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ARTICLE

NAVIGATING LEGAL ETHICS AND LAW SCHOOL CURRICULA: ATTEMPTING TO FIND TECHNOLOGY COMPETENCY WITHOUT A COMPASS

JESSICA DE PERIO WITTMAN* & KATHLEEN (KATIE) BROWN**

ABSTRACT

Comment 8 of Model Rule 1.1 of the Professional Rules of Conduct requires attorneys to be ethically accountable for technology competence. However, the drafting of the language of Rule 1.1 is vague. As a result, attorneys, law firms, and law schools apply Rule 1.1 differently and emphasize topics they deem most important. Per American Bar Association (ABA) Standard 301, law schools must maintain a rigorous program of legal education that prepares their students for effective, ethical, and responsible participation as members of the legal profession. Law schools have summarily responded to Rule 1.1 and Standard 301 by adding and offering courses in the technology space. Arguably, law schools perceive that they are aligning their course curricula with law firm expectations and hiring practices by offering courses that respond to law firm hiring trends. Unfortunately, job descriptions for attorney positions traditionally reflect only some of the technology skills required or mandated for those positions. Moreover, as new positions become available, or lateral positions

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open, job descriptions are equally vague about what is necessary for a successful candidate beyond already-existing knowledge in that field.

This Article proposes that law schools and law firms must share a view of technology competence and its application in legal practice in the absence of a clear-cut standard for technology competence from the ABA and state courts. The authors draw their recommendations from their own empirical studies in legal technology course instruction and law firm job descriptions. The authors look to the Foundations of the Whole Lawyer Model and the Institute for the Advancement of the American Legal System (“IAALS”) Hiring Guide to advocate for a more holistic approach to lawyering that integrates technology and technology competence into all aspects of law practice. The authors recommend that law firms use the Whole Lawyer approach to draft their job descriptions with language that properly addresses the technology competencies necessary for those positions. Only then will law schools be able to properly align their course curricula to meet the current needs of technology competence in modern legal practice.

INTRODUCTION

Attorneys are ethically obligated to be technologically competent per Comment 8 of Model Rule 1.1 of the Model Rules of Professional Conduct.¹ Legal associations, such as the American Bar Association (ABA), have attempted to address this ethical obligation by offering professional guidance and training that supports the duty of technology competence.² However, the drafting of Rule 1.1 is vague, and there is no clarity on what is required to fulfill the duty of technology competence.³ Unfortunately, with little to no guidance from the ABA or state courts on how attorneys can comply with the duty of technology competence, attorneys, law firms, and law schools apply Rule 1.1 differently and place emphasis on topics they deem most important. Additionally, attorney job descriptions emphasize technology skills that practice groups perceive are a value-added return

1. See generally Jessica de Perio Wittman & Kathleen (Katie) Brown, *Taking on the Ethical Obligation of Technology Competency in the Academy: An Empirical Analysis of Practice-Based Technology Training Today*, 36 GEO. J. LEGAL ETHICS 1 (2023).

2. See Mark Rosch, *2020 Technology Training*, AM. BAR ASS’N: TECH REPORT 2020 (Nov. 16, 2020), https://www.americanbar.org/groups/law_practice/publications/techreport/2020/techtraining/ [<https://perma.cc/Y4FG-QEMB>].

3. Some scholars have suggested that the definition of competence is intentionally vague so that attorneys can adapt the definition to various situations while possessing a knowledge base expected of all attorneys. See John F. Sutton, Jr., *Guidelines to Professional Responsibility*, 39 TEX. L. REV. 391, 405–06 (1961) (“The American Bar Association canons were designed to serve as general educational guides to proper professional conduct.”). For a discussion on how vague, implicit language considers changes in technology, see Lori D. Johnson, 65 VILL. L. REV. 159, 168 (2020) (noting that while technology competence was implicitly required in pre-existing Comment 6 to Model Rule 1.1, a new comment specifically addressing technology was required to make this requirement explicit).

on investment for the law firm. The individualized approach to defining technology competence widens the disconnect between stakeholders in the legal profession, resulting in even more confusion.

Law school stakeholders perceive that they are aligning their course curricula with law firm expectations and hiring practices. For example, some law schools include legal technology skills and theory in the curriculum through elective course offerings.⁴ Law schools have also opted to address technology competence in “Advanced Legal Research,” “Law Practice & Technology” (or similarly-named classes), and “Legal Practice” (or legal research and writing classes taught in the first-year curriculum).⁵ This inconsistent value placed on legal technology leaves a few students with deep knowledge of specific technology skills and many students with, at best, a cursory understanding of technology.⁶ Law schools offer these types of courses in an effort to comply with accreditation standards, such as ABA Standard 301.

Per ABA Standard 301, law schools are required to maintain a rigorous program of legal education that prepares their students for effective, ethical, and responsible participation as members of the legal profession.⁷ Additionally, ABA Standard 509 requires schools to report to the ABA and publicly disclose employment outcomes.⁸ For this reason, law schools benefit greatly from understanding positions currently in the job market. What this also means is that law schools align their curricula with what career

4. For a discussion on the types of technology-related courses law schools have offered, see de Perio Wittman & Brown, *supra* note 1, at 19–20. See also Iantha M. Haight, *Digital Natives, Techno-Transplants: Framing Minimum Technology Standards for Law School Graduates*, 44 J. LEGAL PRO. 175, 188–92 (2020).

5. For example, Dyane L. O’Leary offers a course called Legal Practice Skills that offers a component of legal technology. In her 2021 article, O’Leary encourages other Legal Practice professors to introduce technology into their curriculum. Dyane O’Leary, “Smart” Lawyering: Integrating Technology Competence into the Legal Practice Curriculum, 19 U.N.H. L. REV. 197, 199–202 (2021); see also de Perio Wittman & Brown, *supra* note 1.

6. For example, O’Leary offers a “how-to” guide centered on five broad categories of technology competence: (A) Legal Document Proficiency; (B) Legal Analytics & Document Integration/Brief Analysis; (C) E-Discovery; (D) Law Practice Technology; and (E) Data Security. O’Leary, *supra* note 5, at 202. See generally de Perio Wittman & Brown, *supra* note 1.

7. STANDARDS & R. OF PROC. FOR APPROVAL OF L. SCHS. 2022-2023, Standard 301(a) (AM. BAR ASS’N SECTION OF LEGAL EDUC. AND ADMISSIONS TO THE BAR 2022).

8. STANDARDS & R. OF PROC. FOR APPROVAL OF L. SCHS. 2022-2023, Standard 509 (AM. BAR ASS’N SECTION OF LEGAL EDUC. AND ADMISSIONS TO THE BAR 2022). For example, the ABA collects information about employment status (Employed – Bar Passage Required; Employed – J.D. Advantage; Employed – Professional Position; Employed – Other Position; Employed – Law School/University Funded; Employed – Undeterminable; Enrolled in Graduate Studies; Employed – Start Date Deferred; Unemployed – Not Seeking; Unemployed – Seeking; Employment Status Unknown), employment type (Law Firms; Business & Industry; Government; Public Interest; Clerkships – Federal; Clerkships – State, Local, and Territorial; Clerkships – Tribal; Clerkships – International; Education; Employer Type Unknown), law school/university funded positions (Employed – Bar Passage Required; Employed – J.D. Advantage; Employed – Professional Position; Employed – Non-Professional Position), and employment location (State – Largest Employment; State – 2nd Largest Employment; State – 3rd Largest Employment; Employed in Foreign Countries). *Id.*

services and academic affairs departments perceive are important to law firms. For example, e-discovery courses are now commonplace at most law schools in response to the overall increase of e-discovery positions and use in legal practice.⁹ Similarly, many law schools have an abundance of intellectual property courses which corresponds to the number of intellectual property attorney positions available in any given year.¹⁰

Unfortunately, job descriptions on law firm websites may not necessarily reflect all the technology skills required or mandated for those positions. As new positions become available, or lateral positions open, job descriptions are equally as vague about what is necessary for a successful candidate beyond already-existing knowledge in that field.¹¹

This Article proposes that law schools and law firms must share a view of technology competence and its application in legal practice in the absence of a clear-cut standard for technology competence from the ABA and state courts. The authors draw their recommendations from their own empirical studies in legal technology course instruction and law firm job descriptions. The authors look to the Foundations of the Whole Lawyer Model and the Institute for the Advancement of the American Legal System (“IAALS”) Hiring Guide to advocate for a more holistic approach to lawyering that integrates technology and technology competency into all aspects of law practice. The authors recommend that law firms use the Whole Lawyer approach to draft their job descriptions with language that properly addresses the technology competencies necessary for those positions.¹² Only then will law schools be able to properly align their course curricula to meet the current needs of technology competence in modern legal practice.

I. LAWYERING MODELS

Over time, several lawyering models have been created in response to the evolution of the legal profession. Until the late nineteenth century, lawyers were generalists who often served in advisory roles.¹³ The informal apprenticeship system was the only way an individual could practice the

9. See de Perio Wittman & Brown, *supra* note 1, at 32.

10. See de Perio Wittman & Brown, *supra* note 1, at 35–39; see also Jessica de Perio Wittman & Kathleen (Katie) Brown, 2020, *The Year of Distance ED: Moving Online ≠ Increased Tech Competency Instruction*, CALICON (June 2, 2021), <https://2021.calicon.org/node/1/sessions/2020-year-distance-ed-moving-online-%E2%89%A0-increased-tech-competency-instruction> [https://perma.cc/3EHE-LFT4]; Jessica de Perio Wittman & Kathleen (Katie) Brown, Keynote Address at the University of St. Thomas Law Journal Symposium: Navigating Legal Ethics and Law School Curricula (Nov. 18, 2022), https://www.youtube.com/watch?v=hILd5qJ1G4I&list=PLmrogaurG3Z_zKltumfwknXUnMSKnzYI2&index=4.

11. See discussion *infra* Part II, Section D.

12. See discussion *infra* Part II, Section D (“Job Description #4 (Whole Lawyer Example)”).

13. William D. Henderson, *Three Generations of U.S. Lawyers: Generalists, Specialists, Project Managers*, 70 MD. L. REV. 373, 374 (2011).

law¹⁴ until standardized education employed the case method approach.¹⁵ This educational approach allowed for mass entry into the profession and resulted in a standardized lawyering model.¹⁶ Today, clients expect efficiency and effective use of technology in law practice, and emerging models of the ideal lawyer often mirror those expectations.¹⁷

A. *The I-Shaped and T-Shaped Lawyer Models*

Lawyers began offering bespoke services in the mid-twentieth century.¹⁸ This involved a one-on-one, customized service to individual clients in the view that every situation was unique.¹⁹ Lawyers were trained and rewarded for their depth of knowledge in narrow subject specialties.²⁰ This style of lawyering is often referred to as the I-shaped lawyer.²¹ Although there are some law firms today still focusing on the I-shaped lawyering model, many law firms have responded to client needs and have adjusted their services.²² This expansion of client-focused services forced lawyers to adapt and develop new skills and opened the door for the T-shaped lawyer model.²³

The T-shaped lawyer model describes how the focus of legal practice has expanded beyond a deep legal expertise.²⁴ This model recognizes that

14. *See id.* at 375. For further discussion on the experiences of those who participated in the apprenticeship system, see A. Christopher Bryant, *Reading the Law in the Office of Calvin Fletcher: The Apprenticeship System and the Practice of Law in Frontier Indiana*, 1 NEV. L.J. 19 (2001).

15. For more information on Christopher Columbus Langdell and the case method approach to legal education at Harvard, see Russell L. Weaver, *Langdell's Legacy: Living with the Case Method*, 36 VILL. L. REV. 517 (1991); Martha Minow, *Marking 200 Years of Legal Education: Traditions of Change, Reasoned Debate, and Finding Differences and Commonalities*, 130 HARV. L. REV. 2279 (2017).

16. *See generally* Weaver, *supra* note 15; Minow, *supra* note 15.

17. *See* Lisa J. Damon, *Applying Lean Six Sigma Methods to Litigation Practice*, PRAC. L.J., Dec. 2013–Jan. 2014, at 30.

18. *See* R. Amani Smathers, *The 21st Century T-Shaped Lawyer*, 40 LAW PRAC. 32, 34 (2014).

19. *Id.*

20. *Id.*

21. *See id.*

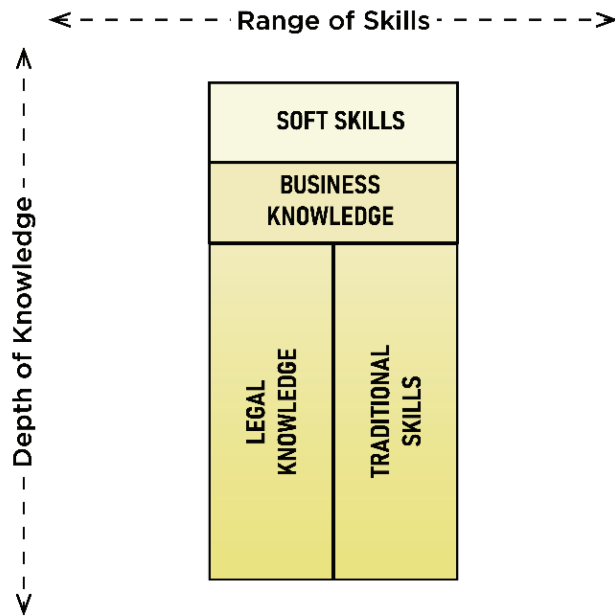
22. *See, e.g.*, *ETA/Search Funds*, HMB LEGAL COUNS. (Sept. 23, 2022, 2:43 AM), <https://hmblaw.com/experience/business-and-finance/eta-search-funds/> [<https://perma.cc/WD26-NPYB>] (“We eschew the classic ‘I’ shaped lawyer model with expertise that’s an inch wide and a mile deep because that model doesn’t suit today’s searcher. Instead, we embrace the client’s true need for a lawyer who is ‘a mile wide and a mile deep.’”).

23. *Id.*; *see also* Smathers, *supra* note 18, at 33–34.

24. ELAINE MAK, *THE T-SHAPED LAWYER AND BEYOND: RETHINKING LEGAL PROFESSIONALISM AND LEGAL EDUCATION FOR CONTEMPORARY SOCIETIES* 7 (2017); Smathers, *supra* note 18, at 33. Under this model, lawyers acquire generic business, leadership, and soft skills, including design thinking, project management, process improvement, and risk management. *See* Peter Connor, *The T-Shaped Lawyer*, ACC DOCKET (Aug. 1, 2017), docket.acc.com/t-shaped-lawyer [<https://perma.cc/ZH59-HSWY>]; *see also* Tom Martin, *How Chatbots Make for Lawyer Soft Skills*, 36 GPSOLO, Mar./Apr. 2019, at 57; Karolina Jackowicz, *T-Shaped Lawyer: Who, What, How? Part 2/2 (004)*, CEE LEGAL TECH (Dec. 23, 2019), <https://ceelegaltech.com/t-shaped-lawyer-who-what-how-part-2-2-004-2/> [<https://perma.cc/239Y-6HJU>]; *T-Shaped Lawyer: The New Skills Every Future*

attorney success requires a strong understanding of legal skills combined with a breadth of knowledge in areas that would bring efficiency to client services, such as communication, project management, data analytics, and technology.²⁵

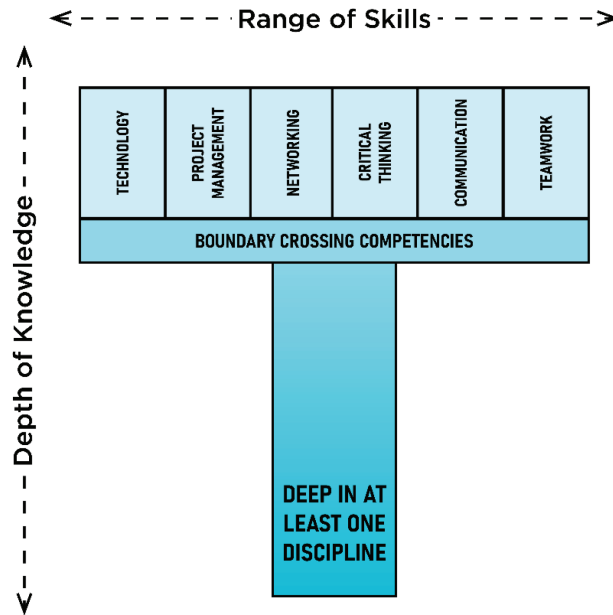
FIGURE 1. I-SHAPED LAWYER MODEL²⁶



Lawyers Needs to Succeed, IE UNIV. L. SCH. (Apr. 10, 2019), <https://www.ie.edu/law-school/news-events/news/t-shaped-lawyers-taking-legal-industry> [<https://perma.cc/646D-W2AY>] (“This [additional] field of knowledge could range from technology, business, and analytics to human resources, politics, or more.”).

25. Alyson Carrel, *The Delta Model: A Framework for Reimagining the Legal Profession Pipeline*, LAW INSIDER (July 24, 2020), <https://www.lawinsider.com/resources/featured/the-delta-model-a-framework-for-reimagining-the-legal-profession-pipeline> [<https://perma.cc/2WPG-C5GA>].

26. This image was specifically created for purposes of this paper by Justin Rogowski.

FIGURE 2. T-SHAPED LAWYER MODEL²⁷

B. The Delta Lawyer Model

The Delta model was created in 2018, and it uses the Greek letter delta (Δ) to symbolize the changing nature of legal services.²⁸ This model reinforces the necessity to balance the practice, the process, and the people—explicitly stating that technology competency is crucial to ensure the delivery of effective and efficient legal services.²⁹ This model encourages lawyers to gain skills in technology, the business of law, and emotional intelligence.³⁰

27. This image was specifically created for purposes of this paper by Justin Rogowski.

28. *Id.*

29. See generally de Perio Wittman & Brown, CALICON, *supra* note 10, at 02:38; AMANDA RUNYON & ALYSON CARREL, ADAPTING FOR 21ST CENTURY SUCCESS: THE DELTA LAWYER COMPETENCY MODEL (Thomson Reuters Legal Exec. Inst. ed., 2019), <https://legal.thomsonreuters.com/content/dam/ewp-m/documents/legal/en/pdf/white-papers/delta-lawyer-competency.pdf> [https://perma.cc/8TZE-QSCJ].

30. See Natalie Runyon & Alyson Carrel, *The Evolution of In-House Counsel*, THOMSON REUTERS, <https://legal.thomsonreuters.com/en/insights/articles/evolution-of-in-house-legal-counsel-delta-model> [https://perma.cc/XW6W-CUKL] (last visited Jan. 11, 2024); see also Alyson Carrel, *Legal Intelligence Through Artificial Intelligence Requires Emotional Intelligence: A New Competency Model for the 21st Century Legal Professional*, GA. STATE U. L. REV. 1153, 1153 (2018). These additional value systems met client demand and would more comprehensively reflect the diverse skills, attitudes, and knowledge that lawyers need.

C. *The Whole Lawyer Model*

In 2014, the IAALS launched Foundations for Practice.³¹ The national, multi-year project aimed to (1) identify the foundations entry-level lawyers need to launch successful careers in the legal profession; (2) develop measurable models of legal education that support these foundations; and (3) align market needs with hiring practices to incentivize positive improvements in legal education.³²

Stage One was accomplished by distributing a nationwide survey with 24,000 responses from lawyers in all fifty states who represented various practice areas and settings.³³ From this data, IAALS attempted to address technology competencies and the use of technology in modern legal practice. For example, IAALS inquired about the necessity of technology skills in practice by asking what skills are necessary for the short term, eventually must be acquired, are advantageous but not necessary, or are simply not relevant.³⁴

Stage Two used these results to develop the Whole Lawyer Model, which focuses on five learning outcomes (communicator, practitioner, professional, problem solver, and self-starter) and 76 Foundations.³⁵ This Model allows employers to use a Foundations-based approach to prioritize competencies and capabilities while measuring a candidate's qualifications.³⁶ IAALS found that, although there is some divergence, the Foundations were overwhelmingly consistent across practice settings.³⁷ Respondents also generally agreed that the "whole lawyer" required foundational skills in the following five categories: Technology and Innovation, Emotional and Interpersonal Intelligence, Passion and Ambition, Working

31. INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS., FOUNDATIONS FOR PRACTICE: THE WHOLE LAWYER AND THE CHARACTER QUOTIENT 1 (Alli Gerkman & Logan Cornett eds., 2016), https://iaals.du.edu/sites/default/files/documents/publications/foundations_for_practice_whole_lawyer_character_quotient.pdf [<https://perma.cc/42FX-YF7F>] [hereinafter IAALS, *Character Quotient*].

32. *Id.*

33. INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS., FOUNDATIONS: EDUCATE AND HIRE THE BEST LAWYERS 3 (Zachariah DeMeola & Logan Cornett eds., 2014) [hereinafter IAALS, *Foundations: Educate and Hire*]. The survey yielded results from twenty-four thousand lawyers, thirty-six legal employers, and four law schools. *Id.*

34. IAALS, *Character Quotient*, *supra* note 31, at 18 (Figure 12).

35. See IAALS, *Foundations: Educate and Hire*, *supra* note 33, at 8.

36. IAALS, *Foundations: Educate and Hire*, *supra* note 33, at 9.

37. See Zachariah DeMeola, Logan Cornett & Alli Gerkman, *The Whole Lawyer: Small Variations Across Practice Settings*, INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS. BLOG (Apr. 30, 2018), <https://iaals.du.edu/blog/whole-lawyer-small-variations-across-practice-settings> [<https://perma.cc/8AQV-PU5E>] [hereinafter IAALS, *Whole Lawyer: Small Variations*].

For business in-house settings, 74 foundations comprise the whole lawyer, all of which are also part of the overall whole lawyer except one. A total of 73 foundations make up the whole lawyer from the government perspective—all but one of these are also part of the overall whole lawyer. Finally, for other practice settings, the whole lawyer possesses 76 foundations, with 75 of those overlapping with the overall whole lawyer.

with Others, and Stress and Crisis Management.³⁸ IAALS saw similarities in responses across demographics, firm sizes, and practice-specific characteristics.³⁹ These similarities allow law schools, the profession, employers, and others to share a view of consistent and definitive professional competencies and legal skills that constitute the whole lawyer.⁴⁰

FIGURE 3. THE WHOLE LAWYER MODEL⁴¹



Stage Three was accomplished by creating a hiring guide.⁴²

38. *Id.*

Notably, five different foundation categories had no practically significant differences affecting the whole lawyer across practice settings: Technology and Innovation, Emotional and Interpersonal Intelligence, Passion and Ambition, Working with Others, and Stress and Crisis Management.

39. *Id.*

The similarities we saw in responses across demographics, firm sizes, and practice-specific characteristics suggest that the findings in *The Whole Lawyer* . . . can be employed with confidence by law schools, the profession, employers, and others to facilitate the development of crucial foundations needed by lawyers right out of law school.

40. See Zachariah DeMeola, *The Whole Lawyer: Consistent Across All Workplaces*, INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS. BLOG (Mar. 8, 2018), <https://iaals.du.edu/blog/whole-lawyer-consistent-across-all-workplaces> [https://perma.cc/YR2W-27PM].

41. Permission granted by the Institute for the Advancement of the American Legal System. Permission on file with the *University of St. Thomas Law Journal*.

42. See discussion *infra* Part I, Section C, Subsection 1.

1. Foundations Hiring Guide

In 2021, IAALS completed Stage Three of their work by releasing a hiring guide that reflects the changing nature of the Whole Lawyer model.⁴³ This guide is designed for employers wishing to improve quality, retention, and diversity in their hiring practices.⁴⁴ Another intended goal is to guide law schools on how to advise their students for entry-level practice by educating job candidates on the foundations that make up the “whole lawyer” instead of a narrow set of criteria rooted in tradition.⁴⁵

When developing the Hiring Guide, IAALS acknowledged that legal employers play a critical role in the responsibility of developing new lawyers and how this responsibility should be shared with educators. When applied correctly, the Hiring Guide is intended to help both legal educators and legal employers.⁴⁶ While law schools do the important work of educating students, legal employers influence how schools prepare new lawyers for practice.⁴⁷ When expected qualifications, capabilities, and competencies are disclosed in job descriptions, employers reduce the influence of

43. See generally INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS., FOUNDATIONS HIRING GUIDE: CUT THROUGH BIAS. HIRE & RETAIN THE BEST LAWYERS (Zachariah DeMeola, Logan Cornett, Elizabeth Anderson & Kristen Uhl Hulse eds., 2021) [hereinafter IAALS, *Hiring Guide*].

44. *Id.* at 1.

[Diversity is] more than racial and gender diversity, although it certainly includes that. It also means a wider source of perspectives, ideas, experiences, and accomplishments that allows lawyers to better serve their clients or stakeholders. Employers we worked with recognized that diversity in the profession is more than a positive social aspiration—it is also good for business. Employers agreed that diverse teams of lawyers produce better work product, and clients frequently demand diversity among their legal teams. In fact, many employers told us that some clients are looking for more affirmative proof that law firms’ hiring practices are not structured in a way to exclude diversity—implicitly or explicitly. The tendency toward bias can easily go unnoticed without deliberate effort to consider it. Implicit bias goes unrecognized when decision-makers do not stop to consider what reasons are behind their hiring choices. Evaluating job applicants on a broad set of qualifications is a better way to find quality candidates and promote the values of diversity. But avoiding bias in hiring is only one piece of the diversity discussion. The other piece is creating a level of cohesiveness among different people who can thrive among differing perspectives and viewpoints to build a positive and team-oriented work environment. All of these factors should be taken into consideration when crafting definitions for foundations.

Id. at 18.

45. The hiring model has not changed over time, and only accounts for a discrete set of criteria focusing on grades, school attended, GPA, rank, professional connections, writing sample, and classes taken. See IAALS, *Hiring Guide*, *supra* note 43, at 2, 8 (“While law schools do the important work of educating students, legal employers can influence how schools prepare new lawyers for practice by hiring candidates based on the foundations that make the Whole Lawyer, instead of a narrow set of criteria rooted only in tradition. . . . Yet many employers still focus on the same, small set of hiring factors: law school, grade point average, or professional connections.”)

46. See IAALS, *Hiring Guide*, *supra* note 43, at 30.

47. IAALS, *Hiring Guide*, *supra* note 43, at 2 (“When employers hire new candidates based on what they actually need, they incentivize improvements in legal education.”); see also IAALS, *Character Quotient*, *supra* note 31.

bias and other factors that compromise the integrity of hiring.⁴⁸ In turn, they better identify appropriate candidates rather than mismatch candidates around ambiguous expectations.⁴⁹ This allows employers to demonstrate to law schools and law students what should be emphasized and prioritized in their legal education curriculum.⁵⁰

2. *Foundations Hiring Guide: Author's Analysis*

At first glance, the Hiring Guide appears to only discuss technology in one Foundation: “learn and use relevant technology effectively” in the Workplace category.⁵¹ Yet, when we reviewed the Hiring Guide, we quickly discovered that technology and technology competency skills are inferred throughout the entire document. We identified that ten out of eleven categories included inferences to technology and technology skills in their listed Foundations. Out of the 76 Foundations, 32 of them were pertinent to technology and technology skills used in the modern-day practice of law.⁵² We also could identify tangible skills that are used in legal practice and inconsistently taught in law schools.⁵³

II. EMPIRICAL STUDIES ON JOB DESCRIPTIONS AND LAWYERING COMPETENCY MODELS

In 2023, we published our findings in our empirical study assessing course offerings in technology and legal technology at ABA accredited law schools.⁵⁴ This study included data from law school websites at all ABA accredited law schools, and we coded the data with the Legal Services Innovation Index protocols.⁵⁵

48. See IAALS, *Hiring Guide*, *supra* note 43, at 9 (“[A] single-minded focus on traditional credentials like law school attended or grade point average significantly diminishes the hiring pool at the outset, disproportionately excluding people of color from the candidate pool. When employers limit their hiring to these factors, they forego talented and capable candidates.”).

49. IAALS, *Hiring Guide*, *supra* note 43, at 10.

50. IAALS, *Hiring Guide*, *supra* note 43, at 30 (“When qualifications are spelled out and, in particular, when the experiences and achievements that signal the possession of those qualities are emphasized, employers effectively communicate directly to law schools and law students about where to focus education and development.”).

51. IAALS, *Hiring Guide*, *supra* note 43, at 41.

52. See *infra* Appendix A.

53. The ten categories are Legal Thinking & Application, Legal Practice, Basic Communications, Project Management, Capacity, Drive, Meeting Goals, Ethics, Professionalism, and Workplace. See *infra* Appendix A.

54. See de Perio Wittman & Brown, *supra* note 1, at 35–39.

55. See de Perio Wittman & Brown, *supra* note 1, at 35–39. In the 2021 Law School Website Data Mining Project, we coded this data set using the following protocols from Linna and Galvin’s Legal Services Innovation Index: alternative fees, artificial intelligence, blockchain and cryptocurrency, contract management, cybersecurity, data analytics, data privacy and protection, document assembly, electronic discovery, expert systems, incubator, information management, innovation entity, knowledge management, process improvement, project management, cloud and alternative

In the same publication, we also analyzed our curated data on technology-related positions at law firms in the Am Law 100.⁵⁶ Initially, we found that technology requirements, except in rare cases, were not held across the entire firm.⁵⁷ We also saw that technology-related job descriptions were vague about which technology competencies and capabilities were required to fulfill the position.⁵⁸

When filling open positions, law firms and legal departments strive to recruit, hire, and retain attorneys who offer the “full package.”⁵⁹ Law firms and legal departments want law student graduates who are holistic problem solvers who can meet a client’s needs beyond legal advice and who know how and when to leverage technology for problem solving.⁶⁰ In reviewing the results from our 2021 Law Firm Data Mining Project, we identified that law firms and legal departments used vague language in the technology-related job descriptions, and these descriptions did not aim to recruit candidates who offered the “full package.”⁶¹ As a result, we decided to expand our scope to gauge if the trend of vague language existed across all job descriptions offered by law firms in the Am Law 100. We completed this work in 2023 (2023 Law Firm Job Descriptions).

In our 2023 Law Firm Job Descriptions Data Set, we observed that the trend of vague language continues to exist across all job descriptions in the Am Law 100, despite scholarship and surveys by practitioners about the value of legal technology and its implementation in daily operational practice.⁶² Almost every job required “excellent” or “stellar” academic

data storage, electronic communication, wireless internet and passwords, and virtual private networks. *See* de Perio Wittman & Brown, *supra* note 1, at 35–39.

56. Jessica de Perio Wittman & Kathleen (Katie) Brown, Law Firm Data Mining Project (2021) (unpublished research) (on file with the Georgetown Journal of Legal Ethics) [hereinafter 2021 Law Firm Data Mining Project]; *see* de Perio Wittman & Brown, *supra* note 1, at 21–25.

57. These firms showed that technology skill was a requirement for all positions: Baker & Hostetler; Covington & Burling; Davis Wright Tremaine; Faegre Drinker Biddle & Reath; Fenwick & West; Fragomen, Del Rey, Bersen & Loewy; Goodwin Procter; King & Spalding; Polsinelli; Ropes & Gray; Sheppard, Mullin, Richter & Hampton; Sidley Austin; White & Case; and Wilmer Cutler Pickering Hale and Dorr. *See* 2021 Law Firm Data Mining Project, *supra* note 56.

58. *See* de Perio Wittman & Brown, *supra* note 1, at 21–25.

59. *See* de Perio Wittman & Brown, CALICON, *supra* note 10, at 03:11 (quoting Rhys Dipshan, *Tech Competency for Tomorrow’s Lawyers is About More Than Just Tech Proficiency*, LAW.COM: LEGALTECH NEWS (Aug. 31, 2020, 9:30 AM), <https://www.law.com/legaltechnews/2020/08/31/tech-competency-for-tomorrows-lawyers-is-about-more-than-just-tech-proficiency/> [<https://perma.cc/4GYE-9C2G>] (“[I]t’s not just about working on interpersonal skills—though those certainly help What’s more important . . . is whether the new hire has kept up with the latest innovations, understanding their impact on the legal industry and is open to deploying and even designing new solutions when the situation calls for it.”)).

60. *See* Dipshan, *supra* note 59.

61. *See* de Perio Wittman & Brown, *supra* note 1, at 21–25; *see also* de Perio Wittman & Brown, CALICON, *supra* note 10 at 03:11.

62. *See* de Perio Wittman & Brown, *supra* note 1, at 7–19; *see, e.g.*, Daniel W. Linna, LEGAL SERVICES INNOVATION INDEX, <https://www.legaltechinnovation.com/> [<https://perma.cc/PU6E-YP77>] (last visited Jan. 11, 2024); Karen Miller-Kuwana & Linda Ouyang, *Analysis: Survey Grades Law Students’ Preparedness for Practice*, BLOOMBERG L. (Jan. 31, 2022, 5:00 AM), <https://news.>

credentials.⁶³ Additionally, we observed that technology-descriptive language is more commonly seen in part-time or contract position job descriptions.⁶⁴ Some may argue that the rationale behind this trend is that full-time candidates already know what “traditional” law firm work should look like, whereas law firms must be more specific in part-time and contract position job descriptions to entice candidates seeking “alternative” kinds of work. There continues to be a disconnect between what practitioners write about the incorporation of technology in practice and how technology skills are required competencies in their job descriptions. Our assertion is that if hiring attorneys or law firm human resources departments can take the time to be descriptive for part-time positions, they should also be descriptive for full-time positions to recruit and retain better hires.

A. *Empirical Data Regarding Legal Technology Courses and the Foundations of the Whole Lawyer Model*

Between 2017 and 2021, we released three surveys aimed at collecting information about legal technology course offerings at ABA-accredited law schools.⁶⁵ In addition to these surveys, our research assistants curated data from the law school websites of all ABA-accredited law schools.⁶⁶ We then coded these law school courses using the definitions and prototype disciplines in the Legal Services Innovation Index.⁶⁷ The categories are alternative fees; artificial intelligence; blockchain and cryptocurrency; contract management; cybersecurity; data analytics; data privacy and protection; document assembly; electronic discovery; expert systems; incubator; information management; innovation entity; knowledge management; process improvement; project management; cloud and alternative data storage; electronic communication, wireless internet, and passwords; and virtual private networks.⁶⁸

Although some may argue that law school course data from 2017 may be too historical, the course data collected in our longitudinal survey represents law school courses that recent graduates (within the past five years)

[bloomberglaw.com/bloomberg-law-analysis/analysis-survey-grades-law-students-preparedness-for-practice](https://perma.cc/TJR3-KK2X) [https://perma.cc/TJR3-KK2X].

63. Jessica de Perio Wittman & Kathleen (Katie) Brown, Law Firm Job Descriptions Data Set (2023) (unpublished research) (on file with authors) [hereinafter 2023 Law Firm Job Descriptions Data Set].

64. *Id.*

65. *See* de Perio Wittman & Brown, *supra* note 1, at 27–32.

66. Student research assistants mined the websites of all ABA-accredited law schools from a consumer perspective with Linna and Galvin’s legal-service delivery disciplines in mind. *See* Linna, *supra* note 62.

67. For a discussion on the importance of coding qualitative data, see Jessica de Perio Wittman & Kathleen (Katie) Brown, *Discovering Diamonds in Your Survey Data*, AALL SPECTRUM, Mar.–Apr. 2020, at 20, <https://ssrn.com/abstract=3690120> [https://perma.cc/M57Y-WMLM].

68. For more information about the details of this project, see de Perio Wittman & Brown, *supra* note 1.

would have taken in their 2L and 3L years.⁶⁹ In total, we looked at 572 law school courses. We then coded these course offerings and protocols with the 32 technology-related Foundations listed in the Hiring Guide.⁷⁰ The results of this additional level of coding provided some interesting insights.

Some protocols cross-reference to more than one Foundation. The protocol with the largest number of Foundation references is Process Improvement (11), followed by Project Management (9).⁷¹ In contrast, six protocols only have one Foundation cross-reference: Artificial Intelligence, Blockchain and Cryptocurrency, Cloud and Alternative Data Storage, Cybersecurity, Data Privacy, and Virtual Private Network.⁷² These Foundation numbers align with the complexities of the protocols. The Project Management and Process Improvement protocols both include several tools and activities, whereas the Artificial Intelligence, Blockchain and Cryptocurrency, Cloud and Alternative Data Storage, Cybersecurity, Data Privacy, and Virtual Private Network protocols may include just one tool and therefore, only represents one Foundation. It is worth noting that Foundations may overlap across protocols. For example, the Foundation “Learn and use relevant technology effectively” spans across five protocols: Expert Systems; Process Improvement; Electronic communication, wireless internet, and passwords; E-Discovery; and Cloud and Alternative Data Storage.⁷³

When applying the Foundations to the protocols and our course list from the longitudinal survey, we observe several trends. When we grouped the protocols and the overlapping Foundations, the course offering with the most Foundation references was “In-House Technology Counsel” offered

69. A 2L taking a legal technology course in the 2017–2018 academic year would have graduated in 2019 and would have taken the Bar shortly thereafter, starting a new attorney position by the end of 2019. These graduates were the last cohort before the COVID-19 pandemic.

70. *See infra* Appendix A.

71. The Foundations for Project Management are “Make decisions and deliver results under pressure,” “Recognize client or stakeholder needs, objectives, priorities, constraints, and expectations,” and “Understand when to engage supervisor or seek advice in problem-solving.” The Foundations for Process Improvement are “Proactively provide status updates to those involved on a matter,” “Work cooperatively and collaboratively as part of a team,” “Critically evaluate arguments,” “Make decisions and deliver results under pressure,” “Recognize client or stakeholder needs, objectives, priorities, constraints, and expectations,” “Learn and use relevant technology effectively,” “Maintain high-quality work product,” “Prioritize and manage multiple tasks,” “Seek and be responsive to feedback,” “Exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances,” and “Set goals and make a plan to meet them.” IAALS, *Hiring Guide, supra* note 43, at 33–52.

72. Interestingly, there are only 3 Foundations that are referenced by these protocols: 1) Effectively research the law (Artificial Intelligence); 2) Learn and use relevant technology effectively (Blockchain and Cryptocurrency, Cloud and Alternative Data Storage); and 3) Keep information confidential (Cybersecurity, Data Privacy, and VPN). Jessica de Perio Wittman & Kathleen (Katie) Brown, *Law School Courses, Protocols, and Foundations Data Set (2023)* (unpublished research) (on file with authors) [hereinafter 2023 Law School Courses, Protocols, and Foundations Data Set].

73. *See id.*

by California Hastings.⁷⁴ In contrast, 34% of the courses (197) in the data set only reference one Foundation.⁷⁵ Similar to our analysis above, the course with the most Foundation references discussed several tools and activities, whereas the courses with the least Foundation references were topic-specific, such as courses on cybersecurity, data privacy, e-discovery, and artificial intelligence. When we look at the complete set of courses and the protocols with Foundation overlaps, only 4.9% of courses (28) in the data set reference more than 20 Foundations.⁷⁶

Once we eliminate the overlaps (and count the Foundation only once), the same twenty-eight courses now reference anywhere between 4 and 23 Foundations.⁷⁷ Using the same parsed data set, we also observe that the Foundation “Keep information confidential” is the most common Foundation taught, appearing in 50.5% of courses in the data set.⁷⁸ The Foundation “Adhering to proper timekeeping and/or billing procedures” was the least common Foundation taught, appearing in approximately 1% of the courses (7) in the data set.⁷⁹ Six Foundations (“Speak and write in a manner that meets professional standards”; “Interview clients and witnesses”; “Prepare client responses”; “Resourcefulness”; “Arrive on time for meetings, appointments, and hearings”; “Exhibit resilience after a setback”) were not addressed in any of the courses in the data set.⁸⁰

TABLE 1. FOUNDATION LANGUAGE INCORPORATED IN LAW SCHOOL COURSE DESCRIPTIONS

Foundation	Courses	%
Keep information confidential	289	50.5%
Learn and use relevant technology effectively	278	48.6%
Gather facts through interviews, searches, document/file review, and other methods	195	34.1%
Identify relevant facts, legal issues, and informational gaps or discrepancies	192	33.6%
Requests and produce written discovery	146	25.5%
Proactively provide status updates to those involved on a matter	105	18.4%
Effectively research the law	97	17.0%

74. Forty-six Foundations (including overlaps) are associated with this course. *Id.*

75. 197 out of the 572 courses referenced 1 Foundation. *Id.*

76. *Id.*

77. *Id.*

78. *Id.*

79. *Id.*

80. *Id.*

Foundation	Courses	%
Work cooperatively and collaboratively as part of a team	58	10.1%
Exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances	51	8.9%
Prioritize and manage multiple tasks	50	8.7%
Draft contracts and agreements	46	8.0%
Recognize client or stakeholder needs, objectives, priorities, constraints, and expectations	45	7.9%
Critically evaluate arguments	44	7.7%
Document or organize a case or matter	42	7.3%
Maintain high-quality work product	42	7.3%
Seek and be responsive to feedback	40	7.0%
Make decisions and deliver results under pressure	39	6.8%
Set goals and make a plan to meet them	38	6.6%
Draft pleadings, motions, and briefs	36	6.3%
Show initiative	34	5.9%
See a case or project through from start to timely finish	32	5.6%
Promptly respond to inquiries and requests	26	4.5%
Speak and write in a manner that meets legal standards	24	4.2%
Understand when to engage supervisor or seek advice in problem-solving	22	3.8%
Maintain core knowledge of substantive and procedural law in the relevant focus area(s)	20	3.5%
Adhere to proper timekeeping and/or billing procedures	7	1.2%

Observing the trends in this chart, many of the technology-related soft skills used in modern-day practice are not taught at all. Staples of attorney work, such as “Critically evaluating arguments” (7.7%), “Speak and write in a manner that meets legal standards” (4.2%), and “Maintain core knowledge of substantive and procedural law in the relevant focus area(s)” (3.5%), are minimally addressed in the law school courses from this data set.

The results of this coding suggest that law schools generally do not place a high priority on legal technology and legal technology-related courses, soft skills, or staples of attorney work. This could be attributed to the courses’ emphasis on technology tools and activities, which aim to maximize students’ exposure to these topics throughout the semester.

B. Empirical Data Regarding Technology-Related Positions at Law Firms in the Am Law 100

In 2021, we discovered that there was a lack of research that identified whether current positions at Am Law 100 firms required knowledge of legal technology. As a result, we collected data on technology-related positions at law firms in the Am Law 100.⁸¹ Student research assistants mined information from various recruiter websites and the job opportunities, “About Us,” and attorney profile sections on law firm websites.⁸² The initial data collected in 2021 demonstrated that technology requirements, except in rare cases, are not held across the entire firm.⁸³ Instead, a law firm’s technology requirement was often associated with specific practice areas and attorney positions that were revenue-driven.⁸⁴

An initial analysis of this data confirmed that 45% of the law firms required technology skills for open attorney positions.⁸⁵ We initially observed trending positions in the software and the technology industry; cybersecurity and data privacy; internet, social media, and media and entertainment-related technology; and electronic discovery.⁸⁶ We observed these trends in practitioner projections that predict more acceleration in AI,

81. 2021 Law Firm Data Mining Project, *supra* note 56. We also used the same sample set of law firms and the innovation protocols from the Legal Services Innovation Index.

82. Terms used for data mining were those previously named in the work conducted by Linna (Alternative Fees: “alternative fee” OR “alternative fees” OR “AFA” OR “AFAs” OR “fixed fee” OR “fixed fees” OR “value-based billing” OR “value based pricing.” Artificial Intelligence: “machine learning” OR “deep learning” OR “artificial intelligence.” Project Management: “project management” OR “project manager” OR “project managers.” Process Improvement and Innovation Framework: “lean thinking” OR “six sigma” OR “process improvement” OR “design thinking.” Knowledge Management: “knowledge management” OR “knowledge engineering.” Automation Basics: “expert system” OR “expert systems” OR “document automation” OR “document assembly” OR “process automation.” Data Analytics: “data analytics” OR “predictive analytics” OR “decision tree” OR “decision trees” OR “data driven.” Legal Operations: “legal operations” OR “collaborative disaggregation.” Proactive Law: “proactive law” OR “preventive law” OR “promotive law.” Blockchain: “Blockchain” OR “smart contract” OR “smart contracts” OR “computable contract” OR “computable contracts”) and (Alternative Fees, Artificial Intelligence, Client Education, Connectivity, Contract Management, Data Analytics, Document Assembly, Expert System, Incubator, Information Management, Innovation Entity, Knowledge Management, Process Improvement, and Project Management Services). 2021 Law Firm Data Mining Project, *supra* note 56.

83. These firms showed that technology skill was a requirement for all positions: Baker & Hostetler; Covington & Burling; Davis Wright Tremaine; Faegre Drinker Biddle & Reath; Fenwick & West; Fragomen, Del Rey, Bernsen & Loewy; Goodwin Procter; King & Spalding; Polsinelli; Ropes & Gray; Sheppard, Mullin, Richter & Hampton; Sidley Austin; White & Case; and Wilmer Cutler Pickering Hale and Dorr. 2021 Law Firm Data Mining Project, *supra* note 56.

84. *See* 2021 Law Firm Data Mining Project, *supra* note 56 (listing firms with overarching requirements and position specifications).

85. 2021 Law Firm Data Mining Project, *supra* note 56.

86. Technology/Software = 87 firms, Cybersecurity and data privacy = 73 firms, Data/technology = 35 firms, Media/internet/technology = 28 firms, and e-discovery = 25 firms. 2021 Law Firm Data Mining Project, *supra* note 56.

automation, cybersecurity, client demand for more remote legal solutions, and alternative legal services (such as outsourcing work to e-discovery firms).⁸⁷

In 2022, we reviewed our initial law firm data in preparation for a keynote discussion at the University of St. Thomas School of Law. Upon reviewing the existing data, we opted for a more comprehensive examination of how law firms were integrating technology skills language into their job descriptions.

C. *Empirical Data Regarding Job Descriptions and the Foundations of the Whole Lawyer Model*

For our 2023 Law Firm Job Descriptions Data Set, student research assistants mined information from job announcements on law firm websites and captured the text of each job description.⁸⁸ We then reviewed the Foundations Hiring Guide and identified that 32 out of 76 Foundations of the Whole Lawyer Model address technology competency skills in practice.⁸⁹ We then coded the job descriptions to each of the Foundations and also identified which job descriptions specifically cited technology examples to accomplish those foundations.⁹⁰

Our data analysis confirms that law firms continue to use vague language in their job descriptions to recruit candidates. The top 6 Foundations that are frequently referred to in job descriptions are “Speak and write in a manner that meets professional standards,” “Speak and write in a manner

87. See Rachel Makinson, *5 Legal Trends to Look Out For in 2022*, LAW MONTHLY (Dec. 9, 2021), <https://www.lawyer-monthly.com/2021/12/5-legal-trends-to-look-out-for-in-2022/> [https://perma.cc/5AHJ-VS7C].

88. There are currently 1,323 law firm job descriptions in this Data Set. See 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

89. See IAALS, *Hiring Guide*, *supra* note 43, at 33–51. The 32 technology-related Foundations are: 1) Proactively provide status updates to those involved on a matter; 2) Promptly respond to inquiries and requests; 3) Speak and write in a manner that meets professional standards; 4) Work cooperatively and collaboratively as part of a team; 5) Draft contracts and agreements; 6) Draft pleadings, motions, and briefs; 7) Interview clients and witnesses; 8) Prepare client responses; 9) Request and produce written discovery; 10) Critically evaluate arguments; 11) Effectively research the law; 12) Gather facts through interviews, searches, document/file review, and other methods; 13) Identify relevant facts, legal issues, and informational gaps or discrepancies; 14) Maintain core knowledge of substantive and procedural law in the relevant focus area(s); 15) Speak and write in a manner that meets legal standards; 16) Resourcefulness; 17) Make decisions and deliver results under pressure; 18) Recognize client or stakeholder needs, objectives, priorities, constraints, and expectations; 19) Understand when to engage supervisor or seek advice in problem-solving; 20) Document or organize a case or matter; 21) Keep information confidential; 22) Arrive on time for meetings, appointments, and hearings; 23) Adhere to proper timekeeping and/or billing procedures; 24) Learn and use relevant technology effectively; 25) Maintain high-quality work product; 26) Prioritize and manage multiple tasks; 27) See a case or project through from start to timely finish; 28) Seek and be responsive to feedback; 29) Exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances; 30) Exhibit resilience after a setback; 31) Set goals and make a plan to meet them; 32) Show initiative.

90. See *infra* Appendix A.

that meets legal standards,” “Maintain high-quality work product,” “Prepare client responses,” “Draft contracts and agreements,” and “Draft pleadings, motions, briefs.” This language, which emphasizes legal writing activities and work-product, demonstrates that law firms expect training in legal writing to occur in law school.⁹¹ Table 2 below identifies how frequently the top 6 Foundations are referenced across the data set.⁹²

TABLE 2. TOP SIX FOUNDATIONS REFERENCED ACROSS LAW FIRM JOB DESCRIPTIONS

Foundation	# of References	% of Data Set
Speak and write in a manner that meets professional standards	921	69.61%
Speak and write in a manner that meets legal standards	906	68.48%
Maintain high-quality work product	816	61.68%
Prepare client responses	789	59.64%
Draft contracts and agreements	538	40.67%
Draft pleadings, motions, and briefs	399	30.16%

Although all these foundations require the use of technology in the modern-day practice of law,⁹³ only four out of 1,323 job descriptions (0.3%) explicitly mentioned proficiency or a strong understanding of the Microsoft Office suite.⁹⁴ Twelve out of the 1,323 job descriptions (0.9%) explicitly mentioned proficiency or certification in Relativity, a commonly used e-discovery platform.⁹⁵ “Forensics” as a skill appeared in the data set

91. We assert that law schools have enhanced, or even strengthened, their legal writing programs in response to writing-related language in law firm job descriptions. In contrast, technology language is vague in law firm job descriptions, therefore, law schools continue to minimize technology training.

92. We include 6 Foundations and acknowledge that the last 2 Foundations address drafting in both transactional and litigation settings.

93. See *infra* Appendix A.

94. See 2023 Law Firm Job Descriptions Data Set, *supra* note 63. The four job descriptions specifically called for “proficiency in Microsoft 365, including Outlook, Word, Excel, and Teams,” “strong understanding of Microsoft Word a plus,” “Computer proficient with strong understanding in Microsoft Office suite (Word, Excel, PowerPoint), SharePoint and other various legal search engines and research platforms,” and “Proficient in Microsoft office applications, including but not limited to Word, Excel, and PowerPoint.”

95. See 2023 Law Firm Job Descriptions Data Set, *supra* note 63. The job descriptions specifically state “Relativity Certified Administrator (RCA) license is considered a plus,” “Relativity experience is helpful,” “strong familiarity with Relativity,” “proficiency in Relativity is preferred,” “Must also have substantial experience with Relativity,” “Experience with Relativity and other review platforms expected,” “Proficiency in the use of Discovery platforms, such as Relativity, Everlaw, NexLP, Brainspace, Disco, etc.,” “Demonstrated technology skills including familiarity

four times (0.3%), but only two job descriptions (from the same law firm) specifically mentioned forensics tools.⁹⁶

Less than 25% of the job descriptions in the 2023 Law Firm Job Descriptions Data Set cited language that identified the following Foundations: “Gather facts through interviews, searches, document/file review, and other methods” (22.98%), “Identify relevant facts, legal issues, and informational gaps or discrepancies” (21.54%), “Critically evaluate arguments” (21.47%), “Maintain core knowledge of substantive and procedural law in the relevant focus area(s)” (20.79%), “Prioritize and manage multiple tasks” (19.27%), “Interview clients and witnesses” (18.07%), “Show initiative” (17.16%), “See a case or project through from start to timely finish” (14.89%), “Effectively research the law” (14.21%), “Set goals and make a plan to meet them” (12.77%), “Make decisions and deliver results under pressure” (12.55%), “Document or organize a case or matter” (11.49%), “Understand when to engage supervisor or seek advice in problem-solving” (11.26%), “Learn and use relevant technology effectively” (10.43%), “Seek and be responsive to feedback” (9.15%), “Request and produce written discovery” (8.31%), “Exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances” (5.59%), “Resourcefulness” (5.44%), “Exhibit resilience after a setback” (4.46%), “Keep information confidential” (0.83%), “Adhere to proper timekeeping and/or billing procedures” (0.3%), and “Arrive on time for meetings, appointments, and hearings” (0.23%).⁹⁷ We observed that the majority of these infrequently referenced Foundations in the 2023 Law Firm Job Descriptions Data Set tend to fall under soft skills, with the exception of these Foundations: “Gather facts through interviews, searches, document/file review, and other methods” (304 references), “Identify relevant facts, legal issues, and informational gaps or discrepancies” (285 references), “Critically evaluate arguments” (284 references), “Maintain core knowledge of substantive and procedural law in the relevant focus area(s)” (275 references), “Effectively research the law” (188 references), “Document or organize a case or matter” (152 references), “Learn and use relevant technology effectively” (138 references), “Request and produce written discovery” (110 references), “Keep information confidential” (11 references), and “Adhere to proper timekeeping and/or billing procedures” (4 references).⁹⁸ Many of these Foundations require the use of specific technology tools, skills, and competencies in the modern-day practice of law. For example, “[r]equest[ing] and produc[ing] written discovery” will involve the use of

with document review platforms, such as DISCO and Relativity,” “Experience working with a document review platform, such as Relativity, Axcelerate, or similar.”

96. See 2023 Law Firm Job Descriptions Data Set, *supra* note 63. The job descriptions specifically state “general familiarity with forensic tools such as Axiom, FTK, and EnCase.”

97. See 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

98. See 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

word processing and email applications. “Timekeeping and/or billing procedures” will likely employ the use of case management or billing system software. “Effectively research[ing] the law” often will involve the use of an electronic legal research database.

Interestingly, when we compared our 2023 Law Firm Job Descriptions Data Set analysis with our 2023 Law School Courses, Protocols, and Foundations Data Set analysis, we discerned that the majority of the Foundations that are referenced in the job descriptions and law school courses do not align. Only 3 of the top 10 Foundations line up between the 2023 Law Firm Job Descriptions Data Set and 2023 Law School Courses, Protocols, and Foundations Data Set analyses: “Proactively provide status updates to those involved on a matter” (26.83% of job descriptions, 18.35% of courses), “Work cooperatively and collaboratively as a team” (25.47% of job descriptions, 10.14% of courses), “Draft contracts and agreements” (40.67% of job descriptions, 8.04% of courses). We believe that these 3 Foundations are aligning in both job descriptions and law school courses because they are staple lawyering skills that require technology for the modern-day practice of law.⁹⁹ This alignment of only 3 out of the 32 technology-related Foundations seems like a missed opportunity for both law schools and law firms to leverage agreed-upon and uniform Foundation definitions offered by the Hiring Guide.¹⁰⁰ Although we see this misalignment in competencies and capabilities between courses and job descriptions, many law schools still perceive they are aligning their course curricula with law firm expectations and hiring practices. However, when both law schools and law firms employ language from the Hiring Guide, they create clear expectations for their graduates, newly-licensed lawyers, and experienced attorneys by establishing a baseline for incorporating specific technology-related competencies, capabilities, and skills into the educational curriculum, job description, and performance assessment.¹⁰¹ When law firms are using language from the Foundations Hiring Guide that specifically address technology competency, vagueness does not exist.¹⁰²

99. For example, a lawyer provides status updates by using Microsoft Word, email, and a case management or knowledge management software. Today, teams can use tools such as Slack, Microsoft Teams, and Microsoft SharePoint for collaboration. Lawyers can also use legal research platforms to locate templates and Microsoft Word to draft documents.

100. See *infra* Appendix B.

101. See IAALS, *Hiring Guide*, *supra* note 43.

102. In particular, law firms rely on outdated competency models and language, such as the I-shaped and T-shaped models. For a discussion on the I-shaped and T-shaped models, see de Perio Wittman & Brown, *supra* note 1, at 15–16.

D. *Empirical Data on Job Description Language and Outdated Competency Models*

Today's job market is highly competitive, and economists assert that newer technologies, such as generative artificial intelligence (AI), will significantly impact legal services.¹⁰³ However, if someone spends any time in a technology-heavy environment, they will hear the assertion that new technology is just a tool, and that people are in charge.¹⁰⁴ Yet, another will argue that the assertion does not recognize how groundbreaking the new technology is.¹⁰⁵ The most accurate way to understand these new technologies is to consider them as innovative forms of social collaboration.¹⁰⁶ We assert that, in legal practice, the profession will require tech-savvy employees who must understand when tasks need to be conducted by generative AI or other automation tools versus when it is necessary for people to provide the legal service.

This shift in the job market has already pushed some employers to broaden their criteria, but they are only expanding using traditional hiring factors.¹⁰⁷ The current hiring model continues to focus on a discrete set of criteria focusing on grades, school attended, GPA, rank, professional connections, writing sample, and classes taken.¹⁰⁸ Even with broadening

103. See Jan Hatzius, Joseph Briggs, Devesh Kodnani & Giovanni Pierdomenico, *The Potentially Large Effects of Artificial Intelligence on Economic Growth*, GOLDMAN SACHS: GLOB. ECON. ANALYST (Mar. 26, 2023, 9:05 PM EDT), <https://www.gspublishing.com/content/research/en/reports/2023/03/27/d64e052b-0f6e-45d7-967b-d7be35fabd16.html> [<https://perma.cc/H9DD-U7SR>] (“[W]e estimate that one-fourth of current work tasks could be automated by AI in the US . . . , with particularly high exposures in . . . legal (44%) professions.”); see also Ed Felton, Manav Raj & Robert Seamans, *How Will Language Modelers Like ChatGPT Affect Occupations and Industries 7* (Mar. 1, 2023) (unpublished manuscript), <https://arxiv.org/ftp/arxiv/papers/2303/2303.01157.pdf> [<https://perma.cc/DE4J-87NG>] (“[L]egal services . . . are among the top five most exposed industries [to AI language modeling].”).

104. See Jaron Lanier, *Annals of Artificial Intelligence. There is No A.I.*, THE NEW YORKER (Apr. 20, 2023), <https://www.newyorker.com/science/annals-of-artificial-intelligence/there-is-no-ai> [<https://perma.cc/5AV3-Q545>] (“Step into any Silicon Valley coffee shop and you can hear the same debate unfold: one person says that the new code is just code and that people are in charge, but another argues that anyone with this opinion just doesn’t get how profound the new tech is.”).

105. *Id.*

106. *Id.*

[W]e’re at the beginning of a new technological era—and the easiest way to mismanage a technology is to misunderstand it. . . . The most pragmatic position is to think of A.I. as a tool, not a creature. . . . We can work better under the assumption that there is no such thing as A.I. The sooner we understand this, the sooner we’ll start managing our new technology intelligently.

107. See IAALS, *Hiring Guide*, *supra* note 43, at 8 (explaining that in recent years, the highly competitive nature of the job market has pushed some employers to broaden their criteria, but they expanded using traditional factors in part because “figuring out how to improve hiring practices and improve outcomes for the future is enormously challenging”).

108. IAALS, *Hiring Guide*, *supra* note 43, at 8.

Yet many employers still focus on the same, small set of hiring factors: law school, grade point average, or professional connections. This limits their ability to hire the best

traditional hiring factors, “[a]ll of us are in the mode of stretching to reach someone who may not hit all the criteria perfectly.”¹⁰⁹

This means that traditional lawyering is still focusing on the I-shaped and T-shaped competency models. The I-shaped model calls for attorneys who possess a depth of legal knowledge with little to no breadth of business knowledge and soft skills.¹¹⁰ The T-shaped model supplements the depth of legal knowledge with a breadth of non-legal skills such as design thinking, project management, process improvement, change leadership, business leadership, business partnering, risk management, technology, and data.¹¹¹

In the 2023 Law Firm Job Descriptions Data Set, we saw that law firms continued to use vague language in their job descriptions that perpetuated the I-shaped and T-shaped competency models. In fact, 864 of the 1,323 job descriptions in the data set (65.31%) employed language that promoted the I-shaped competency model, while 506 of the 1,323 job descriptions in the data set (38.25%) incorporated language that fostered the T-shaped competency model.¹¹² We also see that 56 of the job descriptions in the data set (4.23%) provided no detail about the job itself, but rather, were a general solicitation or call for applications, using language such as “excellent,” “stellar,” or “superior” to describe requirements for experience, academic standards, and knowledge of the law.¹¹³ These solicitations are typically non-descript, providing more information on salary details and compensation rather than skills and competencies.

Example:

The [LOCATION] office of [FIRM] is currently seeking lateral associates in the areas outlined below. Candidates must have **excellent experience and academic credentials**.

candidates to meet their needs, which affects how well these new hires serve clients and how much time and money they spend on lawyer training and retention.

See *Job Outcomes and Salaries*, LAW SCH. TRANSPARENCY, <https://www.lawschooltransparency.com/trends/jobs/legal-jobs> [<https://perma.cc/AA3N-5F9S>] (last visited Jan. 11, 2024) (“Jobs at large law firms are not spread evenly across all law schools. Graduates from the top 20 law schools (by placement in large firms) consistently obtain more than half of these jobs.”). The Internet Legal Research Group (“ILRG”) has information such as GPA Low, GPA Median, GPA High, LSAT Low, LSAT Median, LSAT High. See *2020 Raw Data Law School Rankings*, PUB. LEGAL, <https://www.ilrg.com/rankings/law/> [<https://perma.cc/J849-6CUE>] (last visited Jan. 11, 2024).

109. IAALS, *Hiring Guide*, *supra* note 43, at 8 (alteration in original).

110. See Susan Saltonstall Duncan, *Are You a T- or I-Shaped Lawyer?*, RAINMAKING OASIS (May 14, 2016), <https://rainmakingoasis.com/wp-content/uploads/2016/08/Are-You-a-T-or-I-Shaped-Lawyer.pdf> [<https://perma.cc/9L76-DPLF>]. For further discussion of the lawyering competency models, see de Perio Wittman & Brown, *supra* note 1, at 15–17.

111. See generally Smathers, *supra* note 18; de Perio Wittman & Brown, *supra* note 1, at 16.

112. 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

113. 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

Tax: Associates with 2 to 5 years of experience to join our Tax Department. **The expected base salary for this position ranges from \$225,000–\$345,000.**

Structured Finance/Securitization: Associates with 2 to 7 years of experience to join the Structured Finance/Securitization team within our Corporate Department/Finance Group. **The expected base salary for this position ranges from \$225,000–\$400,000.**

Executive Compensation: Associates with 4+ years of experience to join our Executive Compensation Department. **The expected base salary for this position ranges from \$295,000–\$415,000.**

Other general solicitations draw upon the use of boilerplate language to describe their firm, their vision, and their commitment to diversity.

Example:

Come join the #1 intellectual property firm in the country as a patent litigation associate in our [LOCATION] office. At [FIRM], we promote a creative, respectful and inclusive culture that values the diversity of people and allows ingenuity to thrive. You will stretch your skills in high-stakes litigations that call upon technical knowledge and sophisticated legal strategy. You will be a respected teammate, joining an elite group of attorneys solving intellectual property issues for the world’s leading companies.

However, solicitations, such as the examples above, read more like a strategic plan and less like a job description. When the candidate reads the solicitation, the language generally refers to I-shaped or T-shaped competency model language.

TABLE 3. FOUNDATION AND I-SHAPED MODEL LANGUAGE

Category	I-Shaped Model Language Example
Legal Knowledge	“high-stakes litigations that call upon technical knowledge and sophisticated legal strategy”; “elite group of attorneys solving intellectual property issues”

TABLE 4. FOUNDATIONS AND T-SHAPED MODEL LANGUAGE

Category	T-Shaped Model Language Example
Communication	“teammate,” “joining an elite group”
Teamwork	“teammate,” “joining an elite group”
Critical Thinking	“allows ingenuity”

Here are a few more examples of job descriptions from the 2023 Law Firm Job Descriptions Data Set that demonstrate the reliance on the I-shaped and T-shaped models:

Job Description #1: Associate, Trusts & Estates Department (1–3 years experience)¹¹⁴

[LAW FIRM]’s Trusts & Estates Department is seeking an Associate with 1–3 years of law firm experience to join its [LOCATION] office. The candidate must have knowledge and experience with high net worth estate and tax planning, estate and trust administration, and drafting wills and trust agreements. Successful candidates will have excellent drafting, writing and analytical skills, accurate and strong attention to detail, high level of organization, strong verbal and interpersonal skills, and ability to manage multiple projects and people. Superior academic credentials and admission to the [STATE] bar are required. Large or mid-size law firm experience preferred.

TABLE 5. JOB DESCRIPTION #1 IDENTIFYING I-SHAPED MODEL LANGUAGE

Category	I-Shaped Model Language Example
Legal Knowledge	“knowledge and experience with high net worth estate and tax planning, estate and trust administration, and drafting wills and trust agreements”; “superior academic credentials”

TABLE 6. JOB DESCRIPTION #1 IDENTIFYING T-SHAPED MODEL LANGUAGE

Category	T-Shaped Model Language Example
Communication	“excellent drafting, writing and analytical skills”; “strong verbal and interpersonal skills”
Project Management	“ability to manage multiple projects and people”; “accurate and strong attention to detail, high level of organization”

Job Description #2: FDA Compliance & Enforcement Associate (2–5 years experience)¹¹⁵

The [LOCATION] office of [LAW FIRM] has an immediate opening for an FDA Compliance & Enforcement associate with 2–5 years’ experience and a background in drug and medical device regulatory compliance

114. 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

115. 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

issues. A scientific background and litigation experience are preferred. Excellent academic credentials as well as strong writing and interpersonal skills are required.

TABLE 7. JOB DESCRIPTION #2 IDENTIFYING I-SHAPED MODEL LANGUAGE

Category	I-Shaped Model Language Example
Legal Knowledge	“A scientific background and litigation experience are preferred”; “Excellent academic credentials”

TABLE 8. JOB DESCRIPTION #2 IDENTIFYING T-SHAPED MODEL LANGUAGE

Category	T-Shaped Model Language Example
Communication	“strong writing and interpersonal skills are required”

Job Description #3: Mid-to-Senior Associate, Energy Law¹¹⁶

[LAW FIRM] is seeking a mid-to-senior associate for its growing national energy law practice to work in any of our offices, with a preference of our [LOCATION] office. The candidate should have at least two years of FERC-related experience, including experience on electric regulatory matters. Experience with transmission line interconnection, FERC regulation and enforcement matters, and PJM market issues is a plus, but is not required.

The associate will work on electric regulatory matters for a national mix of clients that are working on the energy transition from fossil fuels to renewables. There will be significant opportunities for the associate to develop a future-oriented practice focused on how to address and mitigate the impacts of climate change. The associate will interact directly with senior partners and firm clients, with the goal of taking on responsibility to manage aspects of even complex cases independently. The associate will also be given the training and resources to begin developing their own clients. Candidates must have a J.D. and local bar membership.

[LAW FIRM] is an AmLaw 100 law firm with ten offices nationwide. We are relentlessly committed to client service and look for candidates who share that commitment. At [LAW FIRM], client service means having empathy for each client’s and each lawyer’s work and personal pressures, business objectives, and legal needs; anticipating their needs; and having the capabilities and commitment to deliver what matters most to them.

116. 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

TABLE 9. JOB DESCRIPTION #3 IDENTIFYING I-SHAPED MODEL LANGUAGE

Category	I-Shaped Model Language Example
Legal Knowledge	“at least two years of FERC-related experience, including experience on electric regulatory matters. Experience with transmission line interconnection, FERC regulation and enforcement matters, and PJM market issues is a plus, but is not required”

TABLE 10. JOB DESCRIPTION #3 IDENTIFYING T-SHAPED MODEL LANGUAGE

Category	T-Shaped Model Language Example
Communication	“will interact directly with senior partners and firm clients”
Case Management	“taking on responsibility to manage aspects of even complex cases independently”

As we see from the examples above, these current job descriptions have few to no sentences that include key skills such as problem solving, grit, and technology know-how.¹¹⁷ We also rarely find specific language in our data set that explains how a candidate could successfully fulfill or demonstrate the listed tasks in the job description.¹¹⁸ Likewise, there is no specific language on how someone may demonstrate up-to-date proficiency in any key skills, such as technology.¹¹⁹

If job descriptions were created with the Whole Lawyer Model in mind, then they would account for the technology-related, client-centric capabilities and competencies that employers are looking for. Here is an illustrative example crafted by the authors that demonstrates how law firms can apply the Whole Lawyer Model in job descriptions:

Job Description #4: Whole Lawyer Example

We fully expect that each associate we hire will eventually become a partner of the firm, so we are highly selective at the outset. Ideal candidates for associate positions have the following attributes:

A passion for litigation and demonstrates the grit to become a top-notch trial lawyer;

A history of leadership, where candidates exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances;

117. 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

118. 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

119. 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

An ability to critically evaluate arguments and consciously assess all assertions in the case; and

An interest in pursuing relevant technology, efficiently and effectively applying innovative uses of technological tools.

EXPECTATIONS

We are willing to invest what it takes in professional development during an associate's tenure, and we expect that new lawyers will take advantage of the many opportunities offered to develop their skills, their practices, and their careers.

The ideal candidate should demonstrate perseverance and consistency when overcoming obstacles and failures to reach long-term goals and/or satisfy long-term commitments. They must also be able to see the big picture, exhibit keen insight, and be ready to change their course, strategy, or approach given new, different, or changing information or circumstances. The ideal candidate devises solutions, creates opportunities, and identifies tools sufficient to deal skillfully and promptly with new situations and difficulties.

The ideal candidate possesses inquisitiveness, a desire to learn, and finds the answer to a legal question in a methodical and time-effective way, exhausting all possible relevant sources with a practical and judicious application of critical evaluation. The ideal candidate will also complete all projects in a timely and efficient manner, proactively move forward or initiate action toward a goal or objective, submit high-quality products and presentations, and adhere to and uphold professional standards regarding confidentiality of information relating to the representation of a client. Candidates must also demonstrate proficiency in timekeeping/billing by tracking the hours/fractions of an hour spent on a specific case, matter, or project.

Associates can be considered for admission to the partnership at any time. However, this is most likely to occur sometime between the seventh and ninth year of full-time practice.

In making decisions about partnership, our ultimate goal is to elect those attorneys who have demonstrated a strong commitment to the zealous representation of the firm's national roster of clients, to the pursuit of excellence in their own professional practice, to the strengthening and building of the firm, to the enhancement of the practices of their colleagues in the firm, and to the constant improvement of the firm as an organization in which collegiality, respect, and shared goals are of paramount importance.

TABLE 11. JOB DESCRIPTION #4 IDENTIFYING WHOLE LAWYER MODEL LANGUAGE

Foundation	Whole Lawyer Model Language Example
Grit	“demonstrates the grit to become a top-notch trial lawyer”; “demonstrate perseverance and consistency when overcoming obstacles and failures to reach long-term goals and/or satisfy long-term commitments”
Work cooperatively and collaboratively as part of a team	“a strong commitment to the zealous representation of the firm’s national roster of clients, to the pursuit of excellence in their own professional practice, to the strengthening and building of the firm, to the enhancement of the practices of their colleagues in the firm, and to the constant improvement of the firm as an organization in which collegiality, respect, and shared goals are of paramount importance”
Perceptiveness	“exhibit keen insight”
Effectively research the law	“find the answer to a legal question in a methodical and time-effective way, exhausting all possible relevant sources”
Critically evaluate arguments	“a practical and judicious application of critical evaluation”
Resourcefulness	“devises solutions, creates opportunities, and identifies tools sufficient to deal skillfully and promptly with new situations and difficulties”
See a case or project through from start to timely finish	“see the big picture”; “complete all projects in a timely and efficient manner”
Enjoy overcoming challenges	“demonstrates the grit”; “demonstrate perseverance and consistency when overcoming obstacles and failures to reach long-term goals and/or satisfy long-term commitments”
Intellectual curiosity	“inquisitiveness, a desire to learn”
Exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances	“exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances”; “be ready to change their course, strategy, or approach given new, different, or changing information or circumstances”

Foundation	Whole Lawyer Model Language Example
Show initiative	“to proactively move forward or initiate action toward a goal or objective”
Maintain a high-quality work product	“submit high-quality products and presentations”
Adhere to proper timekeeping and/or billing procedures	“timekeeping/billing; tracking the hours/fractions of an hour spent on a specific case, matter, or project”
Learn and use relevant technology effectively	“interest in pursuing relevant technology, efficiently and effectively applying innovative uses of technological tools”
Keep information confidential	“adhere to and uphold professional standards regarding confidentiality of information relating to the representation of a client”

Almost every sentence in Job Description #4 addresses a technology-related Foundation in the Whole Lawyer Model. These sentences are not vague. The job position description calls for specific, measurable, achievable, and relevant skills needed for the modern-day practice of law. Law firms and law schools can assess the proficiency of these skills over time.¹²⁰ We also recognize that this job description does not highlight any specific technology vendor. This is intentional, as technology offerings and vendors are constantly changing. We assert that specific technology skills and tools are addressed by the Foundations, and we identify examples in Appendix A. Law schools can use these technology skills and tools to assess whether they are appropriately and consistently delivering instruction and teaching skills in these areas, and law firms can use these same skills and tools to consistently create performance rubrics and assessments for hiring, retention, and recruitment.

III. LAW SCHOOLS AND LAW FIRMS MUST SHARE A VIEW OF TECHNOLOGY COMPETENCY IN THE ABSENCE OF CLEAR-CUT STANDARDS FROM THE AMERICAN BAR ASSOCIATION AND STATE COURTS

“The gap between what new lawyers *have* and what new lawyers *need* may suggest that law schools are falling short when preparing their students

120. Kimberlee Leonard & Rob Watts, *The Ultimate Guide to S.M.A.R.T. Goals*, FORBES, (May 4, 2022, 1:35 PM) <https://www.forbes.com/advisor/business/smart-goals/> [https://perma.cc/LS39-8BL8]. For further discussion on the wider application of SMART goals, see Osahon Ogbeiwi, *Why Written Objectives Need to Be Really SMART*, 23 BRITISH J. HEALTHCARE MGMT. 324 (2017).

for practice. But it may also suggest that legal employers are falling short when it comes to developing hiring practices that result in good hires, or that regulators are falling short when they assess the extent to which the current licensure process aligns with the needs of the profession.”¹²¹

In the previous section, we proposed the drafting of specific job description language which refers to technology-related Foundations employing technology skills and tools. When used consistently, law firms can develop hiring practices that will result in good hires. The use of specific language with reference to technology-related Foundations will also enable law firms to assess employees on the technology competencies and capabilities needed for the position. In turn, if law firms are recruiting for positions requiring prevalent technology skills in their day-to-day operations, the job description, hiring rubric, and assessments created for those jobs will reflect the technology-related Foundations needed for the position. Combined, the Whole Lawyer-based job description, the hiring rubric, and the assessment will create standards that law schools can rely on to determine the definition of technology competency.¹²² In the absence of clear-cut definitions by the ABA and state courts, we propose that law schools should look to law firms electing to employ the language of the Foundations of the Whole Lawyer Model in job description creation, hiring rubrics, and performance assessments to identify what technology competency is in the practice of law and how they can incorporate targeted technology training into their curriculum.

IV. LAW FIRMS APPLYING THE WHOLE LAWYER MODEL ENABLE LAW SCHOOLS TO TEACH TECHNOLOGY COMPETENCY SKILLS BY ADDING CAPABILITIES AND COMPETENCIES TO THEIR CURRICULUM

In 2020, we conducted a survey of ABA-accredited law schools to identify how legal technology training and instruction was provided in the legal academy.¹²³ We collected data on formal and informal training opportunities, as well as who provided those trainings. In the 2020 Legal Technology Survey, we learned that law librarians taught both formal and informal technology training at ABA-accredited law schools (45.23% of

121. Zachariah DeMeola, *Foundations for Practice, the “Whole Lawyer,” and the Path to Competency for New Lawyers*, INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS. BLOG (Aug. 27, 2018), <https://iaals.du.edu/blog/foundations-practice-whole-lawyer-and-path-competency-new-lawYERS> [<https://perma.cc/HP8L-N26Y>].

122. We recognize that there are law schools that have developed technology competency frameworks for their own specific program. See generally Patrick Parsons, Michelle Hook Dewey & Kristina Niedringhaus, *Georgia State Legal Technology Competency Model: A Framework for Examining and Evaluating What It Means to Be a Technologically Competent Lawyer*, 20 U. ST. THOMAS L.J. 53 (2024).

123. de Perio Wittman & Brown, *supra* note 1, at 29.

instructors offered formal training; 60% of instructors offered informal training).¹²⁴

We identified several Foundations of the Whole Lawyer Model that address technology competency and the applicable technology skills and tools that are relevant for the modern-day practice of law.¹²⁵ We then cross-referenced these Foundations and these tools with the results of our 2020 Legal Technology Survey. Results indicate that very little technology training relevant to the Foundations depicted in the Whole Lawyer Model were offered in 2020.¹²⁶ This detrimentally impacts newly-licensed lawyers, as the legal education curriculum offered in 2020 would apply to graduates in 2022 and 2023.¹²⁷ The one positive metric from our 2020 Legal Technology Survey analysis is that Word and Excel is taught approximately 30%–40% of the time in formal and informal technology training. Unfortunately, our analysis showed that Word and Excel are generally not taught in doctrinal courses.¹²⁸

The modern-day practice of law also requires the ability to “proactively provide status updates to those involved on a matter,” “promptly respond to inquiries and requests,” “speak and write in a manner that meets legal and professional standards,” and “gather facts through interviews, searches, document/file review, and other methods.” Attorneys are also expected to “arrive on time for meetings, appointments, and hearings.” All these capabilities require competencies in email and calendaring platforms.¹²⁹ Zero respondents in our 2020 Legal Technology Survey indicated that these skills were taught in formal, informal, or doctrinal instruction.¹³⁰ However, email and calendaring platforms are still essential competencies, as many state bar associations offer continuing legal education on Microsoft

124. See de Perio Wittman & Brown, *supra* note 1, at 29, 30 n.225, 31.

125. See *infra* Appendix B.

126. See *infra* Appendix B.

127. Kathleen S Brown, *Next-Gen Bar Exam that Truly Tests Daily Practice Skills Must Include Technology*, AM. BAR ASS'N: LAW TECH. TODAY (Apr. 18, 2023), https://www.americanbar.org/groups/law_practice/resources/law-technology-today/2023/next-gen-bar-exam-that-truly-tests-daily-practice-skills-must-include-technology/ [hereinafter *Next-Gen Bar Exam*].

The NCBE reported that “it is quite reasonable for educators, clients, and employers to expect proficiency” in word processing software, research software or platforms, electronic communication software, desktop publishing software, and document storage software, including cloud storage. Basic technology tasks that fall under these categories include “draft initial report for client,” “draft resolutions, written consents, and/or meeting minutes,” and “draft engagement letter.”

128. See de Perio Wittman & Brown, *supra* note 1, at 32 (the comparison chart in Part III.B.).

129. See *infra* Appendix B.

130. We infer that this is not being taught in class because there is an assumption that digital natives know how to use email. See Haight, *supra* note 4, at 190 (“For the most part, legal educators assumed law students’ pre-existing technology skills—primarily the abilities to type, use word processing programs, email, and the Internet—were sufficient to qualify them for legal practice.”).

Outlook.¹³¹ Other collaborative communication tools used in practice, such as Microsoft Teams, Slack, Zoom, and WebEx, were also not taught in formal, informal, or doctrinal instruction.¹³²

We find it significant that timekeeping and collaborative communication tools are still not prioritized by the legal academy and law firm job descriptions. Our analysis of the 2023 Law Firm Job Descriptions Data Set and the 2023 Law School Courses, Protocols, and Foundations Data Set confirmed the lack of Foundation references to timekeeping, resourcefulness, and exhibiting resilience after a setback.¹³³ Yet, law firms continue to send attorneys at all levels to continuing legal education training or spend additional money on on-site trainers who offer sessions on timekeeping, calendaring, and other fundamental lawyering skills.¹³⁴

V. WHEN APPLYING THE WHOLE LAWYER MODEL, LAW SCHOOLS AND LAW FIRMS SHOULD NOT NEGLECT SOFT SKILLS

Soft skills are not a priority for law firms and law schools.¹³⁵ Our 2023 Law Firm Job Descriptions Data Set analysis and our 2023 Law School Courses, Protocols, and Foundations Data Set analysis support this assertion. Of the 32 technology-related Foundations, 20 were used in our analyses to address what some attorneys may consider as “soft skills.”¹³⁶ Law firms

131. A simple Google search reveals that many states offer continuing legal education offerings that discuss Microsoft Outlook, email management, and calendaring.

132. See Isha Marathe, *Tech by Osmosis: Firms Getting a Leg Up on Tech and Talent*, LAW.COM: AM. LAW. (May 1, 2023, 9:30 AM), <https://www.law.com/americanlawyer/2023/05/01/tech-by-osmosis-firms-getting-a-leg-up-on-tech-and-talent/> [https://perma.cc/B9RV-DKWR] (discussing technology and how collaboration tools such as Zoom are commonplace in the modern-day practice of law: “When you’re working with entrepreneurs, you’re seeing technology at its beginnings. So we saw what they were doing. . . . As a result, ‘we started using Zoom with our clients back in 2016, and it’s just ubiquitous today. . . .”).

133. See 2023 Law Firm Job Descriptions Data Set, *supra* note 63; see also 2023 Law School Courses, Protocols, and Foundations Data Set, *supra* note 72.

134. See de Perio Wittman & Brown, *supra* note 1, at 13–14; see also Joseph D. Lawson, *Teaching Legal Tech Is Not Optional*, AALL SPECTRUM, Jan.–Feb. 2021, at 42 (emphasizing the importance of technology training for lawyers).

135. Susan Smith Blakely, *Law Firms Shouldn’t Overlook Value of Soft Skills*, A.B.A. J. (Mar. 7, 2019, 6:30 AM), <https://www.abajournal.com/voice/article/law-firms-shouldnt-overlook-the-value-of-soft-skills> [https://perma.cc/QN6B-5D6X].

136. These 20 Foundations are: “Speak and write in a manner that meets professional standards”; “Speak and write in a manner that meets legal standards”; “Prepare client responses”; “Promptly respond to inquiries and requests”; “Maintain high-quality work product”; “Proactively provide status updates to those involved on a matter”; “Recognize client or stakeholder needs, objectives, priorities, constraints, and expectations”; “Work cooperatively and collaboratively as part of a team”; “Seek and be responsive to feedback”; “Prioritize and manage multiple tasks”; “See case or project through from start to timely finish”; “Effectively research the law”; “Show initiative”; “Set goals and make a plan to meet them”; “Resourcefulness”; “Make decisions and deliver results under pressure”; “Exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances”; “Exhibit resilience after a setback”; “Understand when to engage supervisor or seek advice and problem solving”; and “Arrive on time for meetings, appointments, and hearings.”

continue to prioritize profit-focused and revenue-generating skills, such as the billable hour, business development, and profit gains per partner.¹³⁷

The remaining 12 technology-related Foundations are what some practitioners would consider “hard skills.” Skills such as legal analysis, legal writing, and persuasive legal argument creation have priority.¹³⁸ It is worth noting that the top 4 Foundations referenced in the job descriptions in our 2023 Law Firm Job Descriptions Data Set are soft skills that support legal writing.¹³⁹ Other experts writing about the incorporation of soft skills in legal practice have identified that “80 percent of success in business is determined by soft skills.”¹⁴⁰ In review of our data analysis, the only soft skills that are emphasized in law firm job descriptions are specifically aligned with legal writing.

If we take a closer look at how law schools are covering technology-related soft skills, we see that curricula are not covering necessary technology-related soft skills. In fact, the top 5 Foundations referenced in the law school course offerings in our 2023 Law School Courses, Protocols, and Foundations Data Set are examples of hard skills. The top 5 Foundations are “Keep information confidential” (50.3%); “Learn and use relevant technology effectively” (48.4%); “Gather facts through interviews, searches, document/file review, and other methods” (34.1%); “Identify relevant facts, legal issues, and informational gaps or discrepancies” (33.4%); and “Request and produce written discovery” (25.3%). In contrast, 6 Foundations are not referenced in our 2023 Law School Courses, Protocols, and Foundations Data Set.¹⁴¹

Successful attorneys recognize the necessity of developing both soft and hard skills.¹⁴² They will nimbly execute these complementary skills to effectively provide clients with solid work product, active listening, and

137. Smith Blakely, *supra* note 135.

138. The remaining 12 Foundations are “Gather facts through interviews, searches, document/file review, and other methods”; “Identify relevant facts, legal issues, and informational gaps or discrepancies”; “Interview clients and witnesses”; “Draft contracts and agreements”; “Critically evaluate arguments”; “Draft pleadings, motions, and briefs”; “Learn and use relevant technology effectively”; “Maintain core knowledge of substantive and procedural law in the relevant focus area(s)”; “Request and produce written discovery”; “Document or organize a case for matter”; “Keep information confidential”; and “Adhere to proper time keeping and/or billing procedures.” See also Smith Blakely, *supra* note 135.

139. The top 4 Foundations are “Speak and write in a manner that meets professional standards,” “Speak and write in a manner that meets legal standards,” “Maintain high-quality work product,” and “Prepare client responses.” See *supra* note 91. 2023 Law Firm Job Descriptions Data Set, *supra* note 63.

140. Smith Blakely, *supra* note 135.

141. Five of the Foundations not referenced refer to soft skills: “Speak and write in a manner that meets professional standards”; “Prepare client responses”; “Resourcefulness”; “Arrive on time for meetings, appointments, and hearings”; and “Exhibit resilience after a setback.” See IAALS, *Hiring Guide*, *supra* note 43, at 33–52.

142. RANDALL KISER, *SOFT SKILLS FOR THE EFFECTIVE LAWYER 2* (2017).

resourceful advocacy.¹⁴³ Technology proficiency is essential, but it is no longer enough.¹⁴⁴ People seem to think that soft skills have no relation to technology, but emotional intelligence is even more important when relying on technology for efficiency and communication purposes. Tonality, sarcasm, and other contextual clues do not translate well in writing, and one risks the possibility of sounding like a bot versus sounding like a human. This is an issue in a profession dependent on client relations. Similarly, daily operational communications in law firms are more and more reliant on communication platforms, such as Slack and Teams.¹⁴⁵ Although these platforms are designed to foster collaboration and teamwork, their text features only go so far, and law firm organizations still require basic rules around social etiquette in the workplace.

CONCLUSION

Susskind and Cohen posit that the new legal landscape will mandate a strategic integration of data, technology, and human ingenuity.¹⁴⁶ However, this will only occur when law schools and law firms have a singular view of technology competence. Their shared view of technology competence must employ the Foundations of the Whole Lawyer Model. By employing these Foundations, law firms and law schools will emphasize the importance of possessing hard and soft skills, as well as the requisite technology capabilities, necessary for the modern-day practice of law.

Law schools are required to maintain a rigorous program of legal education. This program must prepare students for effective, ethical, and

143. *See id.*

144. Olivia Clarke, *The Next Generation of Leaders*, CHI. LAW., June 2009, <https://www.chicagolawyer.com/elements/pages/print.aspx?printpath=/Archives/2009/06/generation-OC&classname=tera.gn3article> [https://perma.cc/NN85-38GD]. For example, Amy Manning said:

I think you will see more diversity. A number of studies show that a diverse team gets to the best solutions.... Technology is going to continue to have a huge impact on law firms.

Already you've seen how this changes how you interact with clients, ... although you can never underestimate the importance of personal interaction. I think the mistake some people make is relying too heavily on technology. You learn so much from personal contact.

Id. Christina Martini is also quoted: "Clients want advisors—not just lawyers... The law firm of tomorrow must have self-awareness and understand its place in the marketplace." *Id.*

145. *See* Caroline Hill, *Microsoft Teams Tops Tables in ILTA Tech Survey*, LEGAL IT INSIDER (Aug. 25, 2022), <https://legaltechnology.com/2022/08/25/microsoft-teams-tops-tables-in-ilta-tech-survey/> [https://perma.cc/UXY8-5HT3]; Zack Glaser, *How to Use Tech to Improve Communication for Your Law Firm*, LAWYERIST (Mar. 8, 2023), <https://lawyerist.com/news/communication-tools-for-law-firms/#:~:text=Law%20firms%20have%20a%20lot,using%20Slack%20or%20MS%20> [https://perma.cc/7EQH-3C8U]; Jim Calloway, *Slack v. Teams for Law Firm Instant Messaging*, OKLA. BAR ASS'N, https://www.okbar.org/cm_articles/slack-v-teams-for-law-firm-instant-messaging/ [https://perma.cc/B4TH-2ZUM] (last visited Jan. 11, 2024); Misbah Siddiqui, *Slack: An Effective Communication Platform for Law Firms*, ROCKET MATTER, <https://www.rocketmatter.com/blog/law-firm-communications-slack/> [https://perma.cc/4CGJ-835C] (last visited Jan. 11, 2024).

146. *See* Richard Susskind & Mark A. Cohen, *Forging New Paths at the Foothills of Legal Modernization*, UNITED LEX (2023), https://unitedlex.com/wp-content/uploads/2023/04/Susskind-Cohen_Takeaways_-_white_paper_v5_-_PR_Edits.pdf [https://perma.cc/BGY3-VTY9].

responsible participation in the legal profession. Law schools benefit greatly from aligning their curricula with the needs of successful modern-day legal practice.¹⁴⁷ However, to be a successful modern-day lawyer, it is imperative that law schools also align themselves with the expectation of their state bar associations and train their students to pass the bar exam. Ever-increasing and evolving substantive law puts pressure on law schools to teach what is tested on bar exams. The requisite skills identified by the National Conference of Bar Examiners for the new bar examination innately require technology competency.¹⁴⁸ Unfortunately, these skills are de-emphasized and lacking in both course curricula and in law firm job descriptions.¹⁴⁹ Once law schools and law firms implement a base framework that is rooted in the Foundations of the Whole Lawyer, the legal profession will ensure that practicing attorneys can deftly navigate technology competency.

147. See STANDARDS & R. OF PROC. FOR APPROVAL OF L. SCHS. 2022-2023, Standard 301 (AM. BAR ASS'N SECTION OF LEGAL EDUC. AND ADMISSIONS TO THE BAR 2022).

148. *Next-Gen Bar Exam*, *supra* note 127 (“The NCBE has already reported that skills like Negotiation, Client Counseling, and other performance-type skills will be assessed ‘using uniform text-based scenarios to which candidates will respond in writing or by choosing correct answers from multiple options.’”).

149. See discussion *supra* Part II.

APPENDIX A

(Chart: Whole Lawyer Model Cross-Referenced with Technology Skills)¹⁵⁰

Lawyer As...	Category	Foundation	Technology Examples
Communicator	Basic Communications	Proactively provide status updates to those involved on a matter	email/Outlook, Slack, Microsoft Teams, Zoom
Communicator	Basic Communications	Promptly respond to inquiries and requests	email/Outlook
Communicator	Basic Communications	Speak and write in a manner that meets professional standards	Word, Excel, email/Outlook
Communicator	Basic Communications	Work cooperatively and collaboratively as part of a team	Slack, Microsoft Teams, Zoom, WebEx
Practitioner	Legal Practice	Draft contracts and agreements	Word
Practitioner	Legal Practice	Draft pleadings, motions, and briefs	Word
Practitioner	Legal Practice	Interview clients and witnesses	Zoom, Slack, Microsoft Teams, Webex
Practitioner	Legal Practice	Prepare client responses	Word
Practitioner	Legal Practice	Request and produce written discovery	Word, email/Outlook, Excel
Practitioner	Legal Thinking and Application	Critically evaluate arguments	competitive intelligence, data analytics
Practitioner	Legal Thinking and Application	Effectively research the law	Westlaw, Lexis, Bloomberg, Fastcase, DocketAlarm, PACER, government websites, data analytics
Practitioner	Legal Thinking and Application	Gather facts through interviews, searches, document/file review, and other methods	Word, Excel, email/Outlook, Slack, Microsoft Teams, Zoom, WebEx, data analytics, forensic analytics, competitive intelligence, knowledge management

150. Thirty-two out of the 76 Foundations of the Whole Lawyer Model address technology and technology-related skills and tools in the modern-day practice of law.

Lawyer As...	Category	Foundation	Technology Examples
Practitioner	Legal Thinking and Application	Identify relevant facts, legal issues, and informational gaps or discrepancies	Westlaw, Lexis, Bloomberg, Fastcase, DocketAlarm, PACER, government websites, data analytics
Practitioner	Legal Thinking and Application	Maintain core knowledge of substantive and procedural law in the relevant focus area(s)	Westlaw, Lexis, Bloomberg, Fastcase, DocketAlarm, PACER, government websites, data analytics, Law360, ALM, law.com
Practitioner	Legal Thinking and Application	Speak and write in a manner that meets legal standards	Word, email/Outlook
Problem Solver	Capacity	Resourcefulness	Legal Lean, Agile, Six Sigma
Problem Solver	Project Management	Make decisions and deliver results under pressure	Legal Lean, Agile, Six Sigma
Problem Solver	Project Management	Recognize client or stakeholder needs, objectives, priorities, constraints, and expectations	Legal Lean, Agile, Six Sigma
Problem Solver	Project Management	Understand when to engage supervisor or seek advice in problem-solving	Legal Lean, Agile, Six Sigma
Professional	Ethics	Document or organize a case or matter	Word, case management software, Microsoft Teams, SharePoint
Professional	Ethics	Keep information confidential	cybersecurity, data privacy, VPN, encryption, password management, email/Outlook, texting, 2FA (two-factor authentication)
Professional	Professionalism	Arrive on time for meetings, appointments, and hearings	calendaring, Outlook

Lawyer As...	Category	Foundation	Technology Examples
Professional	Workplace	Adhere to proper timekeeping and/or billing procedures	billing/timekeeping software, Excel
Professional	Workplace	Learn and use relevant technology effectively	innovative technological tools relevant to the field
Professional	Workplace	Maintain high-quality work product	Word, Excel, email/ Outlook, PowerPoint/ Keynote
Professional	Workplace	Prioritize and manage multiple tasks	Legal Lean, Agile, Six Sigma
Professional	Workplace	See a case or project through from start to timely finish	Legal Lean, Agile, Six Sigma, Project Management
Self Starter	Drive	Seek and be responsive to feedback	Slack, Microsoft Teams, Zoom, WebEx (or any videoconferencing platform), email/Outlook
Self Starter	Meeting Goals	Exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances	Legal Lean, Agile, Six Sigma
Self Starter	Meeting Goals	Exhibit resilience after a setback	Legal Lean, Agile, Six Sigma
Self Starter	Meeting Goals	Set goals and make a plan to meet them	Legal Lean, Agile, Six Sigma
Self Starter	Meeting Goals	Show initiative	Legal Lean, Agile, Six Sigma

APPENDIX B

(Chart: Whole Lawyer Model Cross-Referenced with 2020 Legal Technology Survey¹⁵¹)

Foundation	Examples	Legal Tech Topics Taught	Taught in Formal/For-Credit Classes	Taught in Formal Classes	Taught in Doctrinal Classes
Proactively provide status updates to those involved on a matter	email/Outlook, Slack, Microsoft Teams, Zoom	Zero respondents indicated that this skill was taught in courses.			
Promptly respond to inquiries and requests	email/Outlook	Zero respondents indicated that this skill was taught in courses.			
Speak and write in a manner that meets professional standards	Word, Excel, email/Outlook	Word	39.47%	38.89%	0.0%
		Excel	36.84%	33.33%	0.0%
		Zero respondents indicated that email skills were taught in courses.			
Work cooperatively and collaboratively as part of a team	Slack, Microsoft Teams, Zoom, WebEx	Zero respondents indicated that these skills were taught in courses.			
Draft contracts and agreements	Word	Word	39.47%	38.89%	0.0%
Draft pleadings, motions, and briefs	Word	Word	39.47%	38.89%	0.0%
Interview clients and witnesses	Zoom, Slack, Microsoft Teams, Webex	Zero respondents indicated that these skills were taught in courses.			
Prepare client responses	Word	Word	39.47%	38.89%	0.0%
Request and produce written discovery	Word, email/ Outlook, Excel	Word	39.47%	38.89%	0.0%
		Excel	36.84%	33.33%	0.0%

151. For more information on the 2020 Legal Technology Survey, see de Perio Wittman & Brown, *supra* note 1, at 29–32.

Foundation	Examples	Legal Tech Topics Taught	Taught in Formal/ For-Credit Classes	Taught in Formal Classes	Taught in Doctrinal Classes
Critically evaluate arguments	competitive intelligence, data analytics	Data analytics, competitive intelligence, and legal research software or platforms are offered in all advanced legal research courses. ¹⁵²			
Effectively research the law	Westlaw, Lexis, Bloomberg, Fastcase, DocketAlarm, PACER, government websites, data analytics	Data analytics, competitive intelligence, and legal research software or platforms are offered in all advanced legal research courses. ¹⁵³			
Gather facts through interviews, searches, document/file review, and other methods	Word, Excel, email/Outlook, Slack, Microsoft Teams, Zoom, WebEx, legal analytics, forensic analytics, competitive intelligence, knowledge management	Word	39.47%	38.89%	0.0%
		Excel	36.84%	33.33%	0.0%
		Matter and knowledge management	31.58%	22.22%	11.76%
Identify relevant facts, legal issues, and informational gaps or discrepancies	Westlaw, Lexis, Bloomberg, Fastcase, DocketAlarm, PACER, government websites, data analytics	Data analytics, competitive intelligence, and legal research software or platforms are offered in all advanced legal research courses. ¹⁵⁴			

152. The authors did not specifically inquire about legal research instruction in the 2020 Legal Technology Survey. Yet, the authors can infer that all legal technology courses taught by law librarians will address the domains, competencies, and skills that today's legal information professionals need for success. See de Perio Wittman & Brown, *supra* note 1, at 27–29 for statistics on how law librarians provide approximately half of the technology training (formal and informal) at ABA-accredited law schools. Additionally, the American Association of Law Libraries' Body of Knowledge (BoK) specifically addresses two domains that address technology competencies: "Research + Analysis" and "Information Management." Research + Analysis refers to "[e]xpertise in harnessing, interpreting, and leveraging legal knowledge and data to create a competitive edge that solves real-world problems and satisfies stakeholders." Similarly, Information Management is "[e]nsuring and facilitating timely access to relevant legal information [to] foster[] sound legal arguments and wise legal decisions while mitigating loss and risk." AM. ASS'N OF L. LIBRS., AALL BODY OF KNOWLEDGE [BoK] 2 (2018) [hereinafter AALL BoK].

153. See generally AALL BoK, *supra* note 152.

154. See generally AALL BoK, *supra* note 152.

Foundation	Examples	Legal Tech Topics Taught	Taught in Formal/ For-Credit Classes	Taught in Formal Classes	Taught in Doctrinal Classes
Maintain core knowledge of substantive and procedural law in the relevant focus area(s)	Westlaw, Lexis, Bloomberg, Fastcase, DocketAlarm, PACER, government websites, data analytics, Law360, ALM, law.com	Data analytics, competitive intelligence, and legal research software or platforms are offered in all advanced legal research courses. ¹⁵⁵			
Speak and write in a manner that meets legal standards	Word, email/ Outlook	Word Document assembly and drafting	39.47% 36.84%	38.89% 16.67%	0.0% 17.65%
Resourcefulness	Legal Lean, Agile, Six Sigma	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%
Make decisions and deliver results under pressure	Legal Lean, Agile, Six Sigma	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%
Recognize client or stakeholder needs, objectives, priorities, constraints, and expectations	Legal Lean, Agile, Six Sigma	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%
Understand when to engage supervisor or seek advice in problem-solving	Legal Lean, Agile, Six Sigma	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%
Document or organize a case or matter	Word, case management software, Microsoft Teams, SharePoint	Word Matter and knowledge management Document assembly and drafting	39.47% 31.58% 36.84%	38.89% 22.22% 16.67%	0.0% 11.76% 17.65%

155. See generally AALL BoK, *supra* note 152.

Foundation	Examples	Legal Tech Topics Taught	Taught in Formal/ For-Credit Classes	Taught in Formal Classes	Taught in Doctrinal Classes
Keep information confidential	cybersecurity, data privacy, VPN, encryption, password management, email/Outlook, texting, 2FA (two-factor authentication)	Computer security and law practice	44.74%	25.0%	14.71%
		Zero respondents indicated that email skills were taught in courses.			
Arrive on time for meetings, appointments, and hearings	calendar, Outlook	Zero respondents indicated that these skills were taught in courses.			
Adhere to proper timekeeping and/or billing procedures	billing/ timekeeping software, Excel	Excel	36.84%	33.33%	0.0%
Learn and use relevant technology effectively	innovative technological tools relevant to the field	New model law firms	26.32%	5.56%	5.88%
Maintain high-quality work product	Word, Excel, email/Outlook, PowerPoint/ Keynote	Word	39.47%	38.89%	0.0%
		Excel	36.84%	33.33%	0.0%
		Presentation technology	31.58%	11.11%	5.88%
Prioritize and manage multiple tasks	Legal Lean, Agile, Six Sigma	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%
See a case or project through from start to timely finish	Legal Lean, Agile, Six Sigma, Project Management	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%
		Project Management	28.95%	11.11%	8.82%
Seek and be responsive to feedback	Slack, Microsoft Teams, Zoom, WebEx (or any videoconferencing platform), email/ Outlook	Zero respondents indicated that these skills were taught in courses.			

Foundation	Examples	Legal Tech Topics Taught	Taught in Formal/ For-Credit Classes	Taught in Formal Classes	Taught in Doctrinal Classes
Exhibit flexibility and adaptability regarding unforeseen, ambiguous, or changing circumstances	Legal Lean, Agile, Six Sigma	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%
Exhibit resilience after a setback	Legal Lean, Agile, Six Sigma	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%
Set goals and make a plan to meet them	Legal Lean, Agile, Six Sigma	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%
Show initiative	Legal Lean, Agile, Six Sigma	Lean/Six Sigma/Agile	0.0%	0.0%	2.94%