

Charles Darwin University

Submission to the Inquiry into the use
of generative artificial intelligence (AI)
in the Australian education system

July 2023

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Australia's most connected university

Charles Darwin University's vision is to be Australia's most connected university by being courageous and making a difference in the Northern Territory (NT), Australia and beyond.

Charles Darwin University (CDU) is a dual sector university with around 7,500 higher education and 3,000 vocational full time equivalent students. Around seven per cent of higher education and 25 per cent of vocational education students are First Nations students, and CDU has the highest proportion of remote students in higher education in Australia.

Being a dual sector university allows CDU to meet the education needs of Territorians in campuses in Darwin, Alice Springs, Palmerston and Katherine and in study centres in Nhulunbuy and Tennant Creek. CDU has a proud history of delivering on country in some of the NT's most remote locations, bringing training to communities who need it in places such as Galiwinku, Maningrida, Borroloola, Wadeye and Hermannsburg.

At the heart of CDU is to engage First Nations students and support their attainment of vocational and higher education. The NT spans approximately one sixth of Australia's landmass and yet is home to just one per cent of the population, of whom 30 per cent are First Nations peoples.

CDU has established itself as an exciting and progressive research-intensive university with a regional focus. CDU's research outputs consistently outperform for its size and are evaluated as being well above world standards in areas of importance to Northern Australia.

Summary of submission and recommendations

In line with the House of Representatives Standing Committee on Employment, Education and Training's Terms of Reference for this Inquiry, this submission focuses predominantly on the strengths, future impacts and risks presented by generative Artificial Intelligence (AI) in education.

In order to present CDU's expertise within the unique education, training and research environment of the NT, this submission includes the results of a survey of CDU academics in July 2023 by the Education Strategy team.

For a 10-day period at the beginning of July 2023, academic staff at CDU, both from Vocational Education and Training (VET) and higher education, were asked to participate in a short survey. This survey was designed to help inform the University's position in relation to use of Generative AI engines, such as ChatGPT, and their implications on how CDU academic staff respond to the opportunities and challenges these technologies provide. A particular emphasis in the survey was on how this may be affecting assessment items, with a clear focus on preventing academic integrity breaches.

73 out of a possible 488 CDU academic staff participated in the survey, mostly from the higher education faculties. Considerable qualitative data was gathered, providing clear commentary on how staff were contemplating this shift in practice. Associate Deans of Teaching and Learning from each of CDU's three Higher Education faculties were also invited to participate in a small, focused workshop in mid-July 2023. This submission incorporates some of these pertinent observations from the survey.

CDU has also contributed to and supports the Australasian Council on Open, Distance and eLearning Submission to the Inquiry.

Recommendations

CDU recommends that:

1. where there are opportunities for TESQA to support AI-related transformation, these should also be adapted and adopted, where appropriate by ASQA.
2. TEQSA and ASQA develop modules that all students can undertake in relation to Academic Integrity, similar to what has been developed for higher education providers by TEQSA for their staff, in the 'Academic Integrity Masterclass' online resources.
3. AI be progressed as a potential equaliser for disadvantaged students and that techniques on appropriate use be developed, agreed on and promoted across the sector.
4. where any guidance notes and online resources are provided by TESQA, there is facility for these to keep pace with technology so that they do not become redundant.
5. there be further investment in professional development, including Microcredentials for academic teaching staff on the use and usability of Generative AI.
6. the Inquiry acknowledge the funding implications arising from workload pressures associated with generative AI and refer these funding implications to the Universities Accord process.

Context

The majority (76 per cent) of CDU respondents to the survey saw benefits in using generative AI tools, both for their students and more generally to help them prepare for their teaching.

It is fair to say the ascension of ChatGPT in late 2022 was not fully comprehended by universities, despite warnings from peak bodies, Tertiary Education Quality and Standards Agency (TEQSA), and in media commentary. Both the scale of the technology and pace of transformation was unexpected and it was difficult to be suitably prepared for the 2023 calendar year.

Only 17 per cent of CDU academics surveyed had made major changes or completely changed their approach to unit assessment. However, the vast majority of surveyed academics are presently making changes or planning to make changes. Around 20 per cent of surveyed academics are implementing a "major rethink" of approaches to teaching over the next 12 months.

VET

The vast majority of CDU's engagement in responding to AI has been with higher education academic staff, rather than VET staff. While this is not surprising given VET's focus on capabilities which are often demonstrated practically, it is still important that VET does not get forgotten in the education and training landscape. As such, where there are opportunities for TEQSA to support AI-related transformation, these should also be adapted and adopted by Australian Skills Quality Authority (ASQA).

Recommendation 1

That where there are opportunities for TESQA to support AI-related transformation, these should also be adapted and adopted, where appropriate by ASQA.

Academic Integrity

There is both an assumption and significant evidence that students are using generative AI in their assessments. However, many academic staff do not know how to instruct students on appropriate use, especially in "grey areas".

As with contract cheating, AI poses considerable risks to academic integrity and these risks require monitoring, and then investigation, and then possibly action. The sophistication of AI technology means that the technologies used to identify academic dishonesty more broadly are not keeping up and are unlikely to keep up with the next expected wave of generative AI to hit the market in coming months.

While there are clear cases of academic dishonesty, for instance where 100 per cent of a written assessment is directly copied from ChatGPT, the more common examples are much more speculative. Where academic dishonesty is suspected, but is not clear-cut, it requires a significant amount of time to properly investigate. At a university level, academics are saying that time allocation for marking is simply not sufficient for the level of additional scrutiny required in this marking.

Student support for academic integrity

As one academic noted, “students don’t know the ethical boundaries of using AI”. While students are required to undergo training on academic integrity when they commence their studies at CDU, it is clear that much more is needed for students to equip them for this new phenomenon.

CDU sees the benefit in TEQSA and ASQA developing modules that all students can undertake in relation to Academic Integrity, similar to what has been developed for higher education providers by TEQSA for their staff, in the ‘Academic Integrity Masterclass’ online resources. If developed by these quality agencies there can be a consistent message presented for all students (see also Recommendation 5).

Recommendation 2

That TEQSA and ASQA develop modules that all students can undertake in relation to Academic Integrity, similar to what has been developed for higher education providers by TEQSA for their staff, in the ‘Academic Integrity Masterclass’ online resources.

Universities are also feeling the tension between their classical role in transferring knowledge and encouraging the development of new knowledge, against preparing students for AI-activated workplaces. Academics want to continue to prepare their students to be critical thinkers, but also don’t want to leave their students behind.

Survey comments:

“The risk to scholarship and critical thinking is high – we need to design assessment to help the student avoid the temptation of having AI do all the “thinking” for them. The challenge for academics is ensuring the students have met the expected graduate outcomes and are equipped with the skills and knowledge expected from the successful completion of the course.”

Differential impact on disadvantaged students

CDU believes there is the potential for AI to act as a ‘learned friend’ and in fact become an equaliser for disadvantaged students.

Survey comments:

“I can see [AI] as a very powerful tool for inclusion. Used wisely it will be a game changer for those who English is not the first language (both First Nations and International students). It will also help my neurodivergent people who are very creative but struggle to express in writing their thoughts. I expect a very big shift on the focus of our teaching to adapt to the needs of the future jobs. Overall, I find it all very exciting. Interesting times!”

CDU's survey of academics included several reflections on how those with non-English speaking backgrounds are engaging with AI. This was usually reflected on negatively, for example, potential academic dishonesty where the assessment's English language was more advanced than other work from the student. However, there are clearly opportunities for AI to become an effective coach for these same students – especially with English grammar and style. Again, noting the difficulty in navigating the grey areas, one workshop participant asked, "how different is that from Grammarly"?

Recommendation 3

That AI be progressed as a potential equaliser for disadvantaged students and that techniques on appropriate use be developed, agreed on and promoted across the sector.

Access to AI

Logically, disadvantaged students with poorer access to internet and computer technology would not experience the advantages of AI due simply to access. In this sense, AI, as technology before it, has the capacity to leave disadvantaged students behind. The CDU survey indicated that eight per cent of respondents were already seeing evidence in the Northern Territory of students experiencing disadvantage because they cannot access the benefits of AI. A further 15 per cent foresee that there will be disadvantage.

Survey comments:

"Certainly, remote students who are already disadvantaged by insufficient broadband and access to technology will also be limited in access to AI. Additionally, those for whom English is a second or third language may also be disadvantaged in their ability to use the tool effectively."

Opportunities

Guidance

CDU expects that the national regulator, TEQSA will provide Guidance Notes for academic practice and would welcome that guidance, in excess to what has currently been forthcoming. CDU will continue to contribute to policy development in this area alongside other universities. An important consideration will be ensuring that any guidance keeps pace with technology and are future-proofed where possible to mitigate the risk of becoming redundant.

It was clear from discussions in the Focus Group that our academic leaders were looking for guidance in a time where there is increased uncertainty, and that this should be provided by way of sector-wide advice. The current sense is that each university is doing its own thing to try and remediate this current threat to academic integrity, and that this needs to be mediated in some way.

Recommendation 4

That where any guidance notes and online resources are provided by TESQA, there is facility for these to keep pace with technology so that they do not become redundant.

Professional development to respond to AI

Academic staff are using colleagues internally and across the sector, including professional bodies, to inform AI approaches. While communities of practice will naturally be strengthened over time, there is a strong case for further investment in professional development, including Microcredentials for academic teaching staff on the use and usability of Generative AI.

Recommendation 5

That there be further investment in professional development, including Microcredentials for academic teaching staff on the use and usability of Generative AI.

Workload

Without a doubt the most pressing issue for CDU academic staff is ‘workload’ and the second is understanding what needs to change and how to change it. This is primarily in how they assess student learning, ensuring it is learning they are assessing and not an output from an AI engine. This requires not just a rethink of traditional ways of doing things but the time in an already stretched workload to make substantial changes to how they assess and how they teach towards that assessment. The impost on university budgets, and in particular CDUs budget, should not be understated here. If CDU is to deal with this in a coherent way, and in line with what other institutions are doing, this requires time to engage at that level with colleagues from across the institution and the sector.

As one staff member commented when asked, ‘what do you feel could contribute to a meaningful response to the advent of Generative AI’, wrote:

Survey comments:

“The impact of advancements in AI reach across every activity in the university. Academic integrity / assessment is an obvious first place to look but the impact is likely to be at least as profound as the invention of the Web.”

This is such a fundamental change to current practice, that this should be recognised by those who fund education that this cannot adequately happen within current funding windows. So although the advent of generative AI is exciting, and potentially leveling for those who may be disadvantaged, for institutions to make the most of the options for this to spurn productivity, time has to be made in workload to allow for this to happen.

Within the context of the Universities Accord consultation process, CDU has argued that the funding model for place-based, non-metropolitan universities places is not sufficient for organisations like CDU to deliver on its purpose. Despite the advent of online learning, students have high expectations for both the availability of campus-based experience, as well as the quality of teaching and learning and flexibility. This means, while over time the physical infrastructure demands for universities have remained similar, extraordinary technological infrastructure demands have been added.

Addressing AI within existing teaching and learning workloads is another example of increased expectations on universities within a constrained funding model. CDU recommends that the Inquiry acknowledge the funding implications arising from workload pressures associated with generative AI and that this should be considered in the context of the Universities Accord process.

Recommendation 6

That the Inquiry acknowledge the funding implications arising from workload pressures associated with generative AI and refer these funding implications to the Universities Accord process.

Conclusion

CDU argues that the core business of universities in ‘transferring’ knowledge and engaging students in critical thinking remains as important as ever. While the benefits of AI will not be realised without concerted effort on the part of universities, it is also true that universities do not have the optimum approach in place at this stage. A continuous improvement approach to measuring, utilising and regulating AI will be important in the future.