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The silent trade-off: Unveiling the hidden costs of artificial intelligence integration in higher education

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1 Introduction

The Fourth Industrial Revolution (4IR) represents a paradigm shift in how society interacts with technology and its potential impact on all facets of human life.[1] Artificial Intelligence (AI),[2] in particular, stands out as a transformative technology[3] with the capacity to mimic human cognitive abilities, such as learning, reasoning, and problem-solving.[4] AI's ability to analyse vast amounts of data and adapt in real-time can significantly enhance legal education by improving students' access to personalised learning materials, timely academic support, and interactive resources, thereby enabling equitable educational opportunities irrespective of students' background or location.[5] As AI increasingly finds its place in higher education[6] (HE), the focus has primarily been

1 Du Preez & Sinha 'Paradigm shift in higher education in the context of the fourth industrial revolution' (2021) *IEEE Potentials* 13-18.

2 AI is defined as 'Machines that perform tasks normally performed by human intelligence, especially when the machines learn from data how to do those tasks' REF Government's National AI Strategy https://www.gov.uk/government/publications/national-aistrategy/national-ai-strategy-html-version.

3 Gejendhiran & others 'Disruptive technologies - a promising key for sustainable future' (2022) *Education, Procedia Computer Science* 172 843-847.

4 UNESCO 'Guidance for generative AI in education and research' http://creativecommons.org/licenses/by-sa/3.0/igo/.

5 Department for Education Innovation *Lecturer's guide: Leveraging generative artificial intelligence for teaching and learning enhancement'* (2023) 1.

6 Du Preez & Sinha (n 1) *IEEE Potentials* 13-18.

on the potential benefits.[7] However, beneath the enthusiasm for AI integration lie significant trade-offs, whose long-term pedagogical and ethical implications might be deliberately overlooked or underestimated due to the immediate benefits and instant gratification associated with AI-driven efficiency.[8]

This chapter aims to critically examine the integration of AI in higher education, with specific emphasis on legal education within the Bachelor of Laws (LLB) curriculum. It argues that while AI offers substantial pedagogical advantages such as increased accessibility, personalised learning, and enhanced efficiency, there is a significant risk that these benefits come at the expense of critical academic competencies like creativity, analytical reasoning, and ethical judgement. Using the analogy of traditional versus modern Lego sets, the discussion contrasts open-ended exploration and predefined structured learning to highlight the hidden pedagogical and ethical costs of AI integration. This chapter further evaluates these trade-offs against the backdrop of South Africa's Higher Education Qualifications Sub-Framework (HEQSF), offering strategies to balance AI-driven innovation with maintaining core academic skills. Ultimately, the chapter seeks to propose an informed framework for integrating AI effectively in higher education while preserving essential human-centred educational values.

2 The evolution of educational tools

Education has always been shaped by the tools available to teachers and students.[9] From the early use of chalkboards and printed textbooks to the introduction of overhead projectors and computers, each advancement has influenced how education is delivered and consumed. Chalkboards and textbooks allowed for a relatively uniform teaching experience. Every student in a classroom received the same information, delivered in the same way, at the same pace. The internet brought about a revolution,

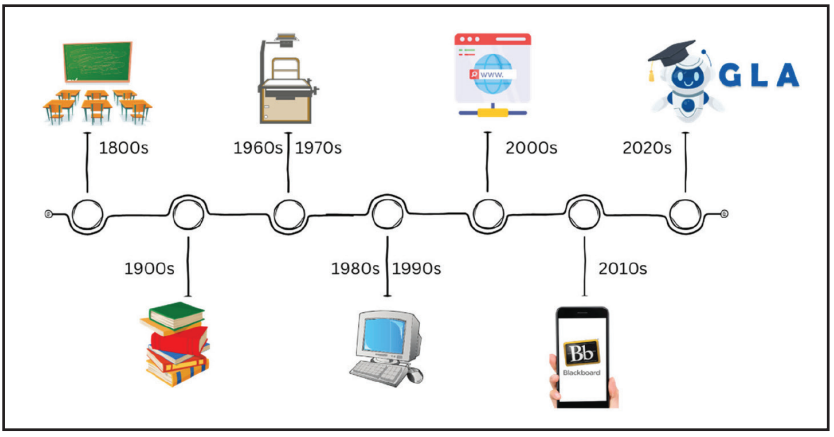
7 UNESCO 'Guidance for generative AI in education and research' http://creativecommons.org/licenses/by-sa/3.0/igo/.

8 Tomak & Virlan 'Ethical considerations in the educational use of generative AI technologies' in Ara (eds) Exploring the ethical implications of generative AI (*IGI Global 2024*) 49-62.

9 ProctorEdu 'The evolution of educational technology: From blackboards to artificial intelligence' https://proctoredu.com/blog/tpost/1pnogloey1-history-of-technology-in-education.

allowing access to a wealth of information and enabling the development of online learning platforms that have transformed education.

Figure 1: Created by L Kok



Unlike previous advancements that primarily enhanced the delivery of information, the journey from online learning platforms to AI moves beyond simply enhancing education; AI begins to shape the nature of learning as it fundamentally alters how students engage with learning materials. Tools like adaptive learning platforms, AI tutors, and automated assessments can personalise the learning experience, offering students a tailored path based on their performance and learning preferences. However, this shift entails conscious trade-offs prioritising immediate convenience and efficiency over potential long-term costs to critical and creative learning.

2.1 The Lego analogy: From creativity to uniformity

One way to understand the trade-offs in AI-driven education is through the analogy of Lego sets. Traditional Lego[10] sets offered children a collection of blocks that could be assembled in any way they desired. This type of open-ended play encouraged creativity, problem-solving, and imagination. The child would embark on a creative process,

10 Burke & O'Connor 'Playful learning: developments in early childhood education and care' (2013) *Eurasian Experiment Journal of Arts and Management* 31-34.

often with no specific end goal in mind, allowing for exploration and experimentation. In contrast, modern Lego[11] kits come with detailed instructions and predefined outcomes, ensuring efficiency but limiting open-ended creativity. These kits allow children to build intricate models of spaceships, famous landmarks, or characters from movies, but they do so at the cost of creativity. This development shifts the focus from a process of exploration and creation to reproducing a pre-designed model. While this ensures that the child arrives at a desirable outcome, it removes the freedom to imagine and create independently.[12]

Mirroring the shift from open-ended creativity to structured uniformity in Lego sets, AI in legal education offers both advantages and challenges. Modern Lego kits guide the building process toward predetermined models, ensuring consistent results but potentially limiting creativity. Similarly, AI can provide structured learning paths and help students meet set standards, but it also risks prioritising efficiency and uniformity at the expense of these essential intellectual skills.[13] Nowhere is this tension more apparent than in legal education, where analytical reasoning and nuanced interpretation are paramount; if students rely excessively on AI-generated tools, their ability to engage deeply with legal concepts, construct original arguments, and critically assess judicial reasoning may deteriorate.[14]

At the root of this lies the following question: *How can we harness the power of AI to foster a deeper understanding and mastery of complex subjects without losing the essence of traditional pedagogical methods?* This question is of paramount importance for educators, legal professionals, and policymakers alike, as they bear the responsibility of ensuring that future generations of *lawyers* possess not only technical skills but also the capacity for critical thinking, complex problem-solving, and a profound engagement with the law.[15] This concern is already manifesting, as

11 As above.
12 As above.
13 UNESCO 'Guidance for generative AI in education and research' http://creativecommons.org/licenses/by-sa/3.0/igo/28 'Facilitating creative use of GenAI in education and research'.
14 Van Eck 'Error 404 or an error of judgment? An ethical framework for the use of ChatGPT in the legal profession' (2024) *Journal of South African Law* 469.
15 LexisNexis 'Law schools must prepare students for this new development in legal practice in addition to learning about the ethics of using generative AI, law students must also learn how to use AI in legal research, writing and analysis.' Department for Education Innovation (2023) *University of Pretoria*.

evidenced by instances where legal practitioners have been criticised for employing AI to draft legal documents, only to present those documents in court with false and fabricated citations.[16] A recent decision from the High Court underscores this issue, stating regarding the use of AI in legal research that:

> In this age of instant gratification, this incident serves as a timely reminder to, at least, the lawyers involved in this matter that when it comes to legal research, the efficiency of modern technology still needs to be infused with a dose of good old-fashioned independent reading. Courts expect lawyers to bring a legally-independent and questioning mind to bear on, especially, novel legal matters, and certainly not to merely repeat in parrot-fashion, the unverified research of a chatbot.[17]

It is clear that the ramifications of this shift extend deeply beyond legal education and into the realm of legal practice itself.[18] Suppose we do not approach the integration of AI in legal education with caution. In that case, we risk producing a generation of lawyers[19] who may adeptly utilise technology yet lack the critical thinking, creativity, and comprehensive understanding essential to the profession.[20] Consequently, this *evolution* necessitates educators to embrace AI and strategically adapt pedagogy to maintain and enhance essential legal reasoning and critical thinking skills, ensuring educational outcomes align with traditional academic standards.

3 AI in the legal education context

The LLB qualification is a vital foundation for aspiring legal professionals and plays a crucial role in shaping the legal profession's future. As technology advances at an unprecedented pace, it is essential to evaluate how AI affects LLB qualification standards and to adapt teaching

16 *Parker v Forsyth (Regional Court, Johannesburg, Gauteng)* unreported case no 1585/20 2023, and reported on Law Library South Africa as *Parker v Forsyth* 2023 ZAGPRD 1.

17 *Mavundla v MEC: Department of Co-Operative Government and Traditional Affairs KwaZulu-Natal* 2025 ZAKZPHC 2 para 42-43; at para 50 Judge Bezuidenhout states '[i]n my view, relying on AI technologies when doing legal research is irresponsible and downright unprofessional.'

18 van Eck (n 14) 469.

19 Kok 'Keep ChatGPT out of Court' in RE.SEARCH Magazine Issue 11 '*Digital*' (2025) 13-14.

20 LexisNexis (n 15) at 1 para 2.

strategies accordingly. This ensures that the curriculum aligns with the evolving needs of both students and the legal industry.[21] Rather than resisting AI, our objective should be to embrace its potential while maintaining fundamental educational principles.[22]

3.1 The LLB qualification standard

In terms of the National Qualifications Framework Act 67 of 2008 (NQF), the Council on Higher Education (CHE) is the Quality Council (QC) for Higher Education.[23] The CHE assumes the responsibility of ensuring the quality assurance of qualifications in higher education. In accordance with the HEQSF established by the CHE, the process of formulating qualification standards must adhere to the principles, protocols, and methodology outlined in the Framework.[24] This HEQSF primarily emphasises the interplay between the intended purpose of a qualification, the desired qualities and skills exhibited by a graduate, and the various contexts and circumstances in which these qualities and skills are evaluated. [25] Accordingly, the HEQSF provides a minimum threshold at which the qualification may be awarded – namely, 'the purpose of the qualification', the 'NQF Level and credits', the 'standard for the qualification', and the 'context and conditions for assessment'.[26]

3.1.1 The purpose of the LLB degree

The purpose of the LLB is to offer a broad education that develops well-rounded graduates with:

(a) A knowledge and appreciation of the values and principles enshrined in the Constitution;

(b) A critical understanding of theories, concepts, principles, ethics, perspectives, methodologies and procedures of the discipline of law;

21 LexisNexis (n 15) 1.
22 Maimela & Schoeman (2022) PULP at x.
23 National Qualifications Framework Act 67 of 2008.
24 CHE 'Qualification for Bachelors of Laws (LLB): Education higher education qualifications sub-framework' (2015).
25 CHE (n 24) 4.
26 CHE (n 24) 'qualification standard is a statement that indicates how the purpose of the qualification, and the Level on the NQF at which it is awarded, are represented in the learning domains, assessment contexts, and graduate attributes that are typical for the award of the qualification'.

(c) Ability to apply the above appropriately to academic, professional and career contexts and

(d) Capacity to be accountable.[27]

3.1.2 NQF Level descriptors

The NQF Level descriptors, as indicated by the HEQSF, are as follows:

	Lower Order Cognitive Skills	**Higher Order Cognitive Skills**
NQF Level 5 (first year)	80 per cent knowledge of main areas, knowledge of key terms, knowledge literacy, standard methods, etc.	20 per cent identify and solve problems, evaluation of learning skills, etc.
NQF Level 6 (second year)	60 per cent detailed knowledge of main areas, knowledge of specialisation areas, etc.	40 per cent analysing key terms, evaluation of applicable methods, etc.
NQF Level 7 (third year)	40 per cent integrated knowledge of main areas, etc.	60 per cent analysis and evaluation of key terms, synthesising own learning methods, etc.
NQF Level 8 (final year)	20 per cent knowledge of a field of discipline, understanding and knowledge of application, etc.	80 per cent analysis of knowledge in a specific context, etc.

3.1.3 Context and conditions for assessment

According to the HEQSF, appropriate assessment of graduate attributes is informed by the following assumptions:[28]

(a) Various assessment methods and types are used, including summative and formative assessments. Assessment opportunities occur regularly throughout the course of study.

(b) Students engage in some independent research that is assessed.

27 CHE (n 24) 8.
28 CHE (n 24) 12.

(c) Assessment includes authentic problem-solving in real-life work contexts or simulated teaching and learning activities by staff appropriately qualified to effect meaningful assessment.

(d) Adequate teaching-learning and physical resources are available to implement practical assessment activities, which, in order to achieve the particular purpose of the qualification, include:

(i) An adequate student-staff ratio;

(ii) Adequate access to resources such as the library and e-resources in order to meet the problem-solving and research attributes of the qualification.

(d) IT resources are available to enable graduates to achieve the purposes of the qualification.

(e) Regular and constructive feedback is given to enable graduates to achieve problem-solving, research, literacy and communication skills for the attainment of the qualification.

3.2 Unpacking AI's impact on the LLB qualification standard

The LLB qualification serves a substantial purpose by providing graduates not only with crucial professional skills but also with the ability to think critically in their specific societal contexts. Its aim goes beyond mere legal training; it seeks to cultivate a legal profession committed to building a society grounded in the broader constitutional movement.[29] This holistic approach ensures that graduates acquire sound legal knowledge and a robust ethical framework that underscores human dignity, equality, and the protection of human rights for all.[30] By instilling these values, the LLB qualification prepares students to engage thoughtfully and effectively with the complexities of the societies in which they operate.

It is within this context that legal education acknowledges the importance of integrating new technologies, including AI, that are in line with the HEQSF. The HEQSF explicitly lists 'information technology'[31]

29 Arendse in *Technological innovation (4ir) in law teaching and learning: Enhancement or drawback during Covid-19?* (2022) PULP at Chapter 4 referring to CHE at 7.

30 CHE (n 24) 7.

31 CHE (n 24) 10 'the graduate is able to: (a) access information efficiently and effectively; and (b) use technology as a tool to research, organise, evaluate and communicate information.'

as one of the applied competence standards for the LLB, requiring graduates to demonstrate the capacity to access and utilise information productively. Graduates must also exhibit advanced proficiency in using technology as a tool to research, organise, evaluate, and communicate information. Accordingly, institutions are responsible for ensuring that adequate IT resources are available to achieve these objectives.[32] However, adopting emerging technologies demands a careful equilibrium between leveraging their benefits and recognising their potential pitfalls. Therefore, every aspect of the HEQSF qualifying standard[33] must be scrutinised to understand AI's implications for legal education.[34]

Despite the clear advantages of incorporating AI into legal education, its introduction poses significant challenges to the LLB's core objectives. A reliance on AI-based tools risks undermining the LLB qualification standards if educational programmes do not carefully manage how AI is integrated into curricula and assessments. While these tools can help achieve desired learning outcomes, they also create an imbalance that can disrupt traditional legal pedagogy, potentially compromising the degree's foundational purpose.[35] It is essential for the use of AI to be aligned with the teaching and learning goals of the respective NQF Level; as such, educators should clearly define their role and purpose. It is recommended that educators utilise AI-guided learning to the same Level of lower-order thinking and higher-order thinking required by the NQF Level. For example, Level 5 may allow educators to rely more heavily on AI-guided learning tools; however, as the student's legal education progresses and adjusts to the higher NQF Level, so must the reliance on AI tools be diminished.

32 CHE (n 24) 10.

33 This research focuses on the NQF Level 8 standards, which constitute the exit Level for the LLB qualification, to address the overarching LLB qualification standard.

34 Mnyongani in *Technological innovation (4ir) in law teaching and learning: Enhancement or drawback during Covid-19?* (2022) 'Though universities enjoy a relative measure of autonomy and are at liberty to craft policies to suit their needs, teaching and learning takes place within parameters set by the CHE and the Department of Higher Education and Training (DHET).'

35 Department for Education Innovation (n 5) at 1 para 2.

3.2.1 AI integration example structure

NQF Level 5 (first year)	Intensive use for personalisation and rapid feedback, provided lecturers guide students in interpreting that feedback and reinforce proper research habits.
NQF Levels 6-7	Moderate AI integration with emphasis shifting towards analysis and synthesis skills, maintaining significant human interaction and authentic assessments that demand independent problem-solving.
NQF Level 8 (final year)	Minimal AI dependency, focusing on critical analytical skills, independent research, and complex problem-solving without substantial AI assistance.

This level of integration is not a novel concept in terms of the current LLB curriculum. First- and second-year modules rely on the assistance of tutors, such as tutorial sessions and tasks. Educators have an opportunity to incorporate AI-guided tools into their outcomes with a similar mindset. However, this should be thoughtfully and cautiously included to enhance learning outcomes and provide additional support to students, not to replace human thinking or engagement with the discipline.

4 AI, curriculum transformation, and pedagogical adaptation

While AI offers significant pedagogical advantages, such as personalised learning, administrative efficiency, and enhanced student engagement, these must be carefully weighed against the potential erosion of critical skills that lie at the heart of legal education. The LLB qualification, as framed by the HEQSF, is not only intended to build legal knowledge but to cultivate reflective, ethical, and analytically skilled graduates. When AI is used indiscriminately, it may jeopardise the development of such higher-order cognitive skills. Therefore, the hidden costs are not merely side effects but material concerns that impact the qualification's foundational purpose. AI must thus be integrated in a way that supports, rather than supplants, the development of the core legal competencies articulated in national standards.

To translate these broad concerns into concrete curricular actions, the first step is to examine how AI currently functions in the classroom. This inquiry begins with an honest assessment of current practices: most exposure to AI still occurs through isolated demonstrations or student

side projects. These disconnected encounters do not meet the HEQSF standards nor address the hidden costs previously identified. Therefore, the following discussion outlines the necessary shift from these ad-hoc uses to a comprehensive, curriculum-wide model of AI-guided learning.

4.1 From ad-hoc AI tools to curricular AI-guided learning

Early encounters with AI software have been largely ad-hoc: individual students use chatbots to paraphrase cases, or a lecturer demonstrates a predictive-text function during a workshop. These isolated, tool-centred episodes seldom align with module outcomes and can even encourage a shortcut mentality. To realise AI's pedagogical promise without undermining the aims of the LLB, legal education must now progress from tool use to a *Guided Learning Artificial Intelligence* (GLA)[36] approach that is deliberate, scaffolded activities designed around AI capabilities and mapped explicitly to the HEQSF and NQF Levels.

This approach refers to the deliberate, curriculum-aligned deployment of AI-guided tools that scaffold students' progress while preserving the educator's role in summative judgment. In this model, the AI offers adaptive prompts, formative feedback, and personalised pathways that are explicitly mapped to each module's outcomes; students, in turn, must verify, reflect on, and refine the AI's output rather than accept it uncritically. By anchoring every AI-mediated task in human oversight and requiring iterative engagement with primary sources, the GLA approach aims to supplement, rather than replace, independent reasoning. In practice, this shift entails four curriculum design moves:

(a) Embedding, not bolting-on: AI activities, such as comparing an AI-generated opinion to the original judgment or refining a chatbot's argument through iterative prompting, are positioned inside tutorials, seminars or assessments, rather than as optional extras. Learning outcomes are rewritten to name the AI interaction.

(b) Progressive tapering: At NQF Level 5, AI tutors may guide students through basic doctrine and offer instant formative feedback. By Level 8, AI use is curtailed to an advisory role, compelling students to produce original research and reflect critically on any algorithmic assistance.

36 GLA refers to AI that is purpose-built (or purpose-configured) to *guide* students through higher-order learning tasks while safeguarding the intellectual and ethical aims of legal education.

(c) Critical-AI literacy across years: Each level includes a short, assessed component on data provenance, bias and algorithmic accountability, ensuring that graduates can interrogate, not merely consume, AI output.

(d) Assessment redesign: Summative tasks remain human-graded but take advantage of AI for preparatory phases: students test arguments against an AI counterparty, revise, then submit the human-refined product. This keeps intellectual ownership with the student while still leveraging AI for iteration.

By moving from occasional tool use to structured AI-guided learning tools, the curriculum can uphold the LLB's higher-order objectives, independent reasoning, ethical judgement and doctrinal mastery, while equipping students to engage confidently and critically with the technologies that increasingly shape legal practice. However, this is only the first step; effective implementation also requires fresh pedagogical thinking. The following, therefore, turns to the broader question of pedagogical innovation, using the University of Pretoria's Curriculum Framework to illustrate how AI can be aligned with responsiveness, epistemic diversity and reflective practice.

4.2 AI in modern legal education: the necessity of pedagogical innovation while preserving fundamental legal reasoning skills

Given the challenges posed by AI in legal education, pedagogical innovation is essential to ensure that technology enhances, rather than replaces, intellectual engagement. Institutions like the University of Pretoria (UP) have highlighted the importance of a balanced approach to AI that supplements rather than supplants traditional legal training. A practical example is UP's Curriculum Framework, which not only seeks to address student protests but also meets the scholarly demand for a curriculum responsive to local and global contexts.[37] This Framework underscores the value[38] of integrating diverse knowledge, approaches,

37 Department for Education Innovation (2023) at 1 'This guide is designed as an introductory resource for lecturers at the University of Pretoria seeking to explore and harness the potential of Generative AI to enhance teaching and learning outcomes.'

38 To honour this commitment whilst using AI, legal educators must confront the risk of algorithmic coloniality: large language models predominantly trained on Western legal materials can marginalise African, indigenous, and other non-European traditions.

and worldviews into discipline-specific teaching to cultivate graduates equipped with both specialised skills and broader literacy.[39]

The UP-Curriculum Framework sets out four key principles:

(a) Responsiveness to the social context.

(b) Embracing epistemological diversity.

(c) Promoting the renewal of pedagogy and classroom practices.

(d) Fostering an institutional culture of openness and critical reflection.[40]

Building on these principles, the following discussion identifies four core objectives crucial for aligning AI with LLB qualification standards. This approach aims to leverage AI's potential to deepen the comprehension and mastery of complex legal subjects while upholding the integrity of traditional pedagogical methods.

Accordingly, the following four key objectives aim to achieve this balance:

(a) To evaluate the current LLB curriculum and assess its alignment with the rapidly changing digital landscape and the evolving demands of the legal profession.

(b) To explore the advantages of integrating AI-guided learning tools, such as LLM and chatbots, in legal education, emphasising their potential to enhance student engagement and academic achievement.

(c) To examine the challenges and concerns associated with AI in legal education, including potential impacts on critical thinking, socio-economic disparities in access to technology, and the limitations of AI software.

(d) To propose effective integration strategies, such as AI-guided blended learning and the use of interactive or immersive technologies, in order to optimise AI's benefits in legal education.

It is important to note that the field of AI is constantly evolving, and these objectives may not encompass all future developments or challenges. Nonetheless, the following sections aim to contribute to the ongoing dialogue surrounding AI's role in legal education and its impact on LLB qualification standards. Ultimately, this research will

39 University of Pretoria 'Curriculum transformation framework' (2023) 2 https://www.up.ac.za/faculty-of-law/article/2291240/curriculum-transformation-framework.

40 As above.

offer a comprehensive analysis of AI's implications for the future of legal education, along with recommendations to guide policymakers and educators in enhancing pedagogy while maintaining inclusivity and accessibility.

4.2.1 The role of AI in shaping modern legal curricula: LLB qualification standards

The digital landscape has undergone significant transformations in recent years, and legal education must reflect these advancements in its curriculum to prepare law graduates adequately. The impact of AI and other advanced technologies on LLB qualification standards is multifaceted. As AI technology continues to evolve, anticipating the future needs of LLB students and the legal profession is crucial to developing a curriculum that remains relevant and responsive to industry demands and anticipating its needs. Moreover, identifying gaps and opportunities in the current LLB curriculum concerning AI integration is crucial to enhance the educational experience and better prepare students for their professional journey.

Critical gaps may include the absence of AI-related courses, limited exposure to AI-guided learning tools, and a lack of emphasis on the ethical implications of AI in legal practice. Traditionally, LLB programs have emphasised legal theory, doctrine, and case analysis, providing students with a solid foundation in legal principles. While these core aspects remain crucial, the curriculum must incorporate technological literacy and AI-related knowledge to equip students with the skills required for the digital age.[41] This includes developing interdisciplinary courses that explore the intersection of law, technology, and AI ethics. These courses could foster collaboration between law schools and computer science or engineering departments, encouraging students to understand and address the legal challenges of AI's pervasive use. On the other hand, opportunities lie in integrating AI into existing courses to

41 CHE (n 24) 8-11: Applied competence – namely continuous basis 'Graduates have the requisite knowledge-base and skills to be able keep up to date continuously with the ever-changing body of substantive law, including new precedent-setting judgments, amendments to legislation and new legislation. Life-long learning is a pursuit that is essential for every law graduate to maintain throughout their careers.'

facilitate interactive and personalised learning experiences. Combining AI-guided learning tools with traditional instruction can enhance student engagement and knowledge retention.

The legal profession increasingly seeks lawyers with technological literacy, data analytics skills, and the ability to leverage AI tools to optimise legal services. Incorporating practical AI simulations, such as virtual courtrooms or case analysis using AI algorithms, can provide valuable experiential learning opportunities.[42] Future LLB graduates will likely face a legal environment where AI is integrated into various legal tasks, such as contract analysis, legal research, and due diligence.[43] However, legal education must incorporate discussions on the ethical and responsible use of AI in legal practice.[44] By instilling ethical awareness, educational institutions can cultivate a generation of AI-literate legal professionals who uphold the highest standards of integrity and accountability. Consequently, legal education must foster a comprehensive understanding of AI technology, its capabilities, and its limitations.

4.2.2 The intersection of AI tools and legal pedagogy: Student engagement and academic achievement

AI-guided learning tools and student engagement

Traditional teaching methods, especially in large classes, often struggle to maintain high levels of student engagement with lecturers, leading to passive learning experiences.[45] One major cause is the high student-to-staff ratio. According to HEQSF, '*law students [must] receive regular and constructive feedback on comprehensive research-and problem-based assignments*'.[46] AI-guided learning tools provide an opportunity to solve this challenge by providing interactive and dynamic learning opportunities

42 LexisNexis (n 15) 11.
43 Van Eck 'Chatting with ChatGPT: Will attorneys be able to use AI to draft contracts?' (2023) *De Rebus* 12.
44 Van Eck (n 14) 469.
45 Passive learning pertains to situations in which students internalise instructions provided by an educator. However, in contrast to active learning, these sessions leave no opportunity for constructive criticism or discussion.
46 CHE (n 24) at 15 para 9.

under the supervision and guidance of the educator. LLMs and chatbots, for instance, can engage students in simulated conversations, creating an environment where students actively participate in legal discussions and receive immediate feedback.[47] Additionally, AI-guided learning tools can provide personalised learning pathways, allowing students to engage with legal concepts at their own pace and in ways that suit their learning styles and individual needs.[48] This level of customisation enhances comprehension and retention of concepts and promotes a climate of ongoing education, motivating pupils to assume responsibility for their learning outside the traditional classroom setting.[49]

The following have been identified as opportunities[50] for enhancing the overall quality of teaching and learning while ensuring that the learning outcomes align with the minimum threshold of the HEQSF:

(a) Increased Engagement: AI-Tools and chatbots engage students in interactive and conversational learning experiences, making learning more enjoyable and motivating, while preserving creative and critical thinking. AI-powered tools can boost student engagement and participation in the educational journey.

(b) Immediate Feedback: AI learning tools offer immediate and constructive feedback to students on their assignments and assessments. This timely feedback helps students identify areas of improvement and take corrective actions promptly.

(c) Continuous Learning Support: AI learning tools provide round-the-clock support to students, enabling them to access learning resources and

47 Department for Education Innovation (2023) University of Pretoria 'ChatGPT can provide generated textual responses that accurately reflect the context of the user's input. These generative Artificial Intelligence (AI) technologies can be helpful for academics and students, providing personalised and adaptive learning experiences, improving student engagement, and reducing the burden on educators and administrators.'

48 Bhutoria 'Personalized education and Artificial Intelligence in the United States, China, and India: A systematic review using a Human-In-The-Loop model' (2022) *Computers and Education: Artificial Intelligence* at 6.

49 Bhutoria (n 48) at 8 'This new system is designed to adjust the curriculum and instructions according to the learning requirements and learning abilities of a particular student. Catering to a learner's specific needs is likely to motivate the general populace of students.' This is further in line with the standard of the CHE at 15 – Agency, accountability and service to the community.

50 The opportunities identified here as been integrated into UP's teaching and learning approaches with much success. See https://www.up.ac.za/education-innovation/.

assistance whenever needed. This promotes continuous learning beyond traditional classroom hours.

(d) Automation of Administrative Tasks: Chatbots can automate routine administrative tasks, such as tracking assignment submissions or logging marks, thereby saving educators valuable time and enabling them to focus on the most meaningful aspects of teaching, such as assessing student comprehension and providing substantive, individualised feedback.

(e) Data-Driven Insights: The data collected by AI learning tools can offer valuable insights into student learning patterns and progress. Educators can use this data to identify areas where students may be struggling and devise targeted interventions to support their learning journey.

Using AI generates an opportunity for a more systematic and efficient approach to the teaching and learning process. However, its successful integration depends on the educators' knowledge of the software[51] and the guidance offered to students to ensure it is effectively used and beneficial.[52] By utilising the AI-guided learning tools, educators are able to change the question setting from knowledge-based questions to inquiries aligned with the learning objectives.[53] For example, educators may incorporate the following prompts in their learning outcomes, which allows for a more efficient and systematic approach to gathering valuable insights, enhancing the overall effectiveness of the teaching and learning process:

51 University of Oxford Centre for Teaching and Learning (2023) 'Beyond ChatGPT: The state of generative AI in academic practice' https://ctl.ox.ac.uk/sites/default/files/ctl/documents/media/beyond_chatgpt_-_state_of_ai_for_autumn_2023_correct.pdf 4.

52 As above at 4 – 'Despite often producing accurate and factual responses to prompts, generative AI can easily switch to 'hallucination' without any indication it has done so. Despite improvements in technology and ongoing efforts at reducing hallucination, the output of generative AI remains unpredictable and needs to be regarded as a first draft to be checked or a hypothesis to be confirmed.'

53 See Department for Education Innovation 'clickUP Ultra' (2025) https://clickup-help.up.ac.za/docs/ai-design-assistant?highlight=ai%20design.

1. Explain and teach a topic like a tutor – Teach me how to determine the validity of contract Allow me to answer, and if it is wrong, explain the steps.
2. Use the 80/20 rule to learn a topic – I want to learn about [insert topic]. Identify and share the most important 20 per cent of the learnings of this topic that will help me understand the 80 per cent of it.
3. Ask generative AI for examples – Provide an example of a valid contractual agreement and a void contractual agreement, and explain the difference between the two.
4. Generate questions and answers for studying or test preparation
5. Generate ten multiple-choice questions and answers on the topic of this study unit.

Moreover, AI can gamify legal education, making learning an engaging and enjoyable experience.[54] Through gamification elements, students can earn points, badges, or rewards for completing legal challenges or demonstrating their understanding of legal concepts.[55] This will not only motivate students to participate actively but also enhance their understanding of the material and its application in real-world scenarios.

Integration: Leveraging existing platforms for AI-guided learning in higher education

Within the academic environment, integrating AI into pre-existing platforms, such as those utilised by UP (i.e. *clickUP Ultra* licensed by UP with Anthology *Blackboard)*, offers a promising avenue for enhancing student engagement and learning outcomes.[56] These established platforms serve as a solid foundation upon which AI-guided learning can be incorporated into the curriculum. By leveraging these existing platforms and technologies, educators can effectively introduce students to the benefits of AI-guided learning without confronting them with an entirely new technological ecosystem.

The utilisation of AI-guided learning tools within familiar university platforms offers several practical advantages. First, it facilitates a

54 As above.
55 University of Pretoria 'Bridging the digital divide: Youth empowerment through AI training at UP Mamelodi Campus' (2025).
56 Department for Education Innovation (n 5).

smoother onboarding process for students who have already been introduced to these platforms, such as clickUP Ultra (*Blackboard*),[57] for various academic activities. This familiarity reduces the learning curve associated with adopting new AI tools and allows students to concentrate more fully on engaging with substantive course content. However, while many students may be accustomed to these platforms, it is essential to acknowledge that prior exposure to digital tools can vary significantly, especially given the diverse schooling backgrounds in South Africa.[58] Therefore, while familiarity can support quicker adaptation for some, institutions must remain attentive to supporting students who may require additional guidance to develop digital fluency as part of a more inclusive integration process.

Moreover, integrating AI-guided learning into existing platforms can enhance collaboration and peer-to-peer learning experiences.[59] These tools have the potential to assist students in critiquing each other's work, providing constructive feedback, and fostering a culture of collaboration and teamwork.[60] By enabling features such as automated peer feedback mechanisms and intelligent content recommendations, AI-guided learning platforms can empower students to take a more active role in their learning journey while benefiting from the collective knowledge and insights of their peers.

When used purposefully, AI-guided tools can advance broader pedagogical goals such as critical thinking, problem-solving and habits of lifelong learning.[61] The pedagogical value of AI, however, lies in *how*

57 For the purposes of this research, the Learning Management System Blackboard is referred to as 'clickUP'. 'clickUP Ultra' is the licensed version used by the University of Pretoria through Anthology *Blackboard*.

58 Arendse 'The South African Constitution's empty promise of radical transformation: Unequal access to quality education for black and/or poor learners in the public basic education system' (2019) 23 *Law, Democracy and Development* 100-147; and Chisholm *Changing class: Education and social change in post-apartheid South Africa* (HSRC Press 2004).

59 For example, clickUP's assessments already include a function for self- and peer evaluation.

60 Ellis 'The potential of artificial intelligence in assessment feedback' (2022) https://www.timeshighereducation.com/campus/potential-artificial-intelligence-assessment-feedback.

61 Owan & Abang et al 'Exploring the potential of artificial intelligence tools in educational measurement and assessment' (2023) *Journal of Mathematics Science and Technology Education* 19(8); This also aligns with the standard set out in the CHE at 8-11 Applied competence – namely communication skills and literacy 'The graduate is proficient in reading, writing, comprehension and speaking in a

the tools are employed. For example, students might compare an AI-generated case summary with the original judgment, identify omissions or bias, and revise the summary accordingly; or they might submit draft arguments to an AI tutor, receive counter-arguments, and refine their reasoning. In these scenarios, AI acts as a catalytic 'sparring partner': it highlights gaps, poses alternatives and prompts deeper analysis rather than supplying ready-made answers. Moreover, with appropriate academic oversight, algorithms[62] can diagnose learning gaps and personalise feedback while preserving the independent engagement with legal sources demanded by the curriculum.[63]

Proficiency and enhanced research skills

Language proficiency, particularly in writing and communication skills, is one of the most significant challenges traditional teaching methods face. This challenge extends beyond legal education and into practice and real-world situations, such as legal drafting, client engagement, and presenting legal arguments in court. Writing and communication abilities are on par with legal understanding and application. Unfortunately, the latter is frequently given preference due to time and resource constraints, especially in large staff-to-student ratios. AI-guided learning serves as a transformative force in this regard, propelling the advancement of language proficiency among law students while breaking down language barriers.[64] This innovative approach leverages the power of AI to address the diverse linguistic needs of students, especially non-native English speakers, within the legal context, thereby ensuring compliance with the required communication skills and literacy standards.[65]

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professional capacity, to specialist and non-specialist alike, and is therefore able to: (a) communicate effectively by choosing appropriate means of communication for a variety of contexts; (b) demonstrate effective oral, written, listening and non-verbal communication skills'.

62 Subject to Protection of Personal Information Act 4 of 2014 – compliant data practices.

63 Fischer & Mirbahai et al *Transforming Higher Education: How we can harness AI in teaching and assessments and uphold academic rigour and integrity* (Warwick: WIHEA 2023) at 35 'AI for Teaching and Learning including tools for educators'.

64 Rusmiyanto & Huriati et al 'The role of Artificial Intelligence (AI) in developing English language learner's communication skills' (2023) *Journal on Education* at 750-757.

65 Ndemo 'Harnessing the power of AI to unlock Africa's linguistic diversity' (2024) https://www.linkedin.com/pulse/harnessing-power-ai-unlock-africas-linguistic-diversity-ndemo-uzzte.

AI-powered language support tools offer real-time translations and explanations of legal content, making it accessible to non-native speakers. By facilitating language immersion through conversational AI platforms, students can engage in legal conversations, debates, and simulations, allowing them to practice legal vocabulary and argumentation skills effectively. For example, educators may provide students with the following prompts to improve their reading and writing skills:[66]

1. Translate into home languages - Translate the following passage from English into isiXhosa: [insert passage].
2. Get alternative phrasing for difficult-to-express ideas – I am having trouble expressing my argument for why … rephrase my main points.
3. Help with language learning and practising grammar and sentence structures – Give me an example of a complex sentence using the word 'notwithstanding'.
4. Get formative assessment feedback on the quality of the language – Provide an example of a valid contractual agreement and a void contractual agreement, and explain the difference between the two.
5 . Get feedback on written work - Provide feedback on my essay about [insert topic] and suggest areas where I could improve.

Integrating AI and machine learning algorithms can assist in analysing complex legal issues, thus enabling students to develop strong research and analytical skills.[67] Furthermore, by enhancing legal writing skills and facilitating language-integrated case studies, AI simultaneously reinforces legal knowledge and nurtures language proficiency. Virtual language tutors, which are accessible 24/7, can provide an opportunity for continuous language support, thereby ensuring students can seek assistance whenever needed.[68]

66 Department for Education Innovation (n 5).
67 CHE (n 24) 8-11: Applied competence – namely continuous basis 'Graduates have the requisite knowledge-base and skills to be able keep up to date continuously with the ever-changing body of substantive law, including new precedent-setting judgments, amendments to legislation and new legislation. Life-long learning is a pursuit that is essential for every law graduate to maintain throughout their careers.'
68 Department for Education Innovation (n 5).

Overall, AI-guided learning should complement, *never replace*, human-centred pedagogy. When embedded thoughtfully within established platforms, AI tools can deliver personalised support, promote deeper analysis and foster resilient digital skills, all while allowing lecturers to concentrate on the relational and ethical dimensions of legal education. Through this calibrated approach, AI-guided learning becomes a complement, rather than a substitute, for the human-centred pedagogy essential to legal education.

4.2.3 How AI is influencing legal curriculum design: challenges and concerns

While incorporating AI has possible benefits and opportunities, educators must exercise caution and overcome challenges, potential risks, and setbacks. Aside from posing new threats to data privacy and security, AI poses new, albeit familiar, threats to the integrity of teaching and learning practices.[69] The ability of AI software to introduce new ways for students to present the work of others as their own is most visible, thus raising ethical concerns as educators are well-versed in cheating or plagiarism patterns, which AI models may overlook or misinterpret.

Aside from changing traditional teaching pedagogy and institutional policies, AI requires educators to rethink their learning outcomes and teaching methods.[70] All legal education stakeholders must remain mindful of their responsibility to maximise the benefits of advancing educational standards while minimising potential risks. The following sections attempt to address some of the identified risks.[71]

Promoting critical thinking skills

Critical thinking is a fundamental skill that empowers individuals to analyse, evaluate, and synthesise information objectively and make informed decisions. In legal education, promoting critical thinking skills is essential for students to become active learners, capable of solving complex problems and navigating the challenges of the modern world.[72]

69 As above.
70 Van Eck (n 14) 469.
71 Department for Education Innovation (n 5).
72 CHE (n 24) 9-10.

The impact of generative AI software in this instance is twofold. On the one side, it may result in a lack of development of critical thinking skills by students in having AI software do the work for them; however, on the other end, it represents a unique learning opportunity to show potential shortfalls or lack of application in formulating an opinion.

A common concern with generative AI is that rather than using institutional research databases (HeinOnline, Lexis Nexis, or Juta) to access specific cases or judgements, students may provide ChatGPT with a prompt such as 'what happened in the *S v Makwanyane* matter, what conclusion did the court reach, and why is it important to this topic'.[73] As a result, rather than forming their own cognitive opinion of prescribed reading material, students can 'copy and paste' the generated response with minimal effort. To turn that risk into a learning opportunity, educators can embed AI-guided activities directly into teaching and assessment practices. For instance, after receiving the chatbot's summary, students can be tasked to verify each claim against the official judgment, note any inaccuracies or omissions, and refine the summary accordingly.[74] This exercise develops digital-literacy skills, such as effective online research, source evaluation and critical analysis, while revealing GenAI's limitations: it produces plausible text but does not truly understand context and can generate inaccurate or biased information.[75] By contrasting an AI output with evidence-based revision, educators can help students distinguish between a well-researched argument and an unverified response.

As an additional safeguard, educators can require students to provide a '*disclosure of AI*' report[76] detailing what prompts were used, how they engaged with them, and how they arrived at their answer(s) following such engagement. Incorporating prompt exercises that require contextual judgment compels students to synthesise and evaluate information, achieving the objective of enhancing critical thinking while preventing unchecked AI-generated shortcuts. It also educates students on the

73 The Guardian 'AI bot ChatGPT stuns academics with essay-writing skills and usability' (2022) https://www.theguardian.com/technology/2022/dec/04/ai-bot-chatgpt-stuns-academics-with-essay-writing-.

74 Department for Education Innovation (n 5).

75 Van Eck (n 43) 12.

76 For example, a '*Disclosure of AI Tools*' report can be utilised as a mandatory requirement for the submission of any formative or summative assessments. This ensures transparency and responsibility in the use of AI in assessments or research.

difference between analytical thinking and merely regurgitating facts and findings.[77] Thereby instilling self-reflection habits within students to examine information, identify patterns, and draw logical conclusions.

Educators can also encourage analytical thinking by presenting students with real-world problems and challenges that require critical analysis and problem-solving.[78] Engaging students in discussions and debates with chatbots, encouraging them to consider different perspectives, evaluate evidence, and construct well-reasoned arguments without the time constraint of traditional teaching.[79] Additionally, AI-guided learning tools have the potential to provide immediate feedback and guide students in analysing complex data or scenarios. For this purpose, students can be provided with the following prompts:

1. Assist as tutor – Provide feedback on the quality of my research and suggest any areas for improvement.
2. Ask AI to grade a task or assignment – Does my answer present adequate analytical and critical thinking skills.

Nevertheless, it is imperative to acknowledge the current limitations and recognise that while this potential exists, it may not have been fully actualised.[80]

Ensuring digital equity in AI-guided learning

Fostering a supportive and inclusive learning environment is essential. One of the most critical challenges in integrating AI-guided learning tools in legal education is ensuring equitable access for all students, regardless of their socio-economic backgrounds.[81] Socio-economic disparities can

77 Tai & Ajjawi et al 'Developing evaluative judgement: Enabling students to make decisions about the quality of work' (2017) 76 *International Journal of Higher Education Research* at 467-481.

78 CHE (n 24) at 11 – 'Problem solving: The graduate is able to identify and define the relevant issues in legal problems; identify and select the most relevant sources and research methods (including electronic databases) likely to assist in solving such legal problems and generate reasoned solutions.'

79 Mandernach 'Thinking critically and critical thinking: Integrating online tools to promote critical thinking (2006) 1 I*nSight: A Collection of Faculty Scholarship* 41-50.

80 WIHEA (n 63) at 11 'This perspective strongly supports the case for embracing AI in higher education institutions, as it empowers students to leverage the technology's strengths while capitalising on their unique human skills.'

81 Arendse (n 58) 100-147; and Chisholm (n 58).

create barriers to technology adoption; rural or remote students may be disproportionately impacted by variables such as disparities in computer proficiency and digital literacy, and inequitable access to the internet and technology.[82] Consequently, as noted above, incorporating digital or critical AI literacies into the educational curriculum, especially at the entry level, is imperative. This inclusion ensures that students have the necessary skills to effectively comprehend and navigate AI-guided learning tools.

To mitigate this issue, educational institutions and policymakers must prioritise inclusivity and digital equity[83] to prevent the escalation of educational disparities.[84] Bridging this digital divide is crucial to ensure that all students, especially disadvantaged students, have equal opportunities to benefit from AI-guided learning tools.[85] The following comprehensive strategies can be implemented to ensure equitable resource distribution and technological access in legal education, namely 1) technology grants and funding; 2) collaborative efforts between public and private sectors; 3) digital inclusion initiatives; 5) training and capacity building; and 6) long-term sustainability.

As noted above, such measures can be adapted to align with the relevant NQF Level, thereby catering to the evolving needs and competencies of students as they progress through their educational journey. By prioritising equity and inclusivity, educators and policymakers can harness the transformative power of AI to enhance legal education for all aspiring legal professionals, irrespective of their backgrounds.

82 Ranchod 'AI and data in South Africa's cities and towns: Centering the Citizen' (2020) https://policyaction.org.za/sites/default/files/PAN_TopicalGuide_AIData4_CitiesTowns_Elec.pdf.

83 Mnyongani (n 34) at 8-9 – 'Appropriate infrastructure is an important consideration for the regulatory body. In this regard, the CHE will not accredit a contact programme until it has satisfied itself of, among others, the existence of suitable and sufficient infrastructure such as adequate venues to support the proposed programme.'

84 Reiss 'The use of AI in education: Practicalities and ethical considerations' (2021) *London Review of Educators* 19 at 6.

85 Fischer & others 'Ethically deploying AI in education: An update from the University of Warwick's open community of practice' (2023) stating that 'Whether educators adopt AI or not, educators need to ensure that their decision is fair for all students no matter their background, demographic or other protected characteristics, such as a visible or invisible disability. Fairness includes supporting all students as well as discouraging and preventing behaviour that would give an unfair advantage or otherwise conflict with the principles of academic integrity.'

Ethical considerations and AI in legal education

The integration of AI learning tools into legal education necessitates careful ethical deliberation.[86] While these tools can enhance efficiency and support learning, they also introduce risks related to academic integrity, data privacy, and algorithmic bias. In particular, using generative AI in assessments raises concerns around plagiarism, falsification, and the erosion of independent student work. Students may be tempted to submit AI-generated content without adequate understanding or proper attribution, undermining core learning outcomes and academic honesty. Institutions must therefore implement clear policies and training to distinguish between acceptable support (i.e., grammar checks or feedback prompts) and misconduct (i.e., full AI-generated submissions). Plagiarism detection tools should be adapted to detect AI-written content, and educators should be trained to design assessments that emphasise original, reflective, and process-based work.

Furthermore, the issue of data privacy and security has gained considerable importance due to the use of AI-driven educational systems that analyse student data and provide customised learning routes. It is essential for institutions to prioritise the safeguarding of student data and to ensure that AI systems comply with relevant data protection regulations.[87] This requires establishing transparent consent processes, secure data handling protocols, and routine audits as standard practice.[88]

Finally, it is also essential to recognise that AI algorithms can reinforce biases embedded in historical legal data, thereby perpetuating existing inequities and discriminatory practices. To mitigate this, institutions should adopt AI tools vetted for fairness and ensure that AI-driven decision-making in educational contexts is always subject

86 Mabasa 'ChatGPT: Exploring the risks of unregulated AI in South Africa' https://www.derebus.org.za/chatgpt-exploring-the-risks-of-unregulated-ai-in-south-africa/.
87 Russel Group 'Principles on the use of generative AI in education' (2023) 2-3.
88 The Protection of Personal Information Act 4 of 2013.

to human oversight.[89] Legal ethics modules,[90] in particular, should address the ethical implications of using AI in legal practice and include strategies to mitigate bias and promote fairness.[91] Transparency is a key ethical principle, enabling students to understand how AI tools operate, including how they analyse data and generate recommendations. By embedding digital and AI literacy alongside a transparent approach to AI use within legal ethics modules, students are better equipped to make informed decisions about their learning. This also cultivates a deeper understanding of the ethical challenges associated with AI integration in the legal profession.

4.2.4 Pedagogical strategies for effective AI integration

As we advance in the 4IR, developing skilled educators is essential for maximising the potential of AI-guided learning tools in legal education. To integrate these tools effectively, educators must adopt innovative pedagogical strategies. Continuous professional development is crucial for keeping pace with evolving AI technologies. This includes exploring new instructional approaches, staying informed about the latest research, and engaging with communities focused on technology-enhanced teaching and learning. Such ongoing professional growth equips educators to incorporate these technologies into their practice seamlessly.[92]

89 Rutgers AI Council 'Teaching critical AI Literacies' (2024) at 4 'teaching critical AI literacy thus includes helping students to learn about the existing and potential harms of these tools, whether instructors use them in their teaching or not. To be sure, acquiring in-depth literacy takes time for both educators and students. In the best possible case, students and instructors will learn from each other as they discuss common concerns and experiences.'

90 K Conrad 'A blueprint for an AI Bill of Rights for educators and students' for a useful framework for enabling instructors to teach critical AI literacy (2023) https://criticalai.org/2023/07/17/a-blueprint-for-an-ai-bill-of-rights-for-education-kathryn-conrad/.

91 Van Eck (n 14) 469.

92 Fischer & Dobbins 'Is it worth it? How paradoxical tensions of identity shape the readiness of management educators to embrace transformative technologies in their teaching' (2023) 48(4) *Journal of Management* 829-848.

Blended Learning: a synergy of AI and traditional methods

One such example is the need to consider the impact of AI-guided learning on the conventional understanding of the pedagogical approach known as Blended Learning.[93] The significant advancements in legal education suggest that Blended Learning, within the scope of AI, should be seen as a new pedagogical approach.[94] This approach combines the strengths of AI-guided learning tools with traditional teaching methods to create a synergistic learning experience for LLB. In this synergistic learning model, students engage in face-to-face interactions with instructors and AI-powered online activities. Integrating AI-guided learning tools can supplement traditional lectures and tutorials by providing students with additional learning resources and opportunities for practice. Additionally, AI can analyse individual student performance and provide personalised feedback and recommendations, enabling students to focus on areas where they need improvement.[95] This approach allows students to benefit from both the instructor's expertise and the personalised learning experience AI offers. It promotes self-directed learning and empowers students to participate in their education actively.[96]

Moreover, blended learning allows flexibility in the learning process, accommodating diverse learning styles and preferences.[97] Students can access AI-guided learning materials and interactive exercises at their own pace while still benefiting from real-time interactions with instructors during face-to-face sessions. This flexibility is particularly valuable for part-time learners or those with busy schedules, as it allows them to balance their academic commitments with other responsibilities.

93 Blended learning can be defined as the combination of face-to-face classroom instruction with online learning within a course or programme.

94 Dziuban & Graham et al 'Blended learning: The new normal and emerging technologies' (2018) 15(3) *International Journal of Educational Technology Higher Education*.

95 Department for Education Innovation (n 5) .

96 For example, WIHEA (n 63) suggest the following at 33 'if ChatGPT provides evidence to support a particular argument or solution, evaluate that evidence critically. Is it reliable? Are there other sources of evidence that contradict it? Overall, using ChatGPT as a tool for critical thinking requires an active and engaged approach. By asking open-ended questions, seeking clarification, exploring different perspectives, challenging assumptions, and evaluating evidence, you can use ChatGPT to help you think more critically about a problem'.

97 Bhutoria (n 48) at 6.

The flipped classroom approach: enhancing preparatory learning

The flipped classroom[98] approach is another effective pedagogical strategy that complements AI integration. This approach involves reversing the traditional learning model. In a flipped classroom, students review instructional materials independently outside the classroom, freeing up class time for interactive activities, discussions, and hands-on learning facilitated by the instructor. AI-guided learning tools play a pivotal role in the flipped classroom approach by providing pre-class materials, such as video lectures or reading assignments, that students can review at their own pace. AI-powered quizzes and exercises can be integrated into these materials to assess students' comprehension before the in-class session. Instructors can then tailor their teaching based on students' performance data, addressing any misconceptions or areas of difficulty during class discussions. The flipped model also maximises class time for problem-solving, case analyses, and discussions, providing students with practical exposure and the opportunity to apply legal concepts to real-world scenarios.

Interactive activities for critical thinking and engagement

Educators are encouraged to develop learning activities, within the parameters of institutional policy and guidelines, that not only immerse students in real-world problems but also experiment with integrating AI-guided learning tools into their respective modules.[99] Incorporating authentic, interactive activities of this kind is essential to promote critical thinking and active engagement in legal education.[100] AI-guided learning tools can facilitate interactive activities that challenge students to think critically and analytically about legal issues, such as client briefings or negotiations, using AI-generated responses and interactions.

98 Awidi & Paynter 'The impact of a flipped classroom approach on student learning experience' (2019) *Computers & Education* 128 at 269-283.

99 Fischer (n 85) stating that '... generative AI is sometimes seen by students as a 'replacement' for their own thinking because of its speed and eloquence. Instead, AI, including ChatGPT, should be deployed as a tool to encourage critical thinking, for example by exploring different perspectives, challenging assumptions, and evaluating evidence.'

100 Yeen-Ju & Mai et al 'Authentic learning strategies to engage student's creative and critical thinking' (2013) *International Conference on Informatics and Creative Multimedia* at 57-62.

These interactive activities hone students' analytical and advocacy skills, simulating the challenges they may encounter in their future legal careers.[101] Furthermore, AI-powered debate platforms can facilitate virtual debates on legal topics, encouraging students to present well-reasoned arguments and consider multiple perspectives. These debates can foster a culture of constructive discourse and intellectual curiosity among students.[102]

4.2.5 Strategic integration recommendations

The preceding sub-sections have explored why pedagogical innovation is indispensable and have mapped key objectives for aligning AI with LLB standards. What remains is to distil these principles into a set of practical, programme-level measures. The following sets out those GLA measures, offering strategic recommendations that any law Faculty can adopt to ensure that AI-guided learning tools enhance rather than undermine core legal competencies. The following strategies are recommended for integrating AI into the LLB curriculum:

Use AI for formative support, not summative judgment

AI tools should provide instant feedback on formative exercises (i.e., practice quizzes, grammar checks, or drafting exercises), allowing students to reflect and revise their work. However, all summative assessments should remain human-evaluated, especially where legal reasoning, ethics, and judgment are central.

Scale AI use according to academic level and cognitive demand

Guided learning AI is most beneficial in early stages (NQF Level 5–6) to support foundational knowledge acquisition. However, as students progress to higher NQF Levels, reliance on AI-guided tools should

101 Gonzalez-Cacho & Abbas 'Impact of interactivity and active collaborative learning on students' critical thinking in higher education (2022) *Revista Iberoamericana de Tecnologias del Aprendizaje* at 254-261.

102 Kutsch 'Harness human and artificial intelligence to improve classroom debates A guide to using artificial intelligence to support nuanced class debates that train students' critical thinking and communication skills' https://www.timeshighereducation.com/campus/harness-human-and-artificial-intelligence-improve-classroom-debates.

diminish, with a stronger emphasis placed on independent legal analysis, argumentation, and research.

Embed continuous professional development for lecturers and tutors

Institutions should invest in ongoing training for academic staff, not only to build technical competence but also to equip them to design ethically sound assessments, identify inappropriate AI use, and adapt curricula in response to emerging tools and risks.

Redesign learning outcomes to integrate critical AI literacy

Legal education should reflect AI's growing role in practice. Modules can incorporate outcomes that require students to critically evaluate AI outputs, challenge algorithmic reasoning, and reflect on ethical implications.

Support equitable access through embedded digital onboarding

Every student should be offered structured support to learn how to use university platforms and AI tools, not assuming digital fluency but actively cultivating it through tutorials, scaffolding, and peer learning systems.

Overall, taken together, these recommendations provide a scaffolding that enables AI to serve the curriculum without supplanting it. If implemented systematically, supported by policy, staff training and continuous review, they position the LLB to harness technological change while safeguarding the higher-order skills on which the profession depends. The final section reflects on this balance, drawing together the chapter's findings and outlining the path forward.

5 Conclusion: AI and the future of legal education – a delicate balance

The 4IR is reshaping higher education, with AI emerging as a transformative force in legal pedagogy. This chapter has examined the complex implications of integrating AI within the LLB curriculum. While AI offers clear advantages, enhancing accessibility, personalisation, and efficiency, it also presents critical risks, particularly in developing creativity, independent reasoning, and ethical judgment. The Lego

analogy illustrated that, much like modern kits with fixed instructions, overly structured AI-guided learning can constrain intellectual exploration. Yet, these risks are not inevitable. When aligned with the HEQSF and NQF standards and implemented intentionally, AI-guided tools can support rather than displace the higher-order skills at the heart of legal education. The chapter has advanced a *Guided Learning AI* (GLA) approach, an adaptive, scaffolded model that positions AI as a complement to, rather than a replacement for, human-centred learning.

To realise this balance, legal education must remain anchored in its foundational mission: to develop graduates capable of critical, contextual, and ethically responsible legal reasoning. This requires pedagogy that is both technologically informed and deeply human in orientation. Several practical strategies were identified to help achieve this balance, including blended learning, flipped classrooms, embedded ethical frameworks, and digital equity initiatives. When deployed thoughtfully, these tools can enhance engagement and foster differentiated learning in under-resourced environments. However, their use must be tempered by three core concerns:

(a) The potential erosion of critical and independent thinking if students become reliant on AI-generated answers.

(b) The ethical risks associated with plagiarism, bias, and data privacy;

(c) The broader challenge of ensuring that technological innovation complements rather than supplants human-centred, relational teaching.

The so-called *'hidden costs'* of AI integration, particularly the erosion of independent reasoning and ethical deliberation, pose a direct challenge to this objective. These are not peripheral concerns, but central to the identity and legitimacy of legal education. AI should serve as a supportive tool, not a substitute for the legal educator or the reasoning student.

Addressing these challenges requires more than technological caution; it demands curricular and institutional reform prioritising deep engagement, academic integrity, and reflective practice. As we advance further into 4IR, the role of law educators becomes more critical than ever. Educators must not only embrace AI but also actively shape its implementation to ensure that legal education remains rooted in intellectual inquiry, creativity, and ethical responsibility. AI should assist foundational learning at lower NQF Levels, with reliance gradually

reduced as students' progress toward complex tasks requiring judgment and originality.

The path forward lies not in resisting innovation, but in integrating it responsibly. AI must serve the educational mission, not redefine it. The future of legal education is not a binary between tradition and technology, but a synthesis, where innovation is guided by principle, and legal training remains a space for human thought, ethical deliberation, and intellectual independence. By embracing a Guided Learning AI framework and remaining vigilant to both opportunities and costs, legal education can adapt to the digital age without sacrificing its normative and pedagogical core.