

Google for Education

Future of the Classroom

Emerging Trends in K-12 Education
New Zealand Edition





Our approach

This report is part of a series on the evolution of K-12 education and maps out current and emerging trends in classroom education. In collaboration with our research partner **Canvas8**, we conducted a global analysis spanning:

- Fourteen expert interviews with global and country-specific thought leaders in education
- Academic literature review focusing on the last two years of peer-reviewed publications
- Desk research and media narrative analysis across the education sector, including policy research and teacher surveys, as well as input from Google for Education representatives across the globe

We acknowledge that some of the areas discussed in this report are ones that overlap with Google-led products and programs. In order to maintain a focus on the research and studies presented, we've intentionally excluded them.

Kiwis are digitizing education

Investing a large portion of its GDP (6.3%) in education, from primary to tertiary levels, New Zealand comes out ahead of other OECD countries.¹

On a push to digitize education, New Zealand is attempting to address the 'digital divide' between students of differing socio-economic classes. In response to the estimated 100,000 children residing in homes lacking internet connectivity, the government has promised to close the digital divide by 2020 to offer all students digital competence opportunities.² At the same time, research has shown that students want to be participants of discussions about developing educational practices in the digital age.³

Teachers in New Zealand work an average of

52.1 hours

every week, which is among the highest working hours across 35 countries.

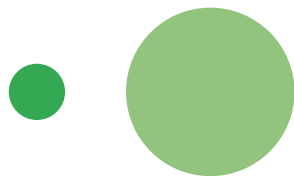
Varkey Foundation (2018)⁴

3rd

is New Zealand's rank among 50 countries in the Worldwide Educating for the Future Index, which measures "the effectiveness of education systems in preparing students for the demands of work and life in a rapidly changing landscape."

The Economist Intelligence Unit (2018)⁵

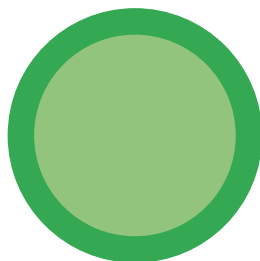
The New Zealand classroom at a glance



1:3

is the average ratio of computers to students in New Zealand classrooms.

Research New Zealand (2016/17)⁶



Primary school
922

Lower secondary school
840

922 hours

a year are spent teaching by New Zealand primary teachers in public schools, more than the OECD average of 800 hours. Lower secondary teachers invest 840 hours, less than the OECD average of 913 hours.

OECD (2017)¹⁶



75%

of all spaces in New Zealand schools are conventional or traditional classrooms.

Innovative Learning Environments & Teacher Change (2017)⁹

Key Trends

From our [Global Report](#), we've analysed three of the most prominent trends in New Zealand's K-12 classrooms

01 Life Skills & Workforce Preparation

People want children to have a more holistic education that goes beyond standardised testing to include social and vocational skills.

02 Digital Responsibility

Parents want schools to help students to have healthy relationships with technology, and to be safe and confident explorers of the digital world.

03 Emerging Technologies

Schools are incorporating emerging technologies into the classroom to create more innovative and engaging teaching methods.

“The New Zealand curriculum is different to many other countries, in that it's not a checklist of things that have to be taught. It's more of a framework, and schools work out themselves how their learners should engage with the ideas.”

Dr. Tim Bell, professor of Computer Science and Engineering at the University of Canterbury and founder of Computer Science Unplugged



Life Skills & Workforce Preparation

Expectations for what students learn in a classroom are changing, with more New Zealand parents expressing a desire for schools to prepare students with the life skills necessary for adult life. With research suggesting that higher levels of emotional intelligence are linked with better leadership and ability to cope with pressures, '21st Century Skills' – skills that are adaptable such as empathy, critical thinking, articulation and teamwork – are being worked into education.⁹

New Zealand scores 79.3 out of a possible 100, ranking it 3rd out of 35 developed countries in future skills education. In fact, the country boasts perfect scores of 100 for the coverage and importance the curriculum gives to 21st Century Skills – one of just six countries to achieve this.⁵



100%

is the score achieved by New Zealand for its coverage and importance given to 21st Century Skills.

The Economist Intelligence Unit (2018)

“Addressing a problem from different disciplinary perspectives is important. This is not only what students need to do when they enter the workforce. This is what we need to solve the big problems that we face, like climate change.”

Dr Hanna Dumont, Educational Psychologist and Researcher in International Education

It's also changing attitudes towards standardised testing and academic achievement. In 2017, the government announced that National Standards and Ngā Whanaketanga Rumaki Māori will be removed from 2018, instead focusing on progress and achievement of all children across the wider curriculum.¹⁰ It aims to better account for the different ways and paces at which students learn.

The desire to prepare students for the future has resulted in the country boasting a successful secondary vocational program, teaching students the skills they would need for trades – employment rates of 25-64 year olds with a vocational upper-secondary or post-secondary non-tertiary education in New Zealand are relatively high (83.8%) in comparison to other OECD countries.¹



“In New Zealand, life skills are a really big deal. The point of having a curriculum that doesn't include a list of things to be taught is that kids get to be creative, enterprising, confident in their identity and lifelong learning, and so on.”

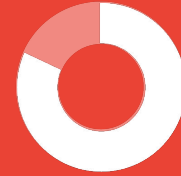
Dr. Tim Bell, professor of Computer Science and Engineering at the University of Canterbury and founder of Computer Science Unplugged



Digital Responsibility

Children are online at a younger age than ever before – those aged 18 or under account for an estimated one in three Internet users globally.¹¹ In New Zealand, approximately 81% of 10 year olds own mobile devices, and 91% of 18 year olds have a smartphone or tablet.²

There is a need to help students develop a healthy, responsible relationship with technology – something that often falls under the jurisdiction of the education system. After all, when it is used correctly, technology has huge benefits for both teacher and student engagement. 8 in 10 New Zealand principals say that digital technologies positively impact student achievement. Schools are looking to benefit from this in the classroom, whilst also teaching students how to navigate the digital world – 74% of New Zealand schools currently have a strategic Information and Communications Technology (ICT) plan.⁶



8 in 10

New Zealand principals say that digital technologies are positively impacting student achievement.

Research New Zealand (2017)

“Digital citizenship and digital literacy programmes are about more than learning how to use something. They must navigate the challenge of encouraging a healthy relationship with technology as a whole.”

Vikas Pota, Group CEO of Tmrw Digital and Chairman of the Board of Trustees of the Varkey Foundation

With research showing that the inclusion of online safety within the school's curriculum is key to helping children become safe and responsible users of technologies, schools in New Zealand are rethinking how they teach these skills. There is a particular focus on teaching students how to manage, rather than avoid, risks online.¹²

For example, The National Curriculum has been updated to hone in on digital technology. Aiming to prepare students for the future, the new curriculum moves away from teaching students how to use digital devices toward providing an understanding of digital principles and programs. The curriculum nurtures digitally-capable thinkers by equipping them with teamwork, communication, ethical, and safety-awareness skills.¹³



“Rather than just saying screentime is bad or AI is terrible, because it's going to replace humans, as a society we need to say there's a good balance. Technology isn't good or bad in itself. I think that's where education is going to be really important.”

Dr. Tim Bell, professor of Computer Science and Engineering at the University of Canterbury and founder of Computer Science Unplugged



Emerging Technologies

Schools are looking for more ways to incorporate emerging technologies into learning in the classroom. Of those that have a strategic ICT plan, 44% of primary schools and 69% of secondary schools in New Zealand have plans to – or already have implemented – the roll out of personal digital devices for each student.⁶

There is also a need to offer teachers more support in incorporating such tech into pedagogy. Next to cost, learning to use these new technologies is one of the main challenges hindering their uptake in the classroom. In New Zealand, 72% of principals report that professional development among staff presents either a “major barrier” or “somewhat of a barrier” to the use of digital technologies in schools. And 70% of Kiwi principals add that support for use of digital tech is a “major barrier” or “somewhat of a barrier” to digital technology use in the classroom.⁷



72%

of principals report that professional development among staff presents either a “major barrier” or “somewhat of a barrier” to the use of digital technologies in schools.

Research New Zealand (2017)

“Learning is happening differently. It’s not on the page but in the world. It’s in how we ask to get different kinds of knowledge, maybe even multi-modally, maybe even multi-lingually, and using different forms and functions.”

Dr. Jen Jenson, professor of Pedagogy and Technology in the Faculty of Education and director of the Institute for Research on Digital Learning at York University

But Kiwis are already making waves in using tech in the classroom. In fact, 96% of principals say that students take part in elearning games at their school, 29% say they take part in virtual events or labs, and 18% say their school offers virtual classes with a remotely located teacher.⁶

Leading the way with artificial intelligence in pedagogy, New Zealand became the first country to invite a digital teacher into its classrooms. Will is a digital human avatar who teaches primary school students about renewable energy as part of a Vector free education program for Auckland schools. It is programed to recognize emotion, including when students are frustrated or upset, and respond to the emotion, including returning a smile.¹⁴



“The kinds of things that tech ought to be able to do and can do is get the very best content and scale it out to people – content I think has been an underappreciated dimension of this.”

Rachel Wolf, founding partner at Public First

“Providing support for teachers is, in my view, the most critical thing in the success of any changes to the curriculum.”

Dr. Tim Bell, professor of Computer Science and Engineering at the University of Canterbury and founder of Computer Science Unplugged



Read the [Future of the Classroom: Global Edition](#) for insights across all 8 emerging trends



Digital
Responsibility



Computational
Thinking



Collaborative
Classrooms



Innovating
Pedagogy



Life Skills & Workforce
Preparation



Student-led
Learning



Connecting
Guardians & Schools



Emerging
Technologies

Works cited

- ¹New Zealand: Overview of the education system. (2018). Retrieved from <http://gpseducation.oecd.org/CountryProfile?plotter=h5&primaryCountry=NZL&treshold=10&topic=EO>
- ²Technology shakeup in New Zealand schools all about 'balance', say educators. (2018). Retrieved from <https://www.stuff.co.nz/national/education/108269352/technology-shakeup-in-new-zealand-schools-all-about-balance-say-educators>
- ³Hodge, E-L., Robertson, N., & J. Sargisson, R. (2017). Mobile technologies in schools: The student voice. *Waikato Journal of Education*, 17(2), 71–76. <http://dx.doi.org/10.15663/tandc.v17i2.157>
- ⁴NZ teachers have biggest workloads, survey finds as NZEI strikes begin. (2018). Retrieved from https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12158427
- ⁵WORLDWIDE EDUCATING FOR THE FUTURE INDEX [PDF file]. (2018). Retrieved from <https://educatingforthefuture.economist.com/EIUYidanPrizeEducatingFortheFuture2018WP.pdf>
- ⁶Digital technologies are having a positive impact on student achievement. (2017). Retrieved from https://2020.org.nz/wp-content/uploads/2014/05/digital-technologies-in-schools-2017_report.pdf
- ⁷Education at a Glance. (2017). Retrieved from https://www.oecd-ilibrary.org/education/education-at-a-glance-2017_eag-2017-en
- ⁸Classroom design should follow evidence, not architectural fads. (2018). Retrieved from <https://theconversation.com/classroom-design-should-follow-evidence-not-architectural-fads-89861>
- ⁹Saini, S. (2018). Emotional Intelligence at Workplace – A Conceptual Study. *International Journal Of Management Studies*
- ¹⁰National Standards removed. (2017). Retrieved from <https://education.govt.nz/news/national-standards-removed/>
- ¹¹The State of the World's Children 2017: Children in a Digital World. (2017). Retrieved from https://www.unicef.org/publications/files/SOWC_2017_ENG_WEB.pdf
- ¹²Middaugh, E., Clark, L., and Ballard., P. (2017). Digital Media, Participatory Politics, and Positive Youth Development. *Pediatrics*, 140(2), S127–S131. <http://dx.doi.org/10.1542/peds.2016-1758Q>
- ¹³Digital Technologies and Hangarau Matihiko curriculum content goes live. (2017). Retrieved from <https://www.education.govt.nz/news/digital-technologies-and-hangarau-matihiko-curriculum-content-goes-live/>
- ¹⁴World-first digital teacher in NZ schools. (2018). Retrieved from <https://www.newsroom.co.nz/2018/08/22/203646/digital-teacher-in-kiwi-schools>