

What do teachers and principals think about digital technology in the curriculum?

Some principals and teachers wrote a comment about the inclusion of digital technologies as a strand in the technology learning area of the curriculum.

Of those who commented:

40% of teachers and 19% of principals made a generally positive comment.



I think it's a great idea and a really positive move forward for NZ education. (Principal)

Necessary in today's world. (Teacher)



22% of teachers and 30% of principals commented on funding and infrastructure support.



Great idea, but how do you make it equitable and achievable for ALL schools, low or high decile? (Teacher)

It is a strand whose ongoing costs are challenging to finance through the budget. (Principal)



18% of teachers and 35% of principals questioned whether digital technologies should sit within the technology learning area, or be integrated across the curriculum.



I feel digital technology is a tool to access all learning areas of NZC. I do not believe it should sit within the technology strand exclusively. (Principal)



I believe there are aspects of digital technology that need to be taught as a separate strand but there are also aspects that need to be integrated into other curriculum areas. (Teacher)

17% of teachers and 15% of principals commented on the need for adequate professional learning to support teachers' capabilities with digital technology.



What do principals and teachers say about infrastructure and support for teaching with digital technologies?

Teachers say:



their school's internet access is adequate and reliable.



they have good technical support to deal with problems



that school equipment is adequate and reliable

56% say they have the knowledge and skills they need to provide learning with digital technology and 21% disagree

56% say their school has strong leadership for the use of digital technologies and 20% disagree

52% say that digital technology is available whenever their students need it for their learning and 36% disagree

Principals:



say that their school has adequate expertise to support good quality learning with digital technology



say the costs of maintaining and replacing digital technologies is a major issue for their school



say that their school has adequate resources to support good quality learning with digital technology, and 33% disagree

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The inclusion of digital technologies in the curriculum

The 2016 national survey was undertaken not long after an announcement by the Minister of Education that digital technology will be more formally integrated into *The New Zealand Curriculum* and *Te Marautanga o Aotearoa* by 2018.¹⁵ We invited teachers and principals to comment on the inclusion of digital technology as a strand in the technology learning area. Forty-two percent of principals and 30% of teachers wrote a comment, incorporating a wide range of views. The most common themes in their comments are indicated in Table 5.

TABLE 5 Themes in teachers' and principals' comments about the inclusion of digital technology as a strand of technology in the curriculum

	Teachers who wrote a comment (n = 231) %	Principals who wrote a comment (n = 80) %
Generally positive comment	40	19
Funding and equity implications (e.g. concern about cost of updating digital technology, requests for additional Ministry funding)	22	30
Should be integrated across all learning areas, rather than a strand of technology curriculum	18	35
Implications for PLD/resources	17	15
Not in favour, or worried about effects of adding to NZC (e.g. effects on other curriculum areas/learning; crowded curriculum)	14	9

¹⁵ See <https://www.beehive.govt.nz/release/nz-curriculum-include-digital-technology>

Not a priority for all learners/particular challenges with young children	8	-
Neutral comment/unsure	5	8
Pedagogy is more important than devices	2	8
Needs further thinking (e.g. evidence/research that shows the benefits to learning, associated with using digital technology)	2	5
Not all families can afford BYOD or internet access at home	1	4

Generally positive views

Of those who commented, 40% of teachers and 19% of principals expressed a generally positive sentiment, saying that digital technology was “necessary” and “essential” learning for young people today.

Go for it! We are teaching it anyway! (Teacher)

Necessary in today’s world. (Teacher)

I am really excited about this. (Teacher)

Awesome. Karawhiua mai. (Teacher)

I think it is overdue. (Teacher)

It is a must to have it as a strand, students will get left behind if they don’t have current knowledge of digital technology. (Teacher)

I think it’s a great idea and a really positive move forward for NZ education. (Principal)

Funding and equity implications

Twenty-two percent of teacher comments and 30% of principal comments related to the funding and infrastructure support they believed would be necessary for this to impact positively for all students, asking whether schools would receive more funding, and raising questions about equity.

Great idea, but how do you make it equitable and achievable for ALL schools, low or high decile? (Teacher)

I think it would be good IF there was enough support/funding for teachers and schools to implement the programmes successfully. (Teacher)

The development of digital technology as a strand will more likely require increased devices for students to use as learning tools. Some schools will pass this cost on to parents, some will not be able to do that. (Principal)

Some principals said they already faced challenges in keeping up with escalating costs for digital technology.

It is a strand whose ongoing costs are challenging to finance through the budget. (Principal)

If this is to be done then there is a need to ensure that all schools will be digitally able to teach to this or respond appropriately. My school is not at this point yet. We are still trying to achieve wifi and have still to find funds to equip our tamariki with the technology. We also need to think about those kura who do not have access to much out in the country. How would they cope? (Principal)

Digital technology ages quickly. It would be good if the Ministry supplied digital technology and kept updating/replacing it. (Principal)

We can't afford to buy enough devices, and being a decile 3 school we would have a lot of trouble with the have and have nots as we draw from a wide range of parent groups. (Principal)

Where should digital technology sit within the curriculum?

Eighteen percent of teacher and 34% of principal comments questioned where digital technologies should sit within the curriculum. Some said it should be integrated across all learning areas rather than be a strand within technology.

Digital technology needs to be integrated to the other curriculum subjects rather than taught as a standalone subject. (Teacher)

I see it as a positive step but not as an add-on—yet another subject. It must be embedded into all existing curriculum areas so it becomes as useful as picking up a pencil when necessary. It should not be just part of the technology curriculum. (Teacher)

I would rather digital technology be used to teach 21C skills and key competencies. If it (Digital technology) is used in isolation as a strand I don't know what the context for learning would be ... Maybe coding? I don't think digital technology needs to sit outside of the learning—there is so much opportunity for digital technology to enable learning across the curriculum to be more collaborative and creative. (Teacher)

That is in a way a step backwards as technology especially eLearning and BYOD can be integrated and used in all curriculum areas. Don't restrict its uses, find new ways of getting it into all classrooms being used more effectively. Exemplars of ways to use it in all areas and resources to help achieve this. (Teacher)

A common refrain was to describe technology is a “tool” for learning, rather than being the focus of learning itself.

Digital Technology is a tool for education. I am not sure whether including it with [achievement objectives] as a strand is going to improve its use. (Principal)

Technology learning (e learning) is just learning. ICT are tools to facilitate learning. (Principal)

I feel digital technology is a tool to access all learning areas of NZC. I do not believe it should sit within the technology strand exclusively. (Principal)

Others saw it as a “both/and” situation, seeing digital technology as belonging across the curriculum as well as having its own specific focus strand.

I believe there are aspects of digital technology that need to be taught as a separate strand but there are also aspects that need to be integrated into other curriculum areas. (Teacher)

Digital devices are a learning tool. I have no problems with technologies such as coding, robotics being included as a strand. (Principal)

Digital technology is a key aspect of the curriculum but the digital tools pervade the whole curriculum ... If it becomes a 'strand' of the technology curriculum you run the risk of dis-integration. If the digital technology becomes a strand the emphasis must be placed on integration through the whole curriculum. (Principal)

Some teachers and principals said that the curriculum is already too crowded, and worried that an additional focus on digital technologies as a curriculum strand would have a negative impact on other learning opportunities.

There is already enough to fit into the day to day curriculum. Adding this in will take away from the core subjects that are already stretched for time. Technology should be integrated, not taught separately. (Teacher)

If you add to a crowded curriculum, what is removed? (Either centrally or in individual schools) usually the arts and PE suffer first. (Teacher)

Our curriculum is already too crowded. Maybe this is appropriate at intermediate level, but not for all children at primary levels. (Teacher)

If you are referring to 'coding' then I feel at our school it is another way of crowding an already over-crowded curriculum which concentrates on National Standards. (Principal)

Support needed for teachers

Comments from 17% of teachers and 15% of principals mentioned teacher capability and the need for adequate PLD.

This is great but lots more PD needed for those that have never been exposed to it. (Teacher)

Important to have this as the digital revolution is well underway. However, also important to be realistic about the number of teachers currently who are not 'digital natives' and will need good support to feel confident about their ability to implement this curriculum. (Teacher)

Will be useful for students once teachers ALL have the skills to make the most of it, to promote in-depth learning and widen the range of learning opportunities by linking to others outside the school. (Teacher)

Teachers need to be capable of using these properly or it is a waste of time. (Teacher)

Some teachers assume putting devices in front of students is all that is needed. Not enough skills to develop efficient use of devices are taught. (Principal)

While some suggested all teachers should be supported to develop capabilities in this area, others thought there would be many teachers who would struggle, and a few suggested it was best to concentrate on developing those teachers who were most likely to have an affinity for it.

It will need teachers who understand and have an ability for this. (Teacher)

[I] feel that the number of digitally minded people aren't as common as you may think. If technology became part of the NZ curriculum this could be possibly done through 'specialist teaching' that some schools now have instead of whole day CRT. (Teacher)

I believe that many teachers are still struggling to get their heads around integrating ICT into their programmes in a meaningful way. For many it will be viewed as yet another thing to learn. (Teacher)

Other themes

Other themes in teacher and principal comments included some remarks about the relevance or appropriateness of digital technology for very young learners, issues with inequity of access to technology in students' homes, or comments stating that what matters is the pedagogy, and that further research and critical thinking were needed to ensure that digital technology was used effectively in service to learning.

Summary

Teacher and principal comments indicate generally positive views about the inclusion and strengthening of digital technologies in the curriculum. However, teachers and principals raised a number of other issues and questions about how this will play out in practice. These include questions around equity of access, funding issues, overcrowding the curriculum, and professional learning and support for teachers. These issues are addressed further in the next chapter.