



PPTA TE WEHENGARUA ANNUAL CONFERENCE 2023

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# A POLICY ON TEACHING WITH DIGITAL TECHNOLOGIES



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## RECOMMENDATIONS

1. That the report be received.
2. That PPTA Te Wehengarua accept the definition of digital technologies as inclusive of advanced digital technologies, and generative artificial intelligence systems that are emerging and continue to be refined.
3. That PPTA Te Wehengarua notes the global and national context when considering the challenges and potentials of teaching with digital technologies.
4. That PPTA Te Wehengarua continues to question the purpose of digital technologies in education and calls on the Ministry of Education to ensure transparent and needed structures are in place to evaluate the quality, usefulness, and relevance of digital technologies used in our schools.
5. That PPTA Te Wehengarua accepts that there are potential opportunities and risks of teaching with digital technologies.
6. That PPTA Te Wehengarua calls on the government to provide appropriate governance and the necessary supports for a whole of system approach to the global issue of the impact of digital technologies in our lives – inclusive of human rights, data rights and privacy.
7. That PPTA Te Wehengarua calls on the government to close the digital divide.
8. That PPTA Te Wehengarua advocates for quality professional learning and resourcing for teachers to build capacity and knowledge of teaching with digital technologies.
9. That PPTA Te Wehengarua calls on the Ministry of Education and NZQA to provide policy direction and advice to ensure the rigor and validity of our national qualifications in the increasing use of digital technologies.
10. That PPTA Te Wehengarua accepts the case for caution, acknowledging recent and emerging research and calls for further research that increases our collective understanding of the impacts of digital technologies.
11. That PPTA Te Wehengarua support partnership building with EdTechNZ to develop professional learning and development (PLD), advice, pathways for collaborative development of digital technologies best suited to NZ classrooms.

## 1. INTRODUCTION

- 1.1. The 2023 school year began with some fervent discussions on ChatGPT - the artificial intelligence chatbot released by OpenAI.<sup>1</sup> It evoked amazed, amused, and concerned reactions and many people have speculated on its impact, to disrupt or enhance learning.
- 1.2. PPTA Te Wehengarua knows that education continues to change - digital technologies are everywhere, and they are impacting what, how, where, and why students learn, and who they learn from.<sup>2</sup> The rapidly evolving world of advanced, emerging and artificially intelligent digital technologies, their global and educational impact, workload implications, varied opinions and reasoning highlight the need for PPTA Te Wehengarua to have a policy position on teaching with digital technologies.
- 1.3. Education International (the world's largest Global Union Federation of which PPTA Te Wehengarua is a member), commissioned a report (July - September 2020) on teaching with technology and the role of unions. The report found that a high proportion of unions have positioned themselves overtly favourable to the introduction of advanced technology; a contrast to the finding that unions also expect negative impacts of technology and consider that teacher training needs in this area are not being met.<sup>3</sup> Further, the report highlighted that unions across the world acknowledged that the level of members' digital knowledge, for many, was very low.<sup>4</sup>
- 1.4. As a union we need a policy that can address the contradictions, with parameters for favourable acceptance of digital technologies that can mitigate expected negative impacts. We need to advocate for resource to upskill teachers' level of digital knowledge and understanding inclusive of our teacher trainees.

## 2. DEFINITIONS

- 2.1. Generative artificial intelligence (GenAI) is a type of [artificial intelligence](#) system capable of generating text, images, or other media in response to [prompts](#). Generative AI models learn the patterns and structure of their input [training data](#), and then generate new data that has similar characteristics.<sup>5</sup>
- 2.2. ChatGPT is an example of such an algorithm, however the technology is not brand-new; generative AI was introduced in the 1960s in chatbots,<sup>6</sup> and has been enabled by significant advancements in AI technology over recent decades.<sup>7</sup> ChatGPT, Google Bard, and other bots

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<sup>1</sup> [BBC news/technology](#)

<sup>2</sup> [Managing-and-supporting-students/DigitalTechnologySafeAndResponsibleUseInSchools.pdf](#)

<sup>3</sup> [Teaching-with-tech-the-role-of-education-unions-in-shaping-the-future](#)

<sup>4</sup> [Teaching-with-tech-the-role-of-education-unions-in-shaping-the-future](#)

<sup>5</sup> [Wiki/Generative artificial intelligence](#)

<sup>6</sup> [Definition/generative-AI](#)

<sup>7</sup> [Much ado about nothing or a technology game changer](#)

like them, are examples of [large language models](#), trained on huge amounts of data, with the companies behind them reluctant to reveal exactly where the data comes from.<sup>8</sup>

- 2.3. Our policy refers to digital technologies inclusive of advanced digital technologies, and generative artificial intelligence systems that are emerging and continue to be refined.

### 3. GLOBAL CONTEXT

- 3.1. The rapid development of digital technologies and the globalised nature of economic systems are creating an entirely new set of educational challenges for the world to adapt to.<sup>9</sup> The way knowledge is delivered (thanks to technological innovation), is different in today's classrooms. Examples of education technology seen and used in Aotearoa-New Zealand and around the world include cloud-based learning software, apps, blogs or discussion boards, digital whiteboards, and other interactive online tools for students and teachers.
- 3.2. The EdTech market is rapidly expanding; prior to COVID-19 it was a 7 billion US dollar industry and is expected to rise to \$285.2 billion by 2027.<sup>10</sup> The global education technology market is experiencing a digital revolution with the emergence of artificial intelligence (AI) and digitalisation (moving existing 'processes' into digital technologies). There is increasing concern with the commercialisation of education and its impact on/ in our schools and classrooms.
- 3.3. EdTech is growing exponentially, however nothing is free. There is no digital technology without a digital trail.<sup>11</sup> Although much digital technology is provided free – the data is repurposed, you may not be paying cash, but you are paying with data. Shoshana Zuboff, has named this 'surveillance capitalism', driven by a profit-making incentive, arising through advertising companies, led by Google's AdWords, seeing the possibilities of using personal data to target consumers more precisely.<sup>12</sup>
- 3.4. Colclough (2021) points out that 'digital technology is not born evil. It is not born good either.' She warns that there will be an impact of digital technologies on the quality of work, types of work available, workers' rights as well as human and privacy rights, resulting from regulation that is - or is not - in place.<sup>13</sup> An example is the provision of 'free' tools, that results in the repurposing, and sometimes selling of data and data profiles created when systems are used – this can put at risk the data privacy rights of workers, and learners.
- 3.5. UNESCO 2020 warns that 'Public education cannot be dependent on digital platforms controlled by private companies.'<sup>14</sup> However, in post Covid-19 responses, many

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<sup>8</sup> [How chatgpt works-large language model](#)

<sup>9</sup> [Educatingforthefuture.economist.com](#)

<sup>10</sup> [Education Technology Market Size Worth \\$285.2 Billion by 2027](#)

<sup>11</sup> [Your digital footprint](#)

<sup>12</sup> [Shoshana Zuboff-Age of surveillance capitalism](#)

<sup>13</sup> [Digitalisation- A union action guide for public services work and workers](#)

<sup>14</sup> [unesdoc.unesco.org](#)

governments have allowed the market to identify ‘solutions.’<sup>15</sup> There is competition in the intersection between the digital world and education, and the learner is not necessarily at the centre.

- 3.6. The national and global context demonstrate that making the most of digital technologies (emerging, advanced, GenAI) in our classrooms, will require trust, inclusion, workforce capability, data capability, and systems and processes to manage these. It certainly demands the removal of barriers that mean access is not available to all, and in Colclough’s view (2021) requires ‘an explicit social license’ to ensure digital technologies benefit us all.<sup>16</sup>
- 3.7. Aotearoa-New Zealand has trusted government, a collaborative culture, high education standards and a commitment to biculturalism that respects different worldviews so is well placed to address concerns and enhance the potentials of digital technologies. Our members want to see this done in an intentional way, rather than an ad hoc manner.

## 4. NEW ZEALAND CONTEXT

- 4.1. The Government’s inaugural Digital Strategy for Aotearoa (launched September 2022) provides a framework for how Aotearoa-New Zealand’s digital future will look, with trust and inclusion equal to growth. It also recognises that digital technologies can bring about challenges.<sup>17</sup>
- 4.2. The Education System Digital Strategy, Transforming Education for the Digital Age (2015-2020) was developed and endorsed by 11 education sector bodies (including PPTA Te Wehengarua) in 2015 and has undergone a revision, with the updated [Connected Ako: Digital and Data for Learning](#) released June 2023. The revision focussed on addressing barriers to access, improving workforce capability, building data capability, and leveraging the potential for digital innovation to help solve educational challenges.<sup>18</sup>
- 4.3. The NZ Curriculum has adapted in response to our fast-evolving world and now includes digital technologies learning,<sup>19</sup> with schools advised to recognise and understand the nature of the changes and challenges that digital technology has brought; and develop systems and processes to manage these.<sup>20</sup>
- 4.4. The Artificial Intelligence Forum of New Zealand (AIFNZ), a purpose-driven, not-for-profit, non-governmental organisation aims to find ways to use AI to help enable a prosperous, inclusive, and thriving future for NZ, by bringing together technology innovators, end users, researchers, educators, entrepreneurs and others to work together.<sup>21</sup> It suggests that developing the right AI skills and talent is one of the most important actions that Aotearoa-

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<sup>15</sup> Williamson, Ben & [Hogan, Anna](#) (2020) *Commercialisation and privatisation in/of education in the context of Covid-19*. Education International, Brussels, Belgium.

<sup>16</sup> [Draft-digital-technologies-industry-transformation-plan-2022-2032](#)

<sup>17</sup> [Launch of digital strategy-Aotearoa New Zealand](#)

<sup>18</sup> [Connected Ako: Digital and Data for Learning – Education in New Zealand](#)

<sup>19</sup> [Changes-in-education/digital-technologies-and-hangarau-matihiko-learning](#)

<sup>20</sup> [Managing-and-supporting-students/DigitalTechnologySafeAndResponsibleUseInSchs.pdf](#)

<sup>21</sup> [aiforum.org.nz/about/](#)

New Zealand must undertake, whilst acknowledging that there is a low understanding of AI's significance compared to other issues with similarly wide-ranging effects on our society.<sup>22</sup>

- 4.5. PPTA Te Wehengarua policy notes the global and national context when considering the challenges and potentials of teaching with digital technologies.

## 5. THE ROLE OF THE UNION

- 5.1. Education International's commissioned report (2020) recommends that unions increase their influence over the technologies used in education and further, that they hold authorities and individual schools responsible and accountable for their implementation and assessment of chosen technologies.<sup>23</sup>
- 5.2. To do this we need to develop our understanding of the variety of digital technologies used in education and be able to answer crucial questions – are they pedagogically sound, do they ensure inclusive and equitable quality education for all, enhance wellbeing, and importantly do we know how and who has control over the data that is generated from them? <sup>24</sup>
- 5.3. PPTA Te Wehengarua has participated in various reference, change and enablement groups in the development of Digital Communication Guidelines,<sup>25</sup>the Education System Digital Strategy and Digital Readiness programme. Over many years, we have given voice and shared the thoughts and concerns of members in the digital technologies space. In 2009 for example, the PPTA ICT Taskforce warned of the negative implications for students who do not have access to computers and the internet both at school and home. Unfortunately, Covid-19 highlighted that those concerns remain valid in 2023.<sup>26</sup>
- 5.4. PPTA Te Wehengarua advocacy work continues to be needed to put teachers' perspectives forward; articulating the wellbeing concerns they have, work intensification, maintaining work-life balance, right to disconnect as well as advocating for teachers to be upskilled, with both time and suitable resource. We agree with Colclough (2021) that further research, training, and knowledge building on digital technologies is needed as well as addressing the lack of structures and processes for the assessment of digital technologies (quality, usefulness, relevance).<sup>27</sup>
- 5.5. In regular ministerial, peak body and educational advisory groups and forums, PPTA Te Wehengarua should promote dialogue and continue to question for example, the purpose of the digital technologies, the extraction and generation of data.

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<sup>22</sup> [Artificial intelligence shaping a future new-zealand-pdf](#)

<sup>23</sup> [Teaching-with-tech-the-role-of-education-unions-in-shaping-the-future](#)

<sup>24</sup> [A union action guide for public services work and workers](#)

<sup>25</sup> [PPTA/communities/ICT-Advisory-Committee/document](#)

<sup>26</sup> [www.education.govt.nz/Digital Strategy](#)

<sup>27</sup> [A-union-action-guide-for-public-services-work-and-workers](#)

- 5.6. PPTA Te Wehengarua should continue to question the purpose of the digital technologies and calls on the Ministry of Education to ensure transparent and needed structures are in place to evaluate the quality, usefulness and relevance of digital technologies used in our schools.

## 6. MEMBER VOICE

- 6.1. Member feedback gained from Issues and Organising sessions, PPTA committee meetings (Information and Communication Technology Advisory Committee, Middle Leaders Advisory Committee, Senior Positions Advisory committee, Secondary Principals' Council of Aotearoa) as well as various forums (Deputy and Assistant Principal Association, Subject Association, AI in Society seminars) and wider research and conversations was varied.
- 6.2. Many members believe that digital technologies, particularly advanced, new, emerging, GenAI, promise opportunities for:
- **Engaged, creative learners with agency.** There are possibilities for out-of-the-box thinking and solutions, evaluating perspectives other than their own, greater creative expression, engaging students with technology they have and play with at home, creating more instead of just consuming.
  - **Accessible, responsive, immediate and individualised learning** with access to knowledge anywhere, anytime and open for all. It can be learning that is affordable, collaborative, flexible, global and/or domestic and portable across all curriculum areas.
  - **Differentiated learning that is equitable** in the learning opportunities with assistive technology and learning resources able to be adapted for different styles, to suit different needs and levels. AI makes it easier to create tailored resources and can also provide learners with access to experts and individualised tutoring.
  - **Workload improvements/ reductions for teachers** in planning and preparation. Lesson planning, marking, differentiated resources as well as logistical tasks can be available in minutes and AI will help refine your ideas, provide alternatives and even offer previously unconsidered ideas. It can be specific to localised curriculum!
- 6.3. Members do also perceive a number of risks:
- **Misuse/mistrust of the technology** with dis-information, propaganda, extremism, hate, information tampering all possible. The outputs reflect inputs so discriminatory ideas can flourish and the known bias (white, middle-aged, western-centric, male worldview of the creators) may still be present.
  - **Loss of skills and sense of effort** in student learning is a concern for teachers. AI is faster to learn, with a better-quality output – so how to maintain motivation and enthusiasm to learn? A loss of confidence in the education system and the devaluing of teaching is possible. Other common questions voiced - will it discourage original thinking? Deep thinking? Can we maintain our cultural identity and sovereignty of ngā mea Māori katoa?



- **Rigor and validity of our qualifications, with issues of authenticity** are readily apparent. Plagiarism, students having AI complete their work are current concerns as is the lack of critical analysis in the work produced by AI; ChatGPT is not always correct! Teachers question in the Age of AI - who owns the product and what about copyright issues?
- **Whole of education system (non) preparedness.** At the NZQA hosted, Assessment in the Age of AI symposium, May 2023, Dr George Slim (Office of the Prime Minister's Chief Science Advisor) admitted they are trying to catch up, with regulatory processes slow and technology fast.<sup>28</sup> NZQA and Ministry of Education admitted to being behind 'the 8-ball' and it is no surprise that many teachers feel unprepared to adapt assessment practice to ensure authenticity. There has been little explicit teaching of learners to use AI well and any responses are ad hoc. Keeping up to speed, not leaving the teachers behind will require time for relevant and effective PLD.
- **The current and increasing digital divide** must be addressed rather than exacerbated as the technologies continue to develop at a rapid rate of change. Inequitable device/ internet access and/ or reliability needs attention. The increased costs of digital readiness for schools will also not be equitable across the motu and will be felt differently depending on the affluence or location of the community.

6.4. PPTA Te Wehengarua accepts that there are potential opportunities and risks of teaching with digital technologies.

6.5. PPTA Te Wehengarua calls on the government to provide appropriate governance and the necessary supports for a whole of system approach to the global issue of the impact of digital technologies in our lives – *inclusive of human rights, data rights and privacy*.

6.6. PPTA Te Wehengarua calls on the government to close the digital divide.

## 7. PRINCIPAL PERSPECTIVES

7.1. Principal members echo these concerns, particularly that 'the most advantaged will be the most advantaged' and we are perpetuating the divide; a rethink is needed rather than exacerbate existing inequities and deeply seated advantage. This requires a whole sector approach.

7.2. Principal members consider that our approach to assessment will need to change (incorporating AI, oral assessments) but the focus must be on learning, not assessment. The relationship between teacher and learner is paramount, 'knowing your student' is essential and pedagogy is critical.

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<sup>28</sup> Dr George Slim (Office of the Prime Minister's Chief Science Advisor), 31 May 2023, A Science policy overview, Assessment in the Age of AI symposium, Wellington, New Zealand.

- 7.3. Principal members struggle to see how teachers with a full workload will find the time to develop their skills in this area and know that both time and PLD are needed. Keeping up to date is a challenge with the technology changing rapidly and there is the risk that we will learn through mistakes. The cultural responsiveness of the tools needs to be questioned.
- 7.4. Teachers need to understand how to use technology to better support students' technical skills and digital fluency in a culturally responsive pedagogy that caters to diverse learners. A teacher's ability will come through gaining confidence and practical know-how skills.
- 7.5. Assessment in the Age of AI symposium (May 2023) presenter and principal, Claire Amos, shared her concern that "we are so damn busy we aren't giving it [AI] the attention it [AI] needs".<sup>29</sup> The requisite attention will need both time for teachers to upskill as well as suitable PLD provision.
- 7.6. PPTA Te Wehengarua advocates for quality professional learning and resourcing for teachers to build capacity and knowledge of teaching with digital technologies.

## 8. AUTHENTIC ASSESSMENT – “LEARNING IS SOMETHING YOU CANNOT OUTSOURCE TO SOMEONE ELSE.”

- 8.1. The emergence of ChatGPT into our classrooms is described as a disruptor by some and a game changer by others.<sup>30</sup> For many teachers its impact on authentic assessment is a major concern and the recent joint entity Assessment in the Age of AI symposium, May 2023, highlighted the need for educational institutions to think critically about opportunities AI provides while balancing risk. Can we leverage opportunities while maintaining the integrity of qualifications?
- 8.2. The variety of responses to ChatGPT can be distilled into six broad categories: ignore, ban, invigilate, embrace, design around, rethink.<sup>31</sup> These options have complexity, and the world of generative AI (ChatGPT) is constantly evolving. Symposium keynote speaker and Deakin University Professor, Margaret Bearman suggests that we shine a little light on the implications of generative AI for assessment but accept that the inherent tension is that assessment both assures learning and promotes learning.<sup>32</sup> We tend to get caught up in quality assurance, but we mustn't lose sight of learning.
- 8.3. Newspaper articles have highlighted the experiences of excellence – level students having to defend the authenticity of their own work against the machine.<sup>33</sup> Accusing people of using AI to cheat is a fraught area, detection systems are not always accurate, ChatGPT can lie and Professor Simon McCallum, Victoria University stresses that while there are tools good at detection, they are not good at providing evidence or the reason they have flagged a

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<sup>29</sup> [Assessment in Age of AI-Claire Amos](#)

<sup>30</sup> <https://scottybreaksitdown.com/ai/>

<sup>31</sup> [Generative AI-taxonomy-options-viability](#)

<sup>32</sup> Margaret Bearman, 31 May 2023, Generative AI – the issues right here, right now, Assessment in the Age of AI symposium, Wellington, New Zealand.

<sup>33</sup> [Chatgpt AI Cheating scandal-the words flagged as plagiarism for year 12 students](#)

concern.<sup>34</sup> McCallum further cautions that new systems are coming along so quickly that any detection you come up with is almost obsolete once you release it.<sup>35</sup>

- 8.4. Assessment in the Age of AI symposium (May 2023) panel discussions emphasised the varied approaches currently being taken in our schools, with some accepting that AI (ChatGPT) is here to stay and actively embracing its potential and rethinking assessment; others concerned with much increased plagiarism moving to assessment completion within the classroom.
- 8.5. Assessment guidelines do need to be updated in relation to AI, with students front of mind and clear messaging a priority. We need to be mindful of a focus on proving learning has happened, rather than concentrating on proving cheating.
- 8.6. The impact of AI on curriculum was a thread, woven through many of the Assessment in the Age of AI symposium (May 2023) presentations. Dr Lenka Ucnik, likened AI to the invention of the printing press, believing it will change the landscape completely. She challenged educators to think – In this AI age what is the transformative piece of work needed to maintain the integrity of the education/qualification system? What are the pillars of the education system that are non-negotiable? <sup>36</sup> At this time, it could be difficult to find a consistent answer in our education system.
- 8.7. The NZ curriculum refresh is front and centre in our secondary schools and currently does not encompass the impact of the persistent advancements in generative AI. Our curriculum does emphasise the significance of fostering critical literacy, including digital literacy <sup>37</sup> which will be an increasingly important area of skill development if young people are to be able to utilise the potential of AI whilst understanding its risks.
- 8.8. Member feedback and the conclusion arrived at by Assessment in the Age of AI symposium (May 2023) participants is that banning GenAI (ChatGPT) is not desired. Teachers do however need advice on best practice, as well as guidelines for responsible use of these technologies in education. Schools will need to help students become responsible users of AI but they need to be guided by both the Ministry of Education (MOE) and New Zealand Qualifications Authority (NZQA).
- 8.9. NZQA needs to lead on matters of authenticity and repercussions of using AI or the Internet, plagiarism, mitigation and identification and MOE needs to advise on policy - ethical and data privacy considerations and equity. Using or having digital must be equitable and decision-making must be transparent.
- 8.10. Any advice given to schools needs to be consistent. The office of the NZ Privacy Commissioner has updated their website advice<sup>38</sup> and recommends government departments to - be transparent, think carefully about where you use digital technology and whether you need it. Be clear and track the use and importantly in the AI age, have a human in the loop somewhere – humans need to make final decisions not the machine.

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<sup>34</sup> [I cheated on a university essay using chatgpt](#)

<sup>35</sup> [Chatgpt-artificial intelligence challenging education sector](#)

<sup>36</sup> Dr Lenka Ucnik, 31 May 2023, The Australian perspective, Assessment in the Age of AI symposium, Wellington, New Zealand.

<sup>37</sup> [New Zealand navigating the role of generative AI in education](#)

<sup>38</sup> [Guidance-resources/generative-artificial-intelligence-15-june-2023-update](#)

- 8.11. Post-Covid research here in NZ found that to fully embrace the potential of digital technologies to enhance teaching, learning and administration, to help ensure education continuity in the event of widespread disruption, and, to better protect against cyber-attacks and privacy breaches, every part of the system must be aligned and connected.<sup>39</sup> We believe this stands true for teaching with digital technologies, that are advancing, emerging, and artificial generative intelligence also.
- 8.12. PPTA Te Wehengarua calls on the Ministry of Education and NZQA to provide policy direction and advice to ensure the rigor and validity of our national qualifications in the increasing use of digital technologies.

## 9. THE CASE FOR CAUTION

### CELLPHONES IN SCHOOLS – WHAT HAVE WE LEARNT?

- 9.1. Schools have already grappled with the introduction of the cellphone which has had a major impact on teaching and learning. It has led to the development of varied policies which have changed over time with increasingly more restrictions put in place.
- 9.2. Member examples highlight the inconsistency of policy and practice:
- Student phone policies - Phone ban, no phone in class, use phone only if the teacher allows otherwise in the bag, juniors no phones in class unless educational purpose/ kahoot/ research, senior classes phones for research only, Linewize system check of device use.
  - Device policies - BYOD policy, Year 13 laptop only, if student cannot provide own device the school will provide, all leases Chromebook to all Y9s for three years to enable equity.
  - Acceptable use policy - phones in bags, computer use only when allowed, students sign they will not use inappropriately, block certain websites on the network, Netsafe advice to school.
- 9.3. Teachers are having to manage device control and do not necessarily wish to do this. Members expressed concern that their school lacks strength to remove phones and they do not want to manage the impact of more advanced, GenAI tools alone.
- 9.4. Members question why individual Board of Trustees should grapple with this and suggest the provision of national excellence examples of policy for schools to use, a policy bank, which may lead to a more consistent approach in dealing with digital technologies.

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<sup>39</sup> [Review-Digital-technologies-in-education-during-the-COVID-19-pandemic.pdf](#)

## RECENT AND EMERGING RESEARCH

- 9.5. Worldwide, there has been study of the use of computers in education and the finding of Karlson (2022) that there was ‘mostly no or weak evidence of increased achievement’<sup>40</sup> should cause us to question the prominent place devices currently have in our educational programmes.
- 9.6. According to the New York Times, “a wariness that has been slowly brewing is turning into a nationwide consensus: The benefits of screens as a learning tool are overblown, and the risks for addiction and stunting development seem high.”<sup>41</sup> There is a lack of research around the human cost of digital technology, young people’s development and what is gained or lost in the digital age.
- 9.7. Further warnings come from the office of the US surgeon general concerned at the almost universal (95%) number of teenagers on social media. The office points out that there are critical gaps in our understanding of mental health risks to young people, posed by social media and recommends that we engage in a multi-layered effort to maximize the benefits and reduce the risk of harm.<sup>42</sup>
- 9.8. AI can negatively affect a wide range of our human rights with the problem compounded by a lack of transparency, accountability, and safeguards on how they are designed, how they work and how they may change over time.<sup>43</sup>
- 9.9. The actions suggested by the US surgeon general’s office for managing social media risks involve system-wide approaches (inclusive of families) to strengthen safety standards, limit access, and expect technology companies to be transparent and better assess the impact of their products.<sup>44</sup> These suggestions are all applicable to advanced, emerging AI technologies used in education also.
- 9.10. Finnish education expert, Pasi Sahlberg, who has presented at PPTA Te Wehengarua Education Conferences, believes that learning in school is in jeopardy. He points out that a decade ago paediatricians noticed a worrying trend: children's mental health was beginning to decline and recently teachers and parents have realised that even when children try harder and spend more time in school, overall learning outcomes have begun to slip.<sup>45</sup>
- 9.11. Key findings from Sahlberg’s Australian research show the impact of digital technologies on young people’s lives. It is not uncommon that they spend 6 to 8 hours on digital screens every day, and young people have become dependent on their gadgets. They walk, talk, and often also sleep with their smartphones, to keep up with what is happening around them.<sup>46</sup> These findings would not be dis-similar for Aotearoa-New Zealand rangatahi.

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<sup>40</sup> [Teaching-with-tech-the-role-of-education-unions-in-shaping-the-future](#)

<sup>41</sup> [The-place-of-technology-in-new-zealands-classrooms](#)

<sup>42</sup> [Surgeon general priorities youth-mental-health/social-media](#)

<sup>43</sup> [In era of artificial intelligence-safeguarding human rights](#)

<sup>44</sup> [Surgeongeneral priorities youth-mental-health/social-media](#)

<sup>45</sup> [What you need to know about childrens digital-wellness](#)

<sup>46</sup> [Teaching-changing children in the changing times](#)

## A WAY FORWARD

- 9.12. We need to increase our understanding of these technologies, their impact, and our response. Sahlberg advises the need for digital wellness – responsible and healthy relationships with technology as part of overall student wellbeing and an essential 21st-century skill. His digital wellbeing balances using and turning off devices; understanding opportunities and ethical responsibilities linked to technology; and building self-regulation to enhance safe use of digital devices.<sup>47</sup>
- 9.13. Beyond wellbeing, Professor Bearman proposes the need for critical AI studies, the need to explore neo-colonial exploitation, carbon cost, cybersecurity, ingested bias, IP and copyright of these technologies.<sup>48</sup>
- 9.14. The US surgeon general suggests that part of the way forward is for technology companies to assess the impact of their products better and do this transparently. They should be sharing data with independent researchers to increase our collective understanding of the impacts, particularly on young people.<sup>49</sup> Design and development decisions should have health and safety as a priority.
- 9.15. It seems clear that further research is needed, providing more information on the educational technologies used in our classrooms – what/ why systems/programmes are being introduced, where, and how will these affect teachers and learners?
- 9.16. PPTA Te Wehengarua accepts the case for caution, acknowledging recent and emerging research and calls for further research that increases our collective understanding of the impacts of digital technologies.

## 10. PARTNERSHIP BUILDING

- 10.1. Colclough (2020) proposes the benefit of horizon scanning for the next generation of education technologies,<sup>50</sup> and the best way to do this is educators and developers in partnership. In fact, the Education Technology Association of New Zealand (EdTechNZ), a community of education technology companies, organisations and educators has been seeking such partnerships with educators in Aotearoa-New Zealand for some time. They have a kaupapa to improve the use of educational technologies in schools but with 2400+ self-managing schools in NZ, they have struggled to form relationships within primary or secondary schools.

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<sup>47</sup> [What you need to know about childrens digital-wellness](#)

<sup>48</sup> Margaret Bearman, 31 May 2023, Generative AI – the issues right here, right now, Assessment in the Age of AI symposium, Wellington, New Zealand.

<sup>49</sup> [sg-youth mental health social media-summary.pdf](#)

<sup>50</sup> [Teaching-with-tech-the-role-of-education-unions-in-shaping-the-future](#)

- 10.2. The Edtech industry in NZ is an important export earner and poised to become a major Industry.<sup>51</sup> It has however found it easier to sell products overseas and the difficulties they experience accessing schools here suggests some centralisation could be useful – how do schools choose their digital products? What could be some model criteria for assessing digital technologies according to NZ teachers? What digital products do NZ teachers believe would be useful for teaching and learning? How can we use our EdTech industry to support teacher PLD?
- 10.3. Spending on education software in New Zealand 2020 was \$173.6 million and is set to reach \$319 million by 2025.<sup>52</sup> EdTechNZ suggests the need for a national edtech strategy to coordinate collective efforts to improve educational outcomes through the application of technology and innovation and the development of a more centralised procurement model.<sup>53</sup> PPTA Te Wehengarua knows that all schools in Aotearoa-New Zealand are not equal in their digital capability or capacity and so, support to make strategic procurement decisions would benefit many; as could improving channels for EdTech vendors to collaborate with teachers.
- 10.4. There is alignment between EDTechNZ and PPTA Te Wehengarua goals. PPTA strongly asserts that the digital divide must be ended and EdTech NZ sees a role in enabling and supporting digital equity. PPTA Te Wehengarua fully supports its recommendation that government fund basic digital equipment and internet access.<sup>54</sup>
- 10.5. PPTA Te Wehengarua considers the provision of quality professional learning for teachers vital and EdTechNZ also has a goal to improve access to and content of PLD for digital upskilling of teachers,<sup>55</sup> with both organisations calling for increased PLD funding.
- 10.6. The Education Review Office (ERO) report (2019) on the implementation of the digital technologies’ curriculum found that schools had made slower than expected progress, with only seven percent of schools considering their staff had sufficient knowledge and/or skills to implement digital competencies.<sup>56</sup> PPTA Te Wehengarua thinks that the statistics could well be the same in 2023 and so upskilling teachers should be a priority.
- 10.7. PPTA Te Wehengarua supports partnership building with EdTechNZ to develop PLD, advice/ pathways for collaborative development of digital technologies best suited to NZ classrooms.

## 11. IN SUMMARY

- 11.1. PPTA Te Wehengarua needs a policy position on teaching with digital technologies.

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<sup>51</sup> [NZ-Education technology poised to become major industry](#)

<sup>52</sup> IDC New Zealand ICT Spending Guide, 2021, Converted to NZD at 2020 0.65 exchange rate.

<sup>53</sup> [Aotearoa EdTech Report 2021](#)

<sup>54</sup> [Aotearoa EdTech Report 2021](#)

<sup>55</sup> [Aotearoa EdTech Report 2021](#)

<sup>56</sup> [Its early days for the new digital technologies - curriculum content](#)

- 11.2. The recommendations of this paper make it possible for the Association to advocate for the supports required to ensure teaching with digital technologies is pedagogically sound, inclusive, and equitable for all; with teachers confident in their digital knowledge and understanding, able to make best use of the opportunities these technologies provide.
- 11.3. These supports can include (but are not limited to) funded quality professional development for teachers, sound policy direction and advice ensuring the rigor and validity of our national qualifications as well as an appropriate structure to evaluate the quality, usefulness, and relevance of digital technologies in education. It must include the closing of the digital divide.
- 11.4. The policy accepts that government must provide appropriate governance and necessary supports for a whole of system approach, and that research is needed on the efficacy and appropriateness of these technologies in our lives. It recognises that partnerships with EdTechNZ and teachers could enable collaborative development of digital technologies best suited to NZ classrooms.
- 11.5. Members know that digital technology is an area of rapid change and want a broad policy that accepts the use of digital technologies, with guidelines. This policy is a beginning and will change and adapt over time, as is appropriate.