Using and embracing AI in Higher Education

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Artificial Intelligence (AI) is rapidly transforming the landscape of higher education across Australia - and for that matter globally. As universities and higher education providers seek innovative ways to improve teaching, learning, and administrative processes, AI technologies are increasingly being integrated into various facets of tertiary education.

Rather than viewing AI as 'the enemy' it would be wise to consider a range of options and opportunities where AI could 'enhance' HE provision and be used 'for good rather than evil' so to speak. We are seeing considerable development in this domain - and it is well worth considering applications, opportunities and associated challenges.

If the priority in HE is to prepare students for the workforce – it would be sensible to integrate AI as much as possible into the curriculum. AI is currently shaping the future job market and supporting students and equipping graduates with the appropriate skill set becomes imperative. Rather than *fearing* AI, students should learn to *collaborate* with it, enhancing their employability and resilience.

Applications

The notion of **personalised learning** needs consideration. Artificial Intelligence enables and encourages tailored educational experiences by analysing student data and adapting content to suit individual learning styles. This can often be incredibly time-consuming. Adaptive learning platforms can recommend things like resources, difficulty levels, and offer targeted feedback to students. If managed correctly – in this space – the process and outcomes can be very effective. Early initiatives (as far back as 2000-2023) included *The Virtual Conservatorium* that attempted to address these issues in a far less supported way – but nevertheless placing technology (of the time) 'front and centre'

In turn, **Automated Assessment** can be used for a range of tasks where AI-powered tools can mark assessments, quizzes, and even essays - providing faster and more consistent feedback. This frees up academics for more complex tasks and allows students to receive timely responses. In other words – efficiency can be achieved without quality loss. The types of assessments to be used would need to be considered carefully – if AI was to be involved in this process. The matter is well worth serious consideration.

Academic Advice and Support could be enhanced using virtual assistants and 'chatbots' answering student queries, helping with course selection, and providing support 24/7. This would help to improve accessibility and efficiency. Other sectors (airlines, travel, health for example) are effectively using this approach – and it could readily be adapted for the HE scene. On reflection, AI is already in use with e Timetables and e Libraries. Expanding the use of AI in this domain makes a lot of sense.

Much **Academic Administration** could be automated. AI is capable of streamlining administrative tasks including admissions processing, timetabling, and resource allocation. This would contribute greatly to reducing manual workload, not to mention operational costs. A number of Student Management Systems (SMS) and Learning Management Systems (LMS) are already quite intuitive and using AI elements. This is not replacing human contact – but rather enhancing access and flexibility.

Research and Data Analysis could be enhanced and made more efficient. AI currently assists researchers by analysing large datasets, identifying trends, and accelerating discoveries, especially in fields such as health sciences, engineering, and social sciences. This could be further extended – without losing integrity and focus.

Opportunities

On reflection there are many opportunities to be embraced.

Learning outcomes could be enhanced by *genuinely 'personalising' education*, AI can help students master content more efficiently and improve overall academic performance. This could provide considerable opportunity for individual approaches to learning (and for that matter teaching). This does not require invention – there are already a number of products in the marketplace that can enhance personalised learning. These are available at all levels – and are highly interactive.

Access and inclusion could be better facilitated. AI-powered tools can make education more accessible for students with disabilities (for example) or those from remote and regional areas (virtual education). Tools/features such as speech-to-text, translation, and adaptive interfaces can be powerful support mechanisms. There are a considerable number of products readily available that could assist in this space. I have personally used some quality products that have enhanced virtual/hybrid teaching across the world. Most recently I completed some professional development work online with *Coursera* – and found the course informative, well organised and highly interactive.

Data-driven decision making could be considerably enhanced. Leveraging AI analytics to better understand student needs, optimise curriculum design, and improve retention rates are just some of the ways that AI could be effectively used and incorporated. There is considerable chatter about retention and attrition across the Sector.

Further, *support for academic staff* could be improved. Automating repetitive tasks allows educators to focus on high-value activities such as mentoring, research, and curriculum development. So much time is often consumed on 'low end tasks' – that could be readily assigned to intuitive AI opportunities.

Challenges

Applying AI initiatives will have key challenges associated that need to be 'front and centre' and addressed from the outset. This positive spin on collaborating with AI is not intended to be embraced blind folded – rather to be approached with the appropriate measure of caution and clarity.

Ethical and privacy concerns are of considerable importance. Collecting and using student data by AI systems raises important questions about consent, privacy, and data security. Institutions must ensure compliance with privacy laws and ethical standards. This needs to be regarded as a prime consideration and a high priority from the outset. This is not a domain for compromise.

AI systems can inadvertently perpetuate *biases* present in their training data, leading to *unfair* outcomes. It is critical to regularly audit AI tools and ensure transparency in their decision-making processes. This does not mean that any use should be abandoned – rather careful monitoring (auditing) should become a vital part of the ongoing process.

The rise of AI-driven tools for writing and problem-solving challenges institutions to develop new approaches to maintaining academic honesty and prevent plagiarism. *Academic Integrity* is of paramount importance – and should never be compromised irrespective of mode or location.

Staff *training* and associated *adaptation* then becomes critical. The most successful integration of AI requires ongoing professional development for educators and staff to understand and effectively use these new tools. Without the necessary training (and associated confidence) all efforts could be futile – and possibly worse – resulting in a negative mindset.

It is important to remember that there will always be considerable *cost* associated with implementing and maintaining AI infrastructure. Planning, investment and monitoring will be crucial.

Current initiatives at Australian universities and private providers are currently in place. Adaptive learning platforms - in large undergraduate courses for example - help tailor content and feedback. Other providers are using *chatbots* to handle common student inquiries, freeing up staff time for more complex issues. Research projects powered by AI are driving innovation in areas such as climate science, health analytics, and language processing.

The HE sector has been pre-occupied with combating the inappropriate use of AI by students in particular – and less focussed on using AI effectively and efficiently. This needs to be addressed.

The future

As AI technologies continue to evolve, their role in higher education is set to expand – without doubt. In the coming years, we can expect to witness greater integration of AI in curriculum design, learning analytics, and student support systems for example. Enhanced collaboration between universities, HE providers, industry, and government will be vital to address the challenges and maximise the benefits of AI for all stakeholders. Rather than ‘sit on our hands’ and be concerned – we need to embrace the technology available to us and put it to good use.

The goal should be to harness AI as a tool to enhance educational quality, accessibility, and innovation, ensuring higher education remains world-class and inclusive - well into the future.

In the Australian higher education context (on reflection) AI should be seen as an ally—one that empowers educators, supports students, and drives institutional progress. By embracing AI thoughtfully and ethically, HE providers can harness its benefits to create a smarter, fairer, and more dynamic learning environment. The future of HE is not one of competition with AI, but of partnership, innovation, and shared growth.

Also worth reading –

Virtually Yours (2025) – Virtually Yours

All a matter of integrity despite the mode of delivery (2025) - 6113ad_78e7dc08f21d4dad9049875149d4f76e.pdf

How to maintain academic integrity (2025) - 6113ad_d55e1564f3774b89a4d85a05495f1c19.pdf

Artificial intelligence versus actual intelligence (2025) - 6113ad_964798f723f64e32a1706f661aae61cd.pdf

Wilful AI blindness and negligence in university assessment (2025) - 6113ad_ce3db3f586c9482ea356d8d1b1a41978.pdf

What needs to be incorporated into a cyber security policy for a higher education institution (2025) - 6113ad_b87586af3123460fa266969fc2265f54.pdf

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