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Teaching Legal Design: Lessons from Five Years of Student-Led Innovation in Tech4Justice

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Abstract

Drawing on insights from the Tech4Justice Lab at Macquarie University and its five-year collaboration with the National Justice Project, the article explores how design thinking methodologies can be embedded into legal education. Tech4Justice focuses on developing important legal design and leadership skills that are highly sought in the job market. Tech4Justice students use no-code software to build chatbots to help people make discrimination complaints. Their chatbots are designed to fit within a broader strategy to facilitate easier access to complaint making (see hearmeout.org.au). We identify three notable pedagogical features that distinguish Tech4Justice from other legal design education initiatives: a sustained focus on a single problem, a mixed teaching model, and student leadership. Drawing on both the case study and existing literature, we then present an integrated framework identifying the key knowledge and skills a legal designer needs to have – and which law schools must, therefore, teach. Finally, we explore implications for legal education more broadly, arguing that our case study offers lessons that extend beyond legal design to legal education generally.

Keywords: legal design, pedagogy, technology for good, legal clinical education, complaints

Introduction

What does it mean to 'be a good lawyer' in a context where legal technology can routinely undertake traditional legal work quicker, cheaper, and more accurately than a human?[1] Are

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[1] See Marcelo Corrales Compagnucci, Mark Fenwick, Helena Haapio, and Erik PM Vermeulen, 'Tomorrow's Lawyer Today? Platform-Driven Legaltech, Smart Contracts & The New World Of Legal Design' (2019) 22[10] Journal of Internet Law, 3-12.

traditional legal skills still useful? If not, what should the lawyers of tomorrow be learning at law school? This article argues that the answer – or at least part of it – may lie in training law students to be good legal designers. The Tech4Justice Lab offers compelling insights about how to achieve this.

To understand why a different pedagogical approach than traditional legal education is needed for legal design, it is helpful to think about law as a box of building blocks of different shapes, sizes and colours. Conventionally understood, the role of a lawyer is to know what the blocks are and how they connect, and to apply this knowledge, reactively, to help solve client problems. But there are other things a lawyer could do with the building blocks. Instead of reacting to a client's specific problem, a lawyer could build the blocks into something that her clients can use to increase their understanding of the law to solve their legal problems. She can think about what her clients have in common and the types of problems they are trying to solve. She can identify the barriers that stand in the way of them being able to understand and apply the law themselves, and she can design a tool to help them do that. She can use the blocks in a different way to build tools to address systemic problems.[2]

Legal design represents a profound shift in the lawyer's role from being mainly reactive – responding to a given set of facts and problems – to proactive – anticipating how people might use law to guide their actions, pre-empting questions and challenges, and creating tools to help.[3] The traditional law school model doesn't teach students how to do this.

But how then do law students learn legal design? Should law schools teach it? And how? Education in this field is growing but the pedagogy around it is still in its infancy. This article builds on foundational work by legal design pioneers to argue that university law schools are uniquely placed to teach legal design and need to catch up with practice and teach legal design skills to equip students to be legal professionals of the future.[4]

Roadmap to this Article

The article proceeds in four parts. We first outline the Tech4Justice case study. We then identify three notable pedagogical features that distinguish Tech4Justice from other legal design education initiatives: a sustained focus on a single problem, a mixed teaching model, and student leadership. Drawing on both the case study and existing literature, we then present an integrated knowledge and skills framework, to identify the key knowledge and skills a legal designer needs to have – and which law schools must, therefore, teach.[5] Finally, we explore

[2] This analogy is inspired by the 'Lego Serious Play' method. See, for example, Per Kristiansen and Robert Rasmussen, *Building a Better Business Using the Lego Serious Play Method* (1st edition, Wiley 2014). See also Astrid Kohlmeier and Meera Klemola, *The Legal Design Book: Doing Law in the 21st Century* (Ground M 2021) 20, for a deeper discussion of the more 'future focused' approach of legal designers.

[3] Helena Haapio, Thomas D Barton and Marcelo Corrales Compagnucci, 'Legal Design for the Common Good: Proactive Legal Care by Design' in Marcelo Corrales Compagnucci and others (eds), *Legal Design: Integrating Business, Design and Legal Thinking with Technology* (Edward Elgar Publishing 2021).

[4] Dan Jackson, 'Human-Centred Legal Tech: Integrating Design in Legal Education' (2016) 50 The Law Teacher 82; Margaret Hagan, 'Legal Design as a Thing: A Theory of Change and a Set of Methods to Craft a Human-Centered Legal System' (2020) 36 Design Issues 3; Sanna Niinikoski and Nina Toivonen, 'Legal Design in Education: Ways of Teaching and the Role of Different Disciplines in Building Legal Design Competence' in Marcelo Corrales Compagnucci and others, *Legal Design: Integrating Business, Design and Legal Thinking with Technology* (Edward Elgar Publishing 2021).

[5] For the purpose of this article, we start from the assumption that at least one of the purposes of law school is to equip students with the professional skills necessary to be a lawyer. We acknowledge,

implications for legal education more broadly, arguing that our case study offers lessons that extend beyond legal design to legal education generally.

Case Study - The Tech4Justice Lab: A Five-Year Case Study

This Case Study has two aims: First, to identify the types of learning that law schools need to facilitate when offering courses in 'legal design' (noting that the term 'facilitating learning' is used deliberately, to distinguish it from 'teaching'); and second, to illustrate a potential model for legal design teaching that can be quickly and easily adopted and scaled up as the demand for legal design instruction increases at universities in Australia and around the world. We hope our insights will be useful to anyone considering how they might incorporate aspects of legal design into their teaching, even on a small scale.

The Problem: Australia's Complaints Maze

Tech4Justice is a five-year collaboration between the Macquarie University Law School and its industry partner, the National Justice Project (NJP), a not-for-profit law firm whose mission is to fight injustice and take strategic legal action to create a fair and equitable society free from discrimination. As part of this mission, the NJP identified that many people have problems that cannot be easily or cost-effectively resolved through the courts or tribunals. This makes access to justice often difficult and beyond people's financial reach. NJP realised that there is an effective, yet underused, alternative pathway to obtain justice: to make an official complaint to one of the many complaint bodies.

The challenge, however, is the complex maze of over 300 different complaint pathways in Australia's Federal and State/Territories jurisdictions – covering everything from discrimination through to consumer and medical complaints.

This confusing environment creates a level of complexity that is hard to manage because of two systemic barriers. First, individuals require information to evaluate whether their concern could form the basis of a valid complaint over which a complaint body has jurisdiction. Second, people need to know how to make their complaints – for many this can be daunting, especially if they are socio-economically or linguistically disadvantaged. To tackle this conundrum, the NJP teamed up with the Macquarie University Law school in 2020 and created the Tech4Justice Lab as part of a wider project[6] to make the complaints maze easier to navigate.

The Design Solution: Student-Led Tech4Justice

The Tech4Justice Lab is offered as a Professional and Community Engagement (PACE) unit at Macquarie Law School. In addition to NJP, it operates in partnership with law firm K&L Gates and legal tech firm Josef, and has received support from the Australian Human Rights

however, that this is not a universal view – for a discussion of the alternative view that law schools should focus on law 'as an academic discipline with its own intrinsic value', see Daniel Goldsworthy, 'The Future of Legal Education in the 21st Century' (2020) 41 Adelaide Law Review 243, 245.

[6] The project also includes Hear Me Out – a free online AI-powered Complaints Platform that helps users identify the complaints bodies that are suitable for their specific circumstances – a complaints clinic and outreach, and systemic advocacy. Some parallels can be drawn with the racism reporting tool discussed in Andy Unger and Lucia Otoyo, 'Making a Racism Reporting Tool: A Legal Design Case Study' in Amanda Perry-Kessaris and Emily Allbon (eds), *Design in Legal Education* (Routledge 2023) 110. In that case, student volunteers were recruited, outside of academic requirements, to build on an idea that grew out of a long term partnership between London Southbank University and industry partner The Monitoring Group.

Commission and the NSW government Access to Justice Innovation Fund. The project aims to advance individual access to justice and drive systematic change by developing technological and AI tools to triage and guide people to make complaints to the correct organisation.

The Lab is student-led and structured along the lines of a tech start-up, as shown in the diagram below. The diagram does not represent a hierarchy in the traditional sense but starts at the top with the most 'static' element – the National Justice Project and its partners – to the bottom, with groups of students that move on each semester.

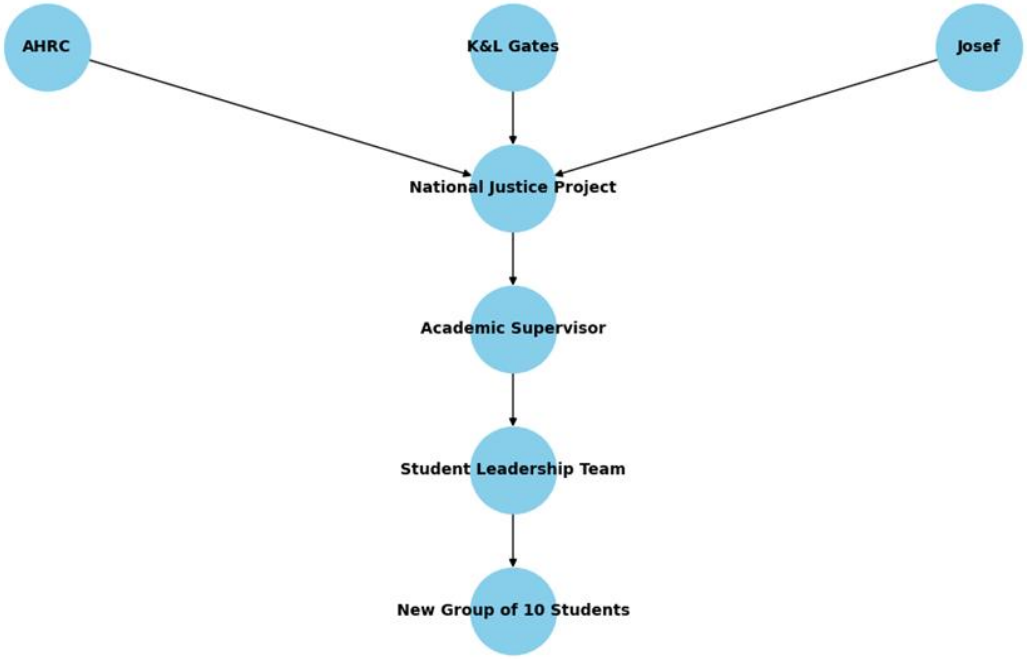

Fig 1 – Tech4Justice structure.

- **AHRC, K&L Gates, Josef**: External contributors providing input and support to the National Justice Project.
- **National Justice Project**: The overarching body coordinating the initiative.
- **Academic Supervisor**: A constant figure who oversees the unit each semester.
- **Student Leadership Team**: Returning students who provide continuity and mentorship.
- **New Group of Ten Students**: A fresh cohort each semester doing the core work.

Every semester, a new group of about ten to 12 law students (mostly undergraduate and some Juris Doctor students) take over the Lab's work. Guidance and continuity is provided by a select group of students from the previous semester who stay on as project supervisors, appointed to leadership positions including Chief Executive Officer, Chief Technology Officer, and Chief Experience Officer. This 'Student Leadership Team' ensures continuity and handover across semesters. Student teams meet for eight hours per week – one day a week from 10:00 to 16:00 – over 12 weeks, to conduct the project work. Each semester, an academic supervisor provided by the Law School oversees the work, acting as a bridge between students and the NJP 'client'. NJP team members visit the Lab to discuss the history of the project and the outcomes of the students' work.

Legal design thinking was embedded from the Lab's outset. In the ideation stage, student teams worked closely with NJP to co-design the project's overall strategy and implementation. The Lab commenced in 2020, after students undertook initial research to map out the broad legal complaints landscape and process. They envisaged creating a standard complaints chatbot and produced a standard complaint template for various complaint pathways across a range of areas and jurisdictions for multiple avenues for administrative and social justice.

However, through a process of reflection, the students identified that the various complaint areas were so diverse and complex that a standard complaint letter would be possible but of marginal added value. In consultation with the NJP and the Australian Human Rights Commission, therefore, students decided to initially focus on a dedicated complaint letter for discrimination complaints, which were considered the most complicated.[7] This work would then be scaled up to other complaint areas.

Following the ideation stage, the Lab's primary work has focused on creating conversational chatbots that automate the complaint writing process in discrimination cases, using the no-code chatbot-building Josef software platform. The students designed their work to result in two key outcomes:

1. Chatbots ask a series of questions in plain English which guide people through the process. They collect the necessary information to make the complaints as complete and comprehensive as possible (and which will make potential court proceedings smoother, faster and fairer should the complaint be litigated). [8]

2. The translation of the information gathered by the bots into a 'legally relevant' complaint letter – i.e. one that includes all the legally required information for a valid complaint should the complaint proceed to litigation. The answers to questions also help determine to which jurisdiction and complaint body the complaint would be best directed.[9]

Every semester, the students evaluate the work that they have completed and plan for the next semester. Although the broad aims have remained the same, students have found that the work

[7] The legal landscape for discrimination complaints in Australia is highly complex. In the Commonwealth system alone, there are five relevant Federal Acts: the Race Discrimination Act 1975 (Cth), the Sex Discrimination Act 1984 (Cth), the Disability Discrimination Act 1992 (Cth), and the Age Discrimination Act 2004 (Cth). The Australian Federal government has committed to establishing a Religious Discrimination Act, but this has not yet been achieved. The four existing pieces of legislation are encapsulated by provisions in the Australian Human Rights Commission Act 1986 (Cth) ('AHRC Act') which outlines issues such as standing and procedural requirements. On top of this, there are separate legislative frameworks in each of the States and Territories. Most States and Territories have their own anti-discrimination legislation, sometimes supplemented by human rights legislation.

[8] They also help to establish which jurisdiction a complaint might best fall under and collect information that can help identify recurring issues for systemic advocacy. The Lab also consulted with legal partners, K&L Gates, to ensure that by providing the bot we would not be construed as (and liable for) giving legal advice.

[9] It is important to note that all four pieces of Australian Federal discrimination legislation establish a compulsory two-tier complaints system with a formal complaint to the Australian Human Rights Commission (AHRC) being a prerequisite to litigation. One issue, however, is that s 46PO(3) of the AHRC provides that the court can only make a ruling based on the circumstances outlined in the original complaint to the AHRC. While there is some leeway to accommodate the reality that the process is designed to be used by lay persons, the more comprehensive a complaint the better – especially when subordinate legislation matters (such as the Standards under the Disability Discrimination Act).

is far from simple, with the mapping process taking far longer than originally envisaged.[10] To give an idea of the complexity, the disability discrimination bot alone comprises 268 messages (or questions) and many more rules to process the user responses. How many of these messages a bot user will encounter in the 20 minutes or so it takes to run through the bot depends on several variables, including location, whether the user is making a complaint for themselves or someone else, and whether adjustments (as required by legislation) were made or would have been needed. The bot is also designed to pick up whether reference to the Disability Standards[11] would make the complaint stronger.

Student insights from lived experience, user testing,[12] and reflection have resulted in several different iterations of the bots. For example, the students realised early on that it would give the complaint letter added value if it was possible to refer to the various relevant parts of the legislation, and they made changes to the bots to enable this. This was significant extra work but gave the complaint letter added rigour and gravitas. This is just one example of where students have identified a need and re-designed the project outcomes to meet it.[13]

While completion and scaling of the bots remains the goal, the slower-than-anticipated progress towards achieving it has not detracted from the educational value to the students who have participated in the Lab; they are amongst the first in Australia to have been explicitly taught legal design and to have been given the opportunity to put that learning into practice in a project with real-world impact.

Three Notable Features of the Tech4Justice Lab

The advantages of clinical legal education are well explored. As early as the 1980s, Bloch made its case as innovative methodology, with the founders and initial funders possessing an underlying social and political vision alongside a skills agenda.[14] This created an opening for clinicians and students to engage in innovative social justice work at law schools.[15] Clinical methods are now largely accepted techniques for teaching law.[16] Cantatore argues this is a particularly valuable model when seeking to incorporate education on legal tech into law school curriculums.[17]

[10] Given the complexity of the project, it took five years to develop the disability discrimination chat bot to cover both the Federal and NSW jurisdictions. Work on a race discrimination (Federal and NSW) bot is nearing completion, and a sex discrimination bot (Federal only) is making good progress.
[11] Section 31 of the Disability Discrimination Act 1992 (Cth) allows for the creation of Standards. Currently, three such Standards exist in the areas of Public Transport, Education and Access to Premises.
[12] The disability discrimination bot was used by the Physical Disability Council of NSW in a campaign. Experienced activist members with different disabilities used the bot while being observed by the students in order to identify unclear messages or language in the bot.
[13] For example, when adding different jurisdictions, they have needed to grapple with different legislative definitions, areas of focus, and complaint bodies.
[14] Stephen Wizner, 'Beyond Skills Training' (2001) 7 Clinical Law Review 327.
[15] Sameer M Ashar, 'Deep Critique and Democratic Lawyering in Clinical Practice' (2016) 104 California Law Review 193, 195.
[16] Gordon Gee and Donald Jackson, 'Bridging the Gap: Legal Education and Lawyer Competency' (1977) 695 Brigham Young University Law Rev 881.
[17] Francina Cantatore, 'New Frontiers in Clinical Legal Education: Harnessing Technology to Prepare Students for Practice and Facilitate Access to Justice' (2019) 5 Australian Journal of Clinical Education 19.

Lab models represent an evolution from clinical education that better serve legal design pedagogy. While clinical education offerings described as 'Labs' are not uncommon,[18] legal design labs must consist of design thinking as well as legal problem solving – including acting as an innovator and strategist – analysing current services, identifying opportunities and testing new solutions. [19] As Sievert and others describe, legal design has distinct 'overlapping pedagogical methods that connect design and law', providing 'a collaborative zone for interdisciplinary research and design'.[20] This aligns with the 'Learning by Developing' approach described by Niinikoski and Toivonen.[21]

Tech4Justice brings together three key features that, in combination, offer a distinctive contribution to legal design pedagogy. While we do not claim these features are entirely unique, their integration within our initiative appears to make a meaningful impact. These features are:

1. a sustained focus on one single problem,
2. a mixed teaching model, and
3. the student-led nature of the Lab.

Sustained Focus on Single Problem

There are, of course, other legal tech labs operating around the world. Not all of these are 'legal design' clinics, however. Some clinics might better be described as social justice clinics, or legal technology and innovation clinics.[22] Tech4Justice, however, is a legal design clinic, in that it follows a legal design methodology, incorporating a full life cycle of ideation, creation, testing, reflection and iteration. This is possible due to the fact that Tech4Justice focuses on a single project over a sustained period of time, spanning a period of five years and counting. While it may be easier to run one-off events such as 'hackathons', this can result in products being designed but not implemented or maintained because legal technology solutions need to be refined over time. In contrast, as a long running initiative, Tech4Justice can provide the necessary ongoing updates, and work with partners to iterate, optimise and maintain products over time. Where other labs may need to jump from project to project and method to method, the sustained engagement with Australia's discrimination complaints system has created opportunities for deep iteration and genuine impact that shorter projects cannot generally achieve. Students don't just learn about legal design principles in abstract – they experience the full cycle of design, implementation, testing, refinement and maintenance that characterises

[18] 'Entrepreneurship and Innovation Law Lab' (*RETEL*) <https://www.retel.unito.it/programmeactivities/eill> accessed 24 June 2025.
[19] Margaret Hagan and Kürtac Özenç, 'The Stanford Legal Design Lab' in Miso Kim, Jules Sievert and Dan Jackson, *Legal Design: Dignifying People in Legal Systems* (Cambridge University Press 2024).
[20] Jules Sievert, Miso Kim and Dan Jackson, 'Teaching the Legal Inventors of the Future' in Miso Kim, Dan Jackson and Jules Sievert (eds), *Legal Design: Dignifying People in Legal Systems* (Cambridge University Press 2024). Hews, McNamara and Nay argue that the collaboration required in legal design can offer an antidote to the 'culture of *hyper-individualism* where students are pitched against each other in a highly competitive environment that is largely fixated upon individual ability and merit', which stifles innovation and creativity. Rachel Hews, Judith McNamara and Zoe Nay, 'Law and Design Thinking: Preparing Graduates for the Future of Legal Work' (2022) 47 Alternative Law Journal 118-123.
[21] Niinikoski and Toivonen (n 4) 236.
[22] In the EU, see Cristina Poncibò, 'Beyond Dichotomies: Integrating Social Aims and Market Considerations in EU Legal Clinics' [2023] Roma The Law Review 85; In the USA, see Cantatore (n 17); In the UK, see Francine Ryan, 'Race against the Machine? Incorporating Legal Tech into Legal Education' (2021) 55 Law Teacher 392; In India and the USA, see K Rajashree, 'Dissecting the Dichotomy of Skill and Social Justice Theory of Law School Legal Aid Clinics in the USA and India: A Re-Look of the Past and the Present' (2021) 8 Asian Journal of Legal Education 79.

real-world legal design work. We have observed three key advantages to this approach for our students.

First, it enables the students to tackle complex issues. As noted above, the legal landscape for discrimination claims in Australia is highly complex. In the Commonwealth system alone, five Federal Acts are relevant.[23] The four existing pieces of anti-discrimination legislation are supplemented by provisions in the Australian Human Rights Commission Act 1986 (Cth) ('AHRC Act'), which outlines issues such as standing and procedural requirements. On top of this, there are separate legislative frameworks in each of the States and Territories. A single-semester project could barely scratch the surface of this complexity and could not hope to achieve real-world impact. The long running nature of the project, however, means each cohort of students can make a considerable contribution to the aspect of the project they focus on in that semester.

For example, the students tackled the Federal disability discrimination bot during the first semester; then focused on translating this bot into a complaint letter during the second semester; before moving on to integrate the NSW disability discrimination bot in the next semester, and so forth. In semesters where we have had larger student cohorts, the students divided into sub-groups, each tackling separate but connected aspects of the task. Although there is inevitably some overlap, we aim to give students a sense of ownership and (as far as possible) completion over a discrete section of the project, while still contributing to the long-term, more complex, whole.

The second key advantage is that the long-running nature of the project means we can give students experience of each stage of the design thinking process. One of the key aspects of design thinking is that it is associated with structured design methodologies. A common approach is the following five-step process:

1. Empathise – observe and engage to identify the problem
2. Define – use insights gained to generate ideas for solving the problem
3. Ideate – create a range of design alternatives
4. Prototype – create something tangible to test your idea
5. Test – get feedback and learn about the user.[24]

The long-term nature of the project has enabled students to cycle through each of the stages – and in some cases to refine, test, and refine again. This has allowed deeper engagement with all aspects of the design process – including the critically important step of seeking and responding to feedback, which is more difficult to achieve meaningfully in shorter term projects.

Third, the long running nature of the project allowed students to see the genuine, real-world social impact their work has. In common with Stanford Legal Design Lab's, the Lab has the 'luxury' of being situated at a university, which allows it to take a long-term view and work with industry partners who are themselves committed to building long term impactful relationships, rather than to perform 'innovation theater'. [25] Indeed, there can be no argument that

[23] The Race Discrimination Act 1975 (Cth) ('RDA'), the Sex Discrimination Act 1984 (Cth) ('SDA'), the Disability Discrimination Act 1992 (Cth) ('DDA'), and the Age Discrimination Act 2004 (Cth) ('ADA'). The Australian Federal government has committed to establishing a Religious Discrimination Act, but this has not yet been achieved.
[24] George Kembel, 'Awakening Creativity' (Chautauqua Institution, New York, 14 September 2009).
[25] Hagan and Özenç (n 19).

Tech4Justice constitutes 'innovation theatre'. The disability discrimination bot has been piloted and the user experience assessed in a real-life campaign by the Physical Disability Council of NSW (PDCN), leading to changes in discriminatory practices by a large event ticketing company.[26] Students also contributed to law reform in NSW when they identified a legislative anomaly that they raised with Anti-Discrimination NSW. Some months later, Anti-Discrimination NSW incorporated their concerns into the NSW Anti-Discrimination Act Review.[27]

Mixed Teaching Model: Academic, Industry, and Peer Teaching

While the focus of the Lab is on hands-on 'learning by designing', there is a need – discussed further below – for some more explicit teaching of specific knowledge and skills. Hews, Beligatamulla and McNamara note that the traditional approach to legal education is based on the Socratic method, where students respond to questions on pre-assigned readings.[28] The Tech4Justice Lab moves away from this model for two key reasons.

First, law firms increasingly require a more sophisticated approach from graduates – one that combines legal skills with 'human and emotional' approaches to complex legal problems.[29] In other words, they require the 'sophisticated generalists' that Niinikoski and Toivonen describe – graduates who can work in interdisciplinary and collaborative contexts to 'apply any form of knowledge to discover new solutions to the challenges we face today'.[30] Traditional teaching is not well-placed to teach this range of knowledge and skills required.

The second is more practical. We were constrained by the format of the PACE unit, which is consistent across the clinics offered by the law school – although the students have 80 hours to work on a project, academic 'teaching' time is limited to four tutorial hours and a two-hour lecture. This is plainly not enough time in which to conduct in-depth teaching in relation to discrimination law, legal design and legal technology, and so we had to take a creative approach, comprised of five key elements:

1. **Traditional lecture and tutorial format:** We begin each semester with four teacher-led tutorials, in which key principles of discrimination law and legal design are taught via presentations. This includes a guest lecture from the Australian Human Rights Commission outlining the complexities of the legal landscape.

[26] Laetitia Thompson, 'Ticketek Enhances Accessibility with New Online Booking Features.' (*Centre For Accessibility Australia*, 28 November 2023) <https://www.accessibility.org.au/ticketek-enhances-accessibility-with-new-online-booking-features/> accessed 11 September 2025; Justice and Equity Centre (JEC), 'Winning Change on Digital Disability Discrimination – Justice and Equity Centre' <https://jec.org.au/impact/our-record/winning-change-on-digital-disability-discrimination/> accessed 11 September 2025.

[27] Anti-Discrimination NSW, *Submission to the NSW Law Reform Commission, Anti-Discrimination Act Review* (Anti-Discrimination NSW, 2013 October) 23.

[28] Rachel Hews, Gnanaharsha Beligatamulla and Judith McNamara, 'Creative Confidence and Thinking Skills for Lawyers: Making Sense of Design Thinking Pedagogy in Legal Education' (2023) 49 Thinking Skills and Creativity 1, 2. See also Daniel Goldsworthy (n 5), 246.

[29] Hews, Beligatamulla and McNamara (n 28).

[30] Niinikoski and Toivonen (n 4) 237. Antonio Coronado goes further than this: not only is legal design teaching necessary to equip lawyers of the future, but it also offers the opportunity to 'resist and repair' concepts of what law and lawyers should be, and what law schools should teach – with a focus on resisting harm and reaffirming dignity. See Antonio Coronado, 'Repair and Resistance: Law Students as Leaders of the Legal Design Movement' in Miso Kim, Dan Jackson and Jules Sievert (eds), *Legal Design: Dignifying People in Legal Systems* (Cambridge University Press 2024) 383 –399.

2. **Legal design workbook with links to reading and resources:** To supplement tutorials, the academic supervisor created an interactive workbook with legal design resources and exercises to deepen student knowledge of legal design principles and associated skills. This serves as a 'guide' for students to conceptualise their own legal design project as part of the assessment for the unit.

3. **Legislation 'mapping' exercise:** While tutorials give an overview of the legislative landscape, deeper learning about the legislation is accomplished by having students work in groups to map the legislation. Through this process they identify key legal questions and issues that complaints would need to address – including how Federal and State legislation interact and differ.

4. **Peer teaching from the student leadership team:** Teaching how to use the no code bot-building software is entrusted to the student leadership team, since their hands-on experience using the software meant they are better able to teach incoming students about its functionality. Student leaders are also present during each session of the Lab and able to provide on-the-spot coaching and problem-solving support. Only when an insurmountable problem arises – either with the software, or with a legal issue – is this escalated to the academic supervisor for advice.

5. **Regular Interaction with industry partners:** In addition to the presentation of the project by NJP at the outset, students present their work to NJP at the end of Semester. This presentation serves two purposes – it updates the NJP on the progress of the project, and it enables NJP to give students for feedback on their work based on their deep knowledge of the legal landscape. Students can also contact NJP via student leaders throughout the Semester if there are any questions.

The multi-pronged teaching approach demonstrates how deep learning can occur even where there is limited time for formal teaching. Students consistently make remarkable progress not just in building bots, but in developing deep knowledge of discrimination law and the real-world intricacies of statutory interpretation. Several students commented that they learned more about these issues from the practical learning in the course than in any other subject in their degree. Indeed, this has inspired us as a Law School to begin research into whether designing chatbots might be incorporated into teaching and assessment across other subjects, to deepen learning and improve assessment. In addition, many start the course having had no exposure to legal technology or programming and come out having made substantial contributions to building the bot. This aspect of the project is explored more deeply below, when discussing how the Lab embedded the knowledge and skills identified in the suggested learning framework.

Student Leadership and Peer Teaching

The Lab goes beyond 'a spirit of the mutuality between teachers and students as joint inquirers'[31] – it puts the students themselves in charge. Together with the Student Leadership Team, each cohort must take ownership and drive the project forward, setting semester goals, creating work plans, making design improvements and resolving design issues or differences of opinion on design questions. This represents a departure from more traditional clinical models where academic supervisors generally maintain control over project direction and outcomes.

[31] Malcolm Knowles, *Andragogy: An Emerging Technology for Adult Learning* (Routledge 1983) 40.

Given the turnover of student cohorts, the peer-leadership by the Student Leadership Team has been key to success of the project and is imperative to provide continuity and knowledge handover to progress the project each semester.

This model does, however, present challenges, especially in a university context. First, it is dependent on the availability of volunteers to be 'student leaders' after they have undertaken the course themselves. This is particularly challenging since most students undertake their PACE units towards the end of their studies, by which time they have paid work commitments and/or load up their units to finish their degrees – and as we noted above, the Lab is a significant time commitment. The availability of students to undertake this voluntary role introduces an element of uncertainty from semester-to-semester. It is testament to the quality and commitment of our students and the value that they find in the course that we have found volunteers to run the Lab every semester, with some volunteering to run the Lab for two or more semesters.

Since the inception of the Lab we have explored various options to ensure the student leadership team volunteers are appropriately compensated for their work, including though course credits, Dean's awards, and offering internships at NJP. Some of these options – for example, course credit – are no longer available as a matter of university policy, and so this – like the rest of the project – is a work in progress.

The student leaders do benefit from their experience, developing their own innovation and entrepreneurial skills beyond those learned by the students in the Lab generally. Challenges naturally arise in the project, as in any tech-start up, and it is student leaders first who must decide how to tackle them. The student-led format of the unit allows us to place some of the responsibility for addressing tricky issues – such as whether the technology we are using is still the best fit for the project – into the hands of student leaders, working with the student cohort to research the next steps and put forward recommendations.

Knowledge and Skills: A Framework for Teaching Legal Design

We believe our experience running the Tech4Justice Lab has given us insight into the types of knowledge and skills that a successful legal designer is likely to need. A central debate in legal pedagogy revolves around which knowledge and skills law schools should teach to nurture the creation of 'capable leaders and problem solvers'.[32] The quest to keep courses up-to-date is ever-present, and it is common for law schools in Australia to include courses on 'legal innovation'.[33] We need graduates who can 'work effectively with law'[34] – but how should we teach them to do this so that they emerge as competent and confident legal designers?
One of the challenges is that the context and audience for legal design teaching can vary significantly from institution to institution. Some universities (Laurea; NuLawLab) have designed whole Masters programs and graduate certificates in legal design, with core and

[32] William D Henderson, 'A Blueprint for Change' (2013) 40 Pepperdine Law Review 461, 470–478.
[33] See Andrea Perry-Petersen and Michael Lacey, '"Legal Innovation": Education in Australian Law Schools' (Report, 2018). Hews, McNamarra and Nay draw on this report to note that of law schools in Australia, '25 of the 40 institutions offered some form of 'legal innovation' course, whether through undergraduate or postgraduate coursework, a major or minor, an extra-curricular commitment, a student-led group, or an innovation centre (n 20). Dan Jackson does a similar analysis of law and technology and innovation courses in law schools in the United States. Jackson (n 4).
[34] Emily Allbon and Amanda Perry-Kessaris, 'What Can Design Do for Legal Education?' in Emily Allbon and Amanda Perry-Kessaris (eds), *Design in Legal Education* (Routledge 2024).

elective units over a number of years.[35] By contrast, other offerings are micro-credentials for professionals,[36] or single units as part of a wider law degree.[37] While much teaching is within a university context, some is also provided by private sector entities.[38] As a result, the scope of each institution for teaching knowledge and skills will vary. There is likely to be more scope in a two-year Masters' course, for example, to teach complex legal subject matter than in a single legal design elective or unit within a broader course of study. In addition, as Wrigley and Mosely point out, there may be other challenges – such as costs and delays - associated with introducing legal design into university curriculums.[39] Further, the concept may meet resistance from those more comfortable with traditional styles of legal education.[40]

The following section, therefore, does not aim to be prescriptive about the knowledge that must be incorporated into legal design teaching. Rather it draws on existing literature and our experience at the Tech4Justice Lab to suggest some key areas that educators could consider incorporating, to the extent possible in the contexts within which they work. While many of these ideas have been explored in existing literature,[41] we are not aware of any previous work that has systematically identified the knowledge domains and skill sets that legal designers require, nor demonstrated how these can be effectively taught through integrated pedagogical approaches. We aim in this section of the article, therefore, to present the following framework for legal design education, synthesising insights from existing literature with insights gained from five years of the Tech4Justice project.

[35] Niinikoski and Toivonen (n 4); Sievert, Kim and Jackson (n 20) 209. Gabriel Teninbaum describes the approach at Suffolk University Law School, which offers a 'concentration' approach akin to an undergraduate major in legal design. Gabriel Teninbaum, 'The Peril and Promise of Certificates and Degree Programs in Legal Design' in Kim, Jackson, and Sievert (eds), *Legal Design: Dignifying People in Legal Systems* (Cambridge University Press 2024) 378–382.

[36] See, for example, 'Fundamentals of Legal Design' (*Bond University*) <https://bond.edu.au/microcredential/fundamentals-of-legal-design> accessed 24 June 2025.

[37] See, for example, 'Laboratory Seminar in Applied and Critical Legal Design' (*NuLawLab*) <https://www.nulawlab.org/applied-critical-legal-design> accessed 24 June 2025; Sievert, Kim and Jackson (n 20) 209; Jackson (n 4) 86. See also Hews, McNamara and Nay (n 20) 118–123, for a case study of Australia's 'first dedicated design thinking unit in undergraduate law' at Queensland University of Technology.

[38] See, for example, 'Legal Innovation' (*Portable*) <https://portable.com.au/services/legal-innovation> accessed 24 June 2025.

[39] Cara Wrigley and Genevieve Mosely, *Design Thinking Pedagogy: Facilitating Innovation and Impact in Tertiary Education* (Routledge 2023).

[40] April Greenwood and others, 'Dissensus, Resistance, and Ideology: Design Thinking as a Rhetorical Methodology' (2019) 33 Journal of Business and Technical Communication 400.

[41] For example, in Dana Altajem and others, 'A Legal Design Classroom: Reflections on Learning through Legal Education' (2024) 1 Legal Design Journal 1.

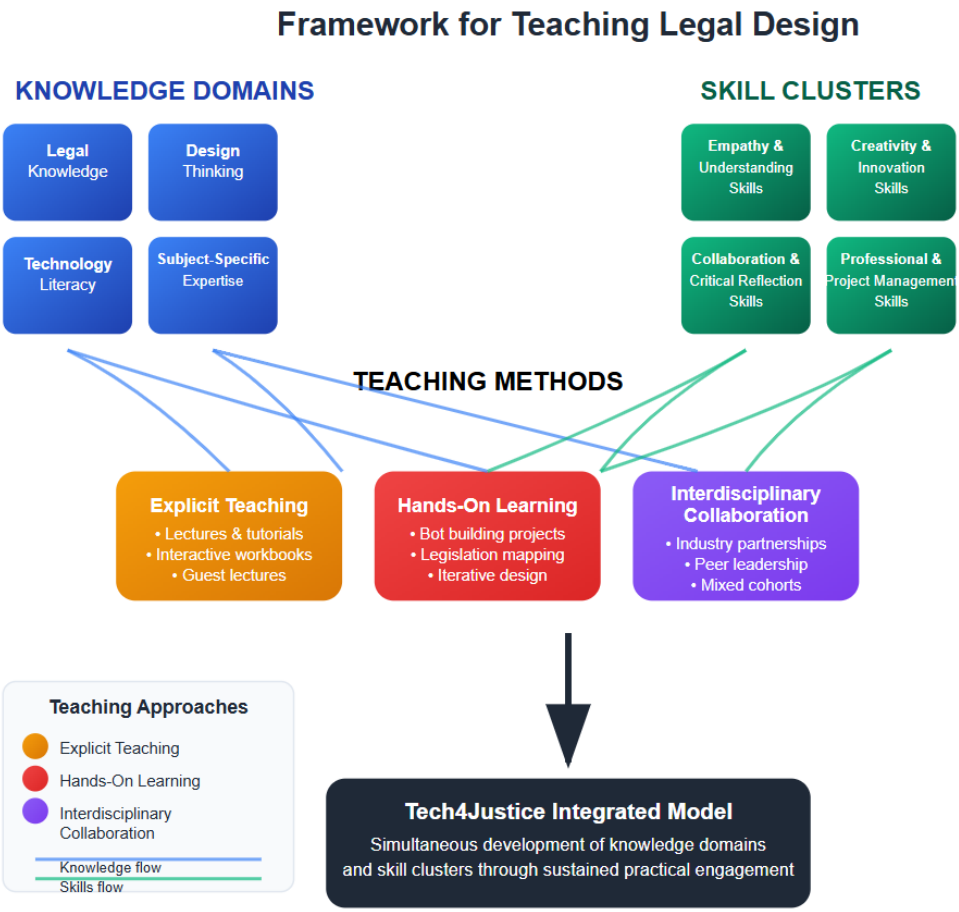

Fig. 2 – Framework for legal design education [42]

Each of these elements, and our approach to teaching them in the Tech4Justice context, is discussed below.

Knowledge Domains Required for Legal Design

Effective legal design work tends to be interdisciplinary, often involving people with no legal education.[43] A key consideration, then, is the extent to which legal knowledge should either be a prerequisite to acceptance on a legal design course or explicitly taught as part of it. Similar questions arise as to whether and to what extent technology and/or design subjects should be taught. These are explored in turn.

Legal Knowledge

A central discussion in the existing literature is whether legal knowledge should be a prerequisite or explicitly taught. Niinikoski and Toivonen argue that 'ideally, a legal designer understands the basic functions of the legal system, is fluent with legal language and legal interpretation, and is able to communicate with legal practitioners.'[44] Hews, Beligatamulla and McNamara add that design thinking provides 'a complementary skillset' but 'is not a substitute'

[42] Produced with assistance from "Claude AI 3(2025)" (<https://claude.com/product/overview>.)
[43] See, for example, Hews, Beligatamulla and McNamara (n 28) 10.
[44] Niinikoski and Toivonen (n 4) 229.

for traditional legal thinking.[45] It is interesting, then, that when designing the legal design Masters' program at Laurea, a decision was taken not to include prior legal knowledge or experience as a pre-requisite for entry onto the program. Instead, students attended introductory lectures on core subjects and subject specific legal electives if required.[46]

This suggests that two types of legal knowledge may be required for effective legal design: First a 'general legal knowledge' about how the legal system of a particular jurisdiction works, how to find the law in legislation and case-law, and how to interpret that law; and second, specific legal knowledge particular to the subject area of specific legal design projects is required. Educators will need to consider, then, whether and to what extent their students will already have this general and subject specific legal knowledge, or whether it will need to be taught.

Students in the Tech4Justice Lab are all in their final year of a law degree. This means that we can assume foundational knowledge about the legal system and statutory interpretation. However, as discrimination law is an elective, most students come to the Lab without the subject-specific legal knowledge the project requires. As discussed above, therefore, we take a multi-pronged approach – key principles of discrimination law are covered in two teacher-led tutorials supplemented by guest lectures from the Australian Human Rights Commission. However, deeper legal learning occurs through the collaborative 'legislation mapping' exercise, where students work in groups to chart legislation and identify key legal questions complaints must address. Through this self-directed process, students consistently develop deep knowledge of discrimination law and statutory interpretation that appears to be as effective as traditional teaching methods for developing subject-specific knowledge. This suggests that structured collaborative discovery can achieve the legal knowledge outcomes that literature identifies as essential, while simultaneously developing the practical application skills that can be more difficult through traditional teaching approaches.

Design Thinking

Hews, Beligatamulla and McNamara point out that of the 56 skills identified by a 2021 McKinsey report into the skills necessary for the future of work, 31 were aligned with design thinking.[47] Consistent with this, we now see job advertisements calling for legal design experience,[48] aligning with students' aspirations to work in the field.[49] Allbon and Perry-Kessaris add that across the world, law firms and in-house legal departments alike are increasingly investing in legal design expertise.[50] In turn, law schools are beginning to recognise that by integrating design thinking into the legal curriculum, they can equip graduates with 'essential human-

[45] Hews, Beligatamulla and McNamara (n 28) 9.
[46] Niinikoski and Toivonen (n 4) 229.
[47] Hews, Beligatamulla and McNamara (n 28) 2. For futher disucssion of the skills likely to be in demand in the future, see Deloitte Insights, 'The Path to Prosperity: Why the Future of Work is Human' (Deloitte, 2019).
[48] Sievert, Kim and Jackson (n 20) 223.
[49] Alexander Smith and Nigel Spencer, 'Do Lawyers Need to Code? A Practitioner Perspective on the "Polytechnic" Future of Legal Education' in Catrina Denvir (ed), *Modernising Legal Education* (Cambridge University Press 2020). See also Niinikoski and Toivonen (n 4) 237.
[50] Allbon and Perry-Kessaris (n 34).

centred skills and mindsets for the future of work'[51] because it offers 'a creative and human-centred approach to addressing complex legal problems.'[52]

While all our Tech4Justice students have legal knowledge it is very rare for them to have design knowledge or experience – the small minority who do experienced this outside of a university setting, for example through their work. We assume, therefore, that most students are starting from scratch with regards to design knowledge.

The way we teach design has evolved over the lifetime of the project. Initially, rather than teaching design thinking as separate theory, design processes were embedded from the Lab's outset and were 'practiced' rather than taught, when early groups of students were involved in the project ideation stage and in refining its focus. As the project progressed, however, the new cohorts of students each semester became further removed from the initial ideation and refinement process. Their focus was on 'making' the chatbots, and as a result they appeared to have lost the sense of design ownership over the whole project – although as discussed above, we strive to ensure they have ownership over individual aspects of it. We wanted to emphasise that design is more than just having a bright idea – that it has the structured stages noted above – Empathise, Define, Ideate, Prototype, Test.

While the later groups were not part of the early stages, they were – and are – nonetheless a key part of the later stages of design process in that they are creating, testing and adjusting the prototype in response to the results of testing. To offer the students the full spectrum of legal design, the academic supervisor therefore began delivering a tutorial on the principles of legal design, talking through the structured methodology and linking it to reflections on the current stage of the project.

Our impression is that students respond very well to this. Our perception was that prior to this tutorial, students were not aware that legal design was 'a thing', let alone a potential career option which they might be well-placed to pursue because of their experience in the Lab. By adding the interactive legal design workbook, we now deepen student knowledge and guide students to conceptualise their own legal design projects.

Alongside this, students continue to learn design thinking through sustained application to the same complex problem over multiple semesters. This sustained engagement allows for genuine iteration and refinement, and thus deeper learning of design thinking and methods, that shorter projects may not be able to achieve.

Technology Literacy

Technological innovation has led to the creation of self-service law products[53] to help people do for themselves tasks that historically would have been performed by lawyers. While early

[51] ibid. Hews, McNamara and Nay (n 20) cite examples of the careers that legal design graduates from QUT have gone on to have: 'graduates include the co-founder of an internationally recognised start-up that has received substantial seed funding, a successful appointment to the Law Design and Practice Group in the Australian Tax Office, a winner of Generation Innovation (for the creation of a legal app concept); and a legal designer tasked with redesigning contracts for a start-up.'

[52] Allbon and Perry-Kessaris (n 34).

[53] See, for example, Draftable Legal, which allows for easy comparison between two versions of legal documents. 'Draftable Legal' (*Draftable*) <https://www.draftable.com/draftable-legal> accessed 24 June 2025. See also Amica, which offers 'DIY' divorce services. It is supported by the Australian government

university-led legal design endeavours may have largely focused on social justice,[54] the application of design thinking to other legal problems has spread rapidly. Tools have been developed across the spectrum of legal issues, from family law services,[55] construction law information,[56] to better contracts[57] and privacy regulation.[58] Thus, the demand for law students with experience designing such tools is bound to increase. Even more 'traditional' law providers are moving towards legal service design.[59] This might be because, as pointed out by the American Bar Association in its 2016 report on the Future of Legal Services, 'the traditional law practice business model constrains innovations that would provide greater access to, and enhance the delivery of, legal services'.[60]

While acknowledging that not all legal design results in technology-based solutions,[61] the importance of technology in law is undoubtedly growing, with several authors emphasising the need for the integration of technology into the legal curriculum.[62] Arguments for technological competence in legal design are even more compelling than in general legal education, as Niinikoski and Toivonen explain:

> Legal design solutions are often created with technology. For this reason a legal designer should have at least a basic knowledge of different contemporary technological possibilities in order to be able to utilize them in cooperation with technical experts, such as software developers.[63]

There are multiple ways of embedding technology teaching into a legal design course. In a university setting it may be possible for law students to take technology electives as part of their overall degree program – or technology students to choose an elective legal tech unit. The Law Tech Clinic at Monash University, for example is structured as Phase One, where students are taught about theory about the intersection of technology and the law; and Phase Two, where

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and describes itself as the 'simple, low cost, smart way to separate or divorce online': 'Amica' (*Amica*) <https://amica.gov.au/> accessed 24 June 2025.

[54] See the Stanford Legal Design Lab for some of their early projects: 'Legal Design Lab' (*Stanford Law School*) <https://law.stanford.edu/legal-design-lab/> accessed 24 June 2025.

[55] 'Amica' (*Amica*) <https://amica.gov.au/> accessed 24 June 2025; 'What we do' (*Wallumatta Legal*) <https://wallumattalegal.org.au/what-we-do/> accessed 24 June 2025.

[56] 'How it works' (*Tools*) <https://buildingtools.co/#how-it-work> accessed 24 June 2025.

[57] Sarah Fox, 'How to Write Simple and Effective Small Works Contracts in 500 Words' (500 Words Ltd 2020). See also Legal Design Podcast, 'Simplifying Contracts into 500 Words' (5 February 2024) <https://podcasts.apple.com/us/podcast/legal-design-podcast/id1556020090> accessed 24 June 2025.

[58] Susanna Barth, Dan Ionita and Pieter Hartel, 'Understanding Online Privacy – A Systematic Review of Privacy Visualizations and Privacy by Design Guidelines' (2022) 55 ACM Computer Survey 1. See also Peter Schaar, 'Privacy by Design' (2010) 3 Identity in the Information Society 267. Niloufer Selvadurai builds on this to discuss compliance by design in Niloufer Selvadurai, 'Advancing Lawful AI through Compliance by Design: A Technical Solution to a Legal Problem' (2025) 32 Computer and Telecommunications Law Review 1.

[59] '10 Predictions: The Legal Department of the Future' (*KPMG*) <https://kpmg.com/xx/en/our-insights/ai-and-technology/legal-department-of-the-future.html> accessed 24 June 2025.

[60] American Bar Association, 'Report on the Future of Legal Services in the United States' (Commission on the Future of Legal Services 2016) 16.

[61] Indeed, sometimes the best legal design may *not* to rely on technological solutions.

[62] See Cantatore (n 17); Jeff Giddings and Jacqueline Weinberg, 'Experiential Legal Education: Stepping Back to See the Future' in Catrina Denvir (ed), *Modernising Legal Education* (Cambridge University Press 2020); Jacqueline Weinberg and Jeffrey Giddings, 'Innovative Opportunities in Technology and the Law: The Virtual Legal Clinic' in Ann Thanaraj and Kris Gledhill (eds), *Teaching Legal Education in the Digital Age* (Routledge 2022).

[63] Niinikoski and Toivonen (n 4) 231.

students build their legal technology solutions to address real legal problems'.[64] Another option, building on the work of Andy Ungar at the London Southbank University, is to run combined clinics, with students from different faculties learning necessary knowledge and skills from each other, rather than through explicit teaching.[65]

We are currently exploring this at as an option for the Tech4Justice Lab. Given time and expertise constraints, the Lab uses a 'no-code' software platform developed by legal tech company Josef. This allows our law students – most of whom enter the project with no prior legal technology knowledge – to build functional bots without coding or computer science skills. We chose this approach because when we first began the Lab, AI-powered solutions were not an option and teaching coding was unrealistic – although the project is long-running, each group of students is only with us for one semester, plainly not enough time to learn how to code. No-code software, which could be mastered by students who in turn became leaders, and passed on this knowledge, was an excellent solution to the 'technology knowledge' gap.

However, we now risk facing 'technological leapfrogging' as generative AI advances may make decision-tree formats outdated. Indeed, our most recent students have been tasked with exploring alternative options. While they flagged alternative AI tools and platforms as opportunities, the students identified these come with inherent risks – such as privacy, inaccuracy, and bias – that law students working alone may not be best placed to identify or address. As technology evolves, we must think more deeply about how to ensure law students can develop technology literacy in a context where there is limited time to devote to explicit teaching. Collaborative clinics with students from other disciplines may well be the answer, and as we discuss further below, this is something the Tech4Justice students are actively exploring.

Subject Knowledge: Interdisciplinary Expertise, Lived Experience and Industry Partners

It can be argued that legal, design and technological knowledge alone is of limited benefit without this fourth domain: lived experience and interdisciplinary expertise can be seen as a 'bridge' between the abstract legal conceptualisation of a problem and real-world implementation of solutions. Embedding lived experience, interdisciplinary perspectives, and industry expertise helps to ensure that legal design solutions are both theoretically sound and practically effective. For this reason, legal design is inherently interdisciplinary. Insights from social and behavioural sciences, psychology,[66] engineering[67] and business[68], as well as lived experience, are all valuable depending on the nature of the project.

The Tech4Justice Lab incorporates lived experience into our teaching in several ways. First, the NJP share their direct knowledge of community experiences through discussions with students.

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[64] ibid 50; 'Law Tech Clinic' (BotL) <https://www.botltech.com.au/law-tech-clinics> accessed 24 June 2025. This Clinic is probably the closest to Tech4Justice in its aims and assessment model but differs in a few ways. Students at Monash have tackled issues in commercial law, family law, cyber insurance, aged care services and employment law, while Tech4Justice is committed to a single, long running social justice project and is entirely student led (see below).

[65] Lucia Otoyo and others, 'Legal Education Meets Computer Science: An Interdisciplinary Approach to Teaching LawTech' in Ann Thanaraj and Kris Gledhill (eds), *Teaching Legal Education in the Digital Age: Pedagogical Practices to Digitally Empower Law Graduates* (Routledge 2022).

[66] Niinikoski and Toivonen (n 4) 231.

[67] Hagan and Özenç (n 19).

[68] See generally Marcelo Corrales Compagnucci and others (eds), *Legal Design: Integrating Business, Design and Legal Thinking with Technology* (Edward Elgar Publishing 2021).

We also involved people with lived experience in the initial project ideation and testing phases. While we do not ask students to share their personal experiences, many bring their own experiences of discrimination.[69] We also test our design solutions – such as the disability discrimination bot described earlier – with people who have relevant lived experience. We continue to explore meaningful integration of lived experience into the project as a work in progress.

Interdisciplinary expertise is also important for designing effective solutions. As Jackson and others highlight, broader collaborator range increases 'potential for significant breakthrough on sticky problems'.[70] Tech4Justice embeds interdisciplinary expertise through multiple industry partnerships. As discussed above, the students in the Lab work closely with NJP, law firm K&L Gates, legal tech firm Josef, and the Australian Human Rights Commission.

The Lab has also benefited from the diverse academic backgrounds of enrolled students, many of whom are pursuing double degrees or bring expertise in psychology, computer science, and marketing. This has introduced perspectives and capabilities to NJP that might otherwise have been unavailable, though this interdisciplinary input relies more on fortunate student selection than intentional design. Building on this observation, students have suggested partnering with the school of computing to bring in students with technical expertise, enabling exploration of broader technological options without requiring extensive computer science instruction within the legal curriculum. This suggestion mirrors the approach of NuLawLab's 'Master Class in Legal Design', which pairs law students with graduate students from 'a design discipline such as architecture, experience design, or game design to reimagine aspects of our legal system for the age of self-representation'.[71] We are currently exploring this collaborative model as the next iteration of the Lab.

Core Skills Required for Legal Design

Legal education has traditionally focused on knowledge and reasoning.[72] One of the striking differences between legal design and other legal disciplines is that it places as much emphasis on the development of particular skills as knowledge.[73] Although the literature discusses a broad range of useful skills, these can be distilled into four broad themes, elements of which may be incorporated into even the smallest legal design teaching endeavour. These themes are empathy and understanding; creativity and innovation; critique, collaboration and reflective thinking; and business and project skills. There is a striking overlap between these skills and the skills identified by Daniel Goldsworthy as being 'the province of human beings' in a world being increasingly shaped by automation and artificial intelligence.[74] As with the 'knowledge' domains, Tech4Justice develops these skills through a combination of focused teaching and hands-on experience. They are discussed in more depth in the following sections.

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[69] One of the authors, Heike Fabig, brought lived experience of disability discrimination complaints (from initial complaint all the way to litigation) to the Lab. She also organised the contact with the Physical Disability Council of NSW for the bot testing.

[70] Dan Jackson, Jules Sievert and Miso Kim, 'Designers, Lawyers, and Students: A Decade of NuLawLab Experience' in Miso Kim, Dan Jackson and Jules Sievert (eds), *Legal Design: Dignifying People in Legal Systems* (Cambridge University Press 2024).

[71] 'Pedagogy' (*NuLawLab*) <https://www.nulawlab.org/pedagogy> accessed 25 June 2025.

[72] Hews, Beligatamulla and McNamara (n 28), citing Caroline Maughan and Paul Maharg, *Affect and Legal Education: Emotion in Learning and Teaching the Law* (Routledge 2011) 1.

[73] ibid 10.

[74] Goldsworthy (n 5) 250.

Empathy and Understanding

Legal design literature identifies empathy, research, and visualisation as core skills for a legal designer, encompassing the ability to put yourself in someone else's shoes and visualise how the world may be improved from others' perspectives.[75] Importantly, empathy is not only a feeling – it is a tool with the potential to uncover hidden emotions and experiences relating to legal systems. For example, the use of an empathy map has the potential to reveal a range of emotions commonly experienced by *pro se* litigants throughout their legal journey, including anxiety, frustration, and determination.[76] This, in turn, is closely linked to visualisation, which is said to be 'one of the basic skills of a legal designer'.[77]

In the Tech4Justice Lab, direct and regular engagement with community and industry partners helps students understand, empathise with and visualise – for example, through case studies of how complaints are made 'in real life' – the barriers that complainants face. This has helped them understand, for example, the need to translate complex law into accessible plain English. Students bring their own lived experiences to the Lab and have sometimes discussed their experiences, which has helped the group empathise with the real-life impact of the systemic barriers to complaint making.

While this creates a foundation for the authentic development of empathy, we also wanted to be explicit in teaching students that empathy is essential to developing workable solutions to problems – in other words, engaging with real problems and experiences rather than assumptions. The legal design workbook requires students think about the perspectives of others, and to engage in 'active listening' and information gathering, to gain as much information and understanding as possible, before 'jumping in' to create a solution. Once they have done this exercise, they are asked to reflect on their new understanding, and to define 'what success would look like' in terms of creating solutions from the perspective of the users they are focusing on. This then becomes a useful checklist for later stages of the project – after they have brainstormed possible solutions, they come back to the perspective of the users and their definition of success to guide them in deciding which of their ideas to progress to a 'prototype'.

[75] Hews, Beligatamulla and McNamara (n 28) 9. See also Alexander C Gavis, 'Teaching Empathy' (2024) 1 *Legal Design Journal* (Studio, 2024 July).
[76] Sievert, Kim and Jackson (n 20) 210.
[77] Niinikoski and Toivonen (n 4) 225–226. Niinikoski and Toivonen also posit a 'skills framework' in this chapter. This article draws on that framework but takes a different approach to integrating legal knowledge.

To be adept at legal design, you need to become adept at uncovering and understanding the 'user experience'. What to current users of the system experience? What is their role and how do they behave? Why? What works well for them? What is a barrier, or a source of frustration? Active listening is essential.

TASK

Find some first-hand descriptions from the 'users' that you are trying to help.

What is being said?	
What is NOT being said?	
What might you need more info on?	
Do users have same experience, or different? Why?	
Are any important voices/perspectives missing? Are any overly dominant?	

Fig. 3 – Example of workbook activity

Creativity and Innovation

Hews, Beligatamulla and McNamara found that 'educators sensed design thinking pedagogies developing empathic, creative, and innovative thinking skills as an alternative to the traditional institutionalised way of producing lawyers',[78] but that many law students do not view themselves as creative. [79] However, 'design thinking, innovation, creativity and an ability to think outside the box are also skills that can be learned'.[80]

One of our aims in the Tech4Justice Lab is to create a 'safe to fail' environment in which students can develop their creative confidence.[81] Law students commonly hold themselves to very high standards and can tend to perfectionism. This, in turn, can stifle creativity and innovation. The student-led design of the Lab is helpful in reversing this tendency and promoting creativity. The academic supervisor is generally present only for the 'tutorial' aspects of the Lab, and the day-to-day work is done in their absence. This has two effects. First, it removes the fear that a 'silly' question, answer, or suggestion may impact the academic supervisor's opinion of the student, and/or their grade in the unit. Second, it removes easy access to the correct 'answers' – forcing students to think for themselves, create and innovate.

[78] Hews, Beligatamulla and McNamara (n 28) 6–7.
[79] ibid.
[80] Niinikoski and Toivonen (n 4) 236. See also R Keith Sawyer, 'Learning for Creativity' in Ronald A Beghetto and James C Kaufman (eds), *Nurturing Creativity in the Classroom* (2nd edn, Cambridge University Press 2017) 265, 268, 270, for the importance of teaching and nurturing creativity.
[81] Hews, Beligatamulla and McNamara (n 28) 7.

One of the academic supervisor's key roles has been supporting students to realise that coming up against problems doesn't mean 'failure' but rather the need to step back, adopt a user-centred approach, and think about how to overcome the issues. 'Failure as feedback' has thus been an ongoing learning tool. This is important in the context of recent research that suggests a fear of failure in law school can 'paralyze students and hinder their learning'.[82]

We have also focused on the critical importance of seeking feedback and responding creatively. Law schools do not always teach this well, with feedback sometimes restricted to comments on exams and essays after the fact, with no obligation on students to consider and incorporate them. This is in marked contrast to receiving feedback in the workplace, where students will be expected to change their work – often very rapidly – in response to feedback from colleagues and clients. In legal design, incorporating feedback is a vital part of the process of working towards a better product or service. This hones students 'analytical skills and facilitat[es] an in-depth evaluation of legal concepts and theories'.[83] The way this works in practice, note Niinikoski and Toivonen, is that

> once the students have come up with a test-worthy idea, they deliver it by trying out different solutions. Finally, when a potential solution is discovered, it is improved by several iteration rounds before being considered as ready.[84]

Responding to feedback on options is particularly important in the context of an ongoing project like Tech4Justice, where the process of offering (and receiving and responding to) feedback is central to quality long-term outcomes.[85] Viewed in this way, feedback appears to become de-coupled from fear of failure and self-criticism, building resilience in students, and increasing their willingness to innovate.[86] A core support to this process is to encourage reflective thinking; when feedback is uncoupled from fear, perfectionism and shame, it can offer the opportunity to pause, reflect, consider and refine.

Like the Tilburg University Access to Justice Technology and Design Lab,[87] we place strong emphasis on reflective practice, with explicit teaching of Kolb's learning cycle to encourage students to reflect on experiences ('reflective observation'), learn from them ('abstract conceptualisation') and put what they have learned into practice ('active experimentation').[88] Indeed, one of the key elements of the assessment for the unit is a reflective report from students on what they have learned across the semester, and how they will put this into practice in their future careers. We supplement this with 'workbook tasks' which require students to practice giving, and receiving, feedback.

[82] Kaci Bishop, 'Framing Failure in the Legal Classroom: Techniques for Encouraging Growth and Resilience' (2018) 70 Arkansas Law Review 959, 961.
[83] ibid.
[84] Niinikoski and Toivonen (n 4) 228.
[85] Sievert, Miso and Jackson (n 20) 217.
[86] Hews, Beligatamulla and McNamara (n 28) 7–8.
[87] Altajem and others (n 41).
[88] David Kolb, *Experiential Learning: Experience as the Source of Learning and Development* (Prentice Hall 1984).

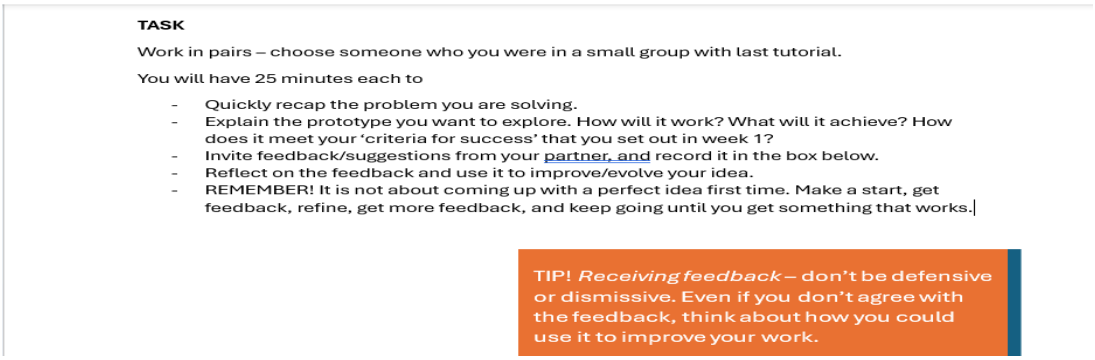

Fig. 4 – Example of workbook activity

Confident communication and Collaboration

Sievert, Kim and Jackson argue that alongside critique and reflection, collaboration is an essential element in both design and legal education.[89] For this reason, beyond collaborating with NJP on the overall project, Tech4Justice requires students to work collaboratively to resolve differences of opinion on design questions, communicate progress, and allocate tasks. Students must decide how to use their combined labour – work as a single group or divide into sub-groups – and ensure consistent standards and approaches. They must determine when they can solve problems themselves and when they need help. To achieve project work, students must work in groups, an experience still unfamiliar to some even in final year law school. They must learn to communicate what they are doing and why, decide how to work together to ensure consistent standards and approaches.

We supplement this with exercises designed to help students think about different kinds of collaborative partners that might help them achieve their aims, and to think about how to convey their ideas effectively. We emphasise that collaboration and communication is just as much about actively listening and taking other perspectives on board as it is about conveying your own thoughts and ideas:

[89] Sievert, Kim and Jackson (n 20) 108–109.

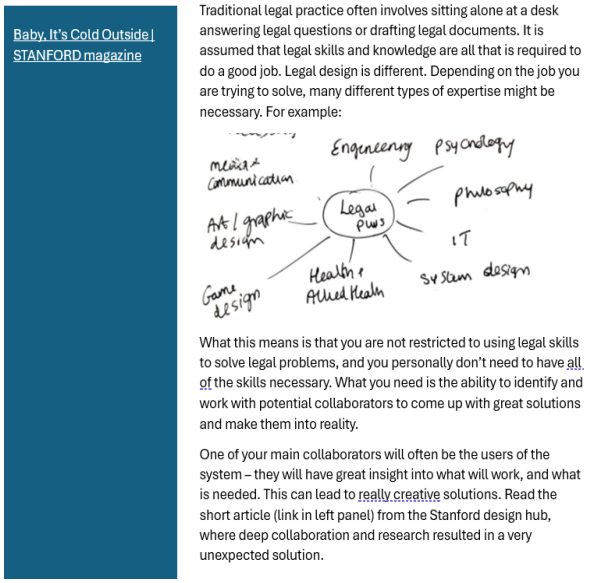

Fig. 5 – Example of workbook activity

Professional and Project Management Skills

The final core group of skills identified in legal design literature can be broadly termed as 'professional and project skills', incorporating project-management, time-management and the ability to attract funding and build effective partnerships. Niinikoski and Toivonen note that:

> Going through a full-length development project and working in a multidisciplinary team with different stakeholders requires leadership and networking skills, as well as project and time management skills. Students also learn pressure tolerance, argumentation and presentation skills, and writing skills.[90]

The Tech4Justice structure as a 'tech start-up' working on a long-term project means that it is well placed to facilitate the development of these skills. Each cohort must take ownership and drive the project forward, with all students developing leadership skills. They set semester goals, create work plans, liaise with project partners and resolve differences of opinion on design questions. Beyond this, selected students take over teaching and management roles the following semester, as part of the Student Leadership team, and all students develop knowledge management skills, creating handover materials as electronic 'Handbooks' developed in collaboration with K&L Gates mentors. In his way, students don't just learn project management – they become project managers. They don't just develop leadership skills – they become leaders for subsequent cohorts.

Implications for Legal Education

Although the rapid pace of AI evolution is increasing the urgency of debates about legal education, they are not new. Hews, Beligatamulla and McNamara argue that 'law schools must adapt their curricula to maintain relevance and responsiveness, and to support students to navigate the evolving legal landscape by fostering interdisciplinary knowledge and future

[90] Niinikoski and Toivonen (n 4) 236.

readiness.'[91] Those considering integrating legal design have options ranging from small-scale inclusion of design thinking elements to re-designing entire degree programs. They can develop 'university-wide majors and minors, combined bachelor's degrees, cross-faculty labs, multidisciplinary undergraduate design degrees, or postgraduate design programs', or partner with industry to 'facilitate the integration of real-world problems into curricula'.[92]

For institutions that are just beginning their legal design journey, Tech4Justice offers a template for small-scale, purpose-driven projects. The multi-strand approach to teaching, peer leadership and industry partnership has significant advantages. It enables students to work on real-world problems, have social justice impact, and develop deep skills and knowledge while remaining feasible within existing university structures.

An unexpected conclusion from our experience is that a project-focused approach might benefit legal education more broadly beyond teaching legal design. In addition to learning skills which are as valuable in traditional practice as in legal design, our students found that they also developed depth of knowledge in particular legal areas. What appeared on the surface to be a simple legislation mapping exercise in practice required a deep and nuanced grasp of discrimination law beyond that which they had developed through traditional law electives. We intend to explore in further research whether there may be benefits to a project-based approach to teaching more traditional law content.

We conclude, therefore, that teaching legal design in law schools can play an important role in re-orienting legal education to meet the changing needs of society. We acknowledge that law schools start from different places on this journey: some may meet resistance to change, while others are already progressing. Wherever they sit on the spectrum, we hope they can take inspiration from Tech4Justice as an example of how small-scale, purpose-driven projects can achieve real change in both legal education and the wider world.

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[91] Hews, Beligatamulla and McNamara (n 28) 12.
[92] ibid 11.