Submission to The House of Representatives Standing Committee on Employment, Education and Training's INQUIRY INTO THE USE OF GENERATIVE ARTIFICIAL INTELLIGENCE IN THE AUSTRALIAN EDUCATION SYSTEM

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We are researchers from the Centre for Research in Assessment and Digital Education (CRADLE) and School of Education, Deakin University, who are affiliated with the 'Learners in a Digital World' Research Group within Research for Educational Impact (REDI) Strategic Research Centre. We are known for our expertise and extensive track records in researching digital education, artificial intelligence and/or education policy and systems.

As citizens and academics, we aspire to live in an intelligent nation, one distinctively and deliberately developed for human thriving. A high-quality education system is central to our flourishing – both as individuals and as a nation. However, in the world of generative Artificial Intelligence (AI), our education system risks being shaped directly and indirectly by corporate interests rather considerations of the benefit of our society. In order for this to succeed, we need effective partnerships and dialogue between education systems, government regulation, and technology and other industry partners to ensure regulations promote the interests of our diverse communities.

We ask the Standing Committee to consider the following four recommendations:

1. Fund social sciences research into how generative AI is altering knowledge making (Tor 6)

Research into AI is often mostly seen as a technological issue. However, the most significant opportunities offered by generative AI are as fundamentally social as technical: new ways of learning, new ways of creating and new ways of thinking. Indeed, knowledge making itself is being changed within the broader digital landscape. Greater investment into social science research can support emerging understandings of what knowledge is in a world of generative AI and how such knowledge might be used, shared and translated into curricula that prepare our students for their digital futures. This is an opportunity for Australia to be world-leading by supporting our exceptional social sciences, humanities and interdisciplinary scholars as they seek to understand not just what these technologies do, but the role they play within a knowledge society.

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2. **Counter ethical risks through regulation of governance and policies: these should promote ethical engagement with generative AI first and foremost, as a priority, rather than an add-on (ToR 3,5 and 6).**

One of the largest concerns with generative AI derives from the underlying 'big data' that provides its source material. These data are *always* flawed as:

- Big data reflects the biases and distortions of its sources.
- Not all things are captured in big data and therefore generative AI must marginalise certain types of knowledge.

In addition, generative AI may:

- Draw from datasets that harvest artistic and intellectual works without permission or acknowledgement, denying the rights of and threatening the jobs of those who create this work both now and into the future.
- Be implemented by corporations and other bodies in ways that are profoundly unethical, for example, through labour exploitation or data manipulation.
- Exacerbate the threats already presented within a digital society: including the spread of misinformation at scale, unacceptable environmental costs through computational requirements and the rising inequality of wealth distribution.

In order to address these challenges, institutions should adhere to policies that require identification and review of marginalisations, biases, unethical data harvesting and harmful uses of any products considered for use in education. Products of Generative AI corporations used in education should be selected to preference and prioritise ethical approaches, respect intellectual rights and for their demonstrated capacity to intervene actively to mitigate potential harms. For example, a software that uses its own copyrighted images is more ethical than one which generates images based on a much more contentious dataset scraped from the web.

Moreover, to reduce built-in biases, employment within industries that generate or use technology needs to be made open to those of all genders, colours, abilities and backgrounds; and education needs to prioritise and support this.

3. **Teach (and assess) critical digital literacies to our students and educators across all curricula. (ToR 2,3, 4, 5 & 6)**

As a nation, we must be able to judge how generative AI affects our choices. Everyone from early childhood through to higher education can and should learn about how the digital affects their lives. This goes beyond learning how to use technology – merely learning the 'digital basics' is not enough to be able to critically engage with, judge and improve this technology. We must ensure that, as a nation, we can meaningfully question the information generated by artificial intelligence and have knowledge and avenues as a citizenry to inform AI developments including the rights to challenge adoption of them.

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Individuals must learn the risks of the use of 'big data' we outline above, including an understanding of the social impacts of generative AI – who it may benefit and who it may harm. This includes practical understandings – for example, appreciating terms and conditions, knowing how to be cybersafe, analytic capabilities that benefit the whole community and the ability to participate in the development of future generative AI services. Critical to this endeavour is that all Australians understand that data are not neutral, but instead are already shaped by decisions made about what is collected, from whom and how. This applies both to AI training corpuses and to the data that users share with generative AI.

We propose that a new vision for digital literacies needs to drive national policy and curriculum. And if critical digital literacies are a key part of the curriculum, then at appropriate points in the educational lifecycle, these literacies must be integrated into assessment, in meaningful ways.

4. Promote educational experiences that promote open horizons and allow students to flourish (ToR 1, 4, 5 and 6)

Working with generative AI can prompt creativity and open horizons, but it can constrain new ways of thinking and act in service of values that our learners may not share.

One of the key threats to expanding students' horizons is the notion that generative AI will "personalise" learning. While this is also an opportunity that urgently needs to be explored, algorithmic literacies suggest that generative AI-driven personalisation does normative work shutting down diversity of language and thought. Genuine, personalised and adaptive learning needs to be pursued with great caution and with the voices of students sought and respected at every stage of development. The complexity of learning needs to be understood, with the threats of reductive "training" approaches managed and equity prioritised.

Therefore, education systems should, as a primary goal, develop students and educators who creatively, independently and joyfully experiment with learning. This will naturally include working with generative AI and other digital technologies. However, the emphasis should not be narrowly on skills but on originality, analysis, criticality and open-mindedness. Generative AI in and of itself looks backwards, drawing from past ideas. Our nation needs citizens who can look to the future.

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