Submission on long-term insights briefing: Technology for personalised learning

Ministry of Education | Te Tāhuhu o te Mātauranga

internetnz

Introduction

Who we are and what we stand for

1. InternetNZ | Ipurangi Aotearoa operates the .nz domain space. We ensure all domain names ending with .nz are available for people and businesses in Aotearoa to function and thrive online. We are an incorporated society, and a portion of the money we receive from .nz domain names goes back into the community through grants and funding for other organisations.

2. InternetNZ believes everyone in Aotearoa should be able to make the most of our increasingly digital world in a way that works for them. Our work enables all the people of Aotearoa to access the Internet, but we know that access is not equitable, and the digital equity gap persists.

3. All New Zealanders must be able to equitably participate in and benefit from our society, democracy, and economy. Digital equity and digital competence are the foundations of this. Education is a critical lever in Aotearoa to grow people's digital literacy so they can engage safely online and participate as digital citizens.

4. We welcome this opportunity to submit on the Ministry of Education's long-term insights briefing on realising the potential for digital technology to support personalised and tailored learning.

Our engagement

5. To inform this submission, we engaged primary and secondary educators, a charitable trust working in education, and a disability advocacy organisation.

6. InternetNZ also regularly engages in international Internet governance forums, including providing input to key global processes such as the Global Digital Compact, WSIS+20 and NETmundial+10, where issues such as digital equity, online harms, AI, and education are discussed.

Context and scope

7. Our economic base as a country depends on an education system that produces a capable workforce, and the requirements for a capable workforce will continue to change as technology evolves. We must address economic inequities as our population demographics shift so that everyone can participate meaningfully.

8. The long-term insights briefing needs to be ambitious and focus on what Aotearoa needs to do to achieve the core outcomes of the education system - providing pathways to employment and producing good citizens.

9. The feedback we have received has highlighted the need for the long-term insights briefing to focus on the opportunities digital technologies offer for a range of groups, including ākonga, whānau, teachers, education providers and schools. These groups each need targeted support to maximise the benefits of technology in education and strengthen social cohesion.

10. As younger generations enter the education system and teaching workforce, they will bring new attitudes to technology, shaping how these tools are adopted. Young people are digital natives, which is already changing power dynamics in the classroom by empowering them to take a more active role in their learning.

11. Technology offers significant potential in education, including reducing the administrative burden for educators so they can focus on the core task of teaching. It is also, however, introducing new challenges. Online harm was a common concern among those we spoke to. Our Internet Insights research in 2023 found that young children being able to access inappropriate content online was the top concern for those surveyed, with 73% of New Zealanders extremely or very concerned[1]. The blurred line between the use of technology inside and outside learning environments is also making it difficult to set expectations for behaviour.

Opportunities

12. In our engagement, we heard that digital technologies offer significant opportunities to make education relevant to the needs of a changing population and maximise the economic benefits of our education system. We have identified three main opportunity areas that the long-term insights briefing should address:

Adapting learning programmes

13. Digital technologies have significant potential as tools for inclusion, helping to break down barriers and adapt learning programmes for people with different needs. They are particularly valuable for those not well served by traditional learning models who are currently most likely to disengage from education. Technology will also be an important tool in building an education system that can respond to demographic changes over time.

14. In the next 10-20 years, new tools will likely help people overcome language barriers and create new ways for disabled and neurodivergent learners to engage. Technology can make education more accessible by providing new tools to help learners engage with material in a way that works for them and assisting educators to work with students with diverse needs. AI can also enable personalised learning tools that move at the learner's pace.

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[1] New Zealand's Internet Insights 2023, InternetNZ and Verian (2023): https://internetnz.nz/new-zealands-internet-insights/new-zealands-internet-insights-2023/

Skills not degrees

15. The education system can create work-ready young people by building and sustaining pathways to employment and working with industry and employers. Employers are increasingly focused on skills such as critical thinking and problem-solving rather than qualifications alone.

16. While supporting young people into high-value careers is an important first step, positioning education as lifelong learning will be increasingly important. Many industries are in decline, and new industries will continue to emerge over the next two decades. Providing the workforce with more opportunities to upskill and reskill through stackable learning will be crucial for keeping pace with rapidly evolving technologies and supporting a strong and resilient economy.

Rethinking the teaching environment

17. Over the next 10-20 years, technology should enable us to move away from the industrial model of education. Technology will transform both the teaching environment and teaching, including the size of groups, how to group, when to use technological tools and where hybrid ways of learning could enhance the education experience. We already have the ability to bring others from across the world into the classroom virtually and provide learning experiences in the field. Virtual reality and extended reality technologies can enhance these experiences to offer new opportunities for learners.

18. COVID-19 saw more people getting set up with the technology to study and work from home. The number of people who could do their jobs from home jumped from 47% in 2019 to 60% in 2020.[2] We heard that changes such as the availability of online lecture recordings during this period made a positive difference to the accessibility of higher education for disabled people and enabled people to study without having to relocate. We now have the opportunity to build on this trend to diversify the range of ways to study and learn.

19. For younger generations who use technology extensively as a social tool, it will also be important to use a range of tools, such as gaming and immersive technologies, to enhance the learning experience.

20. Teachers told us that AI has the potential to enhance creativity and enable, empower, and build capacity. Digital technologies such as AI may change how people apply skills, but if used responsibly, they can serve as a strong starting point and an aid for learners that complements teaching.

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[2] New Zealand's Internet Insights 2023

Challenges and risks

21. Technology can support equity in education, but it will not drive this change automatically. Current pressures on the education system will present ongoing challenges for the adoption of new technologies, and targeted effort is needed to support the adoption of technologies in an inclusive and responsible way. The long-term insights briefing needs to address these challenges:

Pressure on education providers

22. We heard from teachers that the work involved in keeping technology up to date is constant and increasing. This could continue to grow further as new technologies are used in education. In particular, educators can also be subject to provider or vendor capture, where the tools used in education are often tied to one global provider and are not interoperable.

23. The significant pressure on schools and teachers to manage their day-to-day responsibilities also means there can be little time to prepare for new technologies. Schools are often focused on cybersecurity and bullying risks rather than the opportunities presented by technology, as the threats posed by these issues are more pressing.

24. Accommodating the learning needs of a growing number of neurodivergent learners and learners with English as a second language also requires significant time and attention from teachers.

Unprepared educators

25. Adopting new technologies such as AI currently relies heavily on educators curating content for their students and being intentional and experimental. Schools also rely on knowledge and expertise within their communities, which is not equally available to all.

26. Some educators may feel that they lack the scope to implement new technologies if they do not have access to adequate support. If people are disinterested, intimidated, or do not have time to engage properly with new technologies, there is a risk that these tools could be misused or poorly integrated into learning plans.

27. We heard from a teacher working in AI engagement that a fear-based introduction to technology can shape someone's entire experience of that technology and that a balanced, informed introduction to these technologies is crucial.

A widening digital divide

28. There is already significant variation in the level of digital access in Aotearoa. In 2017, disabled people not in work were 21 percentage points less likely than the general population to have Internet access, with the same difference recorded for people living in social housing.[3] In 2023, 79% of households with income over $100,000 had a fibre connection, while this figure was only 59% for households with income under $50,000.[4] In our engagement, we heard a broad consensus that emerging technologies are likely to exacerbate this digital divide further.

29. Many families and schools face difficulties accessing up-to-date technologies, and continuing the status quo could worsen this problem. If technology needs to be self-funded, this is likely to disadvantage groups that are already more likely to face access challenges. The digital divide may also reinforce existing biases on the use of technology.

30. We also heard concerns about losing more powerful digital equipment in schools, such as computer labs, to prioritise low-cost, portable equipment. Young people who only engage with technology at school may not build a deeper understanding of technology if they lose these opportunities.

Necessary changes

31. In our engagements, we heard that support is needed across the education sector to maximise the benefits and enable the safe adoption of digital technologies. The briefing needs to note the importance of measures across the following areas to achieve this goal:

Curriculum changes

32. We heard that a big-picture review of the curriculum and a rethink of the industrial model of education is needed. Technology is currently treated as an add-on, but digital literacy and digital competence need to be treated as core competencies. The education system should focus on creating adaptable young people and supporting lifelong education through personalised, stackable learning at the tertiary level so that people can continue to build their skills and capabilities over time.

33. We heard that the skills students need to develop and focus on may change as the adoption of AI progresses. In the medium term, this could include emphasising new ways of looking at problems, asking the right questions and helping students to be more reflective as they engage with AI.

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[3] Digital inclusion and wellbeing in New Zealand, Motu (2019): https://www.digital.govt.nz/digital-government/programmes-and-projects/finished/digital-inclusion/digital-inclusion-research/report-digital-inclusion-and-wellbeing-in-new-zealand
[4] New Zealand's Internet Insights 2023

Support for education providers

34.   For schools and other education providers, a critical enabler for success will be adequate funding for technology needs and infrastructure upgrades. Software and other tools offered to education providers must also be readily available and not locked behind barriers that make them difficult to access.

35.   Education providers need support to build technological capability, including resources and frameworks, best practices for using AI and programmes on online awareness. Providing educators with support to understand digital technologies, how different communities use them and how to address associated biases is essential so they can share an informed perspective with those they teach.

Support for students

36.   We heard that students need to be given the tools to use technology safely rather than being told not to use it. Students need basic digital literacy as a baseline, and guidance from someone who is not afraid of technology and understands how to use it safely.

37.   We have heard that young people generally lack digital wellbeing, and that they need more of a voice in conversations about the effects of technology. Prioritising digital wellbeing in all the spaces students engage in, including social media and online games, will also help young people see the value in technology and increase their willingness to adopt it.

Policy making

38.   At the system level, we heard interest in establishing a formal mechanism where people creating change in the education and technology space could inform policy by providing expert advice from their experience on the ground.

39.   Enforceable legislation will also be important to create a safe online learning environment.

Conclusion

40. Digital technologies offer significant potential to personalise and tailor education in the coming decades, but continuing the status quo risks worsening the existing digital divide. Targeted support across the education system is critical to maximising the benefits and addressing the risks of emerging technologies. Genuine consultation with communities will continue to be vital for any use of technology in education to be successful.

41. An ambitious, future-focused long-term insights briefing can help drive the necessary changes in the education sector and create the foundations for a strong and resilient system in the future.

Want more detail? Get in touch.

42. Thank you again to the Ministry of Education for the opportunity to comment on this long-term insights briefing topic. We welcome the opportunity for further dialogue on this topic and other topics that concern digital technologies and education.

43. Please contact us at policy@internetnz.nz.