APTA response to the House of Representatives Standing Committee on Employment, Education and Training Inquiry into the use of generative artificial intelligence in the Australian education system

The Australian Professional Teachers Association (APTA) welcomes the opportunity to provide a submission to the Inquiry. The Australian Professional Teachers Association is a federation of state and territory joint councils representing teacher associations. These professional teaching associations can represent a network of up to 200,000 teachers from government and non-government schools, early childhood services, universities, technical and further education centres. The vision of APTA is to provide national leadership that supports and advances the teaching profession. Our strength as an organisation lies in our ability to directly represent the interests of practicing classroom teachers across Australia. We are a voice for teachers and an effective conduit between decision-making bodies and the classroom.

Cheryl Brennan
President, Australian Professional Teachers Association
Website: www.apta.edu.au
Email: president@apta.edu.au

14 July 2023.

APTA Response

The House of Representatives Standing Committee on Employment, Education and Training is inquiring into the issues and opportunities presented by generative Artificial Intelligence (AI), with its intention to explore current and future impacts on Australia's early childhood education, schools, and higher education sectors.

This response is about the crucial role that professional teaching associations, their state and territory-based joint councils and collaborative teacher networks generally will play in addressing the generative AI in Education in Australia.

Introduction

APTA acknowledges the Ministers for Education national agreement for a National Artificial Intelligence (AI) Taskforce to develop a framework that is evidence-based for Australian Education to guide the use of generative AI tools, and that the Taskforce will undertake consultation on a draft AI framework for government schools.

Definitions

Using artificial intelligence techniques such as AI algorithms, the term, 'generative AI tools' is defined as functions generating text, images, audio, video, or other creative and synthetic outputs that may appear as human-created content. The broader and more encompassing term 'generative AI software' usually describes the AI tools, functions, or other features, such as those software applications used for workflows and interfaces within larger AI models or platforms to create or build new content.

Terms of Reference

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.

Already, professional teaching associations, their state and territory-based joint councils, the umbrella subject discipline associations and the peak national research associations have gathered supportive evidence of pedagogical knowledge and subject teaching expertise in the use of generative AI tools.

Organising workshops, seminars and training opportunities, the association leaders are assisting teachers to learn about the latest research into best practice in classrooms to lift student learning outcomes. New pedagogical frameworks are being shared for generative AI literacy across the curriculum, teachers' reflection on assessment practice, student engagement, wellbeing and self-directed learning.

An example of the way in which teacher association are sharing information is provided as an attachment. This article was published in the History Teachers' Association of Victoria journal, *Agora*, in June 2023.

Many workshops on the implications of generative AI for specific learning areas have already been delivered at conferences and workshops run by teacher associations to date, this year, and this will continue in the coming months.

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.

As professional teaching associations foster collaborative communities of practice and networks for teachers sharing research, curating fit-for-purpose resources, and assessments, or just inspired case studies of good practice, they are increasingly important for teachers' professionalism – that is, their continuing professional development. For example, generative AI tools are automating routine but time-consuming authentic assessment tasks, such as developing assessment rubrics, actually grading work for assessment, tracking students' progress, or providing feedback.

Professional teacher associations foster teacher coaching and mentoring, a sense of belonging and reducing isolation for beginning teachers and teachers teaching out-of-field. It is significant that many more thousands of teachers are seeking and self-funding one or more professional teaching association memberships rather than HALT status.

Professional teacher associations are often at the frontier of critical thinking and deeper understanding of the role of teacher expertise, discipline expertise and more recently, immersion in transdisciplinary, multidisciplinary, or inter-disciplinary learning, given their memberships can span active participants in early childhood, compulsory and tertiary education and training.

At sector and system levels, the networks of professional teaching associations can assist in the triangulation of data, foster data analytics, and formulate policy processes for changing patterns, trends, or ethical standards. In turn, they are building teacher confidence to engage students in human-centric and authentic learning activities, delivering personalised learning, valuing student voice and feedback with new multimodal assessment methods, such as storytelling, documentaries, data visualisation and infographics, audio and podcast productions.

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.

As teacher members and resource publishers are coming together across the sectors and institutions, spanning compulsory academic and tertiary education and training members, the professional teaching associations are leading work on:

- shaping attribution, authoring and referencing standards for academic integrity;
- establishing parameters for bias detection, procedural fairness in assessments, unintended plagiarism or discrimination; and
- safeguarding standards for children and youth, such as data protection, data security or privacy and transparency for student/family consent when working with association events and conferences, etc.

Teacher associations can move faster than government bodies and can get support and information directly to the email inboxes of teacher members in each discipline. As risk management policies are developed, government guidance on the use of AI will reach more teachers and have more impact if strategies for free and sponsored funded promotion through teacher associations are implemented.

4. How cohorts of children, students and families experiencing disadvantage can access the benefits of AI.

In a time of local, national and global teacher workforce shortages, when Australian families are facing distractions of social and economic upheaval as well as the increasing number of learners in Australian schools experiencing disadvantage or requiring significant learning adjustments, the AI promise of support for families is urgent. Many experts have reported that generative AI tools are going to provide significant benefits for disadvantaged learners, becoming central supports to their future working lives, including the Hon. Professor Verity Firth, Pro-Vice Chancellor (Social Justice and Inclusion) UTS who believes that it provides an opportunity to close the gap in the digital divide of the Education system in Australia, as reported in Professor Leslie Loble's report *Shaping AI and edtech to tackle Australia's learning divide*, who also identifies how AI-powered edtech can help overcome entrenched education disadvantage – challenges which have proven resistant to policy and program efforts.

Professional teaching associations are examining more programs for personalised learning supports, culturally safe and varied styles, pace and places of learning. Rather than less respect for teachers' skills and professionalism, these outcomes can lift teachers' morale, respect in the parent community and teachers' optimism about the reduction of workload and administrative burden to focus on individual learning plans (ILPs), differentiation of classroom, or foster inclusion, access and equity for families.

The national professional library and information association ALIA promotes public and school libraries across the nation playing a vital role in safeguarding the inclusion and equitable educational opportunities for students experiencing disadvantage.

5. International and domestic practices and policies in response to the increased use of generative AI tools in education, including examples of best practice implementation, independent evaluation of outcomes, and lessons applicable to the Australian context.

International and domestic affiliations of professional teaching associations actively co-operating provide exemplary examples and leading insights for strengthening trust in, harvesting and harnessing generative AI tools in education. These affiliations are often more productive collaborations to exchange knowledge, share implementation or training models and go beyond the 'website scraping' of intellectual property and private research reported on social media. For example, the ACCE acce.edu.au national professional body for those involved in the use of ICT in education has many local and international partners. This includes educators who teach computing / information technology subjects as well as all educators who strive to improve student learning outcomes through the powerful use of ICT. The ACCE encourages a level of excellence in this field of endeavour throughout

Australia. Each state and territory has an independent association which advances the professional development of its members in the use of learning technologies in education, such as the New South Wales' ICTNSW https://ictensw.org.au/ or Queensland's QSITE https://qsite.edu.au/ The ACCE Board consists of representatives from the state and territory groups and the ethical watchdog, the Australian Computer Society. It is affiliated with the International Society for Technology Education (ISTE) https://www.iste.org, and the Technology Education Federation of Australia (TEFA).

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

Professional teaching associations are united in a belief that national policy initiatives should include the following:

- Clear differentiation to be accepted or evident between the learning areas and subjects, rather than generic 'rules' for generative AI use or the limitation of AI in schools. Transdisciplinary inquiry and subject disciplines are demonstrating different approaches to the generative language models (LLMs), such as first steps in an effective discipline-specific research strategies.

- Public support, trust and confidence must be built, and a vision communicated for the safe and effective use of generative AI software and tools in professional teaching standards, in early learning centres, schools and teacher education institutions. A human-centric vision within the anticipated draft AI framework must include the principles of inclusion, equity, access, quality, safety, and security.

- The use of generative AI tools for learning, differentiation and assessment in automated systems and augmented intelligence systems should be introduced as a key element of Initial Teacher Education.

- Education ministers and education departments in the states and territories adopt a nationally consistent approach to governance and standards and remove the current regulatory misalignment through calling for a focus on local decision-making. Further, a continuous improvement national strategy and an agile approach is required to reduce teacher polarisation between AI users in government sectors, jurisdictions, and education systems. There is a need to meet the national challenge and strict national control, with specific AI risk mitigation and regulation for areas such as the often-discussed 'guard rails' for cybersecurity, child protection, privacy, IP and consumer protection and information accuracy of student use or source attribution of generative AI tools.

- Investigation of an equitable and accessible national funding program, such as grants, scholarships and awards for professional teaching associations to sponsor and evaluate free professional development for Australian teachers in early childhood, school and higher education sectors. These areas might include recommendations for classroom practice, curriculum initiatives, action research, radical changes in student assessment practices, or the use of an educative approach to anti-plagiarism as well as testing of detection software for academic honesty, originality and attribution.

Whilst English, European, American and Chinese organisations are publicising legislation for AI regulation, the tertiary training experts in Australia call for an AI Ethics regulatory function for the national AI Taskforce. This entity would devise frameworks for the Australian context and audit existing protection laws such as Privacy, Copyright, Consumer Protection for the use of AI software.

It is inevitable that the Australian Computer Society will lead a focus on IT standards accreditation and ethics or changes for IT staff and IT providers in Education, including CIOs, CTOs, system analysts, system integrators and technicians to develop standards and safeguard digital strategies, student safety systems, surveillance systems, content management systems, learning management systems and general integration of computation routines – generative AI software, data analytics, traditional but still complex algorithmic approaches and machine learning.

Conrad Wolfram, European co-founder and CEO of Wolfram Research often writes, the AI is bringing a new cohort of programmers along the way. As co-founder brother Stephen Wolfram cites, the generative AI tools like ChatGPT, now improving through incorporating computational search engines, such as *Wolfram | Alpha* are giving generative AI software the computation superpowers with increasing accuracy and currency to reduce the incidence of error, misinformation, or disinformation.

An insightful and important overview of the dilemmas surrounding the 'backlash' to artificial intelligence in education (AIED) is provided by Professor Neil Selwyn (July 2023). He demonstrates the stark division between enthusiasts' triumphant talk of a coming of age of AI versus the growing pushback against the presence of AI in education, the potential harm, the commercial interests to profit financially from public education or those aspects contributing to the automation or dehumanisation. He explains part is due to the tech backlash of technologies such as facial recognition or lethal autonomous weapons. Some educators, critical of the application of AI in education systems appear to ignore the potential for empowering individual teachers and learners who are self-regulating in choices and actions. The paper is fundamental to an inquiry which will make explicit the underpinning values and ideologies that drive considerations of the safeguards as well as the debates on all fundamental questions about technology, politics, power, social harms and injustice.

Conclusion

Professional teaching associations collaborate with a wide consultative group of educators and industry experts to guide their work on awareness, explainer information sets and community advocacy, policy, and safe and ethical use of generative AI tools in education. A major strategic intent shared by APTA with national professional association affiliations is Australian teachers' appetite for their professionalism – the personally focussed, 'value-added' or self-funded professional development as opposed to industry, commercial, institutional, or mandated staff training.

Attachments:

Julian Floriano, President of the Society and Culture Association provided this May 2023 report of Marshall Leaver (SCANSW Committee Member) attendance at an online conference by the *Guardian* discussing the implications for Artificial Intelligence across numerous areas of society.

The CEO, History Teachers Association of Victoria provided the digital copy of the paper: Ian Lyell, 'What History Teachers Need to Know about ChatGPT,' *Agora* 58:2 (2023), 3–7

References cited:

Loble, L., & Hawcroft, A. (2022). *Shaping AI and edtech to tackle Australia's learning divide | University of Technology Sydney)* University of Technology Sydney. https://doi.org/10.57956/kxye-qd93

Wolfram, Stephen (2023) *Wolfram|Alpha as the Way to Bring Computational Knowledge Superpowers to ChatGPT*. https://writings.stephenwolfram.com/2023/01/wolframalpha-as-the-way-to-bring-computational-knowledge-superpowers-to-chatgpt/

Selwyn, N. (2023) *Constructive Criticism? Working with (Rather than Against) the AIED Back-Lash*. International journal of Artificial Intelligence in Education https://doi.org/10.1007/s40593-023-00344-3

U.S. Department of Education, Office of Educational Technology, (2023) *Artificial Intelligence and Future of Teaching and Learning: Insights and Recommendations*, Washington, DC, 2023. https://tech.ed.gov