earns 2012 InnovAction Award for Innovation*, SEYFARTH SHAW (Aug. 14, 2012), http://www.seyfarth.com/news/1993; Lisa J. Damon, *Association of Corporate Counsel Recognizes Seyfarth Shaw Among 2012 "ACC Value Champions"*, SEYFARTH SHAW (June 21, 2012), http://www.seyfarth.com/news/1933.

46. *See Seyfarth*Lean, SEYFARTH SHAW, http://www.seyfarth.com/SeyfarthLean (last visited Apr. 28, 2013).

has been fired. The tasks performed by the firm, its employees and the client are broken down into their most basic elements. As the process map is built, attorneys scrutinize each step to identify the techniques that achieve the best results. Activities that do not conform are modified using best practices. The firm uses diagnostic tools to measure the time spent on each task and to streamline its process. The firm also embraced alternative fee arrangements to reap the benefit of the more-efficient processes while its clients receive greater cost certainty.[47]

C. Personal Legal Services

Venture-funded legal websites like LegalZoom and RocketLawyer have eroded the client bases of many solo practitioners and small firms by providing low-cost legal documents for wills, estates, and business formation. Some lawyers are battling back by offering legal information for free and unbundled legal services that allow clients to determine how much attorney involvement they want, need, or can afford. These new unbundled practices rely heavily on web technologies and automated document assembly to deliver affordable and convenient personal legal services.[48]

Clients of the Dayton, Ohio, based Burton Law, which bills itself as a "virtual law firm," have the freedom to define the scope of their representation. In the firm's online estate planning and business planning center, clients log into the firm's website and fill out a questionnaire about their legal issue.[49] The firm then uses document assembly software to prepare the appropriate forms required by the clients' circumstances. The forms are reviewed by attorneys before being returned electronically to the clients with instructions.[50] Burton has a staff of

47. *See Key Services & Tools*, SEYFARTH SHAW, http://www.seyfarth.com/key-services-tools (last visited Apr. 28, 2013); *see also* D.M. Levine, *Leap Of Faith: How Much Will Six Sigma Pay Off For Seyfarth Shaw?*, AM. LAW. (Apr. 2010), *available at* http://www.seyfarth.com/dir_docs/publications/LeapofFaith.pdf; Stephanie Francis Ward, *Making It Lean: Lisa Damon, Seyfarth Shaw*, A.B.A. J. (Sept. 21, 2011), *available at* http://www.abajournal.com/legalrebels/article/making_it_lean_lisa_damon_seyfarth_shaw/.

48. Richard S. Granat & Stephanie Kimbro, *The Teaching of Law Practice Management and Technology in Law Schools: A New Paradigm,* 88 CHI.-KENT L. REV. 757 (2013); Kimbro, *Must Have List*, *supra* note 14 at §10.12.

49. *Online Legal Services*, BURTON LAW, http://www.burton-law.com/online-legal-services/ (last visited Apr. 28, 2013).

50. *Id.*

mobile attorneys in Ohio and North Carolina, who can access the firm's client files through a secured, mobile server.[51]

Kelsey & Trask has incorporated iPads into its business model, lending iPads equipped with specially-designed apps to its clients. These apps allow the clients securely to communicate with their attorneys, to keep track of upcoming court dates, to review tasks the attorneys asked the client to complete, and to access other resources the firm has made available.[52] For example, on the iPads clients can obtain secure access to web tools that help develop parenting plans and online calculators for predicting alimony and child support.[53]

D. Legal Needs of Low-Income People—LSC's TIG program

Legal aid lawyers over the last decade have built new technology tools more efficiently to provide legal services to those who can least afford to hire an attorney. The driving force behind these innovations has been the Legal Services Corporation's Technology Initiative Grants program.[54] The Legal Services Corporation (LSC), a non-profit corporation founded by Congress in 1974 to provide equal access to justice, is the single largest funder of civil legal aid programs in the country.[55] In 2011 alone, LSC distributed more than $400 million to 136 local legal aid organizations that provided legal services to 2.2 million low-income households.[56] The need for legal aid far outstrips these resources. Despite the LSC funding and the hard work of thousands of legal aid attorneys, low-income Americans face eighty percent of their legal problems without legal assistance.[57]

51. Brittany Hart, *New Law Firm Offers Modern Model*, DAYTON BUS. J. (Jan. 28, 2011), *available at* http://www.bizjournals.com/dayton/print-edition/2011/01/28/new-law-firm-offers-modern-model.html?page=all.

52. *Personal Divorce Assistant*, KELSEY & TRASK, http://www.personaldivorceassistant.com/ (last visited Apr. 28, 2013).

53. *Client Tools*, KELSEY & TRASK, http://www.kelseytrask.com/clienttools#calcs (last visited Apr. 28, 2013).

54. *See Technology Initiative Grants*, LEGAL SERVICES CORPORATION, http://tig.lsc.gov/ (last visited Apr. 28, 2013). For a more complete discussion of projects developed with the assistance of Technology Initiative Grants, *see* Ronald W. Staudt, *All the Wild Possibilities: Technology That Attacks Barriers to Access to Justice*, 42 LOY. L.A. L. REV. 1117 (2009); Ronald W. Staudt, *Technology for Justice Customers: Bridging the Digital Divide Facing Self-Represented Litigants*, 5 U. MD. L.J. RACE, RELIGION, GENDER & CLASS 71 (2005) (hereinafter "*Bridging the Digital Divide")*.

55. *Fact Sheet on the Legal Services Corporation*, LEGAL SERVICES CORPORATION, http://lsc.gov/about/what-is-lsc (last visited Apr. 28, 2013).

56. *Fact Book 2011*, LEGAL SERVICES CORPORATION (June 2012), *available at* http://lsc.gov/about/lsc-fact-books.

57. *See*, *e.g.*, DOCUMENTING THE JUSTICE GAP, *supra* note 8, at 9; The Lawyer's Trust Fund of Illinois, *supra* note 8, at 41–45; *Legal Needs and Civil Justice: A Survey of Americans Major Findings*

LSC started the Technology Initiative Grants (TIG) program in 2000 to address this access to justice gap by harnessing the power of the Internet to deliver high-quality legal information and automated tools to low-income people.[58] Through twelve years, the TIG program has funded more than 525 projects, creating a national network of legal aid websites,[59] providing a national hosting service for automated document templates,[60] supporting the development of A2J Author®,[61] and using these resources to deploy dozens of online legal aid intake projects.[62]

In 2004, with funding from LSC and the State Justice Institute (SJI), the Center for Computer-Assisted Legal Instruction (CALI®) and IIT Chicago-Kent's Center for Access to Justice & Technology developed A2J Author, a software tool that allows non-programmers, such as lawyers and court personnel, to build A2J Guided Interviews® for use by the low-income public.[63] The A2J Guided Interviews feature an easy-to-

from the Comprehensive Legal Needs Study, A.B.A. (1994), *available at* http://www.americanbar.org/content/dam/aba/migrated/legalservices/downloads/sclaid/legalneedstudy.authcheckdam.pdf.

58. *Technology Initiative Grants—Background*, LEGAL SERVICES CORPORATION, http://tig.lsc.gov/about-us/background (last visited Apr. 28, 2013) ("The unprecedented powers of the Internet, personal computers and mobile devices—combined with the development of high-quality legal information and tools—can broaden the reach of the valuable work conducted by legal services practitioners. Seeing this potential, Congress authorized funding for the TIG program beginning in 2000.").

59. An interactive map featured on the TIG homepage demonstrates how wide this network extends, featuring a website for every state as well as the District of Columbia, Puerto Rico and other U.S. territories. *See Technology Initiative Grants*, LEGAL SERVICES CORPORATION, http://tig.lsc.gov/ (last visited Apr. 28, 2013).

60. *See* LAW HELP INTERACTIVE, http://www.lawhelpinteractive.org (last visited Apr. 28, 2013).

61. *See* A2J AUTHOR, http://www.a2jauthor.org (last visited Apr. 28, 2013).

62. *See, e.g.*, *Legal Aid Line*, LEGAL AID OF WESTERN OHIO, http://www.lawolaw.org/online-access-to-legal-aid-line (last visited Apr. 28, 2013); *CLEAR*Online*, NORTHWEST JUSTICE PROJECT, http://nwjustice.org/clear-online (last visited Apr. 28, 2013); *Online Eligibility Screening*, UTAH LEGAL SERVICES, http://www.utahlegalservices.org/public/do_i_qualify (last visited Apr. 28, 2013).

63. *See Bridging the Digital Divide*, *supra* note 54 at 84; *A Brief History*, A2JAUTHOR.ORG, http://www.a2jauthor.org/drupal/?q=node/123 (last visited Apr. 28, 2013). This software package was developed following the *Access to Justice, Meeting the Needs of Self-Represented Litigants: A Consumer-Based Approach* ("Meeting the Needs") project and the development of an Illinois Joint Simplified Dissolution of Marriage prototype that allowed pro se litigants to use a web-based interface to complete the forms required for a joint simplified dissolution of marriage in Illinois. *A Brief History, supra* note 63. The Meeting the Needs Project culminated in a report that offered dozens of suggestions for overhauling the system of state courts to lower barriers to justice faced by pro se litigants throughout our state courts. CHARLES L. OWEN ET AL., ACCESS TO JUSTICE: MEETING THE NEEDS OF SELF-REPRESENTED LITIGANTS (2002). These suggestions were based on in-person observations by a team from the Chicago-Kent College of Law and the IIT School of Design. *See id.* at 8–10. An important insight from this report was that the seemingly simple act of filling out a court form presented unique challenges that self-represented litigants struggle to overcome. *See id.* at 65–67. The JSDM prototype addressed this difficulty by presenting end-users with a soft interface—that is, an interface that breaks the legal process down into easy to under-

use front end interface that can be used with HotDocs Templates to create automated court forms more easily.[64] These interviews also feature "just-in-time" learning features that educate end-users about their legal situation by providing them with instruction on how to complete a single step of the process right when it is needed, rather than overwhelming them with all of the information at once.[65]

The success of A2J Author can be traced to the TIG-funded system of statewide legal aid websites and the Law Help Interactive (LHI) national server.[66] In 2012 alone, more than 500,000 A2J Guided Interviews ran to produce nearly 400,000 documents. [67] The annual use continues to climb each year. TIG awards have also supported the development of online intake systems and other interactive tools that feature A2J Guided Interviews securely to collect personal information from potential clients before they ever speak to a representative of the legal aid organization.[68]

Even taking these successful efforts into account, the penetration of document assembly and A2J Guided Interviews has been shallow. There remains a massive unmet need for legal aid and a parallel need to automate thousands of forms driven by state-to-state variations and

stand steps presented to the user in digestible portions. *Bridging the Digital Divide, supra* note 54, at 80. Like A2J Guided Interviews now, the prototype featured a pathway to justice with an avatar who walks the user through the interview and a courthouse in the background represents successful completion. As the user answers each question, he moves closer to the courthouse. *See id.* at 81–82. Development of the prototype required significant financial resources and hundreds of hours of programming by the software developers. A2J Author harnesses the power of the prototype, but allows A2J Guided Interviews to be developed by lawyers and court personnel rather than requiring experienced programmers. *Id.* at 80–84.

64. *Bridging the Digital Divide, supra* note 54, at 83–84.

65. *See, e.g.*, *Question Help or "Learn More" Feature*, A2JAUTHOR.ORG, http://www.a2jauthor.org/drupal/?q=node/79 (last visited Apr. 28, 2013); *Pop-Up Text*, A2JAUTHOR.ORG, http://www.a2jauthor.org/drupal/?q=node/80 (last visited Apr. 28, 2013); *Hyperlinks*, A2JAUTHOR.ORG, http://www.a2jauthor.org/drupal/?q=node/81 (last visited Apr. 28, 2013).

66. Pro Bono Net is largely responsible for the success of both of these systems, operating the Law Help Interactive document assembly server and providing a prototype website that has been adapted by many statewide legal aid websites. *See Our Mission and Programs*, PRO BONO NET, http://www.probono.net/about/item (last visited Apr. 28, 2013).

67. *2012 Q4 LHI Content Statistics*, LAWHELP INTERACTIVE, http://www.probono.net/dasupport/library/item.464730-2012_Q4_LHI_Content_Statistics (login required).

68. *See Two More TIG Recipients Successfully Launch Online Intake and Triage Portals*, LEGAL SERVICES CORPORATION: TECHNOLOGY INITIATIVE GRANTS, http://tig.lsc.gov/about-us/tig-updates/two-more-tig-recipients-successfully-launch-online-intake-and-triage-portals (last visited Apr. 28, 2013).

differences in local law and procedure.[69] In Part II and III we propose an action plan to address some of this need.

The tools and processes discussed in this section represent a few examples of the ways that attorneys now use technology to improve law practice. In the next two sections of this article we propose a modest set of innovations in the law school curriculum that can begin to teach students the new core competencies they need to practice law in this technically-rich environment. In Part II, we offer the Justice & Technology Practicum taught at IIT Chicago-Kent College of Law as a model course that provides both academic perspective and hands-on practice in the use of emerging technologies for the delivery of legal services on the web. We suggest that this course has achieved success in teaching established lawyering competencies and offering instruction in new core competencies. We argue that the course also lowers barriers to justice by empowering law students to meet the legal needs of low-income people. In Part III, we describe the CALI Access to Justice Clinical Course Project. The A2J Clinic Project is a collaboration of seven law schools and the CALI team to build shareable curricula, tools and resources for teachers and law students that will make A2J Clinic courses accessible to all law schools.

II. JUSTICE & TECHNOLOGY PRACTICUM AT IIT CHICAGO-KENT

Justice & Technology Practicum is an example of a new type of course that teaches technical skills to law students who use these new skills to break down barriers to justice for low-income people.[70] The Justice & Technology Practicum was launched at IIT Chicago-Kent College of Law in fall 2010 using both clinical and classroom methods. At its core, the course poses a real life justice problem to each student, or

69. *See* Vincent Morris, *Navigating Justice: Self-Help Resources, Access to Justice, and Whose Job Is It Anyway?*, 82 MISS. L.J. SUPRA 161 (2013), *available at* http://mississippilawjournal.org/wp-content/uploads/2013/02/6_Morris_Final1.pdf.

70. The Justice & Technology Practicum was initially born out of a meeting between stakeholders from courts, legal aid organizations, and law schools on June 8–9, 2006, and built upon previous experiences with the A2J Author Student Editorial Board at IIT Chicago-Kent College of Law. The 2006 Leadership Workshop at Chicago-Kent gathered experts to determine the best methodology to encourage the use of technology tools as a way of encouraging law students to reduce barriers to justice. *See* Ronald W. Staudt**,** *White Paper: Leveraging Law Students and Technology To Meet the Legal Needs of Low-Income People*, (2007), http://www.kentlaw.iit.edu/Documents/Institutes%20and%20Centers/CAJT/leveraging-law-students-and-technology.pdf. That group determined that a "new national initiative aimed at enlisting law students to write and program useful legal content for LSC funded statewide websites" was needed. *Id.* at 19. Originally, that led to the development of the Student Editorial Board at IIT Chicago-Kent, which provided the core workflow for what became the Justice & Technology Practicum.

student team, and challenges students to use document assembly and the A2J Author® software to solve the problem for low-income people who face that problem every day. The course is organized to help students frame the justice problem and understand how barriers to justice affect self-represented litigants.[71]

A. Description of the Practicum

In the classroom, students study perspectives on access to justice issues and explore different ways that new technologies are changing the practice of law. During the first half of the semester, students work through a list of assigned readings[72] while they begin to research and define the scope of their projects. The readings challenge students to consider how technology tools can be used to disrupt the traditional law firm model[73] and challenge the students to confront the ethical issues raised by new methods for delivering legal information and services.[74]

71. For an example of the course website used by the Justice & Technology Practicum in the Fall 2012 semester, *see* ACCESS TO JUSTICE CLINICAL COURSE PROJECT, http://a2jclinic.classcaster.net/welcome/ (last visited Apr. 28, 2013). We built a new, simplified version of the Classcaster site based on student feedback for use during spring 2013. This new version embraces the concept of a class blog. The website still comes preloaded with a list of anticipated reading assignments, but a weekly blog post reminds students of that week's assignment and highlights any changes. Tools that helped students find field observation opportunities, sign up for working sessions, and track their timesheets are now featured on the top navigational bar and homepage. Finally, rather than requiring students to log into Classcaster's content management system, students now upload assignments directly from a single, forward-facing web page.

72. *See Course Materials*, ACCESS TO JUSTICE CLINICAL COURSE PROJECT http://a2jclinic.classcaster.net/category/course-materials/ (last visited Apr. 28, 2013). This "Course Materials" section, which is divided into topic-based chapters rather than specific class assignments, features more documents than are actually assigned to students as reading. We anticipate this section of the website will be most helpful to faculty members from other schools who adapt our materials to develop their own course. We liken this section to a casebook because faculty can elect to assign the entire collection, or pick certain materials to focus on. We expect that the faculty members participating in the A2J Clinic Project will add additional topic areas and readings to broaden this selection of recommended materials.

73. *See* Darryl R. Mountain, *Disrupting Conventional Law Firm Business Models Using Document Assembly*, 15 INT'L J. L. & INFO. TECH. 170 (2007); Marc Lauritsen, *Fall in Line with Document Assembly: Applications to Change the Way You Practice*, L. OFFICE COMPUTING, Feb.–Mar. 2006, at 71, *available at* http://www.capstonepractice.com/loc2006.pdf; Stephanie Kimbro, *Practicing Law Online: Delivering Legal Services with a Virtual Law Office*, EVERYDAY LAW-A BLOG BY ROCKETLAWYER (Oct. 4, 2010), http://blog.rocketlawyer.com/practicing-law-online-9460.

74. *See* Will Hornsby, *Professional Responsibility When Lawyering in a Virtual World*, 2008 A.B.A. TECH SHOW (March 14, 2008), http://a2jclinic.classcaster.net/files/2012/06/Will-on-ethicsTECHSHOW-2008.pdf; Richard Granat, *Does JustAnswer.com Provide Legal Advice Online? Is this Site Ethically Compliant?*, ELAWYERING BLOG (August 25, 2012), http://www.elawyeringredux.com/2012/08/articles/legal-ethics-1/does-justanswercom-provide-legal-advice-online-is-this-site-ethically-compliant/.

Early in the course, students read about the importance of using plain language and work through a series of exercises designed to develop the ability to write plain language for the public.[75] Legal aid professionals emphasize that this may be the most important skill that new attorneys need to learn before they are able to develop effective online tools for self-represented litigants.[76] While the law school curriculum effectively can teach law students to write for other lawyers, rarely is there any focus on teaching students to communicate complicated legal concepts to clients. The Practicum focuses on developing plain language skills because many self-represented litigants have limited education or limited understanding of English.[77]

In the clinical portion of the course, students spend several weeks observing the legal processes that are at the core of the justice problem that they are assigned to solve. Students must spend a minimum of twenty hours during the first five weeks of the semester in direct contact with self-represented litigants seeking access to justice in local courts. Most students try to observe courtrooms hearing cases in the substantive area of law involved in their assigned legal process—i.e. domestic relations, eviction, small claims, etc.—or volunteer at the Self-Help Web Center, where they provide legal information and help litigants complete A2J Guided Interviews® on Illinois Legal Aid Online.[78] This experience allows students to observe firsthand the physical, psychological, and linguistic barriers faced each day by the people who will be using their A2J Guided Interviews and consider ways that they can tailor their interviews to lower these barriers.[79]

75. *See* William H. DuBay, *The Principles of Readability*, IMPACT INFORMATION (Aug. 25, 2004) http://www.impact-information.com/impactinfo/readability02.pdf; *Plain Language Online Course, A Self-Guided Learning Experience*, WRITECLEARLY.ORG, https://sites.google.com/a/lawny.org/plain-language-library/home/plain-langauge-online-course (last visited Apr. 28, 2013).

76. *See Back to Basics: Question Design*, A2J AUTHOR NEW USER TRAINING, (Sept. 6, 2012) (on file with author).

77. *See Report to the Supreme Court of Missouri & the Missouri Bar*, MISSOURI SUPREME COURT JOINT COMMISSION TO REVIEW PRO SE LITIGATION 13-15 (Sept. 2003), *available at* http://www.courts.mo.gov/file.jsp?id=5729; *Self-Represented Litigants: Characteristics, Needs, Services*, OFFICE OF THE DEPUTY CHIEF ADMINISTRATIVE JUDGE FOR JUSTICE INITIATIVES 3-5 (Dec. 2005) *available at* http://www.nycourts.gov/reports/AJJI_SelfRep06.pdf.

78. A webpage has been developed to expose students to the different field observation opportunities available at the Daley Center in Chicago. *See Field Work*, ACCESS TO JUSTICE CLINICAL COURSE PROJECT, http://www.a2jclinic.classcaster.net/schedule-time-tracking/field-work/ (last visited Apr. 28, 2013).

79. For example, in the Fall 2012 semester, one of our students observed during his time at the Self-Help Web Center that experienced volunteers knew the interviews so well that they did not need the assistance of the just-in-time learning features that have been an important part of the success of A2J Author and the A2J Guided Interviews it produces. To address what he saw as

This experience leads to a client-centric, rather than lawyer-centric, approach to legal processes and produces students who see the world through the eyes of others.

The most difficult clinical work is the construction of the HotDocs templates and A2J Guided Interviews. During the second half of the semester, we teach HotDocs, a document assembly program and A2J Author, our computer program that produces A2J Guided Interviews for the public. Every student must arrange four tutoring sessions with a skilled teaching assistant who provides technical troubleshooting and ensures that students are making steady progress on their templates and A2J Guided Interviews.

By the end of the semester, students will have produced a tangible work product demonstrating their skill in using these tools. The culmination of this instruction and observation and software work is a completed A2J Guided Interview, and usually a parallel HotDocs template, that provides information and customized documents needed by self-represented low-income people to solve a specific justice problem.

The Practicum is designed to teach students how to plan their work and execute on their plans. We have mapped the software development steps and require students to complete each step in sequence. This process includes:

Scope Document: The scope document is the initial planning document that defines each project. The purpose of the document is to set clear bounds for the project, estimate the size of the project and identify potential areas needing investigation and research. The scope document is vital to ensuring that the project can be accomplished in one semester. Students must communicate with the legal aid attorneys who have requested the work to obtain approval of this scope document at the inception of the project.

Research Memorandum: Before students can begin the technical work of automating a legal process, they must first research the law and procedures controlling the selected documents they plan to automate. They draft a memorandum explaining the law, procedure, requirements, and other possibly undocumented information that might be helpful to a self-represented litigant completing this legal process. In addition to library research, this step should include observation of

an unnecessary delay in the form completion process, he designed a feature in his interview that would allow legal aid employees and volunteers to skip to a simplified version of the interview. It remains to be seen whether his client organization will find the feature useful, but at least he was thinking about ways to improve the process.

the court process or deep interviews with lawyers who are experts in the affected practice area. Like traditional clinics, the Justice & Technology Practicum exposes students to the heuristics of local legal practice in addition to the formal statutory requirements of a given legal process. This research often drives students to restate the scope of their projects after learning more about the legal processes involved. Students share this research with the lawyer requesting the project to validate the accuracy of the legal and procedural information in the memorandum.

Written Storyboard: The storyboard is a graphical or written flowchart representing the information collection process. Students determine the best way to organize and sequence an interview to collect the information needed to complete the documents to be automated. At this step students draft the appropriate wording, terminology, and learning links for each page of the interview. The language and sentence structure should be written in plain language for end users with a fifth grade reading level.

Hot Docs Template Development: Students develop a Hot Docs template that assembles the document needed by the self-represented litigants targeted by their project. This is the most "technical" aspect of the course. HotDocs is a powerful document assembly software tool used by programmers. Many lawyers have learned to use this software, but it is not designed for non-technical people.

A2J Author® Development: Using the storyboard as a reference, students design and develop the A2J Guided Interview in A2J Author. Each step of the A2J Guided Interview should be designed to be easy for end-users to complete and to provide the just-in-time instruction they will need to complete the interview. A2J Author, like HotDocs, is a software programming tool, but unlike HotDocs, it is explicitly designed to be used by lawyers rather than programmers.

Peer & Faculty Review: After the students complete a first draft of their projects, the A2J Guided Interviews and corresponding research are submitted for faculty and peer review. Reviewers test every possible path available to the end user and review the language as well as the legal underpinnings of the interview. Each student prepares and receives a testing report that documents this review. Peer review teaches team work, collaboration and, sometimes, humility.

Final Presentation of Interviews: After incorporating revisions suggested during the peer review, students make a formal presentation to deliver their final project. In this presentation the students de-

scribe their completed projects to the legal aid lawyers requesting the projects and, if feasible, the lawyers participate. Students must be prepared to face questions from faculty and staff as well as their peers.

Final Report: Each student writes a formal report describing and evaluating the course. These reports include an analysis of the entire course and a review of the various tasks that students were asked to complete during the semester.

B. Educational Benefits of the Practicum

Here we argue that the Practicum is an effective method to teach three clusters of essential skills needed by the lawyer of the 21st century:

- First, the Practicum teaches traditional law school skills like legal research, writing and legal analysis;
- Second, the Practicum teaches technical skills and provides a framework for applying technology to law practice; and
- Third, the Practicum teaches essential "soft" skills that lawyers need to succeed in law practice.

First, students in the Practicum learn in traditional ways now commonly employed in law schools: they read and discuss articles in the legal literature, and they do legal and factual research which they synthesize into traditional legal memoranda.[80] When students build A2J Guided Interviews and HotDocs templates they also learn law and legal procedure and lawyering skills. We incorporate by reference the claims of several other authors in this Symposium who explain the educational value of using "apps" or AI analysis or knowledge man-

80. The most searching critiques of legal education in the last twenty years include Marjorie M. Shultz & Sheldon Zedeck, *Predicting Lawyer Effectiveness: A New Assessment for Use in Law School Admission Decisions*, CELS 2009 4TH ANNUAL CONFERENCE ON EMPIRICAL LEGAL STUDIES PAPER (July 31, 2009), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1442118; WILLIAM M. SULLIVAN ET AL, EDUCATING LAWYERS: PREPARATION FOR THE PROFESSION OF LAW (2007) (hereinafter "CARNEGIE FOUNDATION REPORT"); ROY T. STUCKEY, BEST PRACTICES FOR LEGAL EDUCATION: A VISION AND A ROAD MAP (2007) (hereinafter "STUCKEY'S BEST PRACTICES"), *available at* http://law.sc.edu/faculty/stuckey/best_practices/; ABA TASK FORCE ON LAW SCHOOLS AND THE PROFESSIONS, LEGAL EDUCATION AND PROFESSIONAL DEVELOPMENT: AN EDUCATIONAL CONTINUUM (1992) (hereinafter "MACCRATE REPORT"). Each of these reports identifies a list of skills and competencies that are needed by new lawyers and evaluates the relative effectiveness of law schools in imparting these skills on our students. The Justice & Technology Practicum reinforces many of these skills that are taught in traditional doctrinal and clinical courses, while also developing other skills discussed below. *See infra* Part II(b)(i)–(iv).

agement frames as vehicles for teaching students about substantive law, legal writing and traditional legal analysis.[81]

Second, as has been discussed elsewhere in this article and throughout this symposium, new technologies have caused a fundamental shakeup in the practice of law and, indeed, in all knowledge-based professions.[82] We believe the technical skills developed in this course are useful for students starting careers at government agencies, in-house counsel's offices, or law firms—large and small. The course teaches students to use two software programming tools, HotDocs and A2J Author. All legal software is not fungible, so teaching A2J Author and HotDocs will not explicitly prepare students for every technology used in all segments of law practice. But fluency in these technologies does provide students with a "theoretical . . .structure" for understanding the transformation of law that information technology is driving.[83]

As Tanina Rostain and her co-authors argue in this symposium, new attorneys will need to be familiar with the processes involved in building legal expert systems. Courses such as hers and ours equip students with skills that are more broadly applicable and "platform neutral."[84] As larger firms continue to search for more efficient ways to provide legal services to their clients, they will need attorneys capable of planning, developing, and maintaining these new technologies. Although A2J Author may not have a direct application for those going into fields like litigation management or e-discovery at larger law firms, the ability to approach a legal process systematically will prove invaluable in these new law jobs.

While the Practicum explicitly focuses on teaching technology for automating legal processes, students also learn fundamental principles and explore ethical questions raised by the changes driven by technology in law project management, contract standardization, and e-discovery. Our course offers one approach to delivering instruction and skills in the use of modern law office technology—4% of Bill Hen-

81. *See* Tanina Rostain et al., *Thinking Like a Lawyer/Designing Like an Architect: Preparing Students for 21st Century Practice*, 88 CHI.-KENT L. REV. 743 (2013); Kevin D. Ashley, *Teaching Law and Digital Age Legal Practice with an AI and Law Seminar,* 88 CHI.-KENT L. REV. 783 (2013); Conrad Johnson & Brian Donnelly, *If Only We Knew What We Know,* 88 CHI.-KENT L. REV. 729 (2013).

82. *See* Johnson & Donnelly, supra note 81.

83. *Id.*

84. "Our purpose in teaching students to build apps is not to train them in any specific technology or software, but to expose them to the analytic principles underlying the development of these systems." Rostain, supra note 81, at 753 (2013) (citing Roger V. Skalbeck, *Tech Innovation in the Academy, in* AALL AND ILTA DIGITAL WHITE PAPER: THE NEW LIBRARIAN 74. 77 (2012), *available at* http://read.uberflip.com/i/87421/.

derson's "12% solution." We encourage the continued development of other, complementary courses that would provide more intensive training in these other technology skills needed by new lawyers today.[85]

Third, in addition to teaching traditional legal skills like legal research, writing and legal analysis—and the obvious addition of the use of technology tools to assist legal practice—the Justice & Technology Practicum offers instruction and experiences that help students to learn the following skills and values:

a. Legal project management and planning,
b. Collaboration and teamwork,
c. Empathy and client centered professionalism, and
d. Transactional rather than litigation centered problem solving.

The Final Report that every student prepares at the end of the course assesses the effectiveness of the course and feeds back into our course design to improve the course. Lessons we have learned from those reports and our own observations prompt the following preliminary conclusions about the educational benefits delivered by the Practicum:

1. Project management and planning

The step-by-step work plan from Scope Document to Final Report models a systematic approach to legal work. The Practicum forces students to plan their project and build a tool capable of assisting many self-represented litigants. For example, a narrowly drawn scope document is pivotal to completing a project in one semester. The most frequently-asked question raised by faculty interested in this method remains: "How much work can students really accomplish toward addressing a justice problem in just one semester?" In 2010, the first time the course was offered, most students completed about eighty percent of the work, leaving the remaining twenty percent for the student to finish in a subsequent semester or for legal aid lawyers to finish on their own. In fall 2012, nearly every student completed a project that was ready for publication on a statewide legal aid website subject to approval of the client organizations.

85. *See, e.g.*, Granat & Kimbro, supra note 48 (arguing that the law school curriculum should include instruction on law practice management tools and techniques).

What we have learned in three attempts is that the likelihood of project completion in just one semester, by just one student, can be increased greatly by ensuring that the scope of each project is narrowly drawn. This impresses upon our students a lesson which cannot be overstated: setting an appropriate scope early in any project's development is critical to the project's success. Students must focus on building a tool that addresses one specific justice problem, not an entire body of law. Students must avoid scope creep, at all costs, as they work their way through the established process toward project completion. Even if the student's research reveals that the litigant will need to file additional forms later in the legal process, unless that form is necessary to resolve the specific access-to-justice problem, it should wait and be developed as a separate A2J Guided Interview.

2. Collaboration and Teamwork

All of our students engage in both internal and external collaboration during the semester. They learn to collaborate internally by reviewing each other's work product as it nears completion. Students recognize the value of working with others, especially the mutual evaluations of work product. Students explain that reviewing another student's project makes them reexamine their own work. They incorporate positive features and eliminate the same types of errors they discovered in their classmate's A2J Guided Interview. Students also experience external collaboration when they work with a requesting legal aid organization, a collaborative effort similar to a partner-associate relationship. Students must discuss the justice problem they are attempting to address with the legal aid organization and incorporate feedback from the organization into the final work product that they deliver. This relationship can be much more effective if the students have face-to-face meetings with the lawyers in the client organizations.[86]

86. In 2010, Illinois Legal Aid Online was the client organization for every student project and one of its attorneys worked closely with the class to define every project. Our students now work with legal aid lawyers from six or seven different programs and states. As a result, e-mail has become the primary method of communication between students and the legal aid attorneys. Poor e-mail communication has led to numerous misunderstandings between our students and their client organization. Students who met face to face with lawyers at the client organization here in Chicago had a better understanding of what the legal aid wanted the project to accomplish. Faculty should work to ensure that students and client legal aid organizations understand what is expected of them. Face-to-face meetings are the best way to accomplish this goal. Video conferencing software such as GoToMeeting or Skype allows these meetings to occur, even if the legal aid attorney is halfway across the country.

Although limited scope is important, as we discussed above, more complicated projects need not be ignored. Some justice problems can be addressed only with an intricate interview or a packet of interviews. Collaboration among multiple students can ensure that these projects are still completed in one semester. We have found two models for collaborative projects that worked well and trained our students to thrive in a collaborative legal environment. (1) In fall 2011, three students worked with the Illinois Department of Human Rights on three different types of discrimination complaints. While each student was assigned just one form, they collaborated by sharing the work on common elements and avoided duplication of effort. (2) Conversely, in fall 2012, two students worked on a Simple (Uncontested) Divorce packet for Legal Aid of North Carolina. Despite its name, the project was not simple. Their project was the first completed despite being the longest A2J Guided Interview.

3. Empathy and client-centered professionalism

Marjorie M. Shultz and Sheldon Zedeck, in a study of different indicators of future legal professional success, identify the ability to see the world through the eyes of others as one of twenty-six factors that are important to effective lawyering.[87] A requirement that each student conduct twenty hours field work and court observation is our primary attempt to build this skill. We focus an entire section of our course on writing in plain language, but also require students to conduct field observations at courthouse help desks and within pro se courtrooms. These experiences not only help students design better A2J Guided Interviews during the semester, but also teach them to consider how future clients may perceive attorneys and the legal system—an important skill no matter what type of legal career they pursue.

We have found this field observation to be more valuable if students observe self-represented litigants facing the justice problem that their A2J Guided Interview attempts to address. Most of our students conduct field observations at the Self-Help Web Center in the Daley Center, which is conveniently-located and supervised by the same staff members at the Center for Access to Justice & Technology who help teach the Justice & Technology Practicum. The students' final reports consistently indicate that this experience is not only rewarding, but

87. Shultz & Zedeck, *supra* note 80, at 26.

that it drives them to question whether the language that they use in their final A2J Guided Interview will be understood by the self-represented litigants they met.

4. Transactional, rather than litigation-centered, problem solving

Our established workflow—from initial scope document to reflective final report—produces learning opportunities that map to the work of transactional lawyers. The traditional clinical model usually centers on litigation or conflict resolution. Typically, a clinician uses a single specific legal problem to educate students in substantive law, procedure and lawyering skills while resolving that client's problem. We argue that our practicum requires a more transactional approach because, like the transactional attorney, a student developing an A2J Guided Interview must anticipate and account for different circumstances that could confront a wide variety of potential end-users.

To illustrate this point, consider the work performed by a lawyer negotiating and writing a contract. That attorney must envision a wide range of potential events, note future risks triggered by those events, and attempt to use contract language to shift those risks to the other party or eliminate them altogether. The thorough attorney considers every likely possibility to protect the client's interests. In a similar way, students building an A2J Guided Interview must consider all possible scenarios that could arise during the legal process facing various end-users, however likely or unlikely they may be. For example, a petition for a simple, uncontested divorce seems straightforward on its face, but the student automating this process must anticipate that some couples may have significant legal issues involving children or property that must be resolved before they can file. The final A2J Guided Interview need not necessarily produce a completed document for all possible users. But the student must foresee these issues and direct the end user who cannot complete the interview because of his or her unique circumstances to another resource that may be more helpful.[88]

C. Access to Justice Benefits of the Practicum

On April 16, 2011, Marc Lauritsen and Ron Staudt won a simulated venture capital competition for the best new idea to improve legal

88. *See* Richard Zorza, *The Access to Justice "Sorting Hat": Towards a System of Triage and Intake that Maximizes Access and Outcomes*, 89 DENV. U. L. REV. 859 (2012), for a discussion about the need to direct self-represented litigants to appropriate resources in order to ensure equal access to justice.

education at the Future Ed III Workshop sponsored by Harvard Law School and New York Law School for a proposal entitled "Apps4Justice: Learning Law by Creating Software."[89] The Practicum course and the CALI project described next in this article fit easily within the ideas that Lauritsen and Staudt proposed at Future Ed III, but are admittedly narrower and more focused. Our course uses a specific software tool, A2J Author, which is explicitly designed for building content for low-income people. The Apps4Justice courses described in the Future Ed III proposal were defined to include any course in which students use technology to build useful tools to solve legal problems. We believe that building A2J Guided Interviews targeted at the legal needs of low-income people is not only a powerful method for teaching important skills, but it is also uniquely positioned to improve access to justice for low-income people.

A2J Guided Interviews have proven to be an effective tool to help solve this justice gap by delivering just-in-time learning, intake triage, document assembly and legal information to low income people across the country. Clinical faculty members for fifty years have found deep satisfaction and powerful educational opportunities in serving the legal needs of the poor. Even if the lessons of new technology in law could be taught just as well by solving legal problems for IBM or Google,[90] we can better impress the values of our profession on our students by helping them to address the legal needs of the poor.

We do not argue that other software or other clinical customers who are not poor are ineffective vehicles for the education we think is now essential for law schools. We argue that A2J Clinics are more efficient and effective than other models that aim at the same educational benefits—especially for law schools that are not well staffed with technology experts—because the software is already well-established in the legal aid community. The success of A2J Author in the legal aid community offers a network of talented attorneys who can support these efforts and an available environment where students' work product can be quickly implemented to serve the needs of the poor.

89. *Apps for Justice Wins Future Ed Contest*, IIT CHICAGO-KENT COLLEGE OF LAW (Apr. 20, 2011), http://www.kentlaw.iit.edu/news/2011/apps-for-justice-wins-future-ed-contest. Brian Donnelly, Brock Rutter, Blair Janis, David Johnson, John Mayer, Larry Farmer, Oliver Goodenough, and Richard Granat also contributed to the proposal. Ronald Staudt & Marc Lauritsen, *Apps for Justice: Learning Law by Creating Software*, FUTURE ED III (Apr. 15, 2011), http://dotank.nyls.edu/futureed/2011proposals/11llcs.pdf.

90. In fact, neither IBM nor Google have constructed the national infrastructure for delivery and support of technology solutions like LSC's national system of state-wide websites, its LHI server and the supported software solutions like A2J Author.

A2J Author is a widely-dispersed, well-tested, and widely-implemented technology that has been used by legal services customers more than 500,000 times in the last year.[91] Choosing this tool to teach the identified skills requires no search or survey of lawyers and law firms. It is a proven solution and an effective technology for delivering legal education and solutions to the public.

LSC through its TIG grants has helped dozens of LSC-funded legal aid organizations and courts adopt A2J Author. As a result, there are dozens of trained legal aid attorneys and court professionals to serve as adjunct faculty or teaching assistants.[92] These grants have also provided the incentives so that every State has its own legal aid website which needs content to inform low income people of their rights and to provide automated solutions for simple legal problems.

III. ACCESS TO JUSTICE CLINICAL COURSE PROJECT

The Access to Justice Clinical Course Project ("A2J Clinic Project") is a coordinated effort by the Center for Computer-Assisted Legal Instruction, the Center for Access to Justice & Technology at IIT Chicago-Kent College of Law, and Idaho Legal Aid Services.[93] This project organized a team of law school faculty members from seven different schools who will produce course kits for law school clinics to create A2J Guided Interviews® using the A2J Author® software. The central idea of the A2J Clinic Project is to develop courses that use A2J Author as an educational tool while simultaneously providing content for legal aid organizations.

In fall 2012, CALI solicited proposals from its member law schools to participate in this year-long curriculum development effort. Fifteen faculty members submitted responses to the RFP and CALI selected six faculty teams to participate in the project for its first year. Participants

91. *See supra* Part 1(d).

92. By the time this article is printed, a new, web-based version of A2J Author will be released. A2J Author was initially built as a downloaded, Flash-based program, which meant that it was accessible from a Windows PC but not from a Mac or from a mobile device. The new A2J Author 5.0, eliminates the downloadable software package and runs from the cloud as a browser-based web application. This web application will allow students and lawyers to build A2J Guided Interviews from anywhere and on any desktop, laptop, or mobile device, regardless of the operating system. Similarly, a new mobile viewer will optimize A2J Guided Interviews for use with mobile devices so that end-users can complete their A2J Guided Interviews from any browser-enabled device.

93. Support for the A2J Clinic Project is provided through a contract with Idaho Legal Aid Services. *See Technology Initiative Grant # 11035*, LEGAL SERVICES CORPORATION (2011) (on file with author).

in this initial pilot program include Brian Donnelly, Conrad Johnson, and Mary Marsh Zulack at Columbia Law School; Greg Sergienko and Jodi Nafzger at Concordia University School of Law; Joe Rosenberg at CUNY School of Law; Jane Aiken, Tanina Rostain, and Roger Skalbeck at Georgetown University Law Center; Judith Welch Wegner at UNC School of Law; and JoNel Newman and Melissa Swain at University of Miami School of Law.

Each team of participating faculty members will create a new course (or modify a current one) to teach core technical competencies using A2J Author while simultaneously developing self-help resources for legal aid organizations.[94] The A2J Clinic Project will develop a series of course kits to facilitate the growth of such courses. As a result, we hope to establish A2J Clinics as a permanent feature of law school curricula. At the end of the year, each team will contribute its course kit to the project for free use by all CALI member law schools. Course kits will include a syllabus, a list of reading assignments, a workflow for project completion and a teacher's guide explaining the methodology for teaching the course. In addition to guiding other teachers in the methods employed in each course, the teacher's manuals will evaluate the use of the software tools in a clinical setting.

CALI has structured the project to encourage collaboration and sharing between and among the faculty chosen to participate. The selected faculty teams began work on February 1, 2013, at an organizing meeting at Columbia Law School. Five teams plan to teach a qualifying course in fall 2013 and Georgetown will teach its course in spring 2014. Next, we describe the individual projects selected by CALI to participate in the initial pilot program.

The Lawyering in the Digital Age Clinic at Columbia University taught by Conrad Johnson, Brian Donnelly and Mary Marsh Zulack is an existing example of an A2J Clinic.[95] The Columbia course started twelve years ago and takes up to sixteen students each year for seven credit hours during the fall semester. After completing the fall semester, some students elect to continue working on their projects for one or more credit hours in the spring. Students in the clinic are divided into groups of two or more and assigned to a court or legal aid organi-

94. A2J Author® uses a web-based user interface to walk self-represented litigants though a legal process by asking a series of questions to create a document that can be filed with the court. *See* A2J ACCESS TO JUSTICE, A2J AUTHOR COMMUNITY WEBSITE, http://www.a2jauthor.org (last visited Apr. 28, 2013). *See supra* text accompanying notes 61–68.

95. *See* Brian Donnelly, *What does "Digital Lawyer Mean?"*, *in* EDUCATING THE DIGITAL LAWYER, *supra* note 14, at §1.

zation that has a specific justice problem. The students work with the organization to define exactly what type of technology solution best suits the needs of the organization and then the students implement that solution. Past projects have included an A2J Guided Interview for the pro se answer in the New York City housing court,[96] as well as a website explaining the Krimstock proceedings for New York City's administrative law judges.[97] Professors Johnson, Zulack and Donnelly will distill their experiences into a course module that can be used by other clinical faculty.

Concordia Law School will partner with our funding partner, Idaho Legal Aid Services, in the fall, 2013, to offer an A2J Clinic as part of its initial clinical offerings. Jodi Nafzger, director of experiential learning and career services, will work with a staff attorney from Idaho Legal Aid Services, to teach the course. Students in the A2J Clinic will develop A2J Guided Interviews for use by Idaho Legal Aid in subject areas like elder law, family law, housing, and probate.

Professor Joe Rosenberg teaches the Elder Law Clinic at CUNY Law School, which covers a variety of issues affecting the elderly and disabled people in New York City. The clinic is offered to approximately sixteen students each year for twelve credits in the fall and between one and four credit hours in the following spring. Most of the clinic's work focuses on guardianship issues and some of his students have already developed some printed materials to assist pro se litigants seeking guardianship under Article 81 of New York's Mental Hygiene Law.[98] In fall 2013, Rosenberg's students will develop A2J Guided Interviews to supplement these pro se materials, coordinate with the guardianship clerks in each of the counties of New York City to ensure they accept the forms that are created, and work with legal aid attorneys so they can use the A2J Guided Interviews created by students.

Professors Jane Aiken, Tanina Rostain and Roger Skalbeck at Georgetown Law Center are expanding their two-credit seminar, "Technology, Innovation and Law Practice" into a three credit practicum. As a skills practicum, the Georgetown course will pair students

96. *See Nonpayment Answer Program*, NEW YORK CITY CIVIL COURT, http://www.nycourts.gov/courts/nyc/housing/int_nonpayment.shtml (last visited Apr. 28, 2013).

97. *See What To Do If The Police Take Your Car During An Arrest,* NEW YORK CITY OFFICE OF ADMINISTRATIVE TRIALS AND HEARINGS & LAWYERING IN THE DIGITAL AGE, http://www2.law.columbia.edu/vehicleseizure/ (last visited Apr. 28, 2013).

98. *See* Elder Law Clinic, *Guide To Becoming a Guardian Without a Lawyer*, MAIN STREET LEGAL SERVICES, http://www.law.cuny.edu/academics/clinics/elder/Becoming-A-Guardian-Without-A-Lawyer.pdf (last visited Apr. 28, 2013).

with legal aid organizations from around the country that are able to host the students' work product. At the start of the semester, the students work with the faculty, their classmates, and representatives from the external organization to develop an application idea. Early in the semester, all students will be taught to use A2J Author, even if another platform is eventually selected for their project. This course model is unique because it also requires a venture-style funding pitch that teaches students oral presentation skills. At the conclusion of the course in 2012, students presented their ten-minute pitches and answered five minutes of questions as part of an Iron Tech Lawyer competition.[99]

Judith Wegner at UNC Chapel Hill Law School currently teaches a course called "Becoming a Professional," which was developed with Dean Louis D. Bilionis at Cincinnati to prepare law students to develop their own professional identity.[100] This course is designed to help students explore their profession, strengthen their professional identity, and develop "soft skills" such as teamwork, strategic planning, and self-reflection. It is offered in two sections, one at each law school, that are joined by a video link. Students are divided into groups of four to work on a final project in an area of law that interests them. Professor Wegner plans to identify two to four A2J Guided Interview projects relevant to the legal aid communities in Ohio and North Carolina before the semester begins.

JoNel Newman and Melissa Swain at the University of Miami Law School will modify the school's existing Health and Elder Law Clinic to include the development of A2J Guided Interviews alongside the assignment of certain cases to individual students. The clinic currently operates as a twelve-credit Medical-Legal Partnership with the University of Miami's Miller School of Medicine, providing legal services at medical centers throughout the Miami area.[101] The clinic develops paper forms in areas such as Social Security, Immigration and other benefits-based programs working with impoverished residents at their partner hospitals. The development of A2J Guided Interviews will add another dimension to the legal services provided by students in the clinic. This course will be a model for clinical faculty members who

99. *See* GeorgetownLawChannel, *New Apps from "Iron Tech" Lawyers*, YOUTUBE, http://youtu.be/ipVpjtOEyA8 (last visited Apr. 28, 2013).

100. *Becoming a Professional: Exploring Skills & Transition into Practice*, UNC SCHOOL OF LAW, http://www.law.unc.edu/academics/courses/becomingaprof/ (last visited Apr. 28, 2013).

101. *See* JoNel Newman, *Miami's Medical-Legal Partnership: Preparing Lawyers and Physicians for Holistic Practice*, 9 IND. HEALTH L. REV. 471 (2012).

want to incorporate the development and use of A2J Guided Interviews as one part of a broader clinical experience.

Each participant in the A2J Clinic Project brings a different set of skills to the project and will approach their course model from a unique starting point.[102] All participating faculty will gather to present their projects at the annual CALI Conference for Law School Computing® at IIT Chicago-Kent College of Law on June 15, 2013. The CALI project faculty and the authors of this symposium will discuss justice, lawyering and legal education in the digital age. We hope that the June conference will launch many new clinical courses that teach law students about these topics using A2J Author and that these courses will position law students to help low income people achieve greater access to justice.

CONCLUSION

Richard Susskind has argued that the traditional attorney will find an ever-shrinking share of the market and that "legal information engineers" will grab a larger piece of the legal services market.[103] In his most recent book[104] Susskind argues that clients' growing demand for "more for less" will require that law firms be staffed with "enhanced practitioner[s]" who are skilled, knowledgeable, and enhanced by modern techniques, such as standardization and computerization.[105] This demand for enhanced practitioners will also create a wide range

102. The participating faculty from both Columbia and Georgetown had experience in teaching law school courses that incorporate law student authoring of software. Students in Columbia's Lawyering in the Digital Age Clinic built a successful A2J Guided Interview for the City Courts of New York in 2011, but these students have also built all sorts of technical tools, from spreadsheets and calculators to databases and informative webpages. Most of Columbia's projects target problems facing low-income people because the faculty were clinicians whose practice experience was grounded in legal aid to the poor. On the other hand, Georgetown's course in 2012 included no A2J Author projects. Most of the students built intelligent systems using the Neota Logic System, *see* NEOTA LOGIC, http://www.neotalogic.com/ (last visited Apr. 28, 2013), with guidance and support from its founder Michael Mills. The Iron Tech Lawyer pitches made by students at Georgetown were not targeted at legal aid to the poor, but were targeted at new business ideas that would be worthy of venture capital. The CALI project now provides a framework within which both Columbia and Georgetown will focus significant resources teach law students to build A2J Guided Interviews for low income people. *See* discussion, *supra* notes 95–99.

103. *See* RICHARD E. SUSSKIND, THE END OF LAWYERS?: RETHINKING THE NATURE OF LEGAL SERVICES (2008); RICHARD E. SUSSKIND, THE FUTURE OF LAW: FACING THE CHALLENGES OF INFORMATION TECHNOLOGY (1996); *see also* RICHARD E. SUSSKIND, TRANSFORMING THE LAW: ESSAYS ON TECHNOLOGY, JUSTICE, AND THE LEGAL MARKETPLACE (2000).

104. *Tomorrow's Lawyers*, *supra* note 4.

105. *Id.* at 5, 110.

of new jobs for attorneys such as the legal knowledge engineer, the legal technologist and the legal hybrid.[106]

There is no single, magical software or invention disrupting settled legal markets and labor practices. Instead, lawyers in corporate practices and lawyers serving personal legal needs have been forced to innovate by clients who refuse to pay for outdated and inefficient labor practices. While legal costs are being wrung out of the high priced legal market and many young attorneys struggle to find legal work, we live in an age when access to affordable legal services is still impossible for many Americans. Approximately twenty-one percent of the U.S. population is now at or below the poverty line set by federal standards for free legal aid to the poor.[107] More than eighty percent of the legal needs of low income people are not met by overstretched legal aid resources.[108]

Law schools have a unique educational opportunity to work to solve all of these problems at once. Law schools must adapt to produce new lawyers who are fluent with the technical tools that are becoming standard in law offices around the country. The Access to Justice Clinical Course Project described above will arm students with document assembly and automation tools, supply legal aid organizations with interactive content to help reduce barriers to justice, and trigger a reexamination of the core lawyering competencies that law schools need to teach. Now is the time for a renewed clinical effort focused on refining our methods of teaching traditional competencies, developing new models for teaching transactional approaches to personal legal services, and teaching new competencies needed by the digital lawyer.

106. Susskind also says there will be jobs for the legal process analyst, the legal project manager, the Online Dispute Resolution practitioner, the legal management consultant, the legal risk manager and others. *Id.* at 110–18. For challenging new models of technology and the law, *see* REINVENT LAW SILICON VALLEY, http://reinventlawsiliconvalley.com/ (last visited Apr. 28, 2013) (conference held on Mar. 8, 2013); CODEX FUTURE LAW 2013, http://www.law.stanford.edu/event/2013/04/26/codex-futurelaw-2013 (last visited Apr. 28, 2013) (conference held Apr. 26, 2013).

107. Federal law requires that LSC establish maximum income levels for persons eligible for civil legal aid. 42 U.S.C. §§ 2996f(a)(2)(A) (2012). Under LSC regulations the maximum level is 125% of the federal poverty guidelines. 45 C.F.R. § 1611.3(c)(1) (2012). According to the United States Census Bureau, 20.8% of Americans live within 125% the federal poverty guidelines. *See Poverty: 2010 and 2011*, U.S. CENSUS BUREAU 4 (Sept. 2012), http://www.census.gov/prod/2012pubs/acsbr11-01.pdf.

108. *See supra* note 8.