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Technological challenges for modern law school pedagogy – preparing graduates for the modern legal workplace.

This article explores the prevailing narrative that legal technology is changing both what lawyers do and the knowledge, skills and attributes they need, which in turn has implications for the appropriate curriculum required for law students intending to enter legal practice. It presents the results of a funded research study designed to test assumptions made regarding the knowledge, skills, attributes and experience required by law graduates to operate effectively in the modern legal workplace and the corresponding impact on law schools' curricula. The article presents data collected from legal professionals to ascertain their views on the impact of legal technology on practice and what changes law schools should be considering to prepare law students for practice.

Keywords: legal technology, legal education curriculum, legal employers, law school

Introduction

Legal technology has been driving change across the sector for some time, with the legal profession widely using legal technology to enhance the delivery of legal services.¹ While there are many definitions of legal technology,² in this research we adopted the one used by the Law Society of England and Wales where legal technology means technologies that aim to support, supplement or replace traditional methods for delivering legal services or transactions or which improve the operation of the justice system.³ Research by Sako and Parnham for the Solicitors Regulation Authority (SRA) highlighted the

¹ See The Law Society, *Lawtech Adoption Research* (February 2019), confirming lawtech's focus on efficiencies and automation:

<<https://www.lawsociety.org.uk/topics/research/lawtech-adoption-report/>> accessed 27 June 2023.

² See Ryan Whalen, "Defining legal technology and its implications" (2022) *International Journal of Law and Information Technology* 30.

³ The Law Society, *Introduction to Lawtech: A Practical Guide to Legal Technology* (2019) <<https://www.lawsociety.org.uk/topics/ai-and-lawtech/introduction-to-lawtech>> 9 accessed 11 October 2023.

segmentation in the legal sector in relation to legal technology, with SRA regulated firms that deal with individuals and small businesses being less innovative and less likely to adopt legal technology than firms with large corporate clients.⁴ With technology influencing the ways in which legal services are provided, discussion around the inclusion of legal technology in the law school curriculum is ongoing across the world.⁵ While reports from the Law Society of England and Wales have raised questions around the impact of technology on the skills future lawyers will need, there is little emanating from them on a more detailed level to guide an approach to the inclusion of legal technology in the curriculum.⁶ This lacuna is not filled by quality assurance bodies setting standards for higher education. The latest iteration of the QAA Subject Benchmark Statement for Law simply states that law graduates should be able to “develop skills in digital literacy in finding, managing, creating and communicating information.”⁷ However the Legal

⁴ Mari Sako and Richard Parnham, *Technology and Innovation in Legal Services: Final Report for the Solicitors Regulation Authority* (2021) University of Oxford <<https://www.sra.org.uk/globalassets/documents/sra/research/full-report-technology-and-innovation-in-legal-services.pdf?version=4a1bfe>> accessed 27 June 2023.

⁵ In Australia, for example, see Kate Galloway and others “The Legal Academy’s Engagements with Lawtech: Technology Narratives and Archetypes as Drivers of Change” (2019) 1(1) *Law Technology and Humans* 27, 28; in Europe see Aušrinė Pasvenskienė and Paulius Astromskis “The Future of Legal Education: Do Law Schools Have the Right to be Conservative?” (2020) 13(1) *Baltic Journal of Law and Politics* 191.

⁶ The Law Society, *Horizon Scanning Digital Futures* (June 2020) <<https://www.lawsociety.org.uk/topics/research/digital-futures>> accessed 27 June 2023; The Law Society, *Horizon Scanning, Future Skills for Law* (June 2018) (‘The Law Society Report 2018’) <<https://www.lawsociety.org.uk/topics/research/future-skills-for-law>> accessed 27 June 2023.

⁷ QAA, Subject Benchmark Statement for Law (2023) <<https://www.qaa.ac.uk/the-quality-code/subject-benchmark-statements/subject-benchmark-statement-law>> accessed 27 June 2023.

Services Board has commissioned research to help regulators develop their approaches to regulating technology use in the legal sector. As part of that Wyner considers what developments in technical knowledge and skills could take place.⁸

Legal education in England and Wales is also at the start of seismic change with the removal of the requirement for a “qualifying law degree”⁹ to qualify as a solicitor and, while not all law students want to be solicitors,¹⁰ it undoubtedly makes sense for law schools to evaluate their current offerings in order to ensure they remain attractive to potential students who will have to navigate technology enabled workplaces. With employability being a key driver for all,¹¹ law schools need to anticipate and equip law

⁸ Adam Wyner, LegaTech Education – Considerations for Regulators (2020) <<https://legalservicesboard.org.uk/news/lsb-considers-how-education-might-adapt-to-ensure-legal-professionals-can-use-and-shape-new-technology>> accessed 17 October 2023.

⁹ A degree in any subject or experience equivalent to a degree is acceptable. From 1 September 2021, to qualify as a solicitor a national centralised assessment regime has been introduced, the Solicitors Qualifying Examination (SQE), see <<https://www.sra.org.uk/students/sqe/>> accessed 27 June 2023.

¹⁰ Matthew Williams and others, *Research to inform workforce planning and career development in legal services. Employment trends, workforce projections and solicitor firm perspectives. Final report* (Institute for Employment Studies 2019) para 2.4 estimating that between 2011-16 around 35% of law graduates joined the legal profession each year <<https://www.employment-studies.co.uk/resource/research-inform-workforce-planning-and-career-development-legal-services>> accessed 27 June 2023.

¹¹ The Teaching Excellence Framework requires universities to publish data to measure performance including employment outcomes <<https://www.officeforstudents.org.uk/advice-and-guidance/teaching/about-the-tef/>> accessed 29 June 2023; for an overview of the Teaching Excellence Framework see Andrew Gunn, “Metrics and Methodologies for Measuring Teaching Quality in Higher Education: Developing the Teaching Excellence Framework (TEF)” (2018) 70(2) Educational Review 129.

graduates for the modern workplace by providing them with relevant skills. This may require the development of their curricula to reflect technological advancements and for law schools to experiment with different ways of delivering technology as part of the curriculum. There is evidence of a small number of UK law schools already beginning to do this, for example by partnering up with law firms that are leading in the field of legal technology.¹² However, as Ryan’s research established, with only 8% of UK law schools offering a law and technology module promoting engagement with digital technologies, this type of activity is still limited.¹³ There are also a range of viewpoints regarding exactly what knowledge, skills, attributes and experience law graduates need. Debatably,¹⁴ law school graduates who enter the legal profession should be properly

¹² For example, York University partnered with Norton Rose Fulbright, to deliver a law and tech module to 40 third year law and computer science undergraduates <<https://www.york.ac.uk/law/news/news-archive/2019/norton-rose-fulbright-tie-in/>> accessed 27 June 2023; see also Michael Cross, ‘University and law firms team up to develop lawtech standard’ *The Law Society Gazette* (2019) <<https://www.lawgazette.co.uk/practice/university-and-law-firms-team-up-to-develop-lawtech-standard-/5070424.article>> accessed 27 June 2023; an optional final year module developed at Manchester University in partnership with US-based AI platform Neota Logic and Freshfields Bruckhaus Deringer, “Legal tech and access to justice” <<https://www.artificiallawyer.com/2018/06/06/neota-logic-freshfields-uom-launch-legal-technology-course/>> accessed 27 June 2023.

¹³ Francine Ryan, “Race against the machine? Incorporating legal tech into legal education” (2021) 55(3) *The Law Teacher* 392.

¹⁴ It is beyond the scope of this article to add to the debate around the purpose of law schools and the role of the liberal law degree, see Anthony Bradney, *Conversation, Choices and Chances: The Liberal Law School in the Twenty-First Century* (Oxford, Hart Publishing 2002); Sherman J. Clark, “Law School as Liberal Education” (2013) 63 *Journal of Legal Education* 235; Susanna Menis, “The liberal, the vocational and legal education: a legal history review – from Blackstone to a law degree (1972)” (2020) 54(2) *The Law Teacher* 285.

prepared for the modern legal workplace and law schools should bear in mind that, while the graduates who enter the legal sector¹⁵ may become paralegals, solicitors or barristers, they may alternatively undertake one of a number of new roles that are emerging as the use of legal technology becomes more widespread within legal practice. These include roles such as legal technologist, legal knowledge engineer, legal project manager, legal risk manager and legal process analyst.¹⁶ It has been suggested that the success of law schools will increasingly depend on, not only how effectively they teach their students relevant skills and competencies, but also how they customise their offerings to encompass these new roles.¹⁷ In an already packed curriculum, incorporating new knowledge, skills and competencies, whether as standalone modules or by honeycombing through the curriculum, will be challenging, particularly with no clear consensus on what the “lawyer of the future” will look like.

This article presents the results of a funded research study designed to test proposals that have been made regarding the knowledge, skills, attributes and experience required by law graduates to operate effectively in the technologically enhanced modern legal workplace and the corresponding impact on law schools’ curricula. The first part of this article analyses current views in academia regarding the knowledge, skills, attributes and experience that law graduates of the near future will need in the modern legal workplace. This analysis influenced the content of a questionnaire designed to ascertain

¹⁵ Williams (n 10), it was estimated that between 2011-16 only around 35% of law graduates joined the legal profession each year.

¹⁶ Richard Susskind, *Tomorrow’s Lawyers: An Introduction to Your Future* (3rd edn, Oxford University Press 2023) 79; Amy Bullows, “How technology is changing the legal sector” (2021) 55(2) *The Law Teacher* 258.

¹⁷ Terri Mottershead and Sandee Magliozzi, “Can Competencies Drive Change in the Legal Profession?” (2013) 11(1) *University of St Thomas Law Journal* 51, 69.

legal professionals' perceptions of these views. The questionnaire also provided a list of more traditional lawyering skills to ascertain respondent views on how important those skills were in the context of the legal technology used in their existing practice. The second part covers the research methodology used in the questionnaire and part three analyses the questionnaire results. This original data leads to the conclusion that, whilst legal technology is changing the legal profession, this change is not yet dramatic and is not yet having a profound effect on practitioner skills, with traditional lawyers' skills still highly valued. In terms of preparing students for modern, technologically enhanced legal practice, there is no large gap in the knowledge, skills, attributes and experience required of those joining the profession. Nor is there yet a significant focus on graduates being prepared for new legal technology roles. Although there is no pressing need for significant changes to the curricula in law schools to meet the needs of legal practice, suggestions are made for areas of knowledge, skills, attributes and experience which law schools could consider prioritising for curriculum enhancement.

The questionnaires were completed between 4 March 2021 and 27 April 2021. Since April 2021, there have been no step-change innovations that may significantly influence developments in legal technology until the release in November 2022 of ChatGPT by OpenAI, the first of a number of large language model generative AI tools. There is much speculation regarding what effect on the legal profession such systems will have, although research suggests take up is very low at present.¹⁸ In this respect, the study results constitute an important benchmark representing the topography pre legal technology innovations arising out of ChatGPT and suggest that a repeat of the study is

¹⁸ Thompson Reuters Institute, *ChatGPT and Generative AI within Law Firms* (2023) 11-13.

warranted once there is more clarity regarding the integration of ChatGPT into legal tech applications.

Part I

The knowledge, skills attributes and experience required by law graduates for future legal practice

This section considers the literature that informed the questionnaire design in the context of the skills and attributes required for law students who will be working in the modern legal workplace where legal technology is used. Based on the existing literature, it is widely propounded that law students will need to develop particular knowledge, skills and attributes in order to respond to technological change in the legal workplace. Law schools' curricula are currently not suited to achieve this.¹⁹ Academics have suggested teaching “core competencies needed in an increasingly technological profession”²⁰ and new “skill sets”²¹ that will be required for law students to “thrive professionally.”²² However, these “core competencies” and “skill sets” are not defined or explained and

¹⁹ Much of the earlier literature in this area originates from the USA, see for example Michele R Pistone and Michael B Horn, *Disrupting Law School: How disruptive innovation will revolutionize the legal world* (Clayton Christensen Institute for Disruptive Innovation 2016) 2; Richard S Granat and Stephanie Kimbro, “The Teaching of Law Practice Management and Technology in Law Schools: A New Paradigm” (2013) 88(3) *Chicago-Kent Law Review* 757.

²⁰ Ronald W Staudt, “Access to Justice and Technology Clinics: A 4% Solution” (2013) 88(3) *Chicago-Kent Law Review* 695, 698.

²¹ Michele R Pistone, “Law Schools and Technology: Where We Are and Where We Are Heading” (2015) 64(4) *Journal of Legal Education* 586, 589.

²² *ibid.*

whilst many are in agreement that law students need to develop new skills to respond to a changing profession, fewer commentators have chosen to focus on identifying the particular skills or competencies that law students should be taught as part of their legal education. Those who have attempted to identify the particular knowledge, skills and attributes that are needed to ensure graduates are fit for the technology enhanced legal workplace have taken different approaches and produced a variety of suggestions. As will be seen, some of the skills are broader than those which might be regarded as strictly necessary for technological competence.

Project management, one of Susskind's new legal roles,²³ stands out as being commonly identified by commentators.²⁴ Goodenough defines project management as a label for various techniques which bring order to progressing a task from its conception to completion.²⁵ Project management allows lawyers to “break down legal tasks into essential components, schedule deadlines, and manage the people producing the work.”²⁶ Being able to do this will lead to work which is accurately priced and completed on time. This is increasingly important as traditional pricing models and timelines are being challenged by clients expecting more for less.²⁷ In addition, there will clearly be new

²³ Susskind (n 16) 139.

²⁴ Anna Carpenter, “Developing ‘Next-Gen’ Lawyers through Project-Based Learning” in Catrina Denvir (ed), *Modernising Legal Education* (Cambridge University Press 2020) 126, 133-134; The Law Society of New South Wales, *The Future of Law and Innovation in the Profession (FLIP) Report (2017)* (‘The FLIP Report’) 79; Granat and Kimbro (n 19) 766; Oliver R Goodenough, “Developing an e-Curriculum: Reflections on the Future of Legal Education and on the Importance of Digital Expertise” (2013) 88(3) *Chicago-Kent Law Review* 845, 862.

²⁵ Goodenough (n 24) 862.

²⁶ Granat and Kimbro (n 19) 768.

²⁷ Susskind (n 16) 16-17.

disruptive entrants to the legal market attempting to deploy increasing levels of automation to deliver legal services in efficient and cost effective ways.²⁸ Project management does not routinely feature in the law school curriculum but the FLIP Report suggests that consideration should be given to including formal training for this skill.²⁹ There is also evidence that UK law firms are increasingly recognising the importance of legal project management as a skill by both recruiting legal project managers and training apprentices in legal project management.³⁰

Also commonly identified are commercial skills beyond the typical commercial awareness skills that are desirable to employers,³¹ such as business skills³² and accounting and finance skills.³³ Modern practice faces competition in the legal market both from established firms and new disruptors and being able to establish robust pricing and financial models will be imperative to protecting market share. A more proactive approach to wider business and cost management structures will be needed to thrive. In an Australian legal education context, Miller notes that, despite these skills being valuable

²⁸ The Law Society (n 1) 8; see for example LISA <<https://robotlawyerlisa.com/>> accessed 27 June 2023.

²⁹ The FLIP Report (n 24) 79.

³⁰ See legal project management apprenticeships at Clifford Chance <<https://www.cliffordchance.com/news/news/2019/06/clifford-chance-launches-first-legal-project-management-apprenti.html>> and DLA <<https://www.dlapipergraduates.com/uk/opportunities/>> accessed 27 June 2023.

³¹ Siobhan McConnell, “A systematic review of commercial awareness in the context of the employability of law students in England and Wales” (2022) 3 *European Journal of Legal Education* 127.

³² Identified as lacking in lawyers in small consumer law firms, see The Law Society of England and Wales, *Capturing Technological Innovation in Legal Services* (2017) 81.

³³ The FLIP Report (n 24) 79.

to practitioners, they are not taught in law schools, suggesting they should be considered for inclusion in law schools' curricula.³⁴

Many of the attributes and qualities proposed by commentators are already recognised by law schools as being important to instil in their graduates. These are established skills, such as empathy; trustworthiness; integrity; ethical behaviours; logical thinking; strong work ethic; and self-awareness.³⁵ Adaptability is perhaps an attribute which is more novel and the subject of less focus than some of those listed. It has been suggested that this attribute may assist law students in developing their emotional intelligence, giving them an edge over robots, and helping them as lawyers to establish good working relationships with clients.³⁶ The FLIP Report also recognises flexibility as a relevant attribute suggesting that, due to the changes the legal profession is being subjected to, both law students and practitioners would benefit from training dedicated to “managing change and developing resilience.”³⁷

Additionally, the ability to view change as an opportunity has been suggested by several commentators as a worthwhile attribute for law students to develop. In the context of legal technology, it has been suggested that it is better to view technological

³⁴ Katie Miller, “Disruption, Innovation and Change: The Future of the Legal Profession” (Law Institute of Victoria December 2015) <<https://fliphtml5.com/lxdj/rjtd>> accessed 27 June 2023 33.

³⁵ Matthew Kay, “Robot Sophia Comes of Age” (2018) 168 (7803) *NLJ* 22; Ann Thanaraj “‘The Proficient Lawyer’: Identifying Students’ Perspectives on Learning Gained from Working in a Virtual Law Clinic” (2017) 14(3) *US-China Law Review* 137.

³⁶ Kay (n 35). Skills involving emotions were also discussed by Emma Jones, “A change in outfit? Conceptualising legal skills in the contemporary law school” in Rachel Dunn and others (eds) *What is Legal Education For?: Reassessing the Purposes of Early Twenty-First Century Learning and Law Schools* (Routledge 2022) 136.

³⁷ The FLIP Report (n 24) 79. See also The Law Society Report 2018 (n 6) 10.

developments as an opportunity, rather than a threat to existing processes, and as something that both individuals and legal services providers can benefit from.³⁸ Caserta and Madsen suggest that successful lawyers in the future will be able to adapt to new technologies and seize the opportunities new technologies present, arguing that developing such skills “obviously starts at the law faculties and the law schools.”³⁹ This skill of viewing technology as an opportunity could be learned as a by-product of teaching students about new technology and/or exposing students to that technology. It is beyond the scope of this article to consider resilience in more detail but much is being written that can be explored.⁴⁰

Many of the transferable skills highlighted by commentators are familiar to law schools. These are skills such as attention to detail; team working; communication and management and leadership.⁴¹ Mottershead and Magliozzi suggest that two skills which should also be recognised are innovation and entrepreneurship.⁴² The need to instil entrepreneurship in law school graduates is echoed by Granat and Kimbro, who go as far

³⁸ Pistone and Horn (n 19) 3 highlight this as being a particularly important approach for legal educators.

³⁹ Salvatore Caserta and Mikael Rask Madsen, “The Legal Profession in the Era of Digital Capitalism: Disruption or New Dawn?” (2019) 8(1) *Laws* 13.

⁴⁰ See for example Nigel Duncan, Caroline Strevens and Rachael Field, “Resilience and student wellbeing in Higher Education: A theoretical basis for establishing law school responsibilities for helping our students to thrive” *European Journal of Legal Education* (2020) 1(1); Paul McKeown, “A Broken Profession Both Mentally and Physically: Is Wellbeing the Foundation to a Healthy and Resilient Future?” in Emma Jones and Caroline Strevens (eds) *Wellbeing and Transitions in Law* (Palgrave Macmillan 2023).

⁴¹ See for example Thanaraj (n 35) 164; Kay (n 35); The Law Society Report 2018 (n 6).

⁴² Mottershead and Magliozzi (n 17) 74; The Law Society Report 2018 (n 6) 10.

as to say that “the next generation of lawyers will have to be entrepreneurs rather than employees working for someone else.”⁴³

There are differing views on what technological knowledge should be included in the law school curriculum to meet the needs of the modern legal workplace and whether this should be included as standalone modules or honeycombed through the curriculum.⁴⁴ Suggestions have ranged from basic digital skills such as word processing, emails and internet search engines⁴⁵ to coding.⁴⁶ The former is uncontroversial and has been common for many years in law schools, but the latter is disputed with, for example Smith and Spence, arguing that lawyers of the future will interact with code not write it.⁴⁷ Baker suggests that a total reliance on technology without understanding it could lead to issues of professional negligence and breaches of professional obligations because lawyers using technology, for example to conduct legal research, remain responsible for the results generated.⁴⁸ Denvir refers to a lack of knowledge in “modern technological

⁴³ Granat and Kimbro (n 19) 762.

⁴⁴ John M Facciola “A Judicial Perspective: Technological Competence and the Law Schools” (2015) *J Prof Law* 119, 121 introduced the term “honeycombing” in relation to technology being included across the curriculum; see also Galloway and others (n 5) 3 referring to the “immersion” of digital contexts within legal education.

⁴⁵ Emma Jones, “A change in outfit? Conceptualising legal skills in the contemporary law school” in Dunn (n 36) 137.

⁴⁶ Goodenough (n 24) 871; see also Anthony Volini, “A Perspective of Technology for Law Students” (2020) 36(1) *Santa Clara High Technology Law Journal* 165 advocating for teaching law students the fundamental concepts of networking and programming.

⁴⁷ Alexander Smith and Nigel Spence, “Do Lawyers Need to Learn Code?” in Denvir (n 24) 36; see also Mikola Barcentewicz, “Teaching Technology to (Future) Lawyers” (2021) 1 *Erasmus Law Review* 45.

⁴⁸ Jamie J Baker, “2018: A Legal Research Odyssey: Artificial Intelligence as Disruptor” (2017) 110(1) *Law Library Journal* 5, 22-23. This could be a particular issue with the latest step-change in AI innovation, large language model generative AI such as ChatGPT.

literacy skills” constituting a “serious deficiency in an individual’s ability to evaluate the impact and efficacy” of data-driven tools that support legal task completion.⁴⁹ At present, risk management of legal technology is garnering more attention in the USA because of the American Bar Association’s “Duty of Technological Competence.” This duty requires lawyers to maintain a competent awareness of “the benefits and risks associated with relevant technology”.⁵⁰ The SRA currently operate a system of self-certification.⁵¹ While the SRA could impose a technology-related competency on solicitors in the future, which could present similar professional conduct issues, the SRA does not currently seem inclined to take that route.⁵²

Re-designing the law school curriculum

As has been shown, there are various areas of knowledge, skills, attributes, and experience that different commentators identify as being relevant for law school

⁴⁹ Catrina Denvir, “Scaling the Gap: Legal Education and Data Literacy” in Denvir (n 24) 74.

⁵⁰ American Bar Association, Rule 1.1 [8] Maintaining Competence <https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_1_competence/comment_on_rule_1_1/> accessed 27 June 2023.

⁵¹ Solicitors Regulatory Authority, Statement of Solicitor Competence <<https://www.sra.org.uk/solicitors/resources/continuing-competence/cpd/competence-statement/>> accessed 27 June 2023. Self-certification has been criticised and it is possible that in the future this system may revert to its previous iteration, where solicitors had to prove that they were maintaining competence. Should the SRA follow the US approach, then the requirement to maintain competence could well include technology. The Legal Services Board has pledged to review lawyers’ continuing competence <<https://legalservicesboard.org.uk/our-work/ongoing-work/ongoing-competence0>> accessed 27th October 2023.

⁵² Discussed by Julia Brannan and Rob Marrs, “Paths to Practice, Regulation for Innovation in Legal Education and Training” in Denvir (n 24) chapter 12.

graduates. Some of these are commonly agreed and others more novel, however the issue that law schools are likely to have, as has been acknowledged by several commentators,⁵³ is that any newly proposed knowledge, skills and attributes will have to compete with those which are currently taught, or so-called “established lawyering competencies.”⁵⁴ The re-design of law schools’ curricula will inevitably require certain areas of teaching to either be given up or the subject of less focus in the future.⁵⁵ Therefore, the challenge for law schools is not only going to be the identification of relevant knowledge, skills and attributes to teach their students, but also what they will have to sacrifice in order to do so. In addition to the question of “where” in relation to incorporating knowledge and skills in the curriculum, there is also a “when” question. The uncertain pace of change in the legal profession makes it difficult to determine the urgency of making any required changes and therefore what additions should be prioritised.

Our questionnaire was designed to establish the ways in which those working in the legal workplace feel the legal profession is changing due to the influence of legal technology and second to test the assumptions outlined above around the knowledge, skills, attributes and experience graduates need in the modern legal workplace. This approach was adopted because to understand what knowledge, skills and attributes are required, we first needed to understand how the legal profession is changing due to the influence of legal technology. The research questions to be addressed by the study were:

1. Do legal professionals think that what lawyers do is changing?
2. Do legal professionals think that the skills needed by lawyers are changing?
3. What are viewed as the most important skills and attributes required by lawyers?

⁵³ The FLIP Report (n 24) 77; Goodenough (n 24) 875.

⁵⁴ Staudt (n 20) 699.

⁵⁵ Goodenough (n 24) 875.

4. Does size of organisation influence the answers to questions 1, 2 and 3?
5. Does the role held influence the answers to questions 1, 2 and 3?
6. How important is prior experience and understanding of the use of legal technology for new entrants to the legal profession?
7. How do legal professionals think understanding and experience of legal technology should be developed by law schools?
8. What types of legal technology roles currently exist, and are likely to exist in future?

Part II

Methodology

A self-completion questionnaire addressing the research questions was used to gather data from respondents working in legal practice. The decision to use questionnaires, as opposed to interviews, meant a large amount of data could be collected in a quicker and more cost-effective manner.⁵⁶ The study collected both quantitative and qualitative data through online survey software. Ethical approval for this study was granted and the research was conducted in accordance with Northumbria University's policies on ethics.⁵⁷

⁵⁶ Virginia Braun & Victoria Clarke, *Successful Qualitative Research, A Practical Guide for Beginners* (SAGE publications 2013) 137.

⁵⁷ Submission reference 18786 approved 28/11/2019.

Design of the questionnaire

The questionnaire was designed to collect data relevant to answering the research questions set out above. Acknowledging that the definition of “legal technology” is broad and it may have different meanings to different stakeholders, respondents were first guided on the type of legal technology that this study sought to explore by providing the following definition:

“Technologies that aim to support, supplement or replace traditional methods for delivering legal services or transactions or which improve the operation of the justice system. Examples include automated document assembly, document review systems, predictive analytics (data analysis to predict outcomes in litigation), online dispute resolution, smart legal contracts, legal advice chatbots, client portals (electronic gateways for clients to access information relating to their matter), advanced online legal research, e-discovery/disclosure, electronic file management.”

Respondents were asked to consider both the impact of legal technology and what developments may be required in law schools’ curricula to prepare students for success in the modern legal workplace. Initial questions asked about perceptions of change in what lawyers do and in the skills required to do it. Following these, a set of 16 skills and attributes developed using the SRA Statement of Solicitor Competence⁵⁸ and the Legal Education and Training Review⁵⁹ on what is valued and required by the legal service sector was presented. Respondents were asked to rate the importance of the skills and

⁵⁸ SRA (n 51).

⁵⁹ Legal Education and Training Review, *Setting Standards – The Future of Legal Services Education and Training Regulation in England and Wales* (2013) <<https://letr.org.uk/the-report/index.html>> accessed 27 June 2023.

attributes to their *current* practice and to the legal technology that they and their workplace *currently* use. A further list of 13 skills and attributes developed from the academic literature outlined above was also provided, and respondents were asked how important they felt each of these were in preparing students to work in a modern legal workplace where legal technology is deployed. In addition to rating them individually, respondents were also asked to identify what they felt were the most and least important skills and attributes on these lists. Table 1 details both sets of skills and attributes examined.

Column 1	Column 2
Based on SRA Statement of Solicitor Competence and the Legal Education and Training Review	Based on academic literature
Independent thinking	Project management
Analysis	Accounting and finance
Written communication	Emotional intelligence
Oral communication	Empathy
Problem solving	Trustworthiness
Managing client meetings/relations	Logical thinking
Drafting	Strong work ethic
Time management	Self-awareness
Teamwork	Resilience
Curiosity	Leadership
Initiative	Innovation and entrepreneurship
Professionalism	Flexibility/adaptability
Commercial awareness	Attention to detail
Reflection	
Research	
Self-management	

Table 1. Skills and attributes included in the questionnaire

Further questions were then asked about the importance for new lawyers of understanding and gaining experience of legal technology, how respondents thought law schools should develop understanding of legal technology and what legal technology roles were currently

in use in the legal workplace or were likely to be used in future. To reflect the diverse nature of legal practice and to provide a measure of the size of respondent organisations, the questionnaire also collected demographic information such as job title (to allow for examination of variances in response according to respondent role) and number of lawyers within the organisation (to aid in categorising by size).

Administration of the questionnaire

Five professional contacts of Northumbria Law School who were similar in profile to the target audience completed a pilot study using a draft questionnaire. This allowed the questions to be tested in advance of full distribution to ensure they functioned well and to reduce problems arising in advance of the main distribution.⁶⁰ No changes were made to the questionnaire after this pilot.

For the main study, potential respondents were identified from the authors' networks, including contacts made through social media (LinkedIn and Twitter), and also by encouraging potential respondents to forward the survey to others who might be interested in getting involved (referred to as "snowballing").⁶¹ Links to the online questionnaire were sent to potential respondents by email and through LinkedIn messaging. The questionnaire was also tweeted on the law school's Twitter page.

Responses to the main distribution of the questionnaire were received between 4 March 2021 and 27 April 2021. The questionnaire was accessed 100 times in this period, with around 30% of these attempts showing no recorded responses (i.e., the recipient exited without answering any questions). Due to the use of an anonymous link this could be due to recipients accessing the questionnaire more than once, for example, reviewing

⁶⁰ Alan Bryman, *Social Research Methods* (Oxford 4th edn 2012) 263.

⁶¹ Braun and Clarke (n 56) 57.

it quickly and then returning later to complete it, so this does not necessarily suggest that a high proportion of those accessing the questionnaire were dissuaded from continuing by the first questions. Informed consent was received from all respondents who proceeded. In the remaining 70 recorded questionnaires the most notable ‘drop off’ in responses came during the questions rating skills and attributes (52 respondents fully completed these). There were around 50 full or nearly full responses to the survey. Results from the pilot study (five respondents) were added to the data pool, bringing the overall usable sample size to 55 full and 75 partial responses.

Analysis methods

In addition to graphical representations and calculation of summary statistics, two types of statistical tests were employed to address the research questions. To test relationships between the qualitative variables (for example, whether size of firm influences opinions of whether what lawyers do is changing) a chi-squared test would usually be employed. However here this would be invalid due to small expected values in the contingency tables so the Fisher-Freeman-Halton Exact Test was used instead. Secondly, since the data assessing the importance of the various skills and attributes was scored by respondents on a numeric scale, it was possible to carry out comparative tests using the mean or median scores for each group. Given the small sample sizes here the non-parametric Kruskal-Wallis one-way analysis of variance test (which compares medians) was the preferred option to establish significant differences between groups.⁶²

⁶² Andy Field, *Discovering statistics using IBM SPSS: and sex and drugs and rock 'n' roll* (5th edn SAGE 2017).

Limitations

Although we acknowledge the potential limitations from a quantitative perspective of the sample size of 55 full and 75 partial responses, the data captured was from a range of respondents from differing sizes of legal organisations. This provided an array of viewpoints and experiences. In addition, careful consideration was given to the choice of statistical tests used (with non-parametric approaches being preferred in many cases) to ensure the conclusions drawn were reliable.

While the questionnaire was shared with a variety of legal employer organisations, only one barrister completed it and therefore the findings cannot be used to represent the perceptions of barristers. A recent survey by the Legal Services Board indicates that barristers' chambers are now investing in and adopting legal technology.⁶³ Further research would be needed to provide insights on the impact of legal technology on the requirements of law graduates joining barristers' chambers.

Part III

Results

Sample characteristics

To reflect the diverse nature of legal practice, respondents were asked to state the number of lawyers within their organisation. Possible categories were 1-5, 6-14, 15-30, 31-59, or 60+ lawyers. For the purposes of analysis, the categories have been condensed into three groups based on organisation size i.e., small (1-14 lawyers), medium (15-59 lawyers) and

⁶³ See The Legal Services Board, *Technology and Innovation in Legal Services, An analysis of a 2022 survey of legal service providers* (2023) ('The LSB Report 2023') <<https://legalservicesboard.org.uk/wp-content/uploads/2023/06/20230425-Tech-and-Innov-survey-2022-Designed.pdf>> accessed 27 June 2023.

large (60+ lawyers). Comparisons have been made in a number of areas to ascertain if the size of the respondent's organisation impacted on their response and the results are detailed later in this article. Table 2 shows the number of respondents in each group.

Organisation size	Number of sampled organisations	% of sampled organisations
Small	11	19%
Medium	20	34%
Large	27	47%
Total	58	

Table 2. Size of organisations

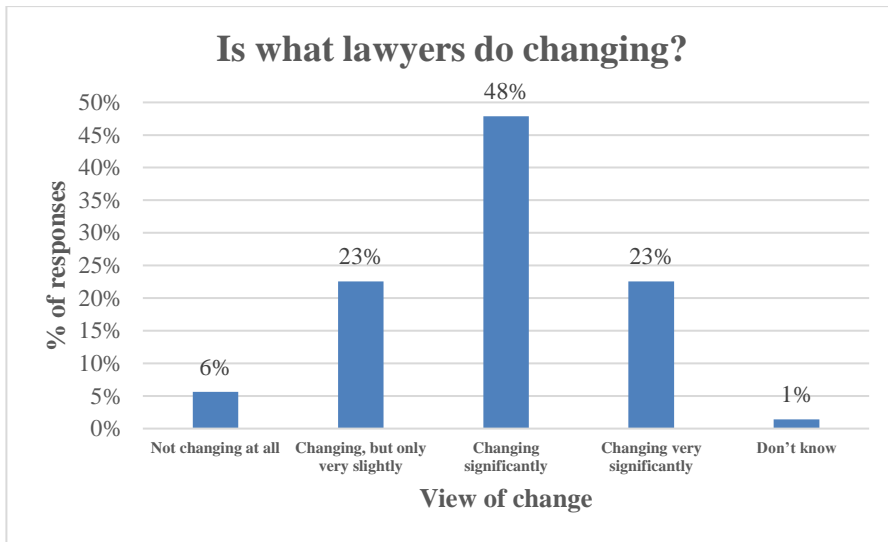
The questionnaire also asked respondents to specify their job title to establish any variances in response according to respondent role. Fifty responses were received to this question, and the answers were categorised as ‘In-house lawyer’, ‘Solicitor’, ‘Barrister’, or ‘Other’ for analysis purposes. Table 3 shows the responses in each category.

Job Type	Number of sampled organisations	% of sampled organisations
In-house lawyer	11	22%
Solicitor	37	74%
Barrister	1	2%
Other	1	2%
Total	50	

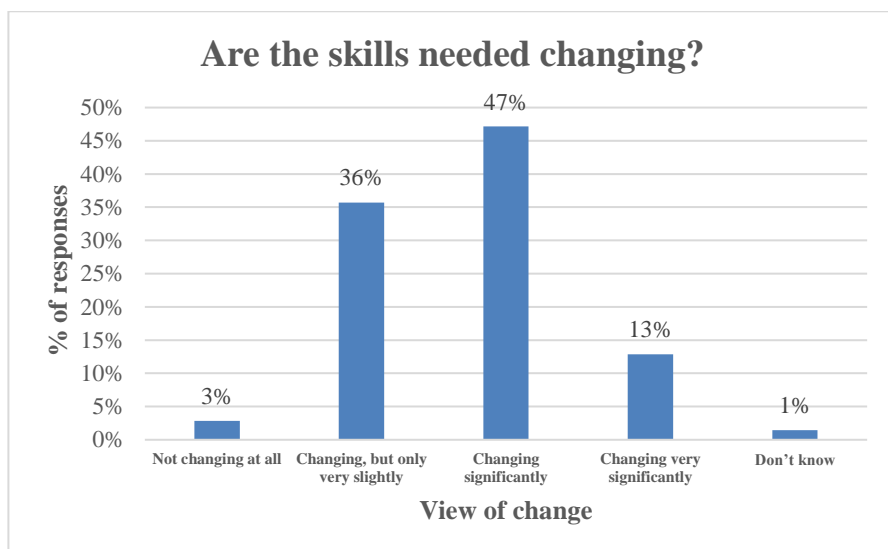
Table 3. Respondents’ roles

The impact of legal technology on what lawyers do and the skills needed to do it

Research question 1 asked whether legal professionals think what lawyers do is changing, while question 2 asked whether they think the skills needed by lawyers are changing. Graph 1 demonstrates the respondents’ views on how legal technology is changing what lawyers do and Graph 2 their views on how it is changing the required skills.



Graph 1. The impact of Legal Technology - is what lawyers do changing?



Graph 2. The impact of Legal Technology - are the skills needed changing?

As Graph 1 demonstrates, very few respondents felt that change is not happening; only 6% thought that what lawyers do is not changing at all. Even fewer (3%) thought that the skills required remained unchanged. Views on the amount of change taking place differed slightly depending on whether respondents were considering the impact of legal technology on the change in what lawyers do or the skills required to do it. In each case,

a similar proportion felt that things were “changing significantly” with 48% of respondents giving this answer for “what lawyers do” and 47% for the “skills needed to do it.” However, as Graphs 1 and 2 indicate, the results for the question on the change in the skills needed were skewed more towards the “less significant” options. 36% of respondents considered the change in the skills needed to be very slight compared to 23% of respondents considering the change in what lawyers do to be very slight. A larger proportion of respondents (71%) indicated that they felt that the change in what lawyers do was either significant or very significant compared to the 60% of respondents who felt that the skills needed were changing significantly or very significantly. Respondents were also asked if they felt COVID-19 had impacted on the use of legal technology by their organisations or if it was likely to do so and, unsurprisingly, around 90% said it had,⁶⁴ particularly in relation to the adoption of online meetings and online hearings, the legal technology required to work from home and the use of electronic signatures to sign legal documents.

Overall, the responses indicated that undoubtedly change is happening in terms of what lawyers do but the skills required to do that work were not seen to be changing as much. This clearly may affect what changes, if any, law schools decide to make and while the literature indicated technology would lead to significant change in the skills and attributes required for modern legal practice, this is not currently borne out in this research.

⁶⁴ Sako and Parnham (n 4) 3 noting the impact of COVID-19 on technology use. See also The LSB Report 2023 (n 63).

Was size or role of respondent a factor in the responses?

To begin to address research questions 4 and 5 the quantitative data was subjected to further statistical analysis to ascertain if the responses differed significantly according to the size of the organisation where the respondent worked or their role i.e., solicitor, barrister, paralegal or other (e.g., HR professional). As explained earlier the Fisher-Freeman-Halton Exact Test for contingency tables was applied. Whilst we might have expected to see a different response from larger organisations that are more likely to adopt legal technology⁶⁵ the results (see Table 4) showed that neither organisation size nor role had a significant influence on respondent views.

Test variables	<i>p</i> value (2 sided)
'Is what lawyers do changing' vs. Organisation size	.950
'Is what lawyers do changing' vs. Job type	.237
'Are the skills required changing' vs. Organisation size	.634
'Are the skills required changing' vs. Job type	.133

Table 4. Results of Fisher-Freeman-Halton Exact Tests of Independence

Respondents' Views

Respondents were invited to comment on their answers. The responses provide further understanding of the respondents' views on the changes taking place and additional insight into some of the broader ramifications of the use of legal technology in the legal workplace. Respondents observed how technology is creating new ways of working and interacting with clients, using specialist software, data rooms, case management systems and online court systems, some of which was driven by the impact of lockdowns during

⁶⁵ Sako and Parnham (n 4).

COVID-19. However, several respondents commented that the key tenets of good legal practice regarding the skills required for the legal workplace remained largely unchanged, for example:

Whilst technological changes are and will no doubt continue to have an impact, I believe that the core skills of ability to assimilate and communicate complex ideas; attention to points of detail and the ability to develop solutions, all remain...largely unaffected by technology.

Several respondents commented on how legal technology had increased the pace of legal work. Whilst this had benefits, for example, making research quicker and easier, there were also challenges concerning the resulting increase in client expectations - clients expected “a far quicker turnaround” in their legal work.⁶⁶ Some respondents explored how legal technology encouraged innovation within their practices, satisfying client expectations, whilst also enabling respondent employers to offer additional services (such as webinars) as a way of attracting clients.⁶⁷ However, there was a note of caution from some respondents who reflected on how there may be resistance to innovation and investment in legal technology because these approaches might result in higher billable hours targets. One respondent, reflecting on the need for a legal technology “champion” within a firm, made this point very clearly:

Trying to convince both partners and other employees that a legal technology champion is required and getting engagement across the firm is a challenge;

⁶⁶ See The LSB Report 2023 (n 63) 11 reporting that the most common impact on firms of implementing technology was being more responsive to clients’ needs.

⁶⁷ *ibid* 7-8 noting the benefits of the adoption of new technology in relation to existing and prospective clients.

particularly if the investment in legal tech and a legal tech employee leads to your target going up!

This respondent identified the need for firms to experience a “cultural shift/change of mentality” to fully benefit from using legal technology. Another respondent noted similar concerns – legal technology would make legal work more efficient, impacting on billable hours.⁶⁸ This respondent suggested the solution could be a greater focus on fixed fees⁶⁹ and the concept of “innovation hours” where practitioners would gain recognition for their use of legal technology and be incentivised for doing so. Whilst change is clearly happening, such comments indicate that not everyone is embracing change and that there are broader, practice management issues created by the use of legal technology.⁷⁰ Some respondents reflected on the implications of the changes in work and skills for those at the start of a legal career, recognising the potential benefits embracing legal technology could bring to such individuals. One respondent encouraged law students to familiarise themselves with new technology while another noted that those who could use legal technology would “stand out amongst more experienced lawyers, who are more traditional in their practice.” Such advice seems appropriate given the ongoing investment in legal technology by UK law firms and the fact that a key business priority for many

⁶⁸ ibid 65 noting that the potential for technology to lead to a reduction in billable hours was a factor none of its participants mentioned.

⁶⁹ See Margaret Thornton, “Towards the Uberisation of Legal Practice” (2019) 1 Law, Tech & Hum 46, 51 noting the rejection of billable hours for fixed price billing by NewLaw firms, many of which have embraced technology.

⁷⁰ See The Law Society (n 3) 25-26 noting the barriers to adopting legal technology, in particular the impact of billable hours targets on fee earner ability to explore technology; The FLIP Report (n 24) 79.

firms is improving their use of legal technology.⁷¹

The importance of skills and attributes to current practice and the legal technology used

As noted in the Methodology, respondents were asked to consider their *current* practice and the legal technology that they and their workplace *currently* use to rate the importance of the skills and attributes listed in Column 1 of Table 1. Data from these questions was intended to inform answers to research questions 3, 4 and 5. The areas identified were rated, on a scale from 0-10. Zero indicated that the skill/attribute is not important and 10 meant it is extremely important. A further question asked respondents to identify what they felt are the most and least important skills/attributes on the list. Table 5 presents the responses, showing the ranking from the least important (lowest mean score) to the most important (highest mean score) and the most and least important skills.

⁷¹ PWC, *UK Legal Services Market Report* (2022) 13, 20.

Skill/Attribute	Mean rating	% identifying this as 'Most important'	% identifying this as 'Least important'
Curiosity	7.05	3%	41%
Research	7.44	2%	14%
Drafting	7.69	2%	14%
Teamwork	7.90	10%	3%
Initiative	8.08	2%	3%
Independent thinking	8.23	3%	2%
Commercial awareness	8.15	8%	8%
Reflection	8.38	7%	2%
Self-management	8.46	2%	2%
Oral communication	8.59	5%	0%
Written communication	8.64	5%	2%
Managing client meetings/relations	8.72	17%	7%
Analysis	8.74	8%	3%
Problem solving	8.74	14%	0%
Time management	8.80	2%	0%
Professionalism	8.87	10%	0%

Table 5. Importance of skills and attributes to current legal practice and legal technology used

Table 5 demonstrates some clear differences between the views of the importance of various skills and attributes. “Curiosity” was the least important skill/attribute when scored on the 0-10 scale with a mean rating of 7.05. Also, 41% of respondents chose this as the least important skill/attribute. “Research” and “drafting” were also deemed low priority skills/attributes. “Professionalism” was the most important skill/attribute based on the mean rating, with 51% of respondents giving it the maximum rating of 10 for importance. It was selected as the most important skill by 10% of respondents. “Problem solving” and “time management,” were also high priority skills/attributes and, alongside “professionalism”, none of the respondents stated that these were the least important skills/attributes although “time management” was selected as the most important skill by only 2% of respondents. “Managing client meetings and relationships” was selected most

frequently as the most important skill and also ranked highly. Respondents were not asked to comment further on their rankings but naturally the variations lead to questions about the potential reasons for their choices. The low priority given to research and drafting perhaps relates to the fact that research and drafting were some of the first areas of legal practice where legal technology had a significant impact on the way in which these activities were carried out. Online research databases have been used in legal practice for decades.⁷² Similarly, automated drafting software has been commonplace for some time and has made the production and adaptation of legal documents quicker and easier.⁷³ It may be that these “older style” advances in legal practice due to legal technology are now so embedded in legal practice that having the required skill-set to carry out these activities is no longer deemed as important.⁷⁴ The skills and attributes legal technology arguably cannot replace, but that are still needed when utilising it, like professionalism and problem solving, are still ranked highly. The outliers here are managing client relationships/meetings and time management. These are skills that can be supported by legal technology, through case management and time recording systems, but that can also be highly individualistic. The ability to relate to clients and prioritise tasks can be very

⁷² Richard Poynder, “LEXIS-NEXIS: Past and future” (1998) 22(2) *Online and CD-ROM Review*, 73; Howard D. Neal, “Electronic Research: Secondary Sources of Law and Facts” (1982) 8 *Legal Econ* 49; LexisNexis, “The LexisNexis Timeline Celebrating Innovation...and 30 years of online legal research” (2003) <https://www.lexisnexis.com/anniversary/30th_timeline_fulltxt.pdf> accessed 27 June 2023.

⁷³ Kathryn D Betts & Kyle R Jaep, “The Dawn of Fully Automated Contract Drafting: Machine Learning Breathes New Life into a Decades-Old Promise” (2016-17) 15 *Duke L & Tech Review* 216.

⁷⁴ See The LSB Report 2023 (n 63) 38-39 noting solicitors’ firms are more likely to use automated document assembly technology or plan to use it than other regulated firms.

much linked to the lawyer, their judgement, and their interpersonal skills, not their use of legal technology.

Was size or role of respondent a factor in the responses?

The results were analysed further using Kruskal-Wallis tests to determine if the sample evidence suggested that responses depended on the size of respondent organisation or their job role. Table 6 below summarises the results.

Skill/attribute	Comparison by size of organisation <i>p</i> value	Comparison by job role <i>p</i> value
Independent thinking	.571	.220
Analysis	.138	.748
Written communication	.076	.591
Oral communication	.517	.208
Problem solving	.166	.602
Managing meetings	.563	.693
Drafting	.016	.863
Time management	.503	.237
Teamwork	.556	.511
Curiosity	.219	.357
Initiative	.408	.927
Professionalism	.710	.587
Commercial awareness	.538	.357
Reflection	.995	.365
Research	.450	.583
Self-management	.552	.763

Table 6. Results of Kruskal-Wallis tests comparing the median scores given for importance to current practice of various skills and attributes by size of organisation and job role

As can be seen the only significant difference found was in relation to “Drafting” – where size of organisation had a significant effect on the result ($H(2) = 8.223$, $p=.016$ with a mean rank of 33.27 for small, 36.33 for medium and 22.91 for large organisations). Post-hoc pairwise comparisons showed that the only statistically significant difference was

between the large and medium organisations ($p=.018$). Neither the large and small ($p=.242$) nor small and medium ($p=1.000$) organisations were found to be significantly different in the scores they awarded. Examination of the mean ratings gives some idea of the scale of the differences in opinion, with $M_{\text{large}}=6.89$ in comparison to $M_{\text{small}}=8.09$ and $M_{\text{medium}}=8.40$. This result might be linked to the longer-term adoption by larger law firms of document automation software, which could mean that the ability to independently draft legal documents is of less importance to those firms than it is to smaller firms that may have invested less (or not at all) in this type of technology. Further research would be needed to ascertain if this is correct but the LSB Report 2023 confirmed that firms with fewer than 10 staff are less likely to use automated document assembly technology than firms with 10+ staff.⁷⁵

Additional skills?

Respondents were also given the opportunity to comment on any additional skills that they thought were required that were not included in the list provided. 69.64% of respondents thought the list covered everything but 17 respondents (30.36%) made additional suggestions. Their responses focused on IT skills, adaptability and, in particular, a willingness to learn. As one respondent noted:

Unless employees are willing and have an open mind as to new legal technologies then they will not use them effectively or even worse just not use them at all. There has to be a willingness to learn.

⁷⁵ See The LSB Report 2023 (n 63) 41.

The importance of skills and attributes identified by the literature as relevant for preparing students to work with legal technology in the modern legal workplace

As discussed in the Methodology, a list of 13 further skills and attributes was developed from the literature (Column 2, Table 1). Respondents were asked to consider these and, as in the previous question, rate the importance of each skill/attribute before selecting the most and least important. Table 7 presents the results.

Skill/attribute	Mean rating	% ranking this as 'Most important'	% ranking this as 'Least important'
Accounting and finance	6.09	2%	28%
Innovation and entrepreneurship	6.62	2%	28%
Leadership	6.98	0%	9%
Project management	7.14	5%	21%
Empathy	7.50	4%	5%
Emotional intelligence	7.69	9%	5%
Self-awareness	8.03	4%	0%
Logical thinking	8.54	5%	2%
Resilience	8.59	18%	2%
Flexibility and adaptability	8.59	7%	0%
Attention to detail	8.95	21%	0%
Trustworthiness	8.95	12%	0%
Work ethic	9.00	12%	0%

Table 7. Importance of suggested skills and attributes for preparing law students for using legal technology in the modern legal workplace.

As with the previous question concerning the importance of skills and attributes to current practice and the legal technology used there were clear differences in view on the importance of the various skills and attributes. Here, there appears to be more consistency between the mean rankings and the most/least important skills/attributes selected. “Attention to detail,” “trustworthiness” and “work ethic” all ranked highly in both

settings, and none were selected as the least important skill/attribute. 50% of respondents gave “trustworthiness” a score of 10; although only 12% stated it was the most important skill to have, it was still the third most selected “most important” skill. “Work ethic” and “attention to detail” were both given a score of 10 by 48% of respondents. “Flexibility and adaptability” were also important, reflecting some of the qualitative comments on the skills needed to use legal technology noted earlier. “Accounting and finance,” “innovation and entrepreneurship,” “leadership” and “project management” were the least necessary skills/attributes and this was reflected across both the mean rankings and when respondents selected the least important skills/attributes. In relation to project management and accounting and finance our findings are contrary to the views expressed by commentators,⁷⁶ although as will be seen project management is of more importance to larger organisations. However, it may be that if there is increasing penetration of the legal marketplace by disruptors, this position will change because of a greater drive for more efficiency and competitive costing.

⁷⁶ Susskind (n 16); Goodenough (n 24); Granat and Kimbro (n 19); The FLIP Report (n 24).

Was size or role of respondent a factor in the responses?

Looking at the statistical significance of these results by size of organisation and job role, employing a Kruskal-Wallis test, gave the results in Table 8.

Skill/attribute	Comparison by size of organisation <i>p</i> value	Comparison by job role <i>p</i> value
Project management	.011	.670
Accounting and finance	.976	.302
Emotional intelligence	.327	.719
Empathy	.935	.668
Trustworthiness	.850	.346
Logical thinking	.981	.878
Work ethic	.221	.515
Self-awareness	.530	.752
Resilience	.241	.590
Leadership	.897	.774
Innovation and entrepreneurship	.151	.735
Flexibility and adaptability	.430	.713
Attention to detail	.485	.451

Table 8. Results of Kruskal-Wallis tests comparing the median scores given for preparing students to work with technology of various skills and attributes by size of organisation and job role

These results suggest that respondents from the various job types do not differ significantly in their views about what skills and attributes are required to prepare students to work with technology. However when size of organisation is used as the grouping variable there is a significant result for ‘project management’ ($H(2) = 9.003$, $p=.011$ with a mean rank of 26.64 for small, 21.98 for medium and 36.34 for large organisations). In this case, the implication of the results is that larger organisations see project management as more important than the small and medium sized organisations ($M_{\text{small}}=8.00$, $M_{\text{medium}}=7.25$ and $M_{\text{large}}=8.85$). As with the earlier differences in views of the importance of “Drafting,” pairwise comparisons show that the key statistically

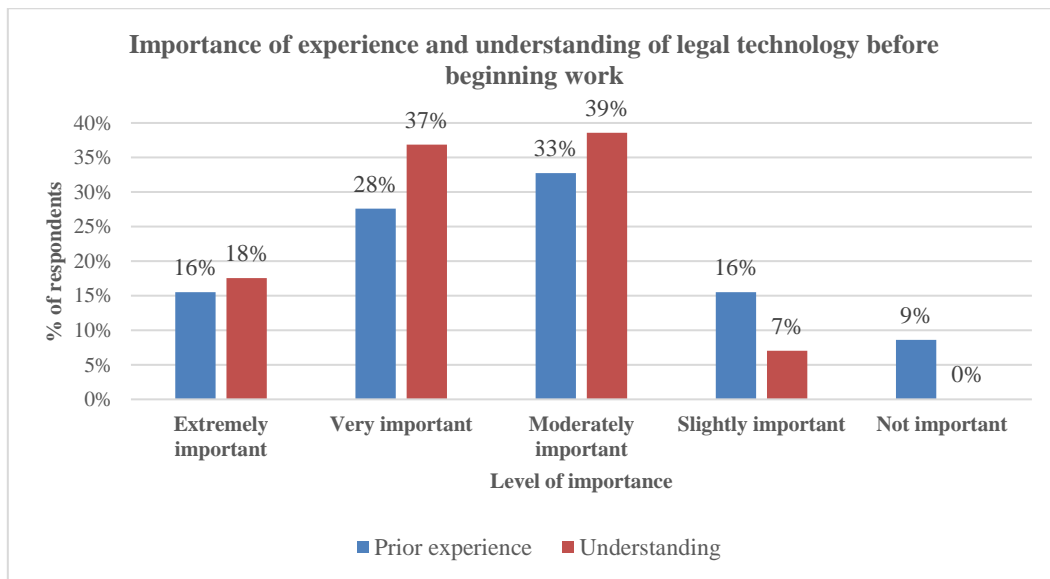
significant difference is between the medium and large organisations ($p=.010$) with neither medium and small ($p=1.000$) or small and large ($p=.311$) being sufficiently different to give a significant result.

The importance of prior experience and understanding of the use of legal technology for new entrants to the legal profession

To answer research question 6, respondents were asked how important it was for new trainee solicitors, paralegals or pupil barristers to have:

- some experience of using legal technology before beginning work; and
- a broad understanding of the nature of legal technology and how it can be used to enhance legal services.

Graph 3 documents the results.



Graph 3. Importance of prior experience and understanding of legal technology for new trainee solicitors/paralegals/pupil barristers.

The results suggest that having some experience of using legal technology before training begins is important – 77% of respondents identified it as important to some extent i.e., it

was “moderately important,” “very important” or “extremely important.” However, only 16% of respondents classified it as “extremely important” and a third (most that responded) felt it was “moderately important.” A further 16% stated it was only “slightly important.” Similarly, whilst 94% felt having a broad understanding of the nature of legal technology is important to some extent, the highest proportion (39%) classified it as only “moderately important” for new entrants to the profession with a further 7% identifying it as only “slightly important.” Overall, it appears that understanding was given slightly more weight than experience with no one in the sample identifying understanding as “not important.” Neither the size of organisation nor role of respondent impacted on the responses.

These results align with Webb’s contention that experience of legal technology, whilst important, is not as significant as has been thought and may reflect the more limited disruption caused by legal technology to date.⁷⁷

Views on the importance of prior experience

Respondents were invited to provide further comments on the importance of having some prior experience of legal technology before joining the profession. Whilst some respondents noted that prior experience could be a “bonus” or make the new entrant “invaluable,” reflecting earlier comments on how familiarisation with and use of legal technology might make such individuals “stand out,” many respondents noted that it was not essential because the legal technology used could be learnt and employer training would be provided. Respondents stated it was important that new entrants had an

⁷⁷ Julian Webb, ‘Legal Technology: The Great Disruption?’ in Richard L Abel and others (eds), *Lawyers in 21st-Century Societies*, Vol. 2: Comparisons and Theories (Bloomsbury Publishing 2022).

awareness of how technology was used, and the related risks and benefits, reflecting the quantitative results that showed understanding was more important than experience. One respondent noted:

Legal tech is something they will be exposed to and will receive training on, so it is not necessary to have experience of it. But I think it is imperative...that they understand legal technology and its benefits.

Reflecting the earlier comments on the importance of differing skills and attributes, some respondents mentioned that adaptability and motivation to learn were key. Overall, the respondent attitudes here were reminiscent of the “recruit for attitude, train for skill” approach that has been used across the legal profession for many years.

Views on what should (or could) that experience look like

Prior experience of legal technology was “extremely important” or “very important” to 44% of respondents. These respondents were asked to specify which types of technology they would like new entrants to have experienced. The responses here naturally lead to a consideration of where students might be able to experience the technology mentioned i.e., in a law school setting or in the legal workplace. Whilst these respondents were not asked to consider whether law schools *should* provide the types of technology they mentioned, it is instructive to contemplate whether law schools *can* provide access to experience of the technology mentioned. Several respondents focused on skills that could be experienced within a law school setting such as word processing, use of Teams meetings and online research. However, many respondents focused on technology that would most likely only be experienced by law students in the legal workplace, so through legal work experience or by working part-time in a legal setting. For example, a minority of respondents focused on bespoke technology products, such as data structuring and

visualisation tools, collaboration tools and signing tech – such technology could only be experienced in a legal workplace. The most frequently cited type of legal technology, mentioned by eight respondents, was case/file management software (CMS). Again, this is bespoke technology that would usually only be accessible to law students in the legal workplace. It is likely that this type of software would only be experienced in a law school setting with a clinical legal education (CLE) facility and even then, not necessarily. The CLE facility at the authors’ institution introduced CMS in 2021. Whilst clinics may adopt CMS mainly with practice and risk management benefits in mind, it is unlikely to be appropriate or workable in the vast majority of law schools. Overall, the technology that the respondents suggested does not fall within the higher level technological skills, such as coding/programming type experience, mentioned in the literature.⁷⁸

Views on prior understanding

I don't think it's a 'must have' when you're starting out.

Again, respondents were asked to provide further comments on the importance of new entrants having an understanding of legal technology and its uses. Several respondents mentioned that an overview or basic understanding of legal technology is sufficient. Other respondents focused less on an understanding of the technology itself but more on its importance in the context of clients, reflecting the client focused comments noted earlier in the discussion of how legal work is changing. Respondents discussed how clients were expecting “more for less” and the related need to innovate to satisfy client demands and to provide better client service. Technology could “make lawyers more efficient and therefore cost-effective,” factors also recognised in a recent survey by the Legal Services

⁷⁸ Smith and Spence (n 47); Goodenough (n 24).

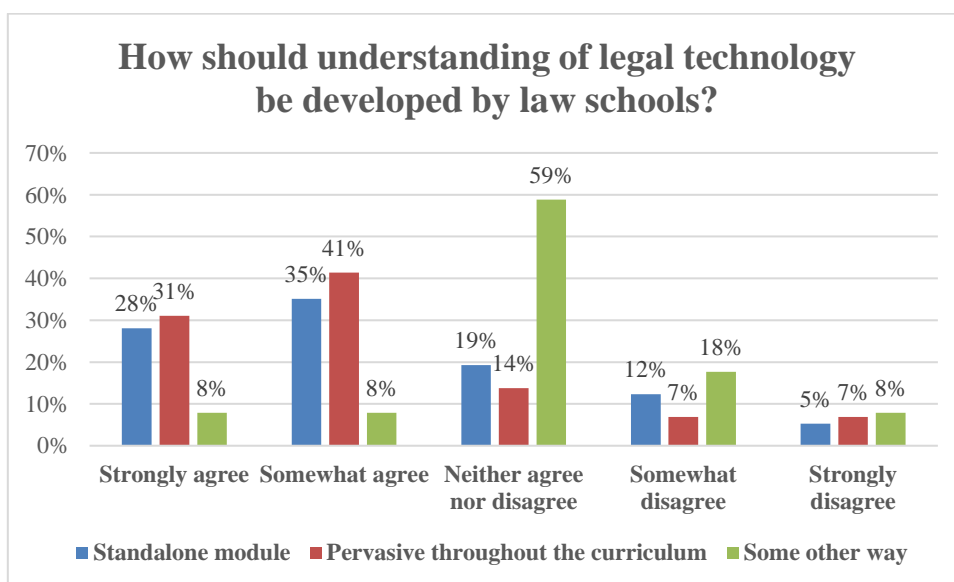
Board on the impact of technology and innovation on legal service providers.⁷⁹ Another respondent took a more holistic approach to prior understanding, stating:

Having the imagination to see how technology can be used is much more important than product-based training.

Whilst the literature indicated that it would be important to have an understanding of the pros and cons and limitations of technology, this was not reflected in the respondents' comments. This may be because we are at too early a stage in the technological evolution and incorporation of much more complex AI to see this change.

How should understanding of legal technology and its effects be developed?

To address research question 7, respondents were asked to consider how understanding of legal technology should be developed in the law school i.e., through a bespoke legal technology module, by making it pervasive throughout the curriculum (in modules like contract law or tort) or in some other way. Graph 4 documents the results.



Graph 4. How should understanding of legal technology be developed by law schools?

⁷⁹ The LSB Report 2023 (n 63) 7-8.

Development through a pervasive approach was preferred to development through a standalone module, a view shared by some commentators.⁸⁰ However, perhaps understandably given that the respondents are not legal educators, there did not appear to be very strong opinions in favour of either option, with “somewhat agree” being the most popular choice in both cases. The lack of strong opinions was also apparent in the responses to whether development should occur in “some other way” with 59% of respondents being neutral on this and seven not answering the question – perhaps they could also be assumed to have no strong opinion, making the proportion in that category even higher. Again, the results were further analysed to see if responses depended on respondent size or role. Size of organisation did affect opinions on whether legal technology should be pervasive in the curriculum. Smaller organisations were more likely to be neutral on this question (neither agreeing or disagreeing), medium sized organisations were more likely to agree, and larger organisations were more likely to disagree. Although caution should be exercised given the smaller sample size in this further analysis, this result may be explained by some of the differences in approach to legal technology that depend on organisation size. Larger organisations have been early adopters of legal technology and so are further ahead in their understanding of its role in the legal workplace. It may be that smaller organisations with much less experience of that technology simply do not know how law schools should develop understanding because their engagement with legal technology is either fairly limited or in its infancy. The medium sized organisations may be keen to “catch up” with the larger organisations and expect their future employees to play a key role in this and so be keen for universities to support them in this endeavour.

⁸⁰ Facciola (n 44); Galloway and others (n 5).

Existing and planned recruitment to legal technology roles

Respondents were asked whether their organisation employed anyone in a legal technology role using a pre-selected role list that included legal technologist, legal knowledge engineer, legal project manager or “other.” They were also asked to consider whether this would change in the next 5 years. The responses helped in answering research question 8. 45% of respondents worked in organisations that did employ someone in such a role and 55% did not. It was found that both size and role of respondent appeared to significantly influence these answers. As might be expected, larger organisations were more likely than small and medium sized organisations to have someone in a legal technology role. A large number of respondents from organisations where there was no one in a legal technology role did not expect this to change in the next five years – 44% from that category answered, “probably no” or “definitely no” and 28% were “unsure.” Only 9% answered “definitely yes.” This suggests that whilst legal organisations may be aware of the impact of legal technology on the profession, some parts of the legal sector may not yet be convinced about the need to invest in the additional “in-house” expertise needed to drive the use of that technology further.⁸¹ For example one of the barriers to innovating and using technology generally is uncertainty about the benefit to the business and it not being a strategic priority to the firm.⁸² Such viewpoints were expressed in some of the qualitative comments noted earlier in the discussion of research questions 1 and 2.

Conclusion

Our findings suggest that, whilst legal technology is changing the legal profession and

⁸¹ Sako and Parnham (n 4).

⁸² *ibid* 119.

COVID-19 undoubtedly hastened the adoption of certain types of technology in the legal workplace, this change is not yet dramatic and is not yet having a profound effect on practitioner skills. What might be called traditional lawyers' skills are still highly valued, although we can begin to see a path for change, with skills where technology has had a significant impact for some time considered of low importance. This study pre-dates the introduction of Chat GPT and serves as an important benchmark in our understanding of how legal technology is impacting on the skills needed for modern legal practice. It would be useful to repeat this study to understand the impact of the technological innovations arising from the use of ChatGPT when its use is more widespread across practice and there is further clarity on how it is being used.

Our findings also suggest that, in terms of being prepared for the modern, technologically enhanced legal workplace, there is not currently a large gap in the knowledge, skills, attributes and experience required of those new to the legal workplace and therefore arguably no pressing need for significant changes to the curricula in law schools. Knowledge, skills, attributes and experience which law schools could consider prioritising for curriculum enhancement via a honeycombing approach are flexibility and adaptability, awareness of legal technology and perhaps greater emphasis on the higher ranked traditional skills such as work ethic and trustworthiness.

Considering the skills and attributes currently used (Column 1, Table 1), professionalism, problem solving, time management and managing client meetings/relationships were given the highest priority. These are all skills that do not appear to relate directly to interacting with or using technology and might be viewed as the traditional skills or soft skills of a legal practitioner. Curiosity was seen as being the least important skill closely followed by research and drafting. This gives us some indication of the direction of travel regarding legal technology and skills as research and

drafting have been significantly affected by innovations in legal technology for some time.

In respect of the skills and attributes needed to prepare students for working with technology (Column 2, Table 1), the findings showed that traditional skills and attributes, such as attention to detail, work ethic and trustworthiness are still highly ranked. Some of the suggested newer skills and attributes such as flexibility and adaptability were important but those such as finance and accounting, project management and innovation and leadership were ranked as the least important skills and attributes. The suggestion that these new skills and attributes are important in a technologically enhanced legal workplace was not borne out by our results.

The results demonstrated that while prior experience and understanding of the use of legal technology to new entrants to the legal workplace was seen as important, its importance was not significant (Graph 3). As noted earlier, this may be due to the more limited disruption than expected caused by legal technology to date.⁸³ However, it should also be borne in mind that employers expect to provide training on the job (and bespoke to the technology they utilise) so therefore they do not feel it is essential prior to commencing employment. What seems of greater value is awareness of relevant technology rather than an ability to use it. In addition, the pace of change in legal technology may make any experience of it less relevant at the point of entering the legal workplace.⁸⁴ What is used during a student's undergraduate studies may no longer be

⁸³ Webb (n 77) 9.

⁸⁴ Chris Ireland and Ryan Hockley, "A Call for Introducing LegalTech in the Classroom" (2020) 36 Computer Law & Security Review 2.

widely used at the point of commencing employment if step change developments in technology have taken place.⁸⁵

The popularity of CMS as an example of legal technology experience that would be useful for law students is not realistic or indeed appropriate for the vast majority of law schools. To the limited degree that understanding of legal technology was commented on, the ability to analyse the pros and cons of technology was not deemed important - it was not seen as a “must have” and an awareness of technology was sufficient. Given there is no ICT or complementary ICT skills in the SQE, it has been suggested that legal employers will now need to give greater focus and resource to training new graduates.⁸⁶

Suggestions⁸⁷ that more specialist technology roles would already be replacing more traditional lawyer roles is not the current reality. While there is definitely change in what lawyers are doing, this has not as yet resulted in a dramatic change to the knowledge, skills, and attributes that legal employers are currently seeking in their graduates. It is clear that larger legal practices are certainly going faster in embracing technology and dedicated legal technology roles, but we are not seeing a significant difference in what they expect from their graduates as regards technology.

As far as the implications for curriculum change are concerned, respondents were not in favour of standalone modules preferring a honeycomb⁸⁸ approach. Although they are not legal educators, as practitioners the respondents are likely to have been through a law degree or law conversion course and so have insight on this point from their own

⁸⁵ *ibid*; see also Smith and Spence (n 47) 18.

⁸⁶ The Law Society Report 2018 (n 6) 13.

⁸⁷ *ibid* 2; Susskind (n 16).

⁸⁸ Facciola (n 44) 121 who introduced the term ‘honeycombing’ in relation to technology being included across the curriculum.

experience as students. The results of this study do not indicate that the respondents are currently experiencing a significant gap in the knowledge, skills and attributes of law students entering practice in respect of using legal technology. Given this and the existing challenges in a busy curriculum, it would be difficult to justify a standalone module. While the honeycomb approach would still require time and resource, it would provide context and demonstrate to students the pervasiveness of technology throughout the legal sector. A number of commentators have suggested that technological literacy should be integrated into the curriculum through CLE whether in simulated or live client contexts.⁸⁹ Experiential learning underpins CLE and the fundamental premise is that students are active participants in their own learning and are afforded the opportunity to reflect and learn from their experience.⁹⁰ This pedagogical approach has the potential to provide an opportunity to integrate technology into the curriculum whether that be through using electronic file management, communication technologies, automated document assembly etc. or the development of cyber or virtual law clinics where students deliver legal services online.⁹¹ While approximately 70% of law schools use some form of CLE

⁸⁹ Smith and Spence (n 47) 19; Francine Ryan and Hugh McFaul ‘The Professions’ Innovative Technologies in UK Legal Education’ in Emma Jones and Fiona Cownie (eds) *Key Directions in Legal Education National and International Perspectives* (Routledge 2020) 67–79.

⁹⁰ Richard Grimes, ‘Reflections on Clinical Legal Education’ (1995) *The Law Teacher* 29(2) 169, 171.

⁹¹ The Open University created a virtual law clinic, see Ryan and McFaul (n 89) as has Monash University in Australia, Jeff Giddings and Jacqueline Weinberg, “Experiential Legal Education: Stepping Back to See the Future” in *Denvir* (n 24) 38.

this does not necessarily mean it is an appropriate or viable vehicle for technological initiatives in all cases.⁹²

Closer collaboration between legal educators and practice has been suggested to help develop the type of skill-set needed in future lawyers but that presupposes an appetite within academia and indeed practice for this blended approach.⁹³ In the absence of any regulatory requirements around technology, legal education providers faced with an already crowded curriculum may be reluctant to embrace innovative pathways, not least due to an absence of staff expertise.⁹⁴ However, it is clear that legal technology will continue to impact and that while the speed of the demise of the legal profession has been exaggerated, complacency to changing the status quo is not a valid option.⁹⁵

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⁹² Vicky Kemp, Tine Munk and Suzanne Gower, “Clinical Legal Education and Experiential Learning: Looking to the Future” (2016) A Report commissioned by The University of Manchester, School of Law, 55 <<https://core.ac.uk/download/pdf/78911073.pdf>> accessed 10 October 2023.

⁹³ Smith and Spence (n 47) 32.

⁹⁴ Ryan (n 13); Pasvenskienė and Astromskis (n 5) 199.

⁹⁵ Webb (n 77).