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ID 276431972 BRIEF OPUSMENT INDEX 1



# Today's answers for yesterday's schools

With the New Zealand education system dropping in world rankings, is the Kiwi curriculum keeping pace with a rapidly-changing world and do enough children have full access to new technology?

**Russell Blackstock**
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Budding architect Emily Mills is using a state-of-the-art industrial laser cutter to bring one of her 3D digital creations to life.

At her private school's new "FabLab", fellow students concentrate intently as they sit before banks of large computer screens, designing everything from fabrics to digital art. Some are editing their own films.

The scene at Diocesan School for Girls, in the Auckland suburb of Epsom, looks more like a commercial research-and-design unit than a classroom.

The school's principal, Heather McRae, introduced the hi-tech facility to help give her girls a head start in the workplace.

Fifteen-year-old Emily, a Year 11 student from Meadowbank, is grateful for the opportunity.

"I have always been keen on doing something in the architectural field when I leave school, but didn't know how to make this a reality," she said.

"But my confidence has been boosted by having access to all this great technology, so now there should be no stopping me. I realised 'I can do this'."

If the FabLab is a peek into the future, thinking outside the box is something that has to be done more often in our schools, according to some experts.

And if we want Kiwi children to compete on a world stage, it is not only in-class computer technologies that have to be overhauled and updated, they say.

International education consultant Neil MacKay addressed hundreds of parents on a recent lecture tour of New Zealand schools.

He warns that Kiwi children are in danger of falling behind other developed countries because of an outdated and increasingly irrelevant curriculum in areas such as languages, maths and writing.

MacKay, from Wales, questions why New Zealand schools are obsessed with teaching children neat handwriting when NCEA will all soon be done online.

It would be better for children to learn touch typing, he says.

And why, he asks, do some schools teach languages such as French or German when widely-spoken languages like Spanish or Chinese would be of more use?

"The New Zealand curriculum is trying hard, but that is often due to the efforts of individual teachers or schools, rather than having good central direction," Mackay says.

"Some schools are really high-tech and students use laptops for everything including emailing in homework but then they have to do public exams in handwriting because policy and dogma haven't caught up."

MacKay believes schools are trying to prepare students for a world that no longer exists — a world in which neat handwriting, accurate reading and spelling are a sign of an educated and employable person.

''Most job applications are now submitted online and educated people are those who know where to look, how to interpret and what to do — rather than having their brains full of facts which are out of date almost immediately," he explains.

"Some New Zealand schools are already embracing the future and doing it well — not through extra funding but because they are striving to future-proof their students."

Many Kiwis regard New Zealand's education system as world-class. But recent international comparisons suggest otherwise. New Zealand took a significant dip in world education rankings last year. Compared with the 2009 results, the ranking for 15-year-olds in the Programme for International Student Assessment fell from 7th to 13th in reading, 13th to 23rd in mathematics, and 7th to 18th in science.

Kiwi 9-year-olds finished last-equal in maths among peers in developed countries in the most recent Trends in International Mathematics and Science Study.

About a third of primary aged children are failing Government-set writing standards because they don't read enough and are confused by text language and slang.

So are we in danger of falling further behind because the curriculum sticks to tradition and doesn't change quickly enough?

And are schools not as well-resourced digitally as they should be?

Professor John O'Neill, from Massey University's Institute of Education, thinks the situation is not yet critical but believes improvements have to be made quickly.

He believes the costs of digital devices and training for students should not be carried by parents but should be Government-subsidised.

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"A lot of schools have a BYO system where kids are expected to bring their own iPads or tablets, but this is a highly questionable moral tactic. It is short-sighted and penny-pinching," he says.

"Parents already have the costs of school donations and uniforms, and electronic devices are not cheap. Family circumstances should not be a barrier to learning and it is time the Government recognised this.''

Companies have been quick to see an opportunity. Microsoft is sponsoring some schools, such as Auckland's Avondale College, with equipment and support to train the next Bill Gates or Mark Zuckerberg.

But some teachers are uncomfortable with the idea of big business guiding the curriculum.

Ironically, lower-decile schools can fare better in the digital space, as they receive greater subsidies from the Government and more sponsorship from local businesses than their wealthier counterparts, which rely on parental donations and fundraising.

Mangere Central School in South Auckland has bought enough mobile devices to supply one for every three students.

The 470-pupil, decile 2 school doesn't get any specific funding to go towards information technology, which is a significant cost, principal Maria Heron says.

"Although we don't have oodles of cash, we manage it very well."

Heron says many of her families don't have the money to have internet at home, and certainly can't afford expensive tablets and laptops.

She concedes the system isn't perfect because the students cannot take the devices home.

"Ideally, I'd like us to be part of a scheme where we could lease the devices to families at a low cost so they can be used outside of school."

This is an idea adopted by a dozen Auckland schools, which have signed up to the Manaiakalani Education Programme.

This promotes new teaching and learning approaches in a growing cluster of decile 1 schools in the low-income communities of Tamaki — the East Auckland suburbs of Glen Innes, Panmure and Pt England.

Glenbrae School in Glen Innes is part of this programme. Parents can pay for netbooks in instalments, equivalent to less than the price of a cup of coffee per week.

For about $3.50 a week, the computer can be bought over three years. The price includes internet access from home and technical support.

Glenbrae principal Lesley Elia says another benefit is that teachers' job are made easier because the devices are all the same.

"We have also had huge support from Telecom, which has helped a great deal.

"These devices are vital and without the Manaiakalani Trust we would never have enough money to cover something like this."

The Government was looking at the initiative with a view to introducing it throughout the country.

"Principals at schools in other regions are now coming to take a look at what we are doing."

Although many schools are sticking with tradition and continue to teach French, German or Italian as a second language, others have changed.

Mangere Central School is teaching students Chinese, Korean and Spanish, which are likely to be more useful in the future workplace than the languages New Zealand schools have more commonly taught in the past.

More schools are expected to follow.

As New Zealand's economic relationship with China deepens, Kiwis are increasingly looking online to learn Mandarin.

The *New Zealand Herald* reported last week that centres teaching Chinese have had an increase in enrolments of up to 70 per cent in the past few years and some Kiwis are also learning in their own time over the internet.

But some old-schoolers, including education consultant John Morris — former longtime head of Auckland Grammar — believe this could be a waste of time and effort.

"In the 1970s and 80s we had close trade links with Japan and all of a sudden everyone was in a rush to introduce Japanese," Morris says.

"But that didn't last long and people were left knowing a language they hardly had much use for. However, learning any second language is a good idea no matter what that language is."

Although Morris acknowledges the importance of computerised technology in schools, he says traditional teaching values also have their place.

"All the best technology in the world cannot replace a brilliant teacher," he says. "You have to know stuff before you input information into a computer.

"I do believe, though, that kids should be taught touch typing from an early age as clearly this will be of benefit when operating a computer keyboard. And knowing your learning tables is still handy for the times when you may not have access to a calculator."

The Ministry of Education says it has strategies and initiatives in place and in the pipeline to address curriculum concerns. An acceptable balance between traditional teaching practices and emerging technology is "a priority", says the deputy secretary of student achievement, Rowena Phair,

Phair also points out that the number of Kiwi students learning Chinese increased significantly between 2004 and 2012.

In July 2012, more than 13,000 primary and intermediate students studied Chinese, nearly six times as many compared to 2004. At secondary level, 2849 students learned Chinese — twice as many as in 2004.

The Government is also investing about $1.35 billion so all schools will have ultra-fast broadband services by the end of 2016.

The Government is driving a range of initiatives to support schools and their students to get the most out of digital technologies, Phair says. "This is a Government priority."

**"Some schools are really high-tech and students use laptops for everything, but then they have to do public exams in handwriting . . ."**

Neil MacKay

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**"The best technology in the world cannot replace a brilliant teacher. You have to know stuff before you input information into a computer."**

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Diocesan School student Emily Mills says the school's FabLab has boosted her confidence. DOUG SHERRING

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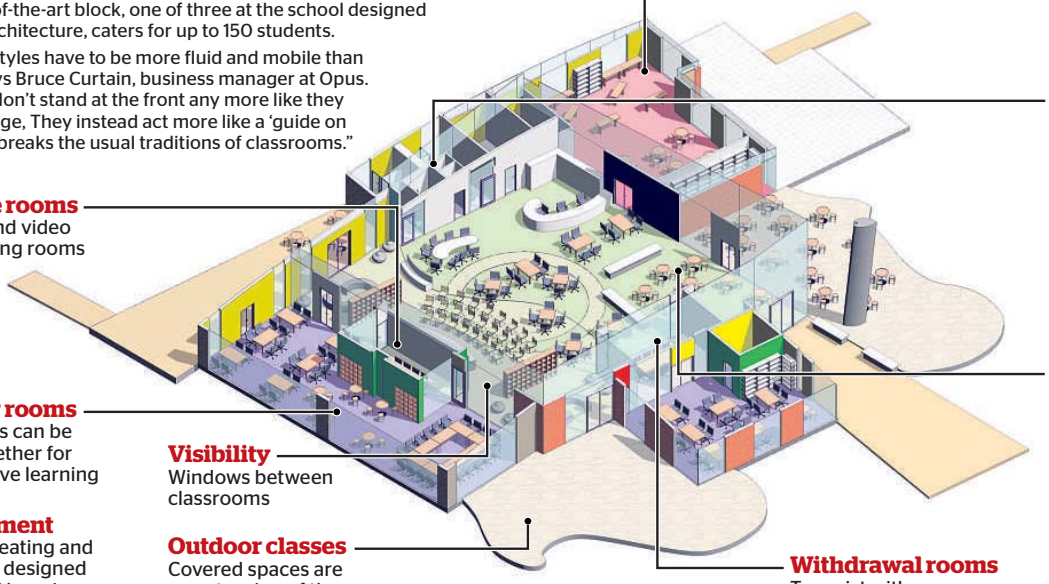
## The school of the future

Futuristic learning spaces like this one at Porirua College, near Wellington, are already being built around New Zealand.

This state-of-the-art block, one of three at the school designed by Opus Architecture, caters for up to 150 students.

"Learning styles have to be more fluid and mobile than before," says Bruce Curtain, business manager at Opus. "Teachers don't stand at the front any more like they are on a stage, They instead act more like a 'guide on the side'. It breaks the usual traditions of classrooms."



**Wet spaces**
Hands-on learning areas for art, science and technology

**Toilets**
Located directly off central learning hub

**Separate rooms**
Seminar and video conferencing rooms

**Themed rooms**
Variety of furniture, colour and texture indicate different learning styles

**Modular rooms**
Classrooms can be joined together for collaborative learning

**Learning hub**
Open-plan area encourages collaborative learning. Students can exchange ideas and "cross-polinate" in a variety of spaces for presentations and group activities. Wifi access allows flexible learning

**Visibility**
Windows between classrooms

**Environment**
Lighting, heating and ventilation designed for optimal learning experience

**Outdoor classes**
Covered spaces are an extension of the classroom

**Withdrawal rooms**
To assist with independent learning

Students at Mangere Central are using school-supplied iPads as part of learning, but their principal wants them to have more access to technology. MICHAEL CRAIG


Education expert Neil MacKay says too many New Zealand schools are teaching outdated lessons. BAY OF PLENTY TIMES

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