

Inquiry into the use of generative artificial intelligence in the Australian education system

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The Australian Technology Network of Universities (ATN) welcomes the opportunity to provide a submission to the House Standing Committee on Employment, Education and Training for its inquiry into the use of generative artificial intelligence in the Australian education system.

ATN universities embrace innovative, engaging and authentic approaches to learning and assessment that develop students' experience and skills in current and emerging technologies. Ensuring students, graduates, educators and researchers can use these technologies effectively, ethically and responsibly as digitally fluent citizens is a priority.

Generative AI is a rapidly evolving technology that is changing the way we create and interact with content and solve problems. It is important that we prepare students and staff to think critically and evaluate the reliability, accuracy and context of the content generated and the way they use it.

Generative AI tools may aid in streamlining analysis, ideas generation, synthesis, design and writing processes. They may be used to stimulate critical or creative thinking by providing new insights and perspectives. Under appropriate circumstances, commercially available generative AI tools can also help with analysis of large amounts of non-sensitive data and help to highlight important findings.

As always, access and equity must be at the heart of our response. We must ensure that all students and staff have fair and equitable access to generative AI tools and that financial resources are not a barrier to success. Equally, we must also ensure that these tools are used in a socially responsible way.

Generative models can perpetuate biases present in the data they are based on. This poses risks regarding authenticity and inaccurate information. Societal bias, structural racism and overt discrimination of underrepresented and vulnerable groups can be replicated and amplified when using generative AI models, resulting in continuing disadvantage and harm.

While regulation is important, it should not constrain or limit the flexibility and adaptiveness of institutions to respond to rapidly changing uses, tools and environments. Given the rapid change in generative AI and the early stage of our evolving responses, it is important that we adopt and evaluate a diverse range of responses so we can test and refine our approaches. Sharing information, evidence and best practice across education sectors will improve our collective response.

Recommendations

ATN recommends that the Committee:

- 1. Place access and equity at the heart of our collective response to generative AI**
- 2. Prioritise educational institutions' need for agility and flexibility in their responses to a rapidly changing environment and technology when considering regulation**
- 3. Adopt and support innovative and proactive approaches and responses to generative AI, recognising that it is going to be part of the future of education and work.**

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Further information

1. The strengths and benefits of generative AI tools for children, students, educators and systems and the ways in which they can be used to improve education outcomes

- For students the use of generative AI will be a key digital skill in all areas of work and life, so it will be essential for them to have thorough experience and awareness of the benefits, risks and appropriate and responsible use of generative AI.
- Generative AI also has the potential to provide personalised and adaptive assistance to students.
 - If equity of access is ensured it could reduce the disparity between those students who have access to tutors or additional services as part of their education study.
 - Personalised learning has not been easily accessible for various reasons, either due to intensive labour and costs to setup suitable systems, or due to costs involved in obtaining support services either through personal or institutional provision.
- Under the appropriate frameworks and guidelines, educators may benefit from the streamlining of automatable tasks allowing them to focus their time and energy on interacting with students.
 - The administrative aspects of educators' roles has increased over the years as well as a focus on data and evaluation metrics for teaching practice.
 - Generative AI has the potential to support a significant portion of educators' work, such as grading and feedback, generating of content or support in resource creation.
 - This could disrupt existing educational publishing business models and reduce costs for educators, institutions, and students.
- With the introduction of generative AI there will be greater potential for educational providers to customise personal learning assistants with specific curated data and materials that can then support students.
 - This may also reduce reliance on international or more generalist educational technology services, and can facilitate more tailored curation that aligns with Australian context. This could mean institutional strategies that truly reflect the needs and interests of students in choosing to study.
 - On the other hand, generative AI is based on a corpus of texts drawn from primarily English language, United States-based sources so care is needed when relying on generated material.

2. The future impact generative AI tools will have on teaching and assessment practices in all education sectors, the role of educators, and the education workforce generally

3. The risks and challenges presented by generative AI tools, including in ensuring their safe and ethical use and in promoting ongoing academic and research integrity

- There are a number of strategies and practices to maximise the beneficial impact of generative AI and mitigate the risks and challenges:
 - Exploration and guidance that promotes educative and collaborative engagement with generative AI
 - Recognition of the limitations and appropriate and responsible use of tools
 - Consideration of ethical issues for general practice as well as exceptions, particularly when vulnerable cohorts are involved and the risk and potential impact of bias is high
 - Clear and ongoing narrative and discourse throughout the education sectors to guide and maintain awareness of ongoing practice, expectations, conduct
 - Integration of AI knowledge and skills into current education qualifications, professional learning, and microcredentials offered by the sector – this requires direction from key regulatory and governance bodies for higher education and vocational education as well (e.g. TEQSA and ASQA to inform consistent capability development in educators)
 - Development of case studies and showcases of exemplary practice to guide appropriate engagement and inspire innovative practice.

6. Recommendations to manage the risks, seize the opportunities, and guide the potential development of generative AI tools including in the area of standards.

- This technology must be incorporated into education, much like the use of computers and software were originally taught as a specific class in secondary schools and then was incorporated as a basic technical skill.
- This exposure and digital literacy in technology must begin in secondary study and be appropriately scaffolded into tertiary study, establishing a strong foundational familiarity with tools prior to more sophisticated application in a higher education setting.
- Short courses (both in higher education and vocational education) in generative AI may help formalise a sufficiently structured curriculum that addresses both technical competency as well as anchoring it in ethical use, critical thinking, evaluation and scenarios for use.
- It is essential that generative AI is implemented and integrated across all fields of study to ensure that all students have the opportunity to build familiarity. This will ensure ethical and critical engagement with the appropriate use of such technologies in society, and preparing future workforce and cultural leadership in policy and government.
- Standards for generative AI use in education contexts should be considered, but also take into account the rapidly changing environment and technology. Standards should not limit and constrain institutions' need for agility and flexibility in their responses. Standards could relate to the specific types of generative AI that are acceptable – these standards could include consideration of data management, privacy, security, as well as broader terms of service, contracts (for paid tools).
- The rapid development of generative AI and proliferation of companies will also prompt a range of new 'edtech' products and services that could create a financial pressure for educational institutions as they attempt to ensure appropriate equity and inclusion for cohorts.

Further enquiries should be addressed to:

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