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The evolving risk to academic integrity posed by generative artificial intelligence: Options for immediate action

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This short document is intended to give institutions and teaching and learning leaders in Australian higher education some ideas about steps that can be taken immediately to address the risks to academic integrity posed by generative artificial intelligence (AI). It is recognised that longer-term planning and action are already occurring. The ideas in this document are intended to provide mitigation strategies while those longer-term plans take shape.

Evidence of cheating

Reports continue to emerge about the inappropriate use of generative AI tools such as ChatGPT in Australian higher education, reflecting similar reports globally. These anecdotes have been picked up by media outlets, who are reporting on the possibility of widespread cheating with AI in education.

At the time of writing, it is unclear what proportion of students use AI in their studies. Estimates range from approximately 10% to over 60% of cohorts, with an unknown proportion of this use being inappropriate. As has long been the case with cheating in higher education, it is difficult to obtain an accurate figure for various reasons. What is without question, though, is that some students are using AI inappropriately and that this inappropriate use constitutes a serious immediate risk to academic integrity.

Development of AI technology

As is the case with reports of the inappropriate use of generative AI in education, there is substantial uncertainty about the ongoing development of AI technologies. Some in the AI community claim that these technologies and tools will continue to develop along exponential trajectories. Others claim that the current iterations of large language models and other generative AI technologies have reached a plateau, requiring a technical revolution to progress further.

There is, therefore, a high degree of uncertainty about the future of AI in higher education. Whatever the coming iterations of AI technology might be, education systems and sectors already face momentous challenges in addition to the opportunities that AI technologies offer. This includes but is not limited to the emerging reports of inappropriate AI use. A wait-and-see approach to these challenges will not suffice.

Action plans

Australian higher education institutions submitted action plans for responding to the risks posed by generative AI to academic integrity in July 2024. *Assessment Reform for the Age of Artificial Intelligence* was developed to assist with crafting these plans. However, the principles and propositions in that resource will, in many cases, require a significant, systemic overhaul of assessment practices. As highlighted in the CRADLE webinar on systemic approaches to

assessment, implementing such an approach to assessment redesign and security across an institution is a complex process. It involves not just technological adaptation but also shifts in pedagogy, policy, and institutional culture.

The current constraints faced by higher education institutions in Australia and in many other parts of the world make these kinds of changes particularly challenging to realise. In many higher education institutions, these changes will take some time to implement, leaving a tangible risk to academic integrity while action plans are further developed and implemented.

Short-term and long-term action

In the meantime, it is imperative to resist the urge to return entirely to conventional, ostensibly "AI-proof" assessment tasks like pen-and-paper exams. Although these could appear like a quick fix, they frequently fail to evaluate the entire range of knowledge, skills, and abilities we ask of students pursuing a higher education.

For example, a teacher educator is unlikely to be concerned about what pre-service teachers can recall during an exam session. Teacher educators are concerned about pre-service teachers' capacity to make informed decisions and judgements in authentic classroom settings to promote the learning of their future students. It is unlikely that an exam will provide sufficient insights into these essential competencies of a professional teacher. Exams have a place, but they are not the only solution to the problem of possible AI cheating in higher education.

Immediate steps

While higher education institutions work towards long-term solutions, steps can be taken to respond to the immediate challenges. These steps will help empower people in the higher education community to make decisions locally to address the immediate risk to academic integrity. Importantly, these steps should not be seen as alternatives to the propositions and principles in *Assessment Reform for the Age of Artificial Intelligence* but as complementary.

1. Increase awareness of AI capabilities

Many in the higher education community have yet to explore generative AI capabilities at all. It is critical for everyone involved in teaching and learning in higher education to engage with and understand these technologies. Beyond encouraging colleagues to use these tools themselves, there are resources available that importantly *show* what generative AI can do rather than just *describe* the capabilities. Here are two examples:

- Professor Danny Liu's demonstration from the TEQSA 2023 Conference
- Professor Jason Tangen's demonstration for The Academic Board of UQ

2. Foster an understanding of what generative AI is and is not

The emergence of generative AI is often compared to when calculators became available to students. However, calculators require some understanding of mathematics to use. Generative AI tools only require basic language skills and can 'chat' with users in natural language. These tools can also explain to users how to use them, calculators do not. The human-machine relationship with generative AI is more interactive than transactional, and this difference is important for those in the higher education community to come to terms with. Generative AI is not like a calculator at all. This paper is an attempt to tease out the critical differences:

- Lodge, J. M., Yang, S., Furze, L., & Dawson, P. (2023). It's not like a calculator, so what is the relationship between learners and generative artificial intelligence? *Learning: Research and Practice*, 9(2), 117–124. https://doi.org/10.1080/23735082.2023.2261106

3. Limit reliance on AI detectors

Many educational institutions and sectors have implemented AI detector tools to attempt to police AI use. Testing of these tools continually demonstrates that they are unreliable and tend to produce false positive results. In one example, an AI detection tool flagged The Bible as being written by ChatGPT. Relying on these tools will lead to some unfair accusations against innocent students while potentially missing sophisticated misuse by students who deliberately seek to avoid detection. These detection technologies will undoubtedly continue to evolve and possibly improve. Still, at the time of writing, it is unwise to rely solely on AI detectors as a means of managing the risk to academic integrity posed by AI.

4. Monitor and review integrity and misconduct processes

Generative AI serves as a catalyst for higher education institutions to consider how integrity and misconduct processes are managed. While changing policies and processes will likely take some time and effort, it is worth carefully monitoring and reviewing these processes at an institutional level now. Emerging evidence suggests that misconduct investigation processes that rely heavily or solely on unit/subject coordinators might not be the best way to manage increasingly complex misconduct cases. This approach is difficult to scale and leads to inconsistencies across institutions that will inevitably result in some students being treated unfairly. The evidence suggests that centralised approaches (as have been implemented at some Australian higher education institutions) can be more effective and consistent. In these examples, the investigation of possible misconduct is carried out by specialists who are experts in and employed specifically to conduct these kinds of investigations and manage misconduct processes. Professor Cath Ellis and Kane Murdoch have developed a useful way of understanding these processes:

- Ellis, C., & Murdoch, K. (2024). The educational integrity enforcement pyramid: a new framework for challenging and responding to student cheating. *Assessment & Evaluation in Higher Education*, 1–11. https://doi.org/10.1080/02602938.2024.2329167
- Video explaining the 'Enforcement Pyramid'.

5. Seek out expert advice

The implications of AI on higher education continue to evolve. Australia is home to some of the world's leading experts on academic integrity, cheating, educational technologies, artificial intelligence, and higher education. These experts span researchers, practitioners, leaders and professionals. The guides and resources included in the TEQSA Good Practice Hub on AI are an excellent starting point. Professor Phillip Dawson's book *Defending Assessment Security in a Digital World* is required reading for anyone with significant responsibilities in managing the risk that AI poses to academic integrity.

LinkedIn is becoming a useful platform for sharing developments, ideas, approaches, and upcoming events that will help to adapt higher education to the age of AI. To keep up with ongoing developments, there are also several podcasts worth subscribing to, particularly the AI in Education Podcast with Dan and Ray (Australia) and Teaching in Higher Ed with Bonni Stachowiak (US). Both have extensively covered issues with assessment and AI.

6. Partner with students

Engaging in conversations and partnering with students and student groups is critical in developing immediate action. Students bring important perspectives to the discussion about AI as key contributors. In addition, many students are already sophisticated users of these technologies and contribute expert views about how they can and should be used in learning, teaching and assessment.

Principles for immediate action

As highlighted by Professor Cath Ellis, one of the key shifts in adapting to the age of AI is moving from a focus on detecting cheating to focusing on detecting whether learning has occurred. After all, the Higher Education Standards Framework (Section 1.4.4) states that "on completion of a course of study, students have demonstrated the learning outcomes specified for the course of study." This shift lends itself to a set of principles that can be implemented in the short term as institutions work towards the systemic changes to assessment practices that are required.

In taking action, there must be a **strong focus on the ways in which these actions will impact equity-bearing students**. AI has the potential to provide support for diverse cohorts of students if used sensibly in evidence-informed ways. However, there are tangible risks in adopting AI in higher education. Some students might be left behind, particularly students with a disability and those with limited access to advanced AI tools due to financial or other constraints. New digital divides are emerging, and others are being exacerbated by AI in complex ways. It is essential for institutions and educational leaders to have these issues front of mind when taking action.

1. Focus on the most urgent priorities

There is a strong case for considering which parts of a program are most in need of urgent attention. For example, final-year assessment could be prioritised as the most important for

determining whether students meet the required program-level standards. There might also be some utility in considering implementing capstone units/subjects or final-year portfolios to mitigate the risk of students being awarded degrees without having met the required outcomes.

2. Know your students

Getting to know students as individual learners on their own developmental trajectories is now critically important. This may be difficult, particularly in large classes and in situations where teaching is mostly carried out by colleagues on casual or sessional contracts, but necessary, nonetheless. Knowing students allows educators to see inconsistencies between the interactions they have with students during classes and what is submitted for assessment tasks. Furthermore, while higher education looks increasingly transactional, high-quality learning is relational. Humans learn best with and from other humans. Finding ways to foster connection between students and between students and teaching staff is now more important than ever and will help to promote academic integrity.

- Associate Professor Jaclyn Broadbent provides one of many excellent examples from around the sector of how technology can be used to help facilitate these relationships.

3. Be transparent about AI use

There are several prominent examples of frameworks that help to make clear to students and staff alike what is appropriate and inappropriate use of AI in learning and assessment tasks. In many instances, a unit/subject coordinator will be best placed to decide on what is appropriate or inappropriate use of AI in a task. The following frameworks will assist with providing this clarity. If there is to be any enforcement of limits on AI use, the limits must be made explicit. Whatever framework each institution implements, what is particularly important is that clear guidance is available for everyone concerned. It is also critical to delineate what is allowable in learning and what is appropriate for assessed tasks where it needs to be clear what work a student has done themselves. Here are some examples:

- The University of Sydney's two-lane approach
- UNSW Sydney's multi-lane approach
- The Artificial Intelligence Assessment Scale (Perkins, Furze, Roe and McVaugh).

4. Ask students to show their working

Require students to document their process if they are allowed to use AI tools. For various reasons, the calculator analogy does not translate well to generative AI; yet, as it is with calculators, "show us your working" is a helpful heuristic in this situation. This strategy can entail asking students to provide the prompts they employed, the results they obtained, and the ways in which they integrated the output into their finished product. This method not only deters inappropriate use but also aids in the development of essential AI skills in students. Furthermore, seeing the working provides teachers with some understanding of the potential applications of these tools in the assignments they set.

5. Engage in conversations with students as assessment

Since the emergence of generative AI, there has been a lot of emphasis on oral assessment in various forms, for good reason. While organising oral assessment may be challenging in larger cohorts, this approach can provide valuable insights into students' understanding and thought processes that may not be evident in written work alone. Educators will likely glean as much if not more, about how a student is doing in a 15-minute chat with them than spending an hour or more looking at the distant echoes of their progress in a written artefact. Care must be taken to implement this kind of assessment task fairly and equitably. The following interactive oral assessment user guide developed by Dublin City University in partnership with Griffith University is a useful resource:

- Interactive Oral Assessment: User Guide (DCU and Griffith University).

6. Learn from and collaborate with others

Change is often difficult in education, and Australian higher education is no exception in this regard. Institutions grapple with rising levels of uncertainty and little sector-wide support for innovation. Ongoing collaboration within the higher education sector and beyond with other education and training sectors to develop long-lasting, effective solutions must be a priority. All education systems, sectors and institutions are grappling with a very similar set of issues when it comes to AI, and there is much we can learn from each other.

None of the strategies provided here is a guaranteed solution to the challenges posed by generative AI. The complex problems AI raises in education won't have a single answer. However, these tactics can assist in bridging the gap between existing policies and practices and the directions outlined in *Assessment Reform for the Age of Artificial Intelligence*. This is particularly so when used within the framework of a well-thought-out and implemented institutional approach to academic integrity. Ignoring the ongoing development of generative AI is not an option. Short-term action is needed now to complement longer-term planning and assessment redesign.

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