



Briefing Note: Next Steps for Communities of Online Learning

To:	Hon Chris Hipkins, Minister of Education		
Date:	20 April 2018	Priority:	High
Security Level:	In Confidence	METIS No:	1120717
Drafter:	Heather Penny	DDI:	463 8101
Key contact and number:	Sheryl Chase s 9(2)(a)	Round robin:	No
Messaging seen by Communications team:	No		

Summary

- This note outlines the result of the consultation on Communities of Online Learning (COOL) proposals to form part of the Education Legislation Bill, and sets out some high level topics for possible discussion on distance education at the Strategy Session on 2 May 2018.

Damian Edwards
Acting Deputy Secretary
Education System Policy

Released under the Official Information Act 1982

Background

Consultation on the COOL proposals for the Education Legislation Bill

1. Twenty submissions were received on the proposal to repeal the COOL legislation. Generally, there was consensus across the submissions for the repeal of COOL in favour of a national conversation about the role of online learning in New Zealand. Fifteen submitters supported repeal, with another five not taking a position, but expressing concerns with the current COOL framework.
2. Those concerns were around extending provision to the private sector; and the ability of private sector providers to employ non-registered teachers and to have a curriculum that was not either The New Zealand Curriculum or Te Marautanga o Aotearoa.
3. Research tells us that the principles of pedagogy hold true in distance education teaching but that teachers need support to use the new mode to its best advantage. Submitters to the consultation raised questions around Professional Learning and Development for distance educators and how we can leverage off the expertise of existing providers in upskilling others.
4. The two Virtual Learning Networks (VLNs) that submitted, while supporting the repeal of the legislation, were concerned that the repeal would result in further delaying the establishment of systems to support online learning. The VLNs are concerned about the fragility of informal structures and complex funding systems, and as a result, the reduction in online learning networks. The VLNs are concerned about the reduction in the number of networks in recent years, and the significant growth in the demand for online learning.
5. The VLNs also identified a number of constraints in relation to employment conditions, such as hours of work a teacher can teach, including over school holiday periods. The nature of distance learning now means that learning can be more flexible in terms of time and place, which may not be able to be fully realised under current industrial relation settings.

Approach to Strategy Session

6. The submissions outline some of the issues that we have already identified as needing to be addressed so that we can fully realise the benefits of digital education for students.
7. We propose that during the strategy session scheduled for 2 May on the future of distance education, we could discuss the areas outlined below.

The need for a whole system approach

8. Student outcomes need to be at the centre of any new approach to distance education. Research finds that distance education can provide good student outcomes for the majority of students, with the right supports, good teaching and curricula. Research also tells us that students are seeing distance education as an integral part of their education offering.
9. There is an opportunity to 'reset the conversation' away from concerns about the COOL model towards a discussion of the transformative potential of 'classrooms without walls'. For example, supporting teacher shortages, and expanding access to high quality education (especially te reo Māori).
10. It is time to consider face-to-face and distance education as a whole system working together, driven by technology, rather than a system where distance education is an exception, or an add-on. We already have a continuum of provision that runs from full

time face- to-face learning through blended learning to full-time distance education and this is expanding.

11. We would like to discuss what such an approach might mean for:
 - a. Students
 - b. Providers of distance education
 - c. Face-to-face schools
 - d. Teachers.

Role of Government

12. We will need to consider what role should the Ministry of Education and the Education Review Office play in the provision of distance education, including:
 - a. A quality assurance or gatekeeping role, e.g. through a system of approval of providers;
 - b. A network management role, e.g. ensuring that the system provides appropriate and consistent pathways for student to move through their education or preventing over or under provision.

Ensuring that every student receives the support that they need regardless of the mode of education provision

13. There has been criticism that distance education provides an easy off-ramp for schools to move on troublesome or at risk students. The focus needs to be on the support for the student to succeed regardless of setting. There is already wider work underway on supporting improvements for at-risk students that should be taken into account in considering this issue.
14. Where students are doing some distance education but are enrolled at a face-to-face school, we may need to consider attendance requirements. It may be disruptive on a number of fronts if schools require students to go elsewhere during the school day to do their distance education. Equally, students should not be able to take themselves away from the school premises when they are not receiving face-to-face education.

Funding distance education in the future

15. The current system of trading resourcing for VLN's and Government payment of dual tuition at Te Kura cannot continue. VLN's are supported by a complex system of trading cash, staffing entitlements or reciprocal teaching, in return for the tuition provided. In many cases, schools do not give up any of their resourcing when a student accesses tuition from Te Kura (a dual tuition funding model).
16. Some key issues in developing a funding system include:
 - a. How far is the government prepared to double fund providers for distance education;
 - b. How schools can manage the volatility of staffing and funding during the year if students' can opt for less than a full-year's course through distance education. This includes how to divide up full-time student resourcing into part-time components, especially when students may be receiving tuition for only a few credits, or for a period of less than a year. It is also questionable the extent to

which it is possible for schools to do this, considering the costs of paying for a student to access a distance education subject will likely not be offset by cheaper costs in their face-to-face provision (while there might be one less student in the classroom, the classroom will still need a teacher);

- c. Are the staffing and IT entitlements for a school that is providing distance education different from those for a face-to-face school;
- d. How to compensate a school for the provision of a space and supervision for students' doing distance education as this becomes the norm;
- e. How would distance education providers be compensated for pastoral care, administrative and other overheads.

Released under the Official Information Act 1982

An Integrated Approach to Distance Education

What is the potential?

Distance education has been provided primarily by Te Kura, our correspondence school as (mainly):

- **Fulltime tuition** for students who cannot access a face-to-face school
- **Supplementary tuition** for students enrolled in a school, but unable to access an aspect of the curriculum

Tertiary providers are increasingly offering education online, to a range of learners

Technology, in recent times, has enabled distance education to grow rapidly, and be provided outside of the traditional face-to-face model of education

- **Virtual Learning Networks (VLN)** have emerged where some schools cluster together, and work together within existing settings, based on principles of collaboration and reciprocity
- **N4L Pond** is a free online community tool enabling registered teachers to share their expertise online

As **technology advances**, distance education and face-to-face education are **converging**

- Students view the ability to do some of their learning online as **integral** to their learning
- Distance education is moving from a separate aspect of our education system, to an integral part of education delivery
- Education professionals increasingly have access to online platforms to **share** expertise and advance their education

Students

are increasingly able to:

- ✓ access a wide range of networks, courses and qualifications online
- ✓ access subjects and teaching expertise in areas of interest, enabling a more personalised learning approach
- ✓ benefit from connected pathways across schools and tertiary, and out of, the education system
- ✓ experience more equitable access to subjects and teachers across the system
- ✓ remain in their local communities and benefit from a broad range of expertise and learning opportunities
- ✓ develop strengths in 21st century competencies such as self-directed learning

Educators & Providers

are increasingly able to:

- ✓ partner and share expertise and resources to provide learning opportunities to students
- ✓ develop areas of expert provision, and reduce duplication
- ✓ partner between schools, and with tertiary providers and industry, to provide specialist learning opportunities
- ✓ retain students by offering a broad curriculum and learning pathway across secondary and tertiary even if they are small or isolated
- ✓ use technology to capture sophisticated sets of data, including real time insights, about student engagement that drive teacher responsiveness to personalised learning

System

is increasingly able to:

- ✓ manage network growth in urban areas as students are able to access high quality learning opportunities from any school and tertiary provider
- ✓ share teachers to overcome teacher shortages, particularly in subjects like STEM and languages, including across secondary and tertiary provision
- ✓ provide for the development of teachers to move seamlessly between online teaching and face-to-face-teaching
- ✓ retain teachers in the system with deep and/or niche subject matter expertise e.g., Mandarin and te reo
- ✓ recognise new roles that are emerging in the system, like eDeans and learning advisors
- ✓ Realise the potential of distance education to improve staff capability

What are the emerging challenges?

Student demand for distance education to support learning is **increasing**

- VLN in secondary schools provide lessons to more than **3000** students. In primary schools, participation has gone from 142 learners in 2011, to 751 learners in 2018. Te Kura enrolls over **20,000** students each year
- University, polytechnic & PTE sector courses that utilise online components have grown significantly

However, the number of Virtual Learning Networks operating is in **decline**. Further sustainable growth is **constrained**:

- increasing demand requires increasing levels of coordination across schools, including timetabling, negotiating resources, and bartering teacher time for student places
- funding arrangements across schooling and tertiary need to ensure that students have access to a flexible, tailored learning pathway through the education system

Students

- Managing the balance between enabling choice about what distance education options students access, and the impact this will have on providers, teachers and peers
- Finding the balance between teacher interaction and working independently as they progress through the education system on their learning pathways
- Managing the engagement and achievement risks of distance education to some students
- Continuing to restrict full-time enrolment for those under 16 in distance education to those who can't access face-to face, and whether there are other students who would benefit

Educators & Providers

Distance learning shifts the balance of who primarily supports students to learn. Support staff, such as learning advisors and eDeans are increasingly important

- Ensuring adequate support roles for students and ensuring that educators and providers have the capability to coordinate participation across schools and tertiary providers
- Evolving infrastructure in a school over time to provide for spaces where students access, and are supervised for, their distance learning
- Linking with employers to ensure that learning opportunities reflect and address industry/sector needs
- Recognising VLN as entities in their own right, to be able to employ teachers, and attract funding, to increase their sustainability
- Unbundling the various roles teachers have combined, for example, in course design, delivery, assessment, learner support, and pastoral care
- Business and revenue models need to adapt to meet large up-front investment in course development, difficulties in scaling delivery, and improving completion rates

System

Infrastructure & Resourcing

- The efficacy of continuing to distinguish between distance and face-to-face education when the distinction is rapidly disappearing, and considering what this then means for the role of Te Kura going forward
- The development of a resourcing system that reflects innovative and flexible delivery models, in an equitable way across different types of providers without incurring excessive and unnecessary costs
- Ensuring equity of access to digital technologies, infrastructure and learning options for those learning by distance
- Ensuring schools have access to technology and systems to capture student data and information
- Ensuring the regulatory environment enables and encourages innovation while protecting students and the quality of teaching

Network & Workforce

- Providing for greater student agency and choice while at the same time managing the physical schooling network
- Recognising emerging roles in the system, and the shifting balance between teaching and support roles
- Evolving the terms and conditions staff work under to take account of the flexibility that distance learning provides while maintaining checks and balances, such as teacher registration
- Ensuring ITE and PLD meets training and development needs in the rapidly evolving environment, and realising the role distance education could play in PLD
- Ensuring that teachers and support staff have the capability to collect, analyse and interpret data to enhance engagement and achievement across modes of learning and use this to inform student pathways



Education Report: Options for delivering online learning

To:	Hon Chris Hipkins, Minister of Education		
Date:	4 June 2019	Priority:	Medium
Security Level:	In Confidence	METIS No:	1175954
Drafter:	Sophie Smith	DDI:	463 7760
Key contact:	Ben O'Meara	DDI:	s 9(2)(a)
Messaging seen by Communications team:	No	Round robin:	No

Purpose of report

This paper provides options to progress the future of online learning in New Zealand through the Education and Training Bill.

Summary

1. Online learning can be used to deliver distance education or be an aspect of face-to-face education. Used well, it provides a range of options to increase learning opportunities, enable the sharing of resources and expertise across the schooling system, and has the potential to lead to more equitable outcomes in education.
2. Distance education delivered online is provided by Te Aho o Te Kura Pounamu o Aotearoa (Te Kura) and the Virtual Learning Networks (VLNs). Te Kura is the only provider of "correspondence" (or distance) education recognised in the Education Act 1989.
3. Having a regulatory framework that supports distance education delivered online is likely to be essential in the future, given New Zealand's geographic isolation, the potential for ongoing skills shortages for teachers in specialist subjects, the range of opportunities that online distance education provides and the key role it is likely to play in teaching and learning. This report provides options to progress technical regulatory changes in distance education delivered online through the Education and Training Bill.
4. We recommend making technical changes to the Education Act 1989 to update the language from "correspondence" education to "distance" education. This would recognise developments in technology and pedagogy.
5. We also recommend clarifying that, subject to board agreement, online tuition can be provided by one board for students enrolled in a school administered by another board.

s 9(2)(f)(iv)

6. We do not recommend broadening access by enabling students to make a choice about enrolling fulltime in distance education delivered online at this time, because there are a number of risks around ensuring the fitness for purpose and quality of education provided solely online. If you are interested in pursuing this option, we could develop a work programme to ensure online education, including distance provision is integrated within the education system in a way that ensures quality and enables positive outcomes.
7. Depending on your preferred option(s), we could undertake targeted engagement on the recommended technical changes. We could progress these changes now.
8. To progress wider policy changes we would recommend a discussion document for public consultation, to enable the public to have a say on what level of choice should be given for full-time and/or supplementary enrolment in distance education delivered online. Feedback from this consultation would inform a broader online learning policy work programme.
9. This consultation should be deferred until decisions have been made on the recommendations in the Tomorrow's Schools Review, because this could change how schools are governed, monitored and evaluated in relation to online learning.

Recommended Actions

The Ministry of Education recommends you:

- a. **note** that having a regulatory environment that enables education to be delivered online is likely to be essential in the future given New Zealand's geography, the range of opportunities that online learning provides and the key role it is likely to play in teaching and learning
- Noted**
- b. **note** that the comments on online education from the Education Conversation | Kōrero Mātauranga and Tomorrow's Schools Review have generally been broad and high level, rather than being specific enough to guide regulatory change
- Noted**
- c. **agree** that legislative changes, which could be included in the Education and Training Bill later this year, should be technical and clarifying only, with a view to updating language from "correspondence" to "distance" education, and clarifying that boards can agree for one board to provide tuition delivered online to students enrolled at other schools, and authorising multiple school boards to enter into one agreement to work together
- Agree / Disagree**
- d. **agree** that broadening access to fulltime enrolment in distance education in legislation should not be progressed at this time
- Agree / Disagree**

s 9(2)(f)(iv)

Proactive Release

- f. **agree** that this Education Report is NOT proactively released at this time because final decisions have not been made.

Agree Disagree



Dr Andrea Schöllmann
Deputy Secretary
Education System Policy

04/06/2019



Hon Chris Hipkins
Minister of Education

19/6/19

Released under the Official Information Act 1982

Background

1. Part of the Education Amendment (Update) Act 2016 was a legislative framework for full and supplementary enrolment¹ in Communities of Online Learning (COOL). Any registered school, tertiary education provider, or a body corporate approved through the accreditation regime, would have been able to be a COOL.
2. Submitters who opposed COOL identified concerns about the risks around private providers of state education; whether all students should have the choice about enrolling in online tuition and at-risk students being "off-ramped" into online education.
3. You agreed to repeal the COOL provisions to enable a wider conversation about online learning. Twenty-one submissions were received on the proposal to repeal the COOL legislation. Generally, there was support for the repeal of COOL in favour of a national conversation about the role of online learning in New Zealand.
4. Two Virtual Learning Networks (VLNs) submitted. While supporting the repeal of the COOL, they were concerned that the repeal would result in further delay in establishing a systematic approach to online learning.
5. Some education providers already provide distance education online (including some without statutory authority). It would be beneficial to ensure that the Education Act 1989 reflects current and future modes of delivery of education. This report provides options for a future-focused regulatory regime that will provide for quality distance education delivered online.

Online learning can be used to provide distance education or supplement face-to-face education

6. Online learning is learning and teaching that is facilitated by or supported through the use of digital technologies. Online learning is a mode of delivery that can be used when providing distance education or face-to-face education.
7. Distance education provides access to learning and teaching without the need for the student or teacher to be physically present in a school. Distance learning previously required a "correspondence" approach, where learning materials were sent to the student, who would complete the work and send it back to the provider.
8. Developments in online learning mean that distance education can be synchronous and involve live communication e.g. webinars, online messages or teleconferences. Distance education can also be asynchronous where students can engage at times that suit them e.g. online forums, accessing resources for self-directed study.
9. Face-to-face education happens when the student and teacher are physically present in a school, usually at set times. Students and teachers may still use digital technologies to support or enhance classroom learning.
10. Blended education uses a combination of distance and face-to-face learning.

¹ "Full enrolment" in this context means students learn by distance fulltime, while "supplementary enrolment" means that only part of their learning happens by distance.

Delivering education online provides the schooling system, educators, and students with a range of opportunities to teach and learn in more innovative ways

11. Used well, digital technology has the potential to increase equality of opportunity in education by reducing geographic, socio-economic, and cultural barriers to teaching and learning. For example, students learning online are able to access subjects that are not available at their local school; educators are able to share expertise and resources across schools; and the schooling system is able to overcome teacher shortages by sharing and retaining teachers in specialist subject areas, such as Te Reo Māori.
12. The opportunities digital technologies and online learning provide were raised in the Education Conversation | Kōrero Mātauranga and Review of Tomorrow's Schools. Through the Education Conversation | Kōrero Mātauranga, we learned that New Zealanders believe we need an education system that understands individual personality traits, interests, strengths and weaknesses and learning styles; schools and the education system need to be fun and enjoyable so that students are engaged to learn; and people need to have technological literacy to succeed in their future education, work and life. People also emphasised the importance of ensuring equitable access to digital technologies and online learning.
13. While comments specifically about online learning only made up a small proportion of those received through the Education Conversation | Kōrero Mātauranga, most were positive about the opportunities online learning creates. This includes opportunities to enable students to access more subject choices and specialist expertise, to allow students to have more control over when and how they learn, and to provide greater consistency in teaching and learning across the country. On the other hand, concerns raised about online learning related to the need for face-to-face student-teacher interaction, students not necessarily having the necessary self-management skills to effectively engage with online learning, and low completion rates of online learning programmes.
14. The Tomorrow's Schools Independent Taskforce (the Independent Taskforce) found that Te Kura and the VLNs have great potential to support and facilitate the provision of more flexible schooling, including innovation in online curriculum content, learning, pedagogy and assessment.

Distance education delivered online is currently provided by Te Aho o Te Kura Pounamu o Aotearoa and the Virtual Learning Networks

15. The Education Act 1989 restricts who can be a recognised provider of "correspondence" education (increasingly distance education); and who can have access to that "correspondence" education. Te Aho o Te Kura Pounamu o Aotearoa (Te Kura) is the only provider of full enrolment and dual enrolment in "correspondence" education recognised by law.
16. The VLNs also provide supplementary or dual tuition delivered online using blended or distance education. Students must be present at their enrolling school while attending their VLN classes. While legal, the VLNs are not specifically provided for by the Education Act 1989.
17. VLN Primary receives funding from the Ministry on a discretionary basis each year. However, most VLNs operate based on member schools' willingness to contribute part of a teacher FTE. The VLNs are concerned about their sustainability as a result of uncertain funding.

18. Online learning and digital technologies may also be used by teachers in the classroom to support and enhance face-to-face education. This current state is set out in more detail in Annex 1.

Options for progressing regulatory changes to distance education delivered online

19. There are a range of changes that could be made to the regulatory framework for how distance education is delivered online. These options do not address the use of digital technologies in classrooms because there are no regulatory barriers to their use.

We recommend making technical changes to the regulatory framework through the education and training bill

Updating the language around "correspondence" education

20. We recommend updating the language from "correspondence" education to "distance" education. This change would recognise the developments in technology that mean face-to-face and distance education are converging through synchronous online learning delivery.
21. It would also reflect changes to pedagogy. In recent years, Te Kura's operating model has shifted and now places a greater emphasis on face-to-face learning opportunities for those students who want them. These face-to-face learning opportunities aim to provide a greater local presence and a more personalised approach to teaching and pastoral support. They are delivered through regional "learning advisories" and community based learning.

Clarifying that schools can collaborate to provide tuition online

22. We also recommend clarifying that tuition delivered online can be provided by one board for students enrolled in a school administered by another board. This would provide regulatory recognition for the increased role of online learning, and would make it clear that boards could agree on a payment for these services.
23. We could also simplify the collaboration process by authorising multiple school boards to agree to do work for each other within one agreement. Currently, each board must have an individual agreement to do work for another board, adding to the administrative burden and acting as a barrier to collaboration
24. This would make VLN operation simpler for schools and would recognise that schools other than Te Kura could provide supplementary or dual tuition delivered online. It would also provide an opportunity for schools who do not want to be a part of a VLN, but who still want to provide online tuition to students enrolled at another school.
25. Under this proposal, students would attend their enrolling school while the school is open for instruction. However, students could attend classes face to face and/or classes provided virtually by schools who are members of the agreement. The enrolling school would be responsible for the student's full-time learning programme and pastoral care.
26. This proposal would better enable schools to overcome teacher shortages, particularly in subjects like STEM and languages, and provide high quality learning opportunities from participating schools. It would also give students access to more subjects and teaching expertise in areas of interest, enabling a more personalised learning approach.

27. This could be supported by non-regulatory guidance for schools on how to collaborate to provide tuition in an online setting, informed by Te Kura and the VLNs.

s 9(2)(f)(iv)

We do not recommend broadening access to full-time distance education under the current framework or before consulting

31. Online learning outcomes for full time students are relatively poor compared to face-to-face learning outcomes (annex 2 provides further details). It would therefore not be preferable to broaden access to fulltime online learning through legislation before more work is done to ensure that online courses are of an acceptable quality and best practice online teaching methods are used as standard practice.
32. While increased competition in distance education may be a way to improve quality, this is not likely without an effective regulatory framework. The Education Act 1989 allows for new "correspondence" schools to be established, which could increase competition. However, it is unlikely that this will occur because of the high start-up costs and restrictions on who can enrol. This means it is likely that Te Kura will continue as a sole provider of full-time distance education.
33. Furthermore, submitters who opposed the COOL provisions expressed concerns that distance education delivered online is not appropriate for all learners. In particular, submitters were concerned that learners at-risk of disengaging from education would be "off-ramped" into distance education delivered online. Currently, because of how the enrolment gateways to access Te Kura are set up, approximately 60% of Te Kura's fulltime enrolments are students who are at-risk.
34. At-risk learners require additional support to reengage with education, such as pastoral care, regardless of the mode of delivery.² There are additional challenges to providing

² ERO evaluation of the Te Kura Big Picture Learning pilot.

this support by distance. We would recommend working through these first before broadening access to fulltime distance education delivered online through legislation.

We recommend exploring further options for online learning following decisions on the Tomorrow's Schools Review

35. One of the Independent Taskforce's draft recommendations is that Education Hubs, working with schools and communities, design community-wide flexible curriculum, assessment and timetable offerings for schools. This draft recommendation suggested using digital infrastructure and delivery options more intensively. If this draft recommendation is finalised and adopted, further work on how it is operationalised, including policy and legislative implications would be needed.
36. This work could include considering whether a student needed to be physically present on the school-site at all times to meet attendance requirements; how different Education Hubs could work together using digital infrastructure to provide online tuition; how digital infrastructure could be used to better connect schools with their communities (including further education and training providers and employers); and whether students and their parents and caregivers, schools, or hubs should hold the choice about enrolling in classes that use mixed or digital delivery options.

Next steps

37. If you agree to progress work on technical changes to the Act, we would like to discuss targeted engagement options with you, to ensure we can meet the timeframes for the Education and Training Bill final policy decisions in August.

Annexes

- Annex 1: The current state of online learning in New Zealand (*attached separately*)
- Annex 2: Evidence about online learning

Annex 2: Evidence about online learning

There have been several examinations of distance education delivered online in New Zealand to date

1. The first report was published in 2005 by the New Zealand Council of Educational Research.³ It examined the Kaupapa Ara Whakawhiti Mātauranga (KAWM) initiatives which aimed to improve ICT infrastructure and student and teacher capability through ICT. The report concluded that there was a need to develop a framework which achieved a balance between centralised decision-making and was flexible enough to meet the needs of all schools. This project was effectively the genesis for the VLNs.
2. In 2009, the Ministry again contracted NZCER to undertake research about students' experiences of learning in virtual classrooms.⁴ This concluded that students experienced different degrees of success and comfort in virtual learning environments; some students' experiences were positive and some less so.
3. This was followed by a project by the Distance Education Association of New Zealand in 2011. The Association engaged Dr Michael Barbour to examine the development of the VLN clusters and the barriers they faced to achieving sustainability and maturity.⁵ Barbour recommended a reorganisation of the way primary and secondary online learning was structured and supported through a new organisational model. The proposed model focused on expanding the brokerage role of the Ministry, providing more regional support, and continuing to provide individual e-learning clusters that had the flexibility to meet local needs.
4. CORE Education subsequently published a report in 2013 which examined the current state of distance education in the schools sector and charted a vision for distance education in the future.⁶ The vision presented proposed another potential organisational structure for the delivery of virtual learning in New Zealand in which one national body would have responsibility to:
 - a. provide and support asynchronous and synchronous tools for virtual learning;
 - b. develop and maintain a repository of online course content that is available to users free of charge; and
 - c. provide brokerage services for users that provide excess capacity or collaborate with others.
5. Most recently, a 2018 report published by Cognition Education has set out the features of high quality online teaching and learning. The report concluded that online teachers need to develop an online pedagogy that effectively uses digital tools and distance methods to enable learner success. This involves translating and transferring known principles of effective teaching and learning, to the online environment. Online learners

³ See: *Evaluation of Kaupapa Ara Whakawhiti Mātauranga (KAWM)*.

<https://www.nzcer.org.nz/research/publications/evaluation-kaupapa-ara-whakawhiti-matauranga-kawm>

⁴ See: *Students' experiences of learning in virtual classrooms*.

<https://www.nzcer.org.nz/research/publications/students-experiences-learning-virtual-classrooms>

⁵ See: *Primary and secondary e-learning: Examining the process of achieving maturity*.

http://www.vln.school.nz/mod/file/download.php?file_guid=114023

⁶ See: *Virtual learning as an impetus for educational change: Charting a way forward for learning in New Zealand*. <http://www.core-ed.org/assets/PDFs/Virtual-Learning-as-an-Impetus-for-Educational-Change-Charting-a-Way-Forward-for-Learning-in-New-Zealand.pdf>

still expect a genuine relationship with their teachers and uninterrupted time with them. They value authentic teacher engagement, demonstrations of teacher care, and teachers who respond to their unique needs and context. While student expectations of teachers were similar to that of a face-to-face setting, teachers need a suite of online teaching skills to meet these expectations.

International evidence indicates that online learning outcomes are relatively poor compared to face-to-face learning but this is likely to be because it is an emerging concept

6. In terms of online learning outcomes, available international evidence suggests that these are relatively poor compared to face-to-face learning. However, this is likely to be because online teaching and learning is still emerging and developing. Best practice online teaching methods, as outlined in Cognition Education report above, are not happening as standard practice, so research is based on existing low-quality online provision.
7. A global report about the use of digital technology by the OECD looked at education systems that had invested significantly in computers and concluded there was "no noticeable improvement" in their results for the core subjects in the Programme for International Student Assessment (PISA) tests.⁷
8. The US-based National Education Policy Center's sixth annual report into fulltime virtual and blended schools⁸ concluded that the academic outcomes of students in both such schools⁹ continue to be worse than in traditional public schools despite enrolments increasing. The report found that of these virtual and blended schools, the lowest performing were large schools with high student-to-teacher ratios.
9. The report also recommends policymakers conduct more research in a number of areas. These include how such schools are serving students with disabilities, optimal school and class size, what constitutes good teaching practice in virtual and blended learning environments, and how different blended school delivery models can serve students more successfully.
10. In a tertiary context, a recent US-based study¹⁰ found that college students, particularly those with below-median pre-university grade point averages, experience substantially worse learning outcomes in online courses than in face-to-face courses. Further, the study found that for these students, taking these online courses impacted performance in future classes and increased the likelihood of them dropping out of university. While the demographics and expectations of tertiary students are different to those in a schooling context, this points to the need to ensure any online learning is of acceptable quality.
11. In a New Zealand context, Te Kura has experienced some success in delivering distance education online through trialling its 'Big Picture Learning' (BPL) approach. BPL utilises both face-to-face and virtual learning approaches to create personalised learning pathways for students.

⁷ OECD (2015), *Students, Computers and Learning: Making the Connection*, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/9789264239555-en>.

⁸ Gary Miron, Christopher Shank and Caryn Davidson, *Full-Time Virtual and Blended Schools: Enrollment, Student Characteristics and Performance*, May 2018.

⁹ The report defines 'fulltime virtual schools' as those which deliver all curriculum and instruction online by distance, and 'blended schools' as combining virtual instruction with traditional face-to-face classroom instruction.

¹⁰ Eric Bettinger and Susanna Loeb, *Promises and pitfalls of online education*, June 2017.

Annex 1 - Online Learning: Current State

Fulltime enrolment in distance education online



The Education Act 1989 restricts who can be a recognised provider of "correspondence" education (increasingly online education); and who can have access to that "correspondence" education.

The only correspondence school in New Zealand is Te Aho o Te Kura Pounamu o Aotearoa (Te Kura). Te Kura enrolls students through gateways that are prescribed by the Secretary under section 7 of the Education Act 1989. Te Kura is not a "school of choice."

In 2018, Te Kura had around 21,000 enrolments.* Around 3,700 of these were fulltime enrolments.

Fulltime enrolment numbers were made up of: 16% Year 1 - 6 students, 37% Year 7-10 students, 41% Year 11 - 13 students and 5% Learning Support students.

In terms of student achievement outcomes, 75% of participating students enrolled in Te Kura fulltime achieved NCEA Level 1 in 2017 (compared to the national average of 84%), 68% achieved NCEA Level 2 (compared to the national average of 89%) and 85% achieved NCEA Level 3 (compared to the national average of 84%).

*note that this figure represents the total number of enrolments throughout the year, not a count of students. Students may be enrolled for only part of the year or enrol more than once in a year.

Big Picture Learning

Since 2014, Te Kura has been trialling a new approach to educating at-risk students called the "Big Picture Learning" (BPL) approach. The BPL approach places the students, their values, context and needs at the centre of all teaching and learning experiences. Students, together with their families and teachers, are actively involved in creating personalised learning pathways. This approach aims to cater for students' potential, abilities and needs through a tailored and responsive programme. A key element of BPL is building knowledge through practical learning experiences including internships, job shadowing and support from locally-based mentors.

A 2017 ERO evaluation of the Pilot found that this approach improved student engagement, wellbeing and achievement outcomes.

The next step is for Te Kura to deliver Big Picture learning at a larger scale.

Supplementary learning through distance education online



Te Kura Dual Tuition

Dual tuition describes the situation where a student is enrolled at a school while also accessing resources through Te Kura (e.g. where a subject is not available at their school).

New Zealand students at state schools, including state-integrated schools, can access government funding for dual tuition through Te Kura if they meet certain eligibility criteria. These criteria are set out in the Te Kura enrolment and dual tuition policy. Government-funded dual tuition is limited to between one and four subjects, depending on the enrolment gateway.

For private or home schooled students, Te Kura can charge a fee. If a private school is accessing Te Kura, it is likely these fees will be passed on to the student. State schools cannot charge their students for access to Te Kura because state education is free.

In 2018, there were approximately 9,000 enrolments in dual tuition from years 1-13 at a total cost of approximately \$8.4 million.

Virtual Learning Networks

The other group of providers of supplementary distance education are the Virtual Learning Networks. (VLNs) These have been a 'grassroots' development at the school level. They are not recognised by law. Networks of schools (some now established as trusts) provide online tuition for one another's students.

VLNs in secondary schools provide lessons to more than 3000 students. In primary schools, participation has gone from 142 learners in 2011, to 751 learners in 2018.

However, the number of VLNs operating is in decline. We are aware that VLNs are having difficulties in meeting overhead costs for things such as administration and pastoral care. This is a barrier for many of them to expanding online tuition.

The secondary school-based VLNs are funded by a complex system of transferring funding or staffing entitlements or agreements for reciprocal teaching (School A teaches School B's students in one subject area and School B teaches School A's students in another subject area).

The Ministry has provided the VLN Primary School with \$80,000 to \$100,000 p.a. of funding since 2012 for coordination and administrative activities. This is in recognition of the fact that primary schools part of the VLN are largely small, rural and remote with limited capacity to fund the activities required to support their cross-school programmes of learning. In addition, the VLN Primary applies for funding for specialist learning programmes, such as Asian Language Learning in Schools (ALLiS) and Networks of Expertise (NEX). This funding doubled from \$100,000 to \$200,000 for the 2019 school year.

Digital technologies in the classroom



Digital technologies, including online learning, can also be used to support and enhance face-to-face teaching and learning by teachers and their students in classrooms.

There are two technological areas in the Technology Learning area of the New Zealand Curriculum and Te Marautanga o Aotearoa: one about students developing an understanding of computer science principles that underlie digital technologies; and another about learning how to design quality, fit-for-purpose digital solutions.

The use of digital technology in New Zealand classrooms varies from school to school. There are a number of equity issues in terms of access to digital content and services (e.g. inequity in access to devices, lack of technology support, costs and variation in digital literacy of school staff).

Digital technology in action: Manaiaakalani Trust

The Manaiaakalani programme, run by the Manaiaakalani Trust, supports 12 mostly decile 1 schools in the Auckland suburbs of Glen Innes, Pt England and Panmure. It supports learners and their whanau to use digital technology to enable learning anywhere, anytime and at any pace. It also provides funding to buy a personal digital device for each learner, provides wireless internet at home and school, and supports teachers in pedagogical innovation.

Building workforce capability through online networks of expertise

There are a couple of online platforms to help teachers build their capability. This includes "N4L" Pond, an online forum which aims to help teachers share pedagogical resources and knowledge.

In addition to this, VLN Primary School and NetNZ have recently announced that they are developing a new Network of Expertise (NEX) for online teaching and learning using funding from the Ministry's NEX fund.

The network will aim to create a learning community where teachers who are or want to teach online, as well as those who support online learners, are supported to connect and share resources and expertise.



Briefing Note: Digital Transformation Bid, Budget '20

To: Hon Chris Hipkins	Minister of Education		
Date:	14 October 2019	Priority:	Medium
Security Level:	Budget Sensitive	METIS No:	1208907
Drafter:	Margaret-Anne Barnett	DDI:	463 7066
Key Contact:	Stuart Wakefield, Chief Digital Officer	DDI:	463 8393
Messaging seen by Communications team:	No	Round Robin:	No

Purpose of Report

This paper is in response to your request for more information about the Digital Transformation Budget '20 bid, following Budget meetings in the week of 7 October.

The purpose of this paper is for you to:

Agree to support continuing work on a Budget '20 bid to enable digital transformation of the education system;

Note that the figures provided in this paper are for full scale technology solutions, and that we are working to developing minimum viable options;

Note that this paper is part of the Budget '20 process and will not be proactively released at this time.

Summary

1. Education agencies are collaborating on a range of initiatives that leverage the affordances of digital technology to drive equitable outcomes for all learners and provide better support for educators and administrators, as described in the 2015 Education System Digital Strategy.
2. The Ministry has subsequently developed a digital investment package that brings together all initiatives that support digital transformation, and crucially identifies those foundational elements that are needed to support current and planned initiatives. New investment is needed for the foundational elements. This paper seeks your support for a Budget '20 bid for up to \$451.2M over four years on these key elements:
 - 1) Equitable digital access
 - 2) Schools' digital enablers
 - 3) Digital identity for students and whānau
 - 4) Support for the Manaiakalani Education Trust outreach programme
 - 5) Careers system online
 - 6) Assessment online (NCEA).

Recommended Actions

The Ministry of Education recommends you:

Agree to support continuing work on a Budget '20 bid to enable digital transformation of the education system;

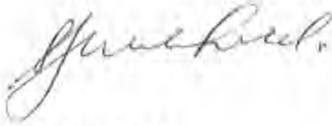
AGREE / DISAGREE

Note that the figures provided in this paper are for full scale technology solutions, and that we are working on developing minimum viable options.

NOTED

Note that this paper is part of the Budget '20 process and will not be proactively released at this time.

NOTED



Stuart Wakefield
Chief Digital Officer

Hon Chris Hipkins
Minister of Education

14/11/19

11/1

Background

1. In April 2018 you met with the education sector agencies listed below to discuss the *Education System Digital Strategy* and the associated *Case for Change: Education for the Digital Age, Mātauranga Mot e Tau Mamati*, which the agencies worked together to develop.
 - 1) Ministry of Education
 - 2) Education Review Office
 - 3) New Zealand Qualifications Authority
 - 4) Tertiary Education Commission
 - 5) The Teaching Council.
2. The Digital Strategy and subsequent Case for Change set out a vision for a fully digitally-enabled education system to support New Zealand's future economic and social well-being; supporting digital learning environments that put learners at the centre of the system and reduce teacher workload.
3. We are taking a whole-of-system approach to harness technologies for a connected, seamless education system in which every learner experiences high quality education personalised to their learning needs. This includes working across government to ensure equitable access and build capability.
4. Following the April 2018 strategy session with you, the Ministry began a multi-year digital investment plan to support effective, coherent, system-wide adoption of technologies for education. These investments aim to:
 - a) enable an **integrated, connected online learning environment**, accessible to educators and to students and those who support them anytime, anywhere
 - b) design **new approaches to curriculum and assessment** that leverage technologies to enable assessment to be a seamless part of learning
 - c) enhance decision-making by ensuring **high-quality data is easily accessible** to educators, stakeholders, and decision-makers, including data on the education workforce
 - d) provide **core digital services and infrastructure** to free up educators and providers to focus on delivering a quality education, reduce costs, and improve efficiency
 - e) **improve agency communication channels and systems** to make it easy for the public to interact with the education system, and to improve agency efficiency and reduce costs.
5. The Ministry's overarching investment plan is still being developed. In the meantime work is underway on several significant digital initiatives to improve student learning and reduce teacher workload, for example an early stage roll-out of Te Rito commences this month.

Digital Transformation Budget '20 Bid

6. This budget bid focuses on core digital services and infrastructure needed to support new approaches to curriculum and assessment, and integrated, connected online learning environments. This bid also includes an initiative to address problems of inequitable access to digital technologies that are a barrier to learning for students who do not have access to a digital device and cannot access the internet at home.

7. The proposals in this paper are for full scale technology solutions. We are doing further work to determine what it will take to scale down if necessary, taking into account the dependencies within the different elements of the bid.

8. There are six elements to the bid, described in annex two and summarised below.

1. Equitable digital access

9. Up to \$133.1M operating over four years to provide internet access at home for an estimated 100,000 students from 40,000 homes who do not have reliable internet access or access to a digital device. This will address the barriers to learning experienced by students who cannot continue their learning at home when online access is required, which risks widening the achievement divide for these students.

2. Schools' digital enablers

10. Up to \$122M operating and \$70.1M capital over four years to deliver high quality foundational ICT infrastructure to schools that opt-in, which will; provide a reliable digital environment, free up school boards and staff to focus on learning, lower the risk of cyber-security breaches, and achieve cost efficiencies. Recent security breaches of personal information indicate that even further investment may be required to bring schools' digital infrastructure and services up to an acceptable standard.

3. Digital identity for students and whānau

11. Up to \$20.6M operating and \$5M capital over four years to provide a common, consistent way to authenticate student and whānau digital identities, incorporating standards for privacy and security, which will help; enable student information to travel with students seamlessly as they progress for ECE to tertiary, enhance whānau engagement in their children's education and ensure student information is only accessed by those with a right to see it.

4. Support for the Manaiakalani Education Trust Outreach Programme

12. Up to \$22M operating over four years to support the Trust expand its outreach programme to a further five school clusters serving students in mostly low SES areas, which will; improve teaching and leadership practices through professional collaboration, build evidence of what works to lift achievement through high quality research, work closely with whānau to support learning, and enable affordable access to digital devices and home connectivity. (NB the funding for access to devices and home connectivity is included in the equitable digital access bid in 1. Above).

5. Careers system online

13. Up to \$44M over four years to procure an online tool that New Zealand students can use for career planning, which will; enable users to map their interests and aptitudes to potential careers including drawing on their own records of learning, provide information on education pathways and the labour market, and enable information to be aggregated so that can offer new products and services to users. There are potential cost savings if we leverage the Te Rito platform for life-long learners.

6. Assessment online (NCEA)

14. Up to \$34.4M operating over four years to deliver equitable, inclusive, digital assessments online in all appropriate NCEA subjects and levels, deploying new technologies and business processes to build on the significant progress made to date.

15. The ability to deliver the education reforms proposed in the consultation document *Shaping a Stronger Education System with New Zealanders* will be dependent on a fully digitally-enabled education system to enable, for example:

- Successful transitions into, within and from places of learning
- Rich records of learning
- Tools that support a common way of noticing learning progress and needs
- Partnerships with families and whānau, which are central to the learning and achievement of every learner/ākonga
- Equitable access to learning, including a range of education options and delivery models to enable life-long learning
- Development, sharing and use of data analytics and evidence-based practice.

16. The elements of the bid are interdependent, as shown in annex one. For example, the success of Assessment Online for NCEA is dependent on both a common, system-wide digital identity management system, and on schools having sufficiently robust technical infrastructure to support high numbers of students sitting online exams simultaneously.

Proactive Release

17. This paper is Budget sensitive and will not be released publicly at this time.

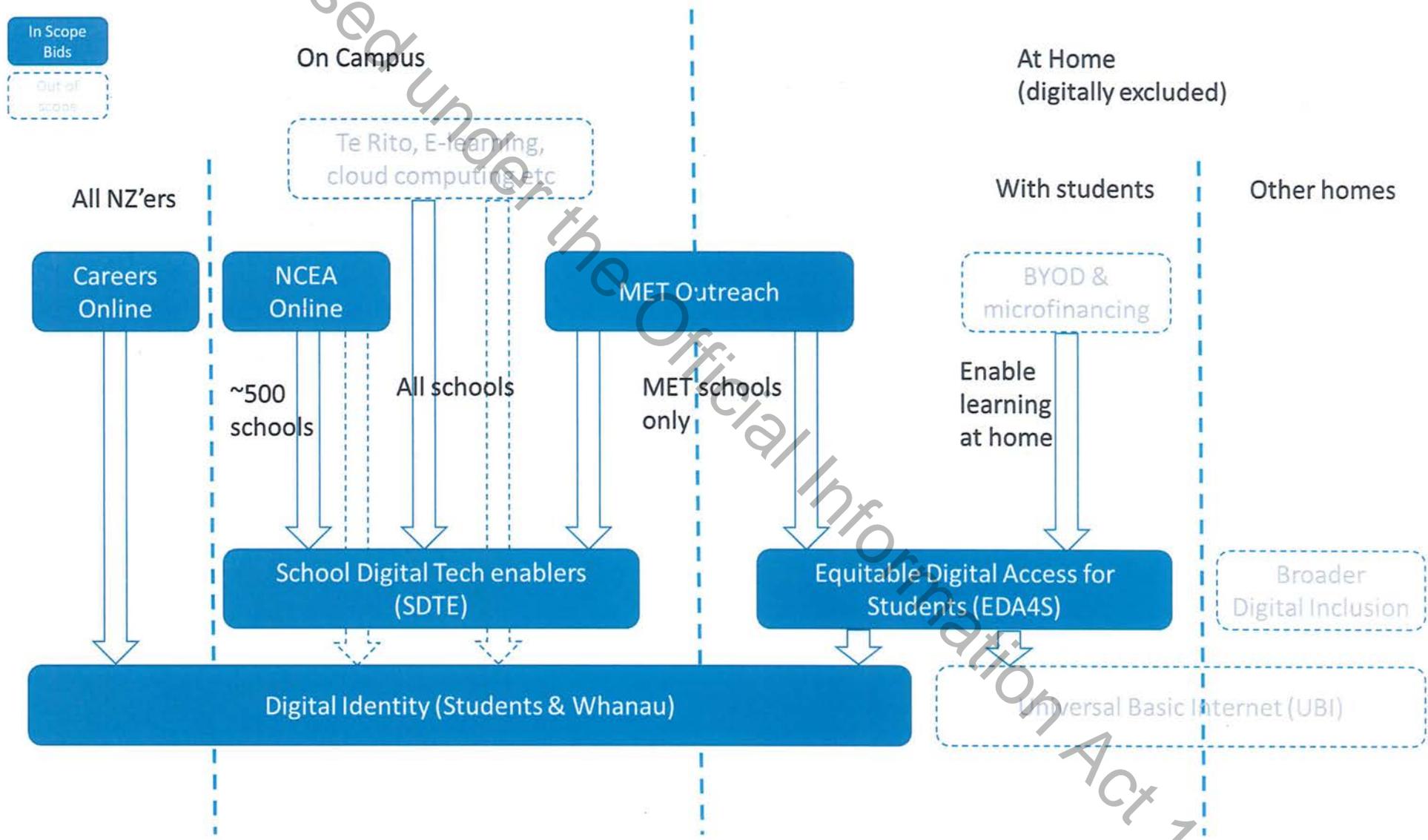
Annexes

Annex 1: Interdependent Elements of the Digital Transformation Bid

Annex 2: Elements of the Digital Transformation Bid Explained

Released under the Official Information Act 1982

Annex One: Interdependent Elements of the Digital Transformation Bid



Appendix two: Key Elements of the Digital Transformation bid explained

Item	Problem Definition	Initiative Description	Projected Costs
1. Equitable Digital access	<p>There are an estimated 100,000 school age students in 40,000 households who do not have access to the internet at home.</p> <p>Research shows that internet access at home can have a positive impact on children's learning, psychological development, social skills and parental engagement in their child's education when used effectively.</p> <p>Where some students cannot access the internet at home, it can affect all students in their cohort, as their teachers are forced to adopt pedagogies that are inclusive of all their students.</p>	<p>This investment will provide internet access to approximately 100,000 students, phased over four years, to take advantage of digital access for their learning. This will give students access to a wealth of online resources, and enable teachers to leverage digital for all students, including developing confidence in independent learning, and building digital skills and fluency. This bid includes limited financial support for families to purchase an appropriate digital device.</p> <p>Although the service is limited to provide access to students, the family and whānau engagement in their children's education will help build skills, motivation and trust, and inspire families to become fully digitally connected.</p> <p>[The Department of Internal Affairs has a complementary Digital Inclusion bid that will test extending this concept beyond students to Universal Basic Internet access for the digitally excluded. Connecting a residential premise to the internet for student access also provides opportunity for others at that location to connect at a low marginal cost]</p>	\$133.1M over 4 years
2. Schools' Digital Technology Enablers	<p>Many schools lack the funding and capability to maintain/upgrade their digital infrastructure, hampering learning and raising the risk of security breaches. The roll-out of CPA, Te Rito and NCEA online are dependent on high quality, reliable ICT networks in schools.</p>	<p>Centrally provided opt-in ICT infrastructure for schools that:</p> <ul style="list-style-type: none"> • Delivers quality ICT infrastructure for schools most in need of it • Frees up educators to focus on delivering education • Improves data security and enhances handling of cyber security incidents • Achieves cost efficiencies through common and effective ICT. 	<p>\$122M operating over 4 years</p> <p>\$70.1M Capital over 4 years</p>

Item	Problem Definition	Initiative Description	Projected Costs
3. Digital Identity for Students and Whānau	<p>The lack of a common, consistent way to verify student identity online prevents information being transferred easily as students move through the education system, or shared with those who support students' learning. In many cases the ways education providers verify identity are not sufficiently robust to ensure data security. Government plans for NCEA Online, CPA, Te Rito and digital badging are dependent on robust digital identity management.</p>	<p>A consistent way to verify and authenticate student and whānau digital identities, incorporating standards for privacy and security to:</p> <ul style="list-style-type: none"> • Enable student information to travel seamlessly with students as they progress from ECE to tertiary • Enhance school and whānau engagement to better support learning • Make it easier for students to learn from more than one education provider at a time • Ensure student information is secure, and accessed only by those with a right to it. 	<p>\$20.6M operating over 4 years \$5M capital over 4 years</p>
4. Manaiakalani Education Trust (MET) Support	<p>The Manaiakalani Trust is working in partnership with schools in low SES areas to lift student achievement by using digital technologies effectively. The Trust cannot expand its successful outreach programme without extra funding to support research and underwrite provision of devices for students.</p>	<p>Expansion of the outreach programme to school clusters in low SES areas to:</p> <ul style="list-style-type: none"> • Improve teacher and leadership practices through professional collaboration • Build evidence, and increase understanding of what works to lift achievement through high quality research • Work closely with whānau to support learning <p>This programme also includes affordable access to digital devices and internet connectivity. Costs for this are included in the equitable access bid number 1. Above.</p>	<p>\$22M operating over 4 years</p>
5. Careers system online	<p>There is no common, consistent system for students and adults to plan their career paths that can be developed and maintained over their lifetime.</p>	<p>Procurement of a mapping tool that NZ students can use for career planning and integration of these with the record of learning and curriculum progression and achievement.</p> <p>The system will be for learners, job seekers, workers, educators and influencers aged 7 to 74, with a focus on those learners at key transition points. The solution will enable users to explore their interests and aptitudes, and map through to potential careers. Students will be able to access seamless regional labour market information on needs and education pathways. Aggregated information will be used to help identify new trends, enabling the Tertiary Education</p>	<p>\$44m over 4 years</p>

Released under the Official Information Act 1982

Item	Problem Definition	Initiative Description	Projected Costs
		Commission (TEC) to provide new products and services to users. TEC is seeking an integrated solution with the ability to develop and integrate specific career planning applications (modules) as required in the future. The solution will be integrated with the Burning Glass analytics tool.	
6. Assessment Online NCEA: Transforming Assessment for Learners	The NCEA external assessment system needs to adapt to match the growing prominence of digitally enabled teaching, learning and assessment in schools, and the wider sector changes for education in the digital age.	Enabling and supporting new technologies and business processes to deliver equitable and inclusive online digital assessments across all appropriate NCEA subjects and levels, building on the significant progress made to date.	\$34.4M over 4 years



Education Report: Supporting every school to succeed – developing a national approach to flexible learning using distance education

To:	Hon Chris Hipkins, Minister of Education		
Date:	30 January 2020	Priority:	Medium
Security Level:	In Confidence	METIS No:	1213239
Drafter:	Sophie Smith	DDI:	463 7760
Key contact:	Ben O'Meara	DDI:	463 8704
Messaging seen by Communications team:	N/A	Round robin:	No

Purpose of report

The purpose of this paper is to seek your agreement on an approach to policy work on distance education using online learning, to improve flexibility within the schooling system and ensure equitable learning opportunities.

Summary

1. *Supporting all schools to succeed: Reform of the Tomorrow's Schools system* says that "over the longer term [2-4 years], the Government will consider opportunities to promote a more cohesive national approach to support flexible learning."
2. The greatest opportunities to support flexible learning lie with changing how the schooling system enables and supports distance education. Distance education can also ensure access to the full breadth of the national curriculum. This will be of particular importance for ākonga in small schools, and in subjects impacted most by teacher shortages.
3. While you have agreed to work which will ensure the status quo is sustainable, there are three key gaps in the work programme which may identify where changes are needed for distance education.
 - a. identifying the degree of access and choice in distance education we want to enable and/or support (e.g. who can be a recognised provider of distance education, and under which circumstances can ākonga access distance education);
 - b. setting out clear functions, roles and responsibilities for high quality distance education across the schooling system; and

Released under the Official Information Act 1982

- c. ensuring resourcing and regulatory systems which assure online learning is high quality and will lead to excellent and equitable outcomes.
- 4. Changes in these areas may impact work already agreed to. We propose one distance education work programme which sequences this work.

Recommended Actions

The Ministry of Education recommends that you:

- a. **note** that before the reform of the Tomorrow's Schools system was announced, you agreed to the Ministry starting a number of small pieces of work on online learning including:
 - i. progressing technical and clarifying changes through the Education and Training Bill [METIS 1175954 refers] by: updating the language from "correspondence" to "distance;" and making it clearer that all school boards can enter into dual tuition agreements, including tuition delivered online;

s 9(2)(g)(i)

- iii. reviewing how Te Kura is funded [METIS 1205000 refers]

Noted
- b. **note** that in *Supporting all schools to succeed: Reform of the Tomorrow's Schools system*, you agreed to consider opportunities to promote a more cohesive national approach to support flexible learning and specialist provision. This would include the roles of Te Aho o Te Kura Pounamu and the Virtual Learning Network (VLN), and the national and local special schools over the longer term [2-4 years]

Noted
- c. **agree** that work on flexible learning using distance education should be sequenced into one cohesive work programme which will:
 - i. identify the degree of access and choice in distance education we want to enable and/or support (e.g. who can be a recognised provider of distance education, and under which circumstances can ākonga access distance education);

Agree Disagree
 - ii. set out clear functions, roles and responsibilities for high quality online learning across the schooling system; and

Agree Disagree
 - iii. ensure resourcing and regulatory systems which assure online learning is high quality and will lead to excellent and equitable outcomes

Agree Disagree

d. **agree** that the Ministry approach this work as:

i. option A: enhancing the status quo by better enabling and supporting Te Kura and the VLNs to provide distance education, including working with schools;

Agree / Disagree

ii. option B: considering the role all parts of the schooling system could have in making learning more flexible through distance education, and ways this could be enabled over time (**recommended**); or

Agree / Disagree

iii. option C: creating a fully flexible schooling system

Agree / Disagree

e. **note** that in the long term, this work could be revisited to create a fully flexible schooling system if it is seen as needed or desirable

Noted

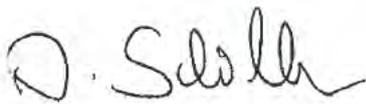
f. **note** that these decisions will separate advice on flexible learning from advice on specialist provision given their different roles in the schooling system, and you will receive advice on specialist provision at a later date

Noted

Proactive Release Recommendation

g. **agree** that this Education Report is not proactively released because final decisions are still to be made on the wider piece of work.

Agree / Disagree



Dr Andrea Schöllmann
Deputy Secretary
Education System Policy

30/01/2020



Hon Chris Hipkins
Minister of Education

— / — / —

It's a
combo
of these
2 things

Released under the Official Information Act 1982

Background

New Zealanders want an inclusive, equitable, connected and flexible education system

1. In September 2019, the Government released a discussion document outlining the long-term vision, objectives and actions resulting from the Education Conversation | Kōrero Mātauranga. The vision reflects the overwhelming aspirations of New Zealanders, as expressed in their kōrero, for a more inclusive, equitable, connected and future-focussed New Zealand learning system.
2. For the purposes of this report, flexible learning refers to the requirements around the time and place where learning takes place, and the extent to which learning programmes can be personalised for ākonga. Distance education occurs when the teacher and the learner are not in the same physical location. Online learning is a mode of delivery that can be used in both distance and in-person learning environments.
3. The opportunities for online learning in schooling, both in-class and by distance, to achieve this vision were raised through the Education Conversation | Kōrero Mātauranga, including through enabling ākonga to:
 - a. have equitable access to the full breadth of the National Curriculum, particularly in areas of teacher skill shortage, or for ākonga enrolled in small schools;
 - b. have more control over when and how they learn;
 - c. have learning programmes tailored to their interests, strengths, development areas, aspirations and learning styles;
 - d. develop digital literacy and citizenship skills to succeed in future education, work and life; and
 - e. access greater consistency in teaching and learning across the country.
4. There are likely to be ongoing skills shortages for teachers, particularly those in specialist subject areas. This is compounded for New Zealand ākonga living in rural or geographically isolated areas where schools are often not large enough to support specialisation, limiting curriculum breadth. Distance education delivered online is likely to play a key role in enabling equitable learning opportunities by addressing these shortages in the future.
5. On the other hand, submitters also raised their concerns about distance education (mostly delivered online), including:
 - a. the need for student-teacher interaction to build educationally powerful relationships;
 - b. low completion and achievement rates for distance learning programmes;
 - c. that ākonga using distance learning may need support to develop the managing-self competencies that are essential to success for online learning;
 - d. whether broadening access to distance learning will lead to schools “off-ramping” ākonga from disadvantaged backgrounds; and
 - e. the impact of socio-economic status on the accessibility of digital devices.

6. In contrast, Te Kura tell us that they have received positive feedback from ākonga and their families about increased engagement and achievement through distance education.
7. The mixed views of Te Kura and submitters to the Education Conversation | Kōrero Mātauranga are likely to reflect a broad range of experiences in distance learning under the current settings. These views will need to be explored further in new distance education work.

You have also agreed to work to ensure that current arrangements are sustainable

8. Through the Education Work Programme, we will drive towards this vision. *Supporting all schools to succeed: Reform of the Tomorrow's Schools system* says that "over the longer term [2-4 years], the Government will consider opportunities to promote a more cohesive national approach to support flexible learning." This would include reviewing the roles of Te Aho o Te Kura Pounamu o Aotearoa (Te Kura) and the VLNs.
9. Before the reform of the Tomorrow's Schools system was announced, you agreed to the Ministry starting a number of small pieces of work on online learning including:
 - a. progressing technical and clarifying changes through the Education and Training Bill [METIS 1175954 refers] by:
 - updating the language from "correspondence" to "distance;" and
 - making it clearer that all school boards can enter into dual tuition agreements, including tuition delivered online.

s 9(2)(g)(i)

- c. reviewing how Te Kura is funded [METIS 1205000 refers].
10. While this work is essential to modernise our legislation, and ensure there is no confusion about current arrangements, it will not in itself improve or expand the distance learning opportunities which are available for students.

The current distance learning policy framework limits how distance education can achieve what New Zealanders want

11. Distance learning has developed without a coherent policy framework or strategic government direction. As a result of an expansion in the functions provided by Te Kura, and new and emerging distance and/or online learning providers entering the education system, the policy framework underpinning online learning is no longer fit for purpose (Annex One).
12. This ad-hoc distance learning framework is limiting choice for ākonga and preventing equitable access to digital technologies and online learning. Having a regulatory and resourcing framework that supports full-time or dual tuition in online learning is likely to be essential in the future.

There are gaps in the work programme around distance education

13. We have identified key work-stream gaps where change is needed to create a fit-for-purpose online learning framework for the 21st Century. Filling these gaps will identify opportunities and lower barriers to promoting a cohesive national approach to support flexible learning through distance education. These gaps include:
 - a. identifying the degree of access and choice in distance education we want to enable and/or support (e.g. who can be a recognised provider of distance education, and under which circumstances can ākonga access distance education);
 - b. setting out clear functions, roles and responsibilities for high quality distance education across the schooling system; and
 - c. ensuring resourcing and regulatory systems which assure online learning is high quality and will lead to excellent and equitable outcomes.
14. These work-streams will be integrated and sequenced with the Education and Training Bill technical amendments, work on funding settings for dual-tuition, and the review of Te Kura's funding model to create a single distance learning work programme. This work programme would address the *Reform of the Tomorrow's Schools* commitment to consider opportunities to promote a more cohesive national approach to support flexible learning.
15. There are three ways that we could approach the scope of this work programme. These are to:
 - a. **option A:** enhance the status quo by better enabling and supporting Te Kura and the VLNs to provide distance education, including working with schools
 - b. **option B:** consider the role all parts of the schooling system could have in making learning more flexible through distance education, and ways this could be enabled over time (**recommended**)
 - c. **option C:** create a fully flexible schooling system
16. Options A and B would begin with a review of the barriers that current players are experiencing under the current settings, and the experiences or evidence that sits behind the mixed feedback in support of, or against, distance education.

Option A: enhance the status quo by better enabling and supporting Te Kura and the VLNs to provide distance education, including working with schools

17. Option A would focus on opportunities to better support Te Kura and the VLNs, in providing distance education. This would incrementally build on the strengths of the key players within the status quo, but within a more strategic policy framework.
18. The work would be developed in conversation with Te Kura and the VLNs to ensure we understand the barriers that they are facing and ensure any proposed options are able to be easily implemented.
19. This option is likely to be considered inequitable by those who have an interest in becoming distance education providers, including some schools. Given the shortage of teachers in specialist areas, it is possible that considering opportunities to support Te

Kura and the VLNs alone will not be enough to ensure equitable access to the full curriculum in the long-term. It also constrains the potential opportunities for flexible learning which could otherwise be considered as we would not understand the barriers emerging providers of distance education are facing.

Option B: consider the role all parts of the schooling system could have in making learning more flexible through distance education, and how this could be enabled over time (recommended)

20. Option B would consider the role that all players could have in providing distance education in the schooling system, and how the Government could approach enabling and/or supporting these players.
21. The work would be developed in conversation with all those who have an interest in distance education to ensure we understand the barriers that they are facing and ensure any proposed options are able to be easily implemented. This will broaden our stakeholder list to schools, ākonga and their whānau, teachers, tertiary providers, peak body representatives, our Te Tiriti partners, and some Non-government organisations.
22. By involving more parties, we are likely to get a more sustainable and equitable outcome as more perspectives have been sought and heard. It will also enable a broader range of opportunities to be considered, including those arising as a result of the reforms in the broader Education Work Programme.
23. On the other hand, some stakeholders may not see option B as going far enough as the scope will be limited to distance education. Some stakeholders have a vision of a fully-flexible schooling system. This option will enable these perspectives to be heard. This feedback could inform immediate options where appropriate, or be fed in to the other parts of the Education Work Programme where they would be better placed.

Option C: create a fully flexible schooling system

24. Option C would be the broadest option, considering all of the options for increasing flexibility in the schooling system.
25. This approach was considered as part of the 21st Century Learning Reference Group report *Future-focused learning in connected communities* in 2014. This report recommended that the Ministry of Education, in partnership with key education sector leaders and agencies, develop a coherent, system-wide plan for future-focused learning.
26. The proposed plan was intended to support fully flexible learning – anywhere and anytime, while creating tailored learning programmes around the needs of the learner. This plan was seen as needing to transform the curriculum, digital technologies, property, infrastructure, funding and legislation.
27. Flexible learning, distance learning, and online learning through digital technologies overlap, but also face distinct problems and opportunities. Some of these problems and opportunities have been considered through the broader Education Work Programme.
28. Given the extent of the reforms underway through the Education Work Programme, and the conflicting views and evidence about fully flexible learning, we do not recommend this approach at this time.
29. Once the Education Work Programme reforms and opportunities to improve flexible learning are fully implemented, we could revisit whether further changes for a fully flexible schooling system would be desirable.

It will be critical to ensure that Te Tiriti is upheld in the development of work to support flexible learning by lowering barriers to distance education

30. The Māori Education Strategic Framework will be integrated appropriately, to ensure that online approaches complement and support culturally responsive pedagogy. It will, for example, be important to ensure that online learning programmes for Māori integrate face-to-face (kanohi ki te kanohi) interactions between teachers and students, and students and students. Direct face-to-face contact and high-quality interactions are important because it develops whānaungatanga.
31. There are three key barriers to high quality online learning in kaupapa Māori environments which will need to be considered and addressed including:
- an over-emphasis on content development as the centre of practice and under-emphasis on context and learner experience;
 - a relative lack of evaluation of real-world practice and professional development available to teachers in kaupapa Māori environments; and
 - roles and tools have been designed by those who are separated or disconnected from the end users of the roles or tools, including Māori.¹
32. There are ongoing inequities from social and economic systems that have not valued, and are not reflective of Te Ao Māori. This means that Māori are less likely to have internet access at home; digital devices; and parents, caregivers and whānau who are digitally literate to support learning at home. It also means that there are barriers to accessing appropriate resources based on kaupapa Māori and / or written in Te Reo Māori.
33. These barriers are also likely to impact Pacific learners, and those with learning support needs because of disability, disadvantage, difficulty or other barriers to making progress. However, further work will be needed to gain insights for these priority groups.

Other challenges and opportunities created by evolving digital environments and online learning will be addressed through the Education Work Programme

34. To ensure that online learning opportunities are equitable, delivered either by distance or in-person, all ākonga and providers will need access to digital technologies, including devices; a capable workforce supported by the digital infrastructure and tools they need; and options for access and choice about high quality online education.

Work is underway to transform how the education system supports and enables digital environments...

35. An Education System Digital Strategy was developed and endorsed in 2015 by the Ministry and education bodies², founded on a vision for a learner-centred, connected, interdependent education system. The Strategy provides the blueprint for on-going developments in the digital infrastructure needed to support schools' teaching, learning and administration. A Digital Transformation Plan is in draft, due for completion in April 2020, which includes technology roadmaps for investments in digital infrastructure that

¹ Tiakiwai, S., & Tiakiwai, H. (2010). A Literature Review focused on Virtual Learning. Environments (VLEs) and e-Learning in the Context of Te Reo Māori and Kaupapa Māori Education. Report to the Ministry of Education. Kiore Enterprises Ltd.

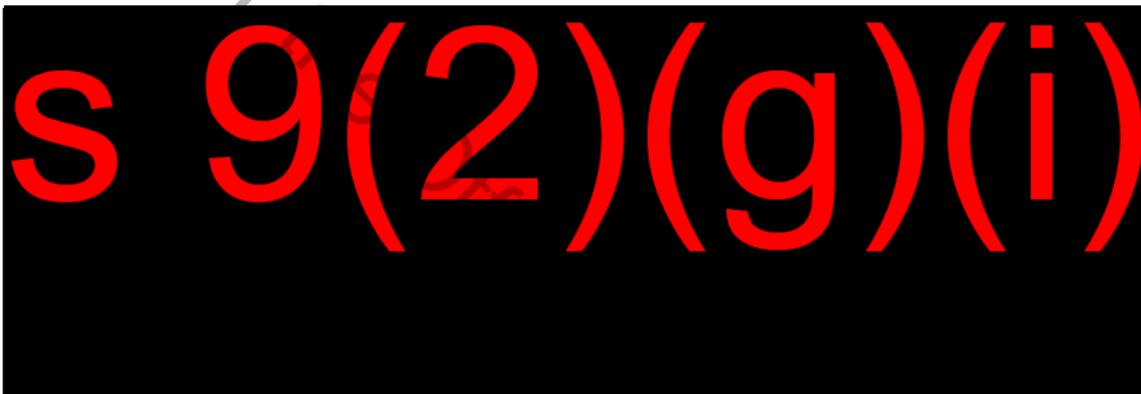
² NZQA, TEC, ERO, Careers NZ, Education Council, Education Payroll, N4L and Te Kura

will support expanded opportunities for flexible learning arrangements. The plan includes building on the investment in Te Rito as a key objective.

36. The draft Digital Transformation Plan also recognises the importance of students being able to continue their learning out of school through equitable access to a suitable device and internet at home. This will build on previous initiatives to improve access to digital devices including The Network for Learning, Laptops in Schools and Computers in Homes.

... and to ensure that the Education Workforce is capable, competent and supported for high quality teaching and learning in the 21st Century...

37. The features of high quality teaching and learning are the same, regardless of whether they are learning in-person or by distance. The core difference for teachers delivering education virtually is their willingness, ability and intent to use appropriate digital tools and methods that enable learner success. Online teachers may require specific pedagogical frameworks to support them to make this shift.³
38. Work underway to support the Education Workforce includes the:



Conclusion and next steps

39. 
40. In the long term, we could revisit whether a co-designed, fully flexible schooling system is desirable. This could build off the fully implemented reforms of the Education Work Programme, and any changes to how distance education is enabled or supported in the schooling system.
41. Although the recommendation in *Supporting all schools to succeed: Reform of the Tomorrow's Schools system* is over the longer term, we recommend starting earlier. This is because previously agreed work is likely to have raised stakeholder expectations.
42. We will work to provide you with an engagement plan which states the distance education problem, opportunities and key areas for change by July. In developing this discussion document we will need to fill the gaps in our knowledge of how current

³ e-Learning and implications for New Zealand schools: A literature review (2010)

settings are working for emerging providers, and explore what sits behind the diverging opinions on the opportunities and challenges of distance education.

43. We will undertake engagement in July, and report back in November with findings, and proposals for policy change. The implementation plan for these changes can be worked through in 2021, including how they would impact Te Kura's funding model.

Annex

Annex 1: Current state of online learning providers in New Zealand schooling

Released under the Official Information Act 1982

Annex 1: Current state of distance education providers in New Zealand schooling

Te Kura is the only provider of distance education recognised in legislation

1. The Education Act 1989 restricts who can be a recognised provider of “correspondence”⁴ education, where students are not required to physically “attend” school, which is increasingly delivered online. While the Act allows for the designation of multiple correspondence schools, Te Aho o Te Kura Pounamu (Te Kura) is the only correspondence school in New Zealand.
2. Te Kura is not a school of choice. It was established in 1922 to provide education to primary-aged learners who could not attend other schooling because of isolation, ill-health or family itinerancy. Within 10 years, the service had been extended to full-time secondary students. Over the next 80 years, new eligibility criteria has been developed on an ad-hoc basis to open up the school for enrolment and dual tuition through a number of gateways (there are currently 38 gateways, for example).
3. In 2019, Te Kura enrolled approximately 22,000 learners on a cumulative basis, with approximately 12,000 ākonga enrolled at any one time. Approximately 4,100 of the cumulative enrolments were for full-time study.
4. Te Kura has told us that 65% of full-time enrolments come through the Ministry of Education referred gateways for exclusion/expulsion, psychological or psycho-social, non-enrolled and through Oranga Tamariki referred gateways. Over half of learners registered for dual tuition through Te Kura are in attached units (alternative education, teen parent units, and activity centres), or have other learning support needs.
5. Te Kura has also told us that they provide dual-tuition for ākonga enrolled at schools who are part of VLNs or other schools who have identified themselves as distance or online education providers.
6. The increase in enrolments of learners who have been underserved by the physical schooling system has occurred without policy decisions about whether distance education is the best delivery mechanism for these learners, and/or how to best support these learners in instances where Te Kura is the best, or only, option.
7. Early Childhood Education has been offered through Te Kura since 1976. In 2019, Te Kura had 496 cumulative ākonga enrolled through in Early Childhood Education. While the focus of the distance education policy work will be in schooling, Early Childhood Education will still need to be considered as part of the review of Te Kura specifically.
8. Te Kura receives a core cash grant which is used to pay staff salaries and other operational expenses. In 2017, the grant had two components: a base component of \$17.3 million including GST and a component based on the number of full-time-equivalent students of \$28.3 million (these figures include the small amount of funding for early childhood services provided by the School). Additional payments are made for special needs support, trades academy students, supervision of students, and a number of other minor initiatives.
9. Te Kura’s funding model was last reviewed in 2011. Te Kura have expressed a number of concerns about their funding model [METIS 1205000 refers].

⁴ The Education and Training Bill proposes amending “correspondence” school to “distance” school to reflect how digital technologies have influenced teaching.

Demand for Virtual Learning Networks is increasing, but may not be sustainable

10. VLNs provide supplementary or dual tuition for ākonga, who remain in their local schools. VLN in secondary schools provide lessons to more than 3000 students. In primary schools 751 learners participated in 2018.
11. VLN funding mechanisms are complex, using transfers of individual school funding or staffing entitlements between schools or to charitable trusts, or through reciprocal teaching agreements (school A teaches school B's students in one subject area, and school B teaches school A's students in another subject area).
12. The VLN primary has received \$80,000 to \$200,000 of funding per year from the Ministry of Education through annual agreements since 2012 for coordination and administrative activities. VLN Primary also applies for funding from specialist learning programmes.
13. Other VLNs do not receive similar funding support because secondary school VLN communities have had greater capacity to absorb the overhead costs associated with their virtual learning operations. However, these secondary VLNs have told us they are concerned about their financial sustainability.
14. The Ministry also provides the VLNs with access to an information technology kit. However, the VLNs do not believe this kit is fit for purpose. The Ministry is working to provide a new set of online services that will support the operation of schools engaged in online learning at a distance.
15. Despite the growth in the number of ākonga using VLNs, the number of VLNs operating is in decline. We are aware that VLNs are having difficulties meeting overhead costs, which is a barrier to their expansion.

Schools are increasingly expressing interest in providing distance education

16. A 2018 resourcing audit identified that Logan Park and Hagley College were running summer school programmes and claiming resourcing through non-compliant March roll returns. Logan Park has been running its summer school programme, primarily through distance education delivered online, for the past three years.

Other providers of distance education and online learning also play a role in the schooling system

17. Other charitable trusts, such as the Manaiakalani Trust, are running programmes in school to support learners and their whānau to use digital technology to enable learning anywhere, anytime, and at any pace to support what happens in local classrooms. Manaiakalani provides funding to buy personal devices for each learner, provide wireless internet at home and school, and support teachers in pedagogical innovation online.
18. Distance learning is offered by a large number of Tertiary Education Organisations, for example, the Open Polytechnic and Auckland University. These distance education courses can form part of Secondary Tertiary Alignment Resources or gateway programmes.

s 9(2)(g)(i)



Education Report: COVID-19 Digital Transformation Initiatives

To:	Hon Chris Hipkins, Minister of Education		
Date:	8 April 2020	Priority:	High
Security Level:	In Confidence	METIS No:	1224812
Drafter:	Margaret-Anne Barnett	DDI:	04 463 7066
Key contact:	Stuart Wakefield Chief Digital Officer	DDI	04 463 8393 s 9(2)(a)
Messaging seen by Communications team:	No	Round robin:	No

Purpose

This paper proposes that the Government accelerate progress on digital transformation initiatives signalled in Budget '20, to support education continuity during the COVID-19 pandemic, provide the tools required for Ministry frontline staff to support the education sector effectively, and take the opportunity to strengthen the resilience of the education system and close the digital divide.

Summary

Digital transformation initiatives, Budget '20

- 1 In October and November 2019 we briefed you on a set of digital transformation bids, which included these elements:
 - Equitable digital access
 - Schools' digital enablers
 - Digital identity for students and whānau
 - Support for the Manaia Kalani Education Trust outreach programme
 - Assessment online (NCEA)
 - Careers system online
 - Tomorrow's Schools, which includes a digital component to support frontline staff provide services to schools and kura.
- 2 Digital transformation is a critical priority now as we confront the COVID-19 pandemic. We have revised the scope of these initiatives to ensure we can continue to support learners, teachers and leaders during this period, but also leverage the benefits of the Government's recent significant investments to support distance learning during the COVID-19 pandemic. These initiatives will help close the digital equity gap and build long-term resilience in the education system.

Supporting distance education during COVID-19

- 3 Our most immediate priority is to ensure that education continues while physical distancing measures are in place. When education stops, student learning slides quickly. Researchers have demonstrated, for example, that students lose the equivalent of one month of a year's learning over the summer break. The loss is even

greater for students from low-income households¹. While progress can be sped up to overcome any loss in learning, we would like to minimise the need for this.

4 Work is underway to help ensure schools and kura are ready to provide distance education from the start of term two beginning 15 April. You recently agreed \$36.440 million in 2019/20 and 2020/21 to begin providing learners without digital access, to a digital device and connectivity so they can learn online [CAB-MIN-20-0136 refers].

5 You also approved immediate funding of \$51.340 million, and signalled funding requirements of \$22.000 million for 2019/20, to enable distance learning while early learning services, schools and kura are closed as part of the emergency response to COVID-19.

6 These measures will provide support for distance learning to the end of June 2020, but more work is needed to realise the vision for a digitally-enabled, interdependent education system enabling teaching and learning anywhere, any time.

7 This paper proposes adding a further bid to those listed in paragraph one for up to \$201.0 million operating and \$37.4 million capital to support distance education, including accelerating progress on the Te Rito platform and improving the quality and availability of online resources to support progress and achievement across the breadth of our national curriculum. This will include initiatives to enable educators to teach interactively in a secure online environment; replace Te Kete Ipurangi (TKI); make it easy for teachers, kaiako and learners to find curriculum resources; and enable records of learning to follow learners as they progress along their education journey.

8 The set of initiatives in this paper will also be important post COVID-19. Learners and educators will have explored a wealth of opportunities for online learning, and grappled with both the benefits and challenges they present. These initiatives will help us to mitigate the risks and exploit the opportunities of digital technologies, as they play a greater role in education in the future.

9 We have grouped the initiatives as follows:

a) *Provide core digital services and infrastructure*

Establish the foundations on which a transformed education system will operate, and on which the success of our education system will increasingly depend:

- i. Equitable digital access
- ii. Schools' digital enablers
- iii. Digital identity for students and whānau

b) *Maximise the benefits of digital for learning, and support educators*

These initiatives will significantly enhance educational practices, including specific initiatives in less-advantaged schools and kura

- iv. Distance learning
- v. Support for the Manaiakalani Education Trust outreach programme
- vi. Assessment online (NCEA)
- vii. Tiro Whetū, Careers System Online.

c) *Streamline education administration*

¹ Fernando M. Reimers & Andreas Schleicher, A framework to guide an education response to the COVID-19 Pandemic of 2020, OECD

This initiative will support frontline staff in the Education Services Agency (ESA) to deliver effective support to schools and kura

- viii. Reducing the administrative burden on teachers, kaiako and school leaders.

Released under the Official Information Act 1982

Recommended Actions

The Ministry of Education recommends you:

- a. **agree** to support the following proposals for up to \$1000.2 million operating and \$176.9 million capital over four years from the COVID-19 Budget to accelerate progress on digital transformation initiatives so that education can continue remotely for all learners and educators while the Government manages the COVID-19 pandemic, prepare for a stronger digital focus in teaching and learning for the future, and reduce the administrative burden on teachers, kaiako and education leaders;

Funding over 4 years

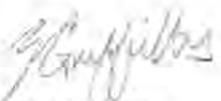
Core Digital Services and Infrastructure (note these are critical dependencies for proposals 4 and 6 below)		
1. Equitable digital access	Up to \$332.2M operating and \$10.3M capital	Agree/Disagree
2. Schools' digital enablers	Up to \$285.8M operating and \$53.0M capital	Agree/Disagree
3. Digital identity for students and whānau	Up to \$26.8M operating and \$9.7M capital	Agree/Disagree
Maximise the benefits of digital for learning, and support educators		
4. Distance learning	Up to \$201.0M operating and \$37.4M capital	Agree/Disagree
5. Support for the Manaiakalani Education Trust outreach programme	Up to \$13.6M operating	Agree/Disagree
6. Assessment online (NCEA)	Up to \$38.7M operating	Agree/Disagree
7. Tiro Whetū, Careers system online	Up to \$11.5M operating and \$15.0M capital	Agree/Disagree
Streamline education administration		
8. Reducing the administrative burden on teachers, kaiako and leaders	Up to \$90.7M operating and \$51.5M capital	Agree/Disagree

- b. **note** that emergency measures are underway to ensure education can continue for all learners throughout the COVID-19 pandemic, and that the initiatives set out in this paper will build on these to significantly enhance the quality of school and kura-based distance education;

Noted

- c. **note** that the plans for digital transformation outlined in this paper comprise a comprehensive package of initiatives, which if prioritised will enable us to build long term digital sustainability and capability by capitalising on the significant investments being made to ready the system for distance education during the COVID-19 pandemic.

Noted


 Zoe Griffiths
 Deputy Secretary,
 Business Enablement and Support
 8/04/2020


 Ellen MacGregor Reid
 Deputy Secretary
 Early Learning and Student Achievement
 8 / 04 / 2020

Hon Chris Hipkins
 Minister of Education

— / — / —

Budget Sensitive

Background

1. The Ministry and education agencies have been working together for more than five years on an Education System Digital Strategy (the Strategy). While good progress has been made to realise the vision and aims of the Strategy, COVID-19 requires us to accelerate progress.
2. In April 2018 you met with the education sector agencies listed below to discuss the Strategy and the associated *Case for Change: Education for the Digital Age, Mātauranga Mo te Tau Mamati, (2018)*, which the agencies worked together to develop.
 - Ministry of Education
 - Education Review Office
 - New Zealand Qualifications Authority
 - Tertiary Education Commission
 - The Teaching Council.
3. The Digital Strategy and subsequent Case for Change set out a vision for a fully digitally-enabled education system to support New Zealand's future economic and social well-being; supporting digital learning environments that put learners at the centre of the system and reduce teacher workload.
4. In October and November 2019 we briefed you on a set of digital transformation bids for Budget '20 which included these elements:
 - Equitable digital access
 - Schools' digital enablers
 - Digital identity for students and whānau
 - Support for the Manaiakalani Education Trust outreach programme
 - Assessment online (NCEA)
 - Careers system online
 - Tomorrow's Schools reforms
5. You recently approved funding to support equitable access to digital devices and connectivity for learners without digital access during COVID-19, and to support distance learning until the end of June. The initiatives listed above have been revised to build on these investments by continuing to close the digital divide, and establishing strong foundations to maximise the benefits of digital technologies for learning over the long term.
6. The Digital Strategy and subsequent digital transformation plans take a whole-of-system approach, harnessing technologies for a connected, seamless education system in which every learner has the opportunity to experience high quality education personalised to their learning needs. This includes working across government to ensure equitable access and to build capability.
7. Ongoing plans for digital transformation are ambitious, but each element is important to success. Implementation of the full transformation programme will take at least five years and require multiple work streams, each with its own business cases setting out delivery and investment options.
8. The COVID-19 pandemic has escalated the necessity for digital transformation to enable everyone involved in education to operate remotely. COVID-19 is likely to have long term impacts on education beyond the duration of the pandemic, and provides an opportunity to accelerate progress to modernise education delivery, close the digital divide and streamline administration.

Digital transformation of the education system

9. The Ministry is working to a multi-year digital investment plan to support effective, coherent, system-wide adoption of technologies for education. These investments aim to:
- close the digital divide** so that every school-aged learner has access to a suitable digital device and home internet access; and teachers have the skills and technologies necessary to make effective use of digital for teaching and learning
 - enable an **integrated, connected online learning environment**, accessible to educators, students and those who support them anytime, anywhere
 - design **new approaches to curriculum and assessment** that leverage technologies to enable assessment to be a seamless part of learning
 - enhance decision-making by ensuring **high-quality data is easily accessible** to educators, stakeholders, and decision-makers, including data on the education workforce
 - provide **core digital services and infrastructure** to free up educators and providers to focus on delivering a quality education, reduce costs, and improve efficiency
 - improve agency communication channels and systems** to make it easy for the public to interact with the education system, and to improve agency efficiency and reduce costs.
10. Good progress has been made on these including:
- Digital Technologies | Hangarau Matihiko mandated as part of the national curriculum from 2020
 - Te Rito learner information sharing platform developed and Early Stage Roll-outs underway
 - online assessment tools, including PaCT, TWA and Assessment Online for NCEA
 - equitable access to digital devices and the internet at students' homes piloted in three sites
 - the development of Kauwhata Reo a new central online hub for all te reo Māori resources to support teaching and learning of and in te reo Māori
 - plans initiated to replace the curriculum supporting TKI, the primary repository for online curriculum resources
 - a new Education Resourcing System (replacing a legacy funding system) developed for phased delivery, with the first phase already live
 - progress on the modernisation of agency back office systems and processes, in line with All-of-Government directions
 - the Tertiary Education Commission's launch of a suite of information products via Ngā Kete
 - development and launch of NZQA's online application for managing external moderation
 - development of Hapori Matatū by the Teaching Council, which will allow teachers to access the Council's online services and renew certification online.
11. An overview of the Ministry's Digital Transformation Plan is attached at annex 1. The Plan is organised under five portfolios, which broadly align to the Government objectives for education:
- 1) The learner and whānau at the centre
 - 2) Quality interactions with education providers
 - 3) An engaged, professional education workforce
 - 4) Efficient, responsive Corporate Services
 - 5) Data and Digital Foundations

12. Other education agencies likewise have plans for digital transformation to realise the vision of the Education System Digital Strategy and address the COVID-19 pandemic. This paper includes advice on Budget '20 bids by NZQA to progress plans for online assessment of NCEA, and from TEC for Tiro Whetū, to support career advice.

The rationale for an integrated approach to digital transformation

13. Investments in ICT for education have historically been made in response to demand from the government, agencies and sector, with relatively little strategic planning to create alignment, achieve economies of scale, manage large data sets effectively, or address risks.
14. This ad hoc approach has resulted in high numbers of disparate IT tools, systems and applications of varying quality being used across the system. Because they are not integrated, the information held within them is siloed and not easily transferred from one to another. Where systems and tools are of poor quality or difficult to navigate, users employ workarounds or build their own systems, exacerbating risks and adding to the complexities already inherent in the system.
15. The same is true of the wider education sector. Because the system comprises self-managed providers, each must take responsibility for their own ICT assets and information. The systems they use are not always interoperable, which means providers operate in their own siloes, many struggling to use technology to share professional practice, and not easily able to transfer student information as students move from one education setting to the next.
16. Consultation across the Ministry and education sector over several years has identified many risks and issues – from the merely difficult and inconvenient, through to serious threats affecting the education system, such as situations in which security of student information is inadequate. As the whole education sector shifts to distance delivery as a result of COVID-19, these risks will become more acute, requiring us to move quickly to implement the most critical elements of the digital transformation plan.

Connecting the sector through interoperable systems

17. The development of sophisticated technology platforms, capable of multiple functions and able to handle vast amounts of data, makes it possible to take an integrated, whole-of-system view and deploy IT platforms that satisfy the needs of many users across the system.
18. The diagram at annex 2 describes the broad areas for digital investment; how they interact and the dependencies between them. Success will depend on establishing the foundational infrastructure; including deploying interoperable cloud-based platforms, such as Salesforce, Te Rito and Azure, to support interactions between students, educators, providers, education agencies and Ministry personnel.
19. This integrated approach will have significant benefits for all users. For the first time, student information will be able to move seamlessly with students throughout their learning journey, streamlined administration systems will give educators their time back to focus on high value tasks, and interactions between education providers and the Ministry will be supported by effective client management systems.

Establishing foundational infrastructure

20. Our plans for digital transformation span multiple years, and are sequenced so that the foundational infrastructure is put in place first, and can be built on over time.

21. The plans are ambitious but are not a wish-list. Rather, they aim to establish the necessary components for a digitally transformed system, based on comprehensive business analysis, planning and design to deliver a new way of working underpinned by digital technology. Our plans are sequenced to ensure they can be implemented, and that both the Ministry and the wider IT sector have the capability to deliver.
22. Critically, the plans will see a shift from an asset-centric capital funding approach, to a service-centric operating funding approach.
23. COVID-19 Budget proposals in this paper will enable work to continue on establishing these foundational platforms, on which the success of digital transformation across the system depends, and will capitalise on the significant investments in digital technologies that have been necessary to ensure education continuity during the COVID-19 pandemic.

COVID-19 Budget Proposals

24. There are eight proposals for COVID-19 funding in this paper. Annex 2 shows how these initiatives relate to each other, and their interdependencies. In particular, the success of initiatives to maximise the benefits of digital for learning depends on the first three budget proposals below to establish core digital services and infrastructure.
25. While the proposals listed below are important priorities to realise the Government's goals for education, they will also support distance learning if managing COVID-19 requires further school and kura closures, and for any emergency situation requiring schools to close.
26. A table summarising the funding proposals follows the initiative descriptions below.

Establish core digital services and infrastructure

1) Equitable Digital access

Up to \$332.2M operating and \$10.3M capital to close the digital divide gap for more than 80,000 families with 145,000 school aged children by providing them with subsidised access to filtered Internet, devices, and support to participate in distance learning during lockdown periods and continue their education at home in other times.

We propose this be tagged as contingency funding, pending any policy work required to develop a sustainable model.

The COVID-19 pandemic has highlighted longstanding gaps and inequities in the provision of digital technologies in schools and kura, and for learners and ākonga.

You recently approved \$36.440 million in 2019/20 and 2020/21 to provide internet connectivity to 50,000 households and digital devices to up to 15,000 students. This will go some way to address the digital divide affecting learners, but more support is needed.

An emergency contingency fund of up to \$22 million has been provided to enable digital access to students during COVID-19 lockdown, which cover the costs until November 2020.

This bid will provide an ongoing service to disadvantaged families including further improvements to the parent engagement and safety and security of access to Internet and devices.

2) Schools Digital Enablers

Up to \$285.8M operating and \$53.0M capital over four years to provide a range of strong and secure ICT services to schools that choose to opt-in, to:

- deliver quality ICT infrastructure for schools most in need of it, including purchasing and installing ICT network equipment such as wires, cabling, digital access points
- free up educators to focus on delivering education and support online education during COVID-19 responses
- enhance handling of cyber security incidents, and supporting schools to protect their information and ICT systems during COVID-19 lockdowns
- achieve cost efficiencies through common and effective ICT services
- support interventions to ensure NCEA exam centres meet specific infrastructure capacity, availability and reliability requirements

A fit-for-purpose and reliable network is the 'backbone' for any new digital learning policies that may be implemented as a response to COVID-19.

In response to COVID-19 this package also includes provision for teachers and administrative staff who have to work from home, but who do not have a suitable device and/or connectivity. This package includes:

- leased devices if they are not eligible for TELA devices
- interim internet connectivity and telephone services for staff who lack adequate and uncapped connectivity and telephone calling plans
- contingency funding to provide ICT technical support directly related to work schools need to do in response to COVID-19

Note that this aspect of the COVID-19 package is subject to policy work to determine the nature and extent of the problem and the degree to which it should be prioritised.

The bid proposes that N4L be contracted to refresh and maintain schools' ICT network systems and hardware, and offer consistent technical support via a service help desk to schools.

3) Digital Identity for students and whānau

Up to \$26.8M operating and \$9.7M capital over four years to provide a common, consistent way to authenticate student and whānau digital identities, incorporating standards for privacy and security, which will: help enable learners to access education from home securely; enable student information to travel with students seamlessly as they progress for ECE to tertiary; enhance whānau engagement in their children's education; and ensure student information is only accessed by those with a right to see it.

The initiative will establish and rollout out a digital identity broker; allowing students and staff to use their normal school credentials (i.e. usernames and passwords), and parents and whānau to use verified credentials to access student information and learning.

It will incorporate standards for privacy and security, and support improvement in security controls for student management systems and other online teaching and learning systems.

Maximise the benefits of digital for learning, and supporting educators

4) Distance learning

Up to \$201.0M operating and \$37.4M capital to provide the foundational elements required to enable distance teaching and learning. These elements are essential to successfully scale and sustain distance education across the sector and will build on three years of work to

implement a 'Connected Learning Environment'. The COVID-19 pandemic has made this work more critical. Providing the systems and services required for teachers and learners to work remotely is a key dimension of the vision for the connected learning environment.

When complete this will provide a robust online environment supporting all aspects of a digitally enabled education system, providing a seamless and integrated experience for all learners through their learning lifetime.

There are four key deliverables:

1. A curated repository of curriculum content and resources, accessible to teachers, learners and parents, and spanning early learning through primary and secondary schooling with alignment to our three core curricula, Te Whāriki, Te Mātauranga o Aotearoa and the New Zealand Curriculum. Resources will be actively managed, quality assured, searchable and meet all requirements relating to learner privacy and online safety.
2. Platforms and services to support the delivery of online learning and collaboration. While some schools are already making use of existing platforms, we need to provide for those who don't and to enable integration of platforms to support collaboration across schools. This includes support for integrated video conferencing, scheduling, collaboration and online assessment.
3. Expansion of the integrated learner profile delivered by the Te Rito programme. This will improve the data quality and security in feeder student management systems, extend support for rich records of learning (including progress and achievement information), integration with tertiary and early learning providers and support for learner, and parent and whānau reporting and engagement.
4. Learning Support Case Management. This will provide robust platforms and processes to deliver effective, efficient and safe learning support services for traditional and distance learning.
5. Change and implementation support to build professional capability for teaching at a distance and online. Includes professional learning support that addresses the pedagogical shifts required for working with learners, their parents and whānau at a distance and online.

This Distance Learning bid builds on work started as an immediate response to COVID-19, as illustrated in the Emergency Funding to Enable Distance Learning for Early Learning and Schooling proposal to the Cabinet COVID-19 Committee. This made specific provision to provide access to an online package of ready-to-go teaching and learning courseware, provide access to an online collaborative learning environment and to provide extra support to schools and kura to help them use online learning tools.

5) Support for the Manaiakalani Education Trust outreach programme

Up to \$13.6M over 4 years to enable the Manaiakalani Education Trust to:

- Expand the successful Manaiakalani Education Trust programme to a larger number of decile 1-3 schools. The rate of expansion is targeted at 1 new cluster of 9-10 schools being started every year over the next four years in addition to the existing ~100 schools participating in the programme.

- Directly fund and expand Manaiakalani Education Trust activities that can directly target better learning outcomes and support learning during the COVID-19 response across additional schools outside the programme.

The Manaiakalani Education Trust has, through its mixture of pedagogy, professional development, use of data, and access to digital infrastructure, seen significant acceleration in educational achievement for students in the low decile schools participating in the programme. Independent evidence provided by Woolf Fisher Research Centre (WFRC) shows a substantial positive differential in lifting achievement.

The trust brings 10 years' experience delivering results in digital learning in low decile schools. The approach is underpinned by a proven digital based pedagogy and necessary supporting services that enable safe and effective digital learning.

This experience can be leveraged to adapt to the new learning environment during and after the COVID-19 pandemic.

6) Assessment online (NCEA)

Up to \$38.7M operating to continue implementing digital NCEA exams, reflecting digitally supported teaching and learning most students now expect and the prospect that online assessment will be increasingly necessary if further COVID-19 responses are implemented, or other emergency situations arise that lead to school closures.

NZQA will further develop operating models for senior secondary assessment, including supporting the implementation of the proposed NCEA changes.

The initiative will continue with the opt-in, co-creation approach with schools to transform the NCEA external assessment system to match the growing prominence and expectation of digitally enabled teaching, learning and assessment in schools and the wider sector changes for education in the digital age.

The NCEA Online programme represents an important component of ensuring digital teaching and learning can be embedded in schools and across the sector. The ability to use digital teaching, learning and assessment, when fully realised, would be a significant component of a government response to future events such as COVID-19.

7) Tiro Whetū: Careers system online.

Up to \$11.5M operating and \$15.0M capital from Vote Tertiary Education to develop a single, free, consistent, accessible, high quality careers tool for learners and workers to use throughout their lifetime, to plan and manage their careers.

This tool will be especially critical in helping New Zealanders manage through the employment impacts from the Covid-19 pandemic, and it will cater to a broad range of New Zealanders, including Māori and Pacific, their Whānau and 'Aiga, who will be particularly vulnerable to the pandemic.

Tiro Whetū is an integrated online solution consisting of tools and content to help New Zealanders plan and manage their careers. It is a system for those in and out of work, for use in schools, and across government agencies, enabling all New Zealanders to understand their transferrable skills and have a personalised life-long career plan. Tiro Whetū is an enabler for, and has the support of, other government agencies - MSD, Corrections, MoE and MBIE – e.g., to help their case workers, career advisors, and educators, in the recovery from the impact of COVID-19.

Under the COVID-19 circumstances TEC will target initial deliverables in six months from investment, and will put in place project support to ensure a first class quality product can be developed iteratively over the following periods.

The first deliverable will be a tool that helps New Zealanders *understand the skills they have* and their *transferability to a range of other jobs*. This will make job-to-job flows clearer and help raise confidence amongst job-seekers that their past experience has provided them with skills that are relevant to other jobs that are more in demand.

The solution for secondary school students, particularly those in the secondary to tertiary transition, will enable them to gain line of sight to job/career opportunities and the learning pathways, broaden their options and allowing good decision-making in a post-COVID-19 world.

As an online solution it can deliver at scale efficiently, is a high value for money platform, and it fits naturally with NCEA Online and move to online learning by helping students pick the right subjects that keep the range of career options of interest open to them.

Tiro Whetū is investment-ready – significant research and planning has been done to date, and development of the solution will be able to be started immediately when funding is available.

8) Reducing the administrative burden on teachers and education leaders

Up to \$90.7M operating and \$51.5M capital to enable the education sector and Ministry staff access to common services and information in a single personalised environment from wherever they are working.

Taking these steps will reduce the administrative burden on education leaders so that they and the Ministry's staff can focus on the significant challenges in delivering education in the COVID-19 environment, during the recovery period and over the long term.

This initiative will make it easy for education providers to seek the range of support they need for day-to-day operations, such as seeking Learning Support, managing staffing, property requests and so on. A dashboard will show how progress on requests is tracking, for both education providers and Ministry frontline staff.

Enhancing information/data platforms that principals and frontline staff can both access will facilitate better collaborative decision making. The system's existing inequities are highlighted in times of limited resourcing or sudden change, such as we confront now with the COVID-19 pandemic. This initiative will enable education providers and regional staff to more quickly identify when help is needed and co-design solutions to address those problems (e.g. quickly identifying who is not able to utilise digital learning platforms).

Improvements supported by this initiative are based on establishing business and technical capabilities that are independent of function and structural change, meaning that the investment now will establish components that will continue to serve the Ministry and sector regardless of any future structural changes (such as the establishment of the ESA). This includes establishing the foundational platforms and services that will support and sustain continuous improvement by the Ministry and sector.

COVID-19 Budget

Funding sought	Operating (\$m)					
	2019/20	2020/21	2021/22	2022/23	2023/24 & Outyears	Total
Equitable Digital Access		47.456	94.912	94.912	94.912	332.192
Schools Digital Technology Enablers		28.448	37.450	35.865	37.567	139.330
Devices and connectivity for teachers and school administrators working from home		70,848	39,464	18,080	18,080	146.472
Digital identity for students and whānau		3.552	6.910	7.768	8.541	26.771
Reducing administrative burden on teachers, kaiako and leaders		16.490	23.500	25.300	25.390	90.680
Distance Learning		54.079	50.682	48.015	48.226	201.001
NCEA Online		14.846	14.285	4.772	4.772	38.675
Manaiakalani Education Trust Expansion		4.710	2.672	3.044	3.144	13.570
Total						988.691

Capital (\$m)					
2019/20	2020/21	2021/22	2022/23	2023/24 & Outyears	Total
	10.321				10.321
	8.500	17.098	16.458	10.920	52.976
	3.714	3.756	1.120	1.120	9.710
	13.530	14.840	15.670	6.550	51.520
	7.113	13.863	9.492	6.961	37.429
					161.956

Funding sought	Operating (\$m)					
	2019/20	2020/21	2021/22	2022/23	2023/24 & Outyears	Total
Careers System Online: Tiro Whetū		1.160	1.550	4.345	4.425	11.480

Capital (\$m)					
2019/20	2020/21	2021/22	2022/23	2023/24 & Outyears	Total
	8.500	6.500			15.000

Proactive Release

27. This paper is Budget sensitive and will not be released publicly at this time.

Annexes

Annex 1: Overview of the Digital Transformation Plan

Annex 2: Interdependent Elements of the Digital Transformation Bid

Released under the Official Information Act 1982

Annex 1: Overview of the Digital Transformation Plan



DATA AND DIGITAL FOUNDATIONS

- Easily accessible, up-to-date, high-quality data and evidence enhances planning and decision-making
- Common, coherent digital tools make it easy to collaborate internally and externally; manage our information and knowledge more easily, and access the systems we need when we need them.
- Trusted, authentic, reliable information on learners, workforce and providers is available through the right channels, to the right person, in the right context.
- The Ministry and providers can prepare for, prevent and respond to cyber security incidents quickly and effectively.

EFFICIENT, RESPONSIVE CORPORATE SERVICES

- Consistent systems and processes improve delivery of services, such as stakeholder relationship management, case management, service management and workflows.
- Ministry staff receive better support from Corporate Services as we embed a customer-focused, collaborative culture, and new ways of working.
- Corporate Services are integrated, delivered in a smart and efficient manner, and are continuously improved.
- Integrated reporting, data and analytics are available across our systems and services, providing evidence to support better decision making across the Ministry.

LEARNERS AND WHĀNAU AT THE CENTRE

- Students' records of learning follow them as they progress. Parent / whānau access to the record helps them support their child's learning. No student 'falls through the cracks'.
- Students get appropriate Learning Support when they need it. An online end-to-end process reduces waiting times and enables seamless support when students move.
- Students continue their learning out of school. Equitable access to a suitable device and internet at home ensures no students misses out.
- Collaborative tools enable teaching and learning approaches unconstrained by location, widening learning options for students and enabling specialist teachers to share expertise beyond their schools.

QUALITY INTERACTIONS WITH EDUCATION PROVIDERS

- Teachers can easily find, use and adapt high quality curriculum resources for teaching, learning and assessment saving time and improving education delivery.
- Curricula resources can be co-designed and localised, and used across multiple channels.
- The school property portfolio is improved by more effective lifecycle management, supported by common systems and processes
- These also ensure school capital projects are delivered more quickly by EIS, schools and their suppliers.
- Reduced administrative burden, for both EIS and schools, with less time being spent on manual processes.
- Improved service delivery in all aspects of the asset management life-cycle, resulting in stakeholder satisfaction and improved delivery outcomes.

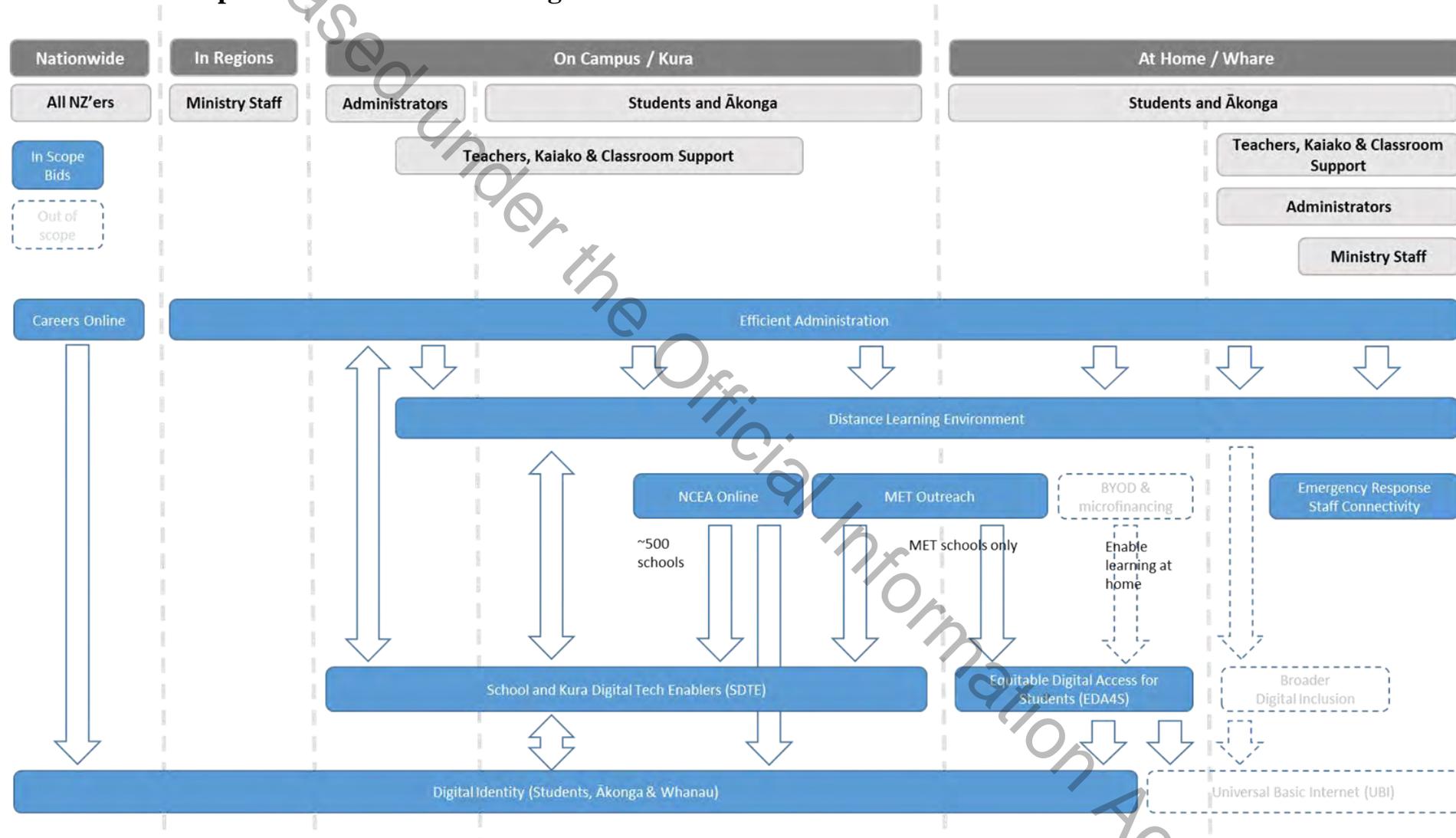
AN ENGAGED, PROFESSIONAL EDUCATION WORKFORCE

- A Workforce Register provides a common platform to engage with the education workforce, improve our understanding of the workforce as a whole and as individuals, and improve admin processes.
- This could allow services to be delivered directly to educators and providers, such as managing safety checks, relief teachers and teacher recruitment
- Schools Human Resource management practices could be enhanced with the provision of common HR system services
- Improved payroll systems ensure members of the workforce are paid efficiently, accurately, on time and according to the requirements of legislation, such as the Holidays Act 2003

Budget Sensitive

Released under the Official Information Act 1982

Annex 2: Interdependent Elements of the Digital Transformation Bid





MEMO

To: Anya Pollock, Principal Adviser; Ben O'Meara, Group Manager
From: Randal Benito, Policy Analyst
Cc: Helen Walter, Senior Policy Manager; Kara Isaac, Senior Policy Manager; ELSA Mailbox
Date: 22 April 2020
Subject: Rapid research on what good quality distance education may look like

Purpose

1. The purpose of this document is to provide a summary of a rapid scan of local and international evidence on what good quality education may look like.

Summary

2. There are four key areas to consider to provide good quality distance education. These include the online learning programme – curriculum design and delivery; ensuring quality participation; providing pastoral care; and providing learning support.
3. Evidence for the effectiveness of distance education and online learning is still emerging but the results are promising. There are many factors to consider when planning for distance education. However, the learning programme must be flexible in delivery to address individual learning needs and builds a sense of ownership in learning for students. Effective learning programmes are backed by kaiako/teachers who are open to the potential of digital technology in student success. Some ākonga/learners and their whānau/family may also need support to access learning.
4. Engagement in distance education goes beyond attendance, and is personalised. Engagement must consider how ākonga interact with distance learning, and their emotional and behavioural development. Effective distance education builds a community between ākonga, kaiako and whānau that is responsive to individual educational needs and makes learning interactive.
5. Schools have the responsibility to maintain the wellbeing of students, even in distance education. Effective pastoral care in distance education allows for ākonga to form meaningful connections with each other and builds on positive behaviour. Pastoral care in distance education is strengthened by the availability of kaiako and guidance counsellors to provide timely support for students to achieve academically.
6. Distance learning must be responsive and flexible to the individual needs of students to ensure that their learning needs are met. This includes accommodations for students with disabilities and additional learning support needs. Effective learning support in distance education also have measures to support kaiako in making the curriculum inclusive, and that whānau are supported.

Different types of learning

7. Online learning is learning and teaching that is facilitated by or supported through the use of digital technologies. Online learning is a mode of delivery that can be used when providing distance education or face-to-face education. Not all online learning needs to be done virtually. For example, assignments assigned online could be printed off by the student and then scanned or photographed to be marked by the teacher.
8. Distance education provides access to learning and teaching without the need for the student or teacher to be physically present in a school. Distance learning previously required a “correspondence” approach, where learning materials were sent to the student, who would complete the work and send it back to the provider.
9. Synchrony of teaching is important to consider. Developments in online learning mean that distance education can be synchronous and involve live communication e.g. webinars, online messages or teleconferences. Distance education can also be asynchronous where students can engage at times that suit them e.g. online forums, accessing resources for self-directed study.
10. Face-to-face education happens when the student and the teacher are physically present in a school, usually at set times. Students and teachers may still use digital technologies to support or enhance learning.
11. Blended education uses a combination of distance and face-to-face learning.

Five areas to consider to provide good quality distance education

12. A rapid scan of the available evidence suggests that there are four areas to consider to provide good quality distance education. These areas are not mutually exclusive and have principles that can be applied across the provision of distance education. The five areas are the following:
 - a. Online learning programme – curriculum design and delivery
 - b. Ensuring quality participation
 - c. Providing Pastoral care
 - d. Providing Learning Support

This document is structured around these areas.

Online learning programme – curriculum design and delivery

13. Evidence for the effectiveness of distance education and online learning is still emerging but the results are promising. There are many factors to consider when planning for distance education. However, the learning programme must be flexible in delivery to address individual learning needs and build a sense of ownership in learning. Effective learning programmes are backed by kaiako who are open to the potential of digital technology in student success. Some ākonga and their whānau may also need support to access learning.
14. Some parts of the New Zealand Curriculum may face additional barriers for translation to a full distance education curriculum due to practical reasons. Quality of the curriculum design includes considerations on subject availability and learning outcomes.

15. Providing digital technology to students may be needed as part of the online learning programme. Providing technology and internet access could provide access for students from disadvantaged background.
16. There are nine identified factors in planning for a successful distance learning environment. The nine factors include mode of delivery; pacing; class size; pedagogy; instructor role online; student role online; online communication synchrony; role of online assessments; and source of feedback. Each factor has different levels of implementation which highlights complexities in planning for distance learning.¹
17. Successful distance education must have elements of all nine factors. However, there is no consensus on what combination of different levels constitutes a successful distance education. This is because different regions or countries will have different educational contexts. Successful online learning environments were noted to produce a learning community where support for both academic and social dimensions of schooling is addressed.²
18. Considering class size first is important. Class size can limit the other factors in planning for a successful distance education environment. Providing feedback or pacing can be difficult in classes with higher student-to-teacher ratio.³
19. In 2016, research done by New Zealand Council for Educational Research (NZCER) concluded teachers see the use of technology for learning in a positive light, and can give students control over their own learning.⁴ Students having a sense of ownership of their learning can contribute to academic success and address issues in wellbeing.⁵
20. In 2009, the Ministry of Education of Education contracted NZCER to undertake research about students' experiences of learning in virtual classrooms. This concluded that students experience different degrees of success in virtual learning environments; some students' experiences were positive and some less so.⁶
21. Recently, a 2017 report by Research New Zealand that looked at the responses of schools to the 'Digital Technologies in New Zealand Schools' survey. The survey aims to provide information on the use of digital technologies in school. The report concluded that 50% of schools found that there were moderate improvements in student learning outcomes.⁷
22. Evidence on the effectiveness of distance and online learning are still emerging and developing. However, results are promising. The 2017 NCEA Level 3 Achievement for full time students enrolled at Te Kura was at 85%, which is marginally higher than the national average of 84%.⁸ Schools with higher teacher-to-student ratios indicated that some distance education has been done to cut costs which does not equate to quality.
23. The quality delivery of distance education must reflect the learners' strengths and interests. It is a collaborative between teachers, students and whānau to ensure that individual learning needs of ākonga are met. Quality of delivery includes considerations of the ways of teaching the curriculum online, and which styles of teaching is effective.

¹ (Means, Bakia, & Murphy, 2014)

² (Hodges, Moore, Lockee, Trust, & Bond, 2020)

³ (Hodges, Moore, Lockee, Trust, & Bond, 2020)

⁴ (New Zealand Council for Educational Research, 2016)

⁵ (Ministry of Education, 2018)

⁶ (New Zealand Council for Educational Research, 2009)

⁷ (Research New Zealand, 2017)

⁸ (Te Aho o Te Kura Pounamu)

24. Research has looked at the potential of using Universal Design for Learning (UDL) in distance learning. UDL aims to support the diverse ways students learn and is designed to be flexible. It allows for the identification of barriers to learning and provide learning and engagement opportunities to all students, especially those with disabilities and additional learning support needs.⁹ Having a variety of ways of learning in an online environment not restricted to video lessons and ways of responding to lesson material is essential in meeting the diverse learning needs of students.¹⁰
25. Considering the synchrony of communication is important as it can differ between age groups and individual learning needs. Older students may benefit from both asynchronous and synchronous instruction. Younger students may benefit more from a more structured and synchronous learning.¹¹
26. Teachers and principals need to be prepared around the use of digital technology for learning and be confident in teaching by distance and online. Research suggest that quality online and distance education is delivered by educators who are willing and prepared to embrace innovative learning environments and use digital technology to overcome learning barriers.¹²
27. Technology is a tool for learning and can be used to strengthen the teacher-student relationship. The availability of the teacher to students contributes to the delivery of quality online learning. The teacher must be available to provide meaningful support; prompt feedback on work; and to motivate students.¹³
28. Distance education can redefine what students need to learn and the competencies that they need to succeed academically. Effective distance education provides teaching and learning strategies that develop cognitive skills. For the student, this includes opportunities for self-testing, review and reflection.¹⁴

Ensuring quality participation

29. Engagement in distance education goes beyond attendance, and is personalised. Engagement must consider how ākonga interact with distance learning, and their emotional and behavioural development. Effective distance education builds a community between ākonga, kaiako and whānau that is responsive to the educational needs of students and makes learning interactive.
30. Having a distance education curriculum means that face-to-face contact is reduced. This reduction in contact can contribute to the high attrition levels in distance education. Quality participation includes considerations on how well the online environment engages with the student; attendance; engagement with the curriculum; and steps to ensure that the distance learning is interactive.
31. Recent research have shown that there are two groups of people who can actively support the emotional, behavioural and cognitive development of students in distance education. The first is the course community, which include contact with peers that are going through the same educational setting with same level of knowledge, and the educators who are available for supporting them. The second is the personal community, which includes the people

⁹ (Centre of Applied Special Technology, 2010)

¹⁰ (Gallup & Stregale)

¹¹ (Hodges, Moore, Lockee, Trust, & Bond, 2020)

¹² (Higgins, Xiao, & Katsipataki, 2012)

¹³ (Dipietro, Ferdig, Black, & Preston, 2008)

¹⁴ (Brennan, 2003)

outside of the online learning environment such as parents who can advocate for their success.¹⁵

32. Research emphasised on the importance of being responsive to students. There are a number of ways to measure engagement to ensure that online provisions are working for the student. The most common way to capture engagement are self-report surveys. Regular video interviews or video observation of student's behaviours can provide better information on a student's engagement and achievement.¹⁶
33. Setting a completion rate of tasks and academic performance are alternative ways to capture the engagement of a student in distance education. This is a less favourable way of capturing engagement as it does not consider the emotional and behavioural responses of a student which can contribute to resilience in learning.¹⁷

Providing Pastoral Care

34. Schools have the responsibility to maintain the wellbeing of students, even in distance education. Effective pastoral care in distance education allows for ākonga to form meaningful connections with each other and builds on positive behaviour. Pastoral care in distance education is strengthened by the availability of kaiako and guidance counsellors to provide timely support for students to achieve academically.
35. Supporting the mental health and wellbeing is key to student achievement, especially in distance education. Providing pastoral care includes considerations on making guidance counselling available online and opportunities to develop quality relationships. Educators will need to have an active role in pastoral care in distance education.
36. Wellbeing is a whole school responsibility. Opportunities for students to connect with peers and relationship building with educators should be given. ERO has released a framework to ensure that wellbeing and achievement are addressed in schools. This framework emphasises that no matter the educational setting, opportunities to learn and connect with others can be done.¹⁸
37. Another framework that schools can use in a distance education is the adapted PB4L framework for wellbeing. This framework highlights the importance of the promotion of student wellbeing, responding to arising student issues and responding to a crisis.¹⁹
38. Wellbeing promotion could also be communicating guidelines on computer use, considering safety and privacy when choosing their online systems.²⁰
39. Wellbeing promotion could also include promoting positive behaviour in students, which include help seeking behaviour in students.²¹ These behaviours will help in providing timely support when schools are responding to arising student issues.
40. Peer support from other students is another way to support wellbeing in distance education. This will allow for meaningful relationships to be developed and increase the supports available for students in distance learning.²²

¹⁵ (Borup, Graham, West, Archambault, & Spring, 2020)

¹⁶ (Henrie, Halverson, & Graham, 2015)

¹⁷ (Henrie, Halverson, & Graham, 2015)

¹⁸ (Hearne, Geary, & Martin, 2016)

¹⁹ (Ministry of Education, 2017)

²⁰ (Vanderhoven, Schellens, & Vanderlinde, 2016)

²¹ (Kendal, Keeley, & Callery, 2014)

²² (Mustacchi, 2009)

41. Research shows that students view the availability of guidance counselling via distance in a positive light. An Australian study found that 80% of students in their sample indicated that they would definitely use or may use online counselling if it was offered to them by their school guidance counsellor. This study also found that males were more likely to seek support through online channels than face-to-face.²³
42. Research also shows that school guidance counsellors see the promising advantages of online guidance counselling. Counsellors' opinions of the use of ICT for school guidance counselling is generally positive but have highlighted the importance of receiving professional learning and development and the need for best practice guidelines to effectively support the wellbeing of students in an online environment.²⁴
43. A study done in Australia found that school principals generally support the use of technology to deliver guidance counselling to students. The availability of this provision would support those who cannot access face-to-face support. The study also highlights that need for more guidance counsellors who can deliver support to students.²⁵
44. Child safety is still a priority in an online learning environment, but it can be difficult to identify crises by distance. The availability of guidance counsellors and educators for support online would make it easier for schools to respond to crises that students may face.²⁶
45. Online resources to support mental health and wellbeing can be provided to schools and students. ERO has published guidelines for schools to help improve wellbeing in learning environments, which have applications in online settings. Online resources for mental health support can also be made explicit that they are available to students such as 'Headspace' and 'The Five Ways to Wellbeing'.²⁷

Providing Learning Support

46. Distance learning must be responsive and flexible to the individual needs of students to ensure that their learning needs are met. This includes accommodations for students with disabilities and additional learning support needs. Effective learning support in distance education also have measures to support kaiako in making the curriculum inclusive, and that whānau are supported.
47. Applying universal design principles in the design of individual learning programmes can lower barriers to access. This also include access to peer interaction, building a relationship with teachers, and promote transferable skills in a learning environment.²⁸
48. As the level of need becomes higher or more complex, teachers may need to adapt the curriculum so it works for individual students. Teachers should be able to access specialists with the knowledge and strategies to support build capability, or provide the resources for support. Examples of this could include brailled reading material for blind students, or annotations of visual material for access via screen readers.
49. Some ākonga may also need reasonable accommodations to be able to access their learning, for example the provision of technology. Providing technology and internet access could provide access for students from disadvantaged background. Making assistive

²³ (Glasheen, Shochet, & Campbell, 2016)

²⁴ (Glasheen, Campbell, & Shochet, Opportunities and Challenges: School Guidance Counsellors' Perception of Counselling Students Online, 2013)

²⁵ (Glasheen, McMahon, Campbell, Rickwood, & Shochet, 2016)

²⁶ (Ministry of Education, 2017)

²⁷ (Education Review Office, 2016)

²⁸ (Ministry of Education, 2020)

technology available could support students with disabilities and additional learning support access learning better.²⁹

50. Some ākonga may also need continued access to their specialists for therapeutic or clinical support for their development, such as access to speech and language therapists, physiotherapists and educational psychologists.

Released under the Official Information Act 1982

²⁹ (Moran, n.d.)

Works Cited

(2013).

- Borup, J., Graham, C. R., West, R. E., Archambault, L., & Spring, K. J. (2020). Academic Communities of Engagement: an expansive lens. *Educational Technology research and Development*. doi:<https://doi.org/10.1007/s11423-020-09744-x>
- Brennan, R. (2003). *One size doesn't fit all: Pedagogy in the online environment*. Kensington Park, Australia: National Centre for Vocation Education Research, Australian National Training Authority.
- Centre of Applied Special Technology. (2010). UDL at a glance. Retrieved from <https://www.youtube.com/watch?v=bDvKnY0g6e4>
- Dipietro, M., Ferdig, R., Black, E. W., & Preston, M. (2008). Best practices in teaching K-12 online: Lessons learned from Michigan Virtual School teachers. *Journal of Interactive Online Learning*, 10-35.
- Education Review Office. (2016). *Wellbeing for Success: a Resource for Schools*. Wellington: Education Review Office.
- Gallup, J., & Streagle, K. (n.d.). *UDL in Online Courses: How Can That Be? Implmentation and Data*. Learning Designed. Retrieved April 4, 2020, from <https://www.learningdesigned.org/resource/udl-online-courses-how-can-be>
- Glasheen, K. J., Shochet, I., & Campbell, M. A. (2016). Online counselling in secondary schools: would students seek help by this medium? *British Journal of Guidance & Counselling*, 108-122.
- Glasheen, K., Campbell, M. A., & Shochet, I. (2013). Opportunities and Challenges: School Guidance Counsellors' Perception of Counselling Students Online. *Australian Journal of Guidance and Counselling*, 222-235.
- Glasheen, K., McMahon, M., Campbell, M., Rickwood, D., & Shochet, I. (2016). Implementing Online Counselling in Australian Secondary Schools: What Principals Think. *International Journal for the Advancement of Counselling*, 108-122.
- Hearne, L., Geary, T., & Martin, N. (2016). Guidance counselling as a whole school responsibility in the Irish post primary sector. *British Journal of Guidance and Counselling*, 1-15.
- Henrie, C. R., Halverson, L. R., & Graham, C. R. (2015). Measuring student engagement in technology-mediated learning: A review. *Computers & Education*, 36-53.
- Higgins, S., Xiao, Z., & Katsipataki, M. (2012). *The Impact of Digital Technology on Learning*. Education Endowment Foundation.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). *The Difference Between Emergency Remote Teaching and Online Learning*. Retrieved from Educase Review: <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning#fn8>
- Kendal, S., Keeley, P., & Callery, P. (2014). Student help seeking from pastoral care in UK high schools: a qualitative study. *Child and Adolescent Mental Health*, 178-184.
- Means, B., Bakia, M., & Murphy, R. (2014). *Learning Online: What Research Tells Us about Whether, When and How*. New York: Routledge.
- Ministry of Education. (2017). *Guidelines to Assist New Zealand Secondary Schools and Wharekura in the Provision of Good Practice in Pastoral Care, Guidance and Counselling*. Wellington: Ministry of Education.
- Ministry of Education. (2018). *Māori Education*. Retrieved from Kōrero Mātauranga: <https://conversation.education.govt.nz/conversations/maori-education/>
- Ministry of Education. (2020). *Guide to Universal design for Learning*. Retrieved from Te Kete Ipurangi: <https://www.inclusive.tki.org.nz/guides/universal-design-for-learning/udl-framework#what-is-the-udl-framework-3489>
- Miron, G., Shank, C., & Davidson, C. (2018). *Full-Time Virtual and Blended Schools: Enrollment, Student Characteristics and Performance*.
- Moran, P. (n.d.). *No Learner Left Behind: Is New Zealand Meeting its Obligations under article 24 of the United Nations Convention on the Rights of Persons with Disabilities?*

Mustacchi, J. (2009). R u safe? *Educational Leadership*, 78-82.

New Zealand Council for Educational Research. (2009). *Students' experiences of learning in*. Wellington: New Zealand Council for Educational Research.

New Zealand Council for Educational Research. (2016). *Digital technologies for learning: Findings from the NZCER national survey of primary and intermediate schools 2016*. Wellington: New Zealand Council for Educational Research.

Research New Zealand. (2017). *Digital Technologies in Schools 2016-17* . Wellington: Research New Zealand.

Te Aho o Te Kura Pounamu. (n.d.).

Vanderhoven, E., Schellens, T., & Vanderlinde, R. (2016). Developing educational materials about risks on social network sites: a design based research approach. *Educational Technology Reserch & Development*, 459-180.

Released under the Official Information Act 1982



Education Report: COVID-19 Digital Transformation Initiatives – Options for Scaling

To:	Hon Chris Hipkins, Minister of Education		
Date:	1 May 2020	Priority:	High
Security Level:	In Confidence	METIS No:	1224812
Drafter:	Margaret-Anne Barnett	DDI:	04 463 7066
Key contact:	Stuart Wakefield Chief Digital Officer	DDI	04 463 8393 s 9(2)(a)
Messaging seen by Communications team:	No	Round robin:	No

Purpose

1. This paper provides revised options for proceeding with COVID-19 Digital Transformation initiatives, in response to your request for advice on how the bids for digital enablers could be scaled.
2. As requested, the scaling options proposed include NCEA assessment online, Tiro Whetū (Careers System Online), expanding the Manaiakalani programme and TKI Replacement, which together total \$143.1million (\$105.5m operating and \$37.6m capital).

Recommended Actions

The Ministry of Education recommends you:

- a. **note** this paper provides scaling options on a package of digital transformation initiatives;

Noted

- b. **note** the three options proposed include the following bids you requested we include in each option (must-do initiatives):

Initiative	Funding over 4 years (\$Ms)
Tiro Whetū, Careers system online	26.5
Assessment online (NCEA)	38.7
TKI Replacement	50.5
Support for the Manaiakalani Education Trust outreach programme	27.4
Total	143.1

Noted

c. **note** we have included the costs of home connectivity as a separate line item, given that this initiative addresses broader issues of equitable access beyond Vote Education;

Noted

Option one	Funding over 4 years (\$Ms)
'Must-do' initiatives	143.1
Digital Identity	15.8
Schools Technology Enablers	58.0
Distance Learning	36.8
Equitable Digital Access – student devices	11.0
Sub-Total	264.7
Equitable digital access – household connectivity	197.1
Total	472.5

AGREE / DISAGREE

Option two	Funding over 4 years (\$Ms)
Must-do initiatives	143.1
Digital Identity	15.8
Schools Technology Enablers	72.2
Distance Learning	102.8
Equitable Digital Access – student devices	11.0
Sub-Total	344.9
Equitable digital access – household connectivity	197.1
Total	542.0

AGREE / DISAGREE

Option three	Funding over 4 years (\$Ms)
'Must-do' initiatives	143.1
Digital Identity	15.9
Schools Technology Enablers	98.7
Distance Learning	111.3
Equitable Digital Access – student devices	54.0
Sub-Total	423.0
Equitable digital access – household connectivity	197.1
Total	577.1

AGREE / DISAGREE



Zoe Griffiths
Deputy Secretary,
Business Enablement and Support
1 / 05 / 2020



Ellen MacGregor Reid
Deputy Secretary
Early Learning and Student Achievement
1/05/2020

Hon Chris Hipkins
Minister of Education

1 / 1

3. In early April we provided advice on eight Digital Transformation initiatives (METIS 1224812 refers):

<i>Core Digital Services and Infrastructure (note these are critical dependencies for proposals 4 and 6 below)</i>	
<i>Initiative</i>	<i>Funding over 4 yrs</i>
Equitable digital access	Up to \$332.2M operating and \$10.3M capital
Schools' digital enablers	Up to \$285.8M operating and \$53.0M capital
Digital identity for students and whānau	Up to \$26.8M operating and \$9.7M capital
<i>Maximise the benefits of digital for learning, and support educators</i>	
Distance learning	Up to \$201.0M operating and \$37.4M capital
Support for the Manaiakalani Education Trust outreach programme	Up to \$13.6M operating
Assessment online (NCEA)	Up to \$38.7M operating
Tiro Whetū, Careers system online	Up to \$11.5M operating and \$15.0M capital
<i>Streamline education administration</i>	
Reducing the administrative burden on teachers, kaiako and leaders	Up to \$90.7M operating and \$51.5M

4. On 28 April you requested advice on scaling the set of initiatives, with a particular focus on achieving equity. You asked that NCEA online, Tiro Whetū (Careers System Online), TKI replacement and the expansion of the Manaiakalani programme be included in all options as 'must-do' initiatives.

COVID-19 Emergency funding to support distance learning

5. In early April you approved immediate funding of \$51.340 million, and signalled funding requirements of \$22.000 million for 2019/20, to provide devices and internet connectivity to students without digital access so they were equipped for online learning while schools are closed during the COVID-19 pandemic.
6. You also approved emergency funding of \$51.340 million, and signalled funding requirements of \$22.000 million for 2019/20, to support providers for distance learning while early learning services, schools and kura are closed.
7. The digital transformation initiatives in this paper build on these investments to create an agile, resilient education system equipped to handle disruptive events, close the digital divide for learners, and provide the means for students to experience a seamless learning experience throughout their education. The options proposed prioritise the digital enablers needed to support the 'must-do' initiatives.

Digital transformation of the education system

8. The Ministry is working to a multi-year digital investment plan to support effective, coherent, system-wide adoption of technologies for education. These investments aim to:

- a) **close the digital divide** so that every school-aged learner has access to a suitable digital device and home internet access; and teachers have the skills and technologies necessary to make effective use of digital for teaching and learning
- b) enable an **integrated, connected online learning environment**, accessible to educators, students and those who support them anytime, anywhere
- c) design **new approaches to curriculum and assessment** that leverage technologies to enable assessment to be a seamless part of learning
- d) enhance decision-making by ensuring **high-quality data is easily accessible** to educators, stakeholders, and decision-makers, including data on the education workforce
- e) provide **core digital services and infrastructure** to free up educators and providers to focus on delivering a quality education, reduce costs, and improve efficiency
- f) **improve agency communication channels and systems** to make it easy for the public to interact with the education system, and to improve agency efficiency and reduce costs.

Digital Transformation for Equity

9. The COVID-19 pandemic has exposed weaknesses in our education system, including highlighting inequitable digital access for many learners, and for some schools and kura.
10. While this problem has been highlighted by the COVID-19 pandemic, the digital divide negatively affects learners and their whānau at any time. Evidence indicates that in the right conditions children and young people achieve better when they have access to a device and the internet at home¹.
11. Equity is also an issue in schools, with many schools lacking the capacity and/or capability to manage their ICT infrastructure effectively and keep it maintained and upgraded. For example, in recent visits to small and isolated schools, some were no longer using their Wi-Fi systems because of inadequate Wi-Fi technology or an inability to get technical support to fix the problem.
12. Poorly maintained digital infrastructure not only hampers teaching and learning, but puts schools at risk of security breaches and cyber-attacks.
13. The initiatives in the digital transformation package include measures to create a 'level playing field' for learners and schools, helping close the digital divide and establishing robust foundational digital infrastructure and services.

Closing the digital divide

14. The Equitable Digital Access (EDA) package will address both the affordability and motivation challenges of the digital divide by delivering a suitable internet connection to households with school aged learners, and engaging with families and whānau via their communities to help ensure they can get maximum benefit from online services.
15. This will have benefits beyond education. Households that will be able to access the internet through the EDA programme are often those that other government agencies must try to serve through non-digital channels. With education having a significant share of this group of citizens, and an established delivery approach, the EDA programme can be the vehicle that all-of-government can invest in to begin to close the digital divide. With this in mind, we have costed this element of the bid separately.

¹ Starkey, L., et al., *Equitable digital access to the Internet beyond school: A literature review*. July 2018, Victoria University of Wellington.

16. COVID-19 emergency funding is enabling provision of devices to schools that learners can use at home.
17. The COVID-19 emergency response is providing devices to schools that learners can use at home. As at 1 May, 6,168 devices have been dispatched and a further 3,717 are being shipped. A survey of schools showed a need for almost 93,000 devices to ensure learners without a device could use a school-owned device. This would cost approximately \$48.1m and devices would need replacing approximately every 3 years. We estimate a cost of \$54m over 4 years. This is included in option 3.
18. One option over the longer term would be to establish a microfinancing scheme to enable families and whānau to purchase devices on a lease-to-buy arrangement underwritten by the Ministry, which we estimate will cost up to \$11m per year. Such a scheme will take advantage of economies of scale for both device and insurance costs, and at the same time give learners and their families and whānau ownership of the device. Funding for this scheme is included in options 1 and 2.

Creating a level playing field: Core digital infrastructure and online services for schools

19. The vision of a more equitable, future focused and 'connected' education system has been a priority of successive governments for some years, but investment is needed to ensure robust, safe and secure IT infrastructure and services to realise the vision.
20. Right now, in our devolved education system, every education provider is largely responsible for purchasing and maintaining their own IT infrastructure and services. This has led to high variability in ICT quality and access across the sector.
21. NZCERs 2018 Survey of Secondary Schools principals reported that the cost of maintaining and replacing digital technology was identified by 55% of principals and 28% of trustees as one of the major issues facing their school in 2018.
22. In addition, some secondary schools do not have adequate network capability to ensure large numbers of students can sit exams online at the same time without risk of system failure.

Scaling the options for digital enablers

23. The options are set out in Annex Two. Most of the elements in the three options are scaled to reflect the pace of implementation, rather than choices between discrete elements. The core infrastructure noted in paragraph 23 will form the ICT backbone for the Ministry and sector, and include critical services such as cyber-security to keep students safe online and ensure their data are secure. The options influence the pace at which we can implement the core infrastructure.
24. The key elements to connect the sector and address these risks include:

- a. **common, interoperable digital tools and systems** to connect the sector and support teaching, learning and administration

Options 1,2 and 3 will establish an Education Technology Assessment Service, which will enable interoperability of systems used by schools

Progress on Te Rito is already funded and further work is underway through the Ministry's digital transformation plan to enable development on common interoperable platforms for the Ministry and sector

- b. a **base package of digital infrastructure services** schools can opt into to ensure robust, safe and secure ICT provision across all schools

Option 1 will establish basic Cybersecurity Operations with further progress in options 2 and 3 to enable closer monitoring of applications and cloud services in schools

Option 1 will enable progress on School ICT Network Equipment & Support / Operating, with additional support for schools in packages 2 and 3, including funding technical support for schools at risk

Option 1 will enable an initial ICT Needs analysis for schools, with greater engagement and co-construction of solutions in options 2 and 3

All packages provide for progress on NCEA online assessment exam centre Support

A Base ICT infrastructure & services package for schools is included in the full package, but with the exception of the Schools ICT Network Equipment & Support / Operating above, is not progressed in any of the 3 the scaled options. We expect further investment will be required following an ICT Needs analysis report.

Only option 3 includes continuation of emergency funding for 5000 devices for school staff COVID19 Devices for school staff

- c. **digital identity** so that all parts of the system can recognise and grant permission to users, user identities are secure, and we can be confident in the integrity of information and data (such as NCEA results) generated by those in the education system.

The 3 options establish Digital Identity for Students, Parents and Whanau. If initiative is not fully funded, as propose in the full package, it will create extra dependencies on other initiatives for rollout and transition support for schools. None of the 3 options include funding for a business case.

25. Robust infrastructure, and standardised, interoperable systems will help enable a seamless, personalised education for every learner throughout their lifetime, free up educators from burdensome administration, provide safe, secure online learning environments, and leverage economies of scale.
26. Implementing the Digital Transformation initiatives does not aim to constrain schools' choices of digital technologies; rather, it aims to provide the core ICT infrastructure on which a schools' chosen digital resources can run safely and effectively.
27. In line with the Government's proposed changes to the education system, these initiatives would result in the Ministry taking a stronger stewardship role in ICT provision and management as shown in Annex 1. The dependencies across the initiatives are shown in Annex 3.

Supporting distance learning

28. Developments in online curriculum resources have not kept pace with rapid developments in digital technologies. The COVID-19 pandemic has highlighted the importance of trusted, high-quality online systems and resources that are easy to find, use and adapt to suit local curriculum needs. Our current systems do not have the functionality or flexibility needed to adapt to our needs during the COVID-19 response, or to make it easy for teachers and leaders to share and access information that helps them to design and deliver high quality distance learning programmes.
29. These initiatives will also help us understand and respond to the impacts on students' learning progress across the curriculum. The need for these was identified through the Curriculum,

Progress and Achievement work programme, and is becoming more pressing to mitigate risks to educational outcomes if disruption to face-to-face learning continues. This includes rich records of learning, which will help both schools and the Ministry to identify adverse impacts on learning progress and equity so any supports and investment necessary can be put in place. Alongside this, curriculum progress maps will help kaiako and teachers design learning opportunities that grow students' social-emotional wellbeing, and understand learning progress.

30. The set of initiatives in this package will also be important post COVID-19. Learners and educators will have explored a wealth of opportunities for online learning, and grappled with both the benefits and challenges they present. These initiatives will help us to mitigate the risks and exploit the opportunities of digital technologies, such as helping to offer learners opportunities to study specialist subject areas not offered in their own schools.

31. There are five key deliverables:

1. **A curated repository of curriculum content and resources**, accessible to teachers, learners, parents and whānau, and spanning early learning through primary and secondary schooling with alignment to our three core curricula, Te Whāriki, Te Mārautanga o Aotearoa and the New Zealand Curriculum. Resources will be actively managed, quality assured, searchable and meet all requirements relating to learner privacy and online safety.
2. **Platforms and services to support the delivery of online learning and collaboration.** While some schools are already making use of existing platforms, we need to provide for those who don't and to enable integration of platforms to support collaboration across schools. This includes support for integrated video conferencing, scheduling, collaboration and online assessment.
3. **Expansion of the integrated learner profile** delivered by the Te Rito programme. This will improve the data quality and security in feeder student management systems, extend support for rich records or learning (including progress and achievement information), integration with tertiary and early learning providers and support for learner, and parent and whānau reporting and engagement.
4. **Learning Support Case Management.** This will provide robust platforms and processes to deliver effective, efficient and safe learning support services for traditional and distance learning.
5. **Change and implementation support to build professional capability for teaching** at a distance and online. Includes professional learning support that addresses the pedagogical shifts required for working with learners, their parents and whānau at a distance and online.

32. These elements are essential to successfully scale and sustain distance education across the sector and will build on three years of work to implement a 'Connected Learning Environment'. The COVID-19 pandemic has made this work more critical. Providing the systems and services required for teachers and learners to work remotely is a key dimension of the vision for the connected learning environment.

33. When complete this will provide a robust online environment supporting all aspects of a digitally enabled education system, providing a seamless and integrated experience for all learners through their learning lifetime.

Scaling the options for digital enablers

34. The options for distance learning are set out in Annex Two.

35. Option 1 will enable us to:

- replace TKI (included in the must-does)
- make Te Kura and Open Polytechnic courseware available to schools

- provision a baseline virtual learning environment
- implement NCEA literacy and numeracy assessment
- deliver Māori medium and English medium progress maps

Option 1 does not include

- the change support necessary to equip teachers with the knowledge and skills they need for effective distance learning
- rich, integrated records of learning for students that will enable teachers to better support student progress, including social and emotional well-being
- a fully integrated online teaching environment to support distance learning by enabling collaboration, video conferencing, online assessment and scheduling

36. Option 2 (in addition to initiatives in Option1) will enable us to:

- implement rich records of learning that will help educators understand progress and achievement – what progress looks like across different groups of learners and how to design and appropriately target to student learning needs
- provide a well-integrated, capable, virtual learning environment
- provide a learner profile able to be integrated across a student's learning journey over time
- support families and whānau to engage more fully in their children's learning
- change management support for teachers to equip them with knowledge and skills for distance learning

Option 2 does not include

- learning support case management that makes it easy for schools to access support for individual learners

37. In addition, Option 3 would enable

- learning support case management that makes it easy for schools to access support for individual learners

None of the options include

- Microsoft, Google and Zoom license uplifts which would provide extra online protection, security and capability for teachers and learners
- a quality assessment framework and service to provide advice and guidance on online tools and resources

Annexes

Annex one: Digital Services to Enable Education System Transformation

Annex two: Detailed options

Annex three: Overview of initiatives and how they fit together

Digital Services to Enable Education System Transformation

Mandated

Full choice



Centrally procured and operated

Centrally negotiated | locally operated

Locally procured and operated

Core digital systems/services/resources procured and run from the centre
For example:
 Policy
 Funding
 Staffing
 Property
 Student enrolment/attendance
 Learning Support
 Internet services (N4L)
 Data standards & storage
 IT integration/standards/accreditation
 Identity, access and management
 Te Rito
 Cyber safety and security
 IT support and common IT services

Rationale

- Necessary for system alignment, coherence and consistency
- Economies of scale reduces cost
- Ensures efficient administration of the education system
- Enables a student-centred system with students' data and learning portfolios moving with them throughout their learning pathways
- Reduces cyber-security risks
- Enables step-by-step design and implementation through a standards-based approach (i.e. not reliant on big system builds)

Suite of co-designed centrally-procured digital systems/services/resources available to education providers
For example:
 TKI
 TELA laptop scheme
 Microsoft & Google Software agreements
 Web services
 IT procurement
 Digital assessment tools
 VLN technology services
 Assistive technologies

Rationale

- Ensures a common experience across the system for users regardless of hub/education provider
- Significant cost savings to Government/hubs/ providers through centrally negotiated contracts
- While Ministry negotiates contracts, hubs/providers operate and brand the services to suit their needs
- Hubs/providers can chose which of these services to use and it's likely many will find it efficient and cost-effective to do so

Wide range of digital systems/services/ resources developed for education that meet the data, privacy, security and interoperability standards

For example:
 Student Management Systems (SMS)
 SeeSaw
 Mathletics
 Khan Academy
 Education Perfect

Rationale

- Hubs/providers use a range of digital tools/services/resources to suit their local needs that can be linked to the common platforms, allowing an appropriately determined exchange of data to support seamless education delivery
- Accreditation or syndication means only quality products – those that meet safety, data and privacy standards – are accredited to link to the common platforms

Education providers select, procure and run their own services/resources.

For example:
 Digital devices
 Digital resources to support local curriculum design/delivery

Rationale

- Digital devices and operating systems best selected by providers/hubs to suit their own contexts
- Education professionals are best placed to select learning resources from the wealth of online content and tools available

Common Digital Platforms support system alignment and a consistent user experience, e.g. Te Rito and Salesforce

Initiative	Funding over 4 years in \$M
Tiro Whetū, Careers system online	11.5 operating and 15.0 capital
Assessment online (NCEA)	38.7 operating
TKI Replacement	27.9 operating and 22.6 capital
Support for the Manaiakalani Education Trust outreach programme	27.4 operating
Total	143.1 (105.5 operating and 37.6 capital)

Scaled Options - Summary (\$millions)

Initiative	\$250m Package	\$350m Package	\$500m Package	Full Package
Must-dos	143.100	143.100	143.100	143.100
Digital Identity	10.951 operating 4.846 capital	10.951 operating 4.846 capital	10.951 operating 4.846 capital	26.771 operating 9.710 capital
Schools' Digital Technology Enablers	33.620 operating 24.476 capital	47.758 operating 24.476 capital	74.208 operating 24.476 capital	285.802 operating 52.976 capital
Distance Learning	30.789 operating 6.021 capital	88.420 operating 14.424 capital	91.330 operating 19.924 capital	156.662 operating 20.224 capital
EDA student devices	11.000 operating	11.000 operating	54.000 operating	54.000 operating
Sub Total	264.803	344.975	422.835	739.535
EDA household connectivity	197.100	197.100	197.100	197.100
Total	461.903	542.075	619.935	936.635

Scaled Options – details (\$millions)

Initiative	Option 1	Option 2	Option 3	Full Package
Digital Identity				
Establishment	2.631 operating 2.344 capital	2.631 operating 2.344 capital	2.631 operating 2.344 capital	\$6.862 operating \$3.713 capital
Rollout to schools	2.385 operating	2.385 operating	2.385 operating	\$6.672 operating
Operational Costs	5.936 operating 2.502 capital	5.936 operating 2.502 capital	5.936 operating 2.502 capital	\$13.237 operating \$5.997 capital

Total	15.797	15.797	15.797	36.481
Comments	<p>Minimal Digital Identity capability to support students, parents and whānau access to online education services and resources Rollout dependent on being led by other initiatives (distance learning, Te Rito, etc) Full support for DIA's proposed Digital Identity Trust Framework is not in scope of funding</p>		<p>Self-sufficient Digital Identity capability to support students, parents and whānau access to online education services and resources Able to sustain rollout to schools, cooperatively with other initiatives (distance learning, Te Rito, etc) Full support for DIA's proposed Digital Identity Trust Framework is anticipated within scope of funding Base service funding is not dependent on baseline funding from the Ministry Includes full programme level business case development</p>	

Initiative	Option 1	Option 2	Option 3	Full Package
Schools' Digital Technology Enablers				
COVID19 Devices for school staff			9.040 operating	72.320 operating
COVID19 telephony & Internet costs				64.152 operating
COVID19 ICT technical support (Contingency Fund)				10.000 operating
Cybersecurity Operations	8.532 operating	11.327 operating	18.188 operating	28.486 operating 3.000 capital
Base ICT infrastructure & services package for schools				71.532 operating 65.874 capital

Vote Education: School ICT Network Equipment & Support / Operating	10.799 operating 21.560 capital	20.799 operating 21.560 capital	30.799 operating 21.560 capital	Included in base package in line above
ICT Needs analysis - schools	2.732 operating	4.165 operating	4.675 operating	6.010 operating
NCEA online assessment exam centre Support	7.200 operating 2.916 capital	7.200 operating 2.916 capital	7.200 operating 2.916 capital	28.350 operating 25.416 capital
Education technology assessment service	4.357 operating	4.357 operating	4.357 operating	4.953 operating
Total	33.620 operating 24.476 capital	47.758 operating 24.476 capital	\$74.208 operating \$24.476 capital	\$285.802 operating \$52.976 capital
Comment				
	Initial Cyber Security Operations for school network services managed by N4L. Fully funded replacement of network equipment for state and state integrated schools. Minimum assessment of ICT needs for schools – for subsequent consideration by government Minimal Education Technology Assessment Service to assess software and online services for NZ schools to help ensure	N4L Cyber Security Operations support extended over time cover to school's Google and Microsoft cloud office productivity and collaboration services. \$2.5M p.a. for targeted ICT support for schools identified as at risk of service failure Strengthened assessment of ICT needs for schools – for subsequent consideration by government	COVID-19 Leasing 5000 additional TELA devices to ensure minimum resilience for schools by enabling key support and teaching staff to work from home due to COVID-19 Cyber Security Operations extended to broader services procured by schools and better integrated with other service providers capabilities \$5M p.a. for targeted ICT support for schools for schools identified as at risk of service failure	COVID19 funding for devices for school staff not eligible for TELA, internet and telephone call costs, and contingency for ICT support Robust Cyber Security Operations support for schools covering the breadth of ICT services schools in common usage by NZ schools. A base package of ICT infrastructure and services for Schools to opt into plus additional related ICT service for schools Power Upgrades and greater degree of onsite ICT support funded for NCEA examinations

Released under the Official Information Act 1982

	<p>security, privacy and interoperability</p> <p>Additional ICT Network Infrastructure and support for NCEA Exam Centres</p>		<p>Greater consultation and strengthened assessment of ICT needs for schools – for subsequent consideration by government</p>	<p>Greater level of consultation and co-design with schools of the base package and the opt in services that schools need to acquire</p> <p>Expansion of Education Technology Assessment Service to assess a wider range of software and online services for NZ schools to help ensure security, privacy and interoperability</p>
Comment				

Initiative	Option 1	Option 2	Option 3	Full Package
Distance Learning				
Curated repository for curriculum content and resources	12.301 operating	13.092 operating	13.092 operating	15.108 operating 0.300 capital
Platforms and services to support online learning and collaboration	2.502 operating 0.457 capital	12.942 operating 8.060 capital	12.942 operating 8.060 capital	76.258 operating 8.060 capital
Expansion of the integrated learner profile	15.186 operating 5.564 capital	23.386 operating 6.364 capital	23.386 operating 6.364 capital	23.386 operating 6.364 capital
Learning support case management	0.800 operating	0.800 operating	3.710 operating 5.500 capital	3.710 operating 5.500 capital
Change support to build professional capability for teaching at a distance and online		38.200 operating	38.200 operating	38.200 operating
Total	30.789 operating 6.021 capital	88.420 operating 14.424 capital	91.330 operating 19.924 capital	156.662 operating 20.224 capital
Comments				

Released under the Official Information Act 1982

- | | | | |
|--|---|--|--|
| <ul style="list-style-type: none"> - Curated repository for curriculum and learning resource - Access to Te Kura and Open Polytechnic courseware - Support for Kauwhata Reo repository - Evaluation of data quality challenges with schools Student Management systems - NCEA Literacy and Numeracy package | <ul style="list-style-type: none"> - Core Virtual learning environment for schools (inc. integration of key learning tools) - Support for Senior Secondary website and School Leavers Toolkit - Curriculum Progress and Achievement Rich Records of Learning - Expansion of the integrated learner profile to integrate early learning and tertiary providers and support for learner, and parent and whānau reporting and engagement - Change support to facilitate sector adoption of new services and ways of teaching and learning | <ul style="list-style-type: none"> - Learning support case management | <ul style="list-style-type: none"> - Learning resource assessment framework and service - Uplift in Google, Microsoft and Zoom licences - Technical Literacy Advisory for schools |
|--|---|--|--|

Initiative	Option 1	Option 2	Option 3	Full Package
Equitable Digital Access – devices for students				
microfinancing scheme for purchasing devices (predicated on 100,000 devices)	11.000	11.000		
Device purchase for schools with students who would otherwise not have access (up to 93,000 devices)			54.000	54.000
Total	11.000 operating	11.000 operating	54,000 operating	54,000 operating

Comments

Initiative	Option 1	Option 2	Option 3	Full Package
Equitable Digital Access – household connectivity				
Subsidised Internet Service (60,000 Households)	162.200	162.200	162.200	162.200
Community Engagement and Family upskilling (200 clusters)	12.200	12.200	12.200	12.200
Safety and security services	20.000	20.000	20.000	20.000
Programme delivery	2.700	2.700	2.700	2.700
Total	197.1operating	197.1operating	197.1operating	197.1operating

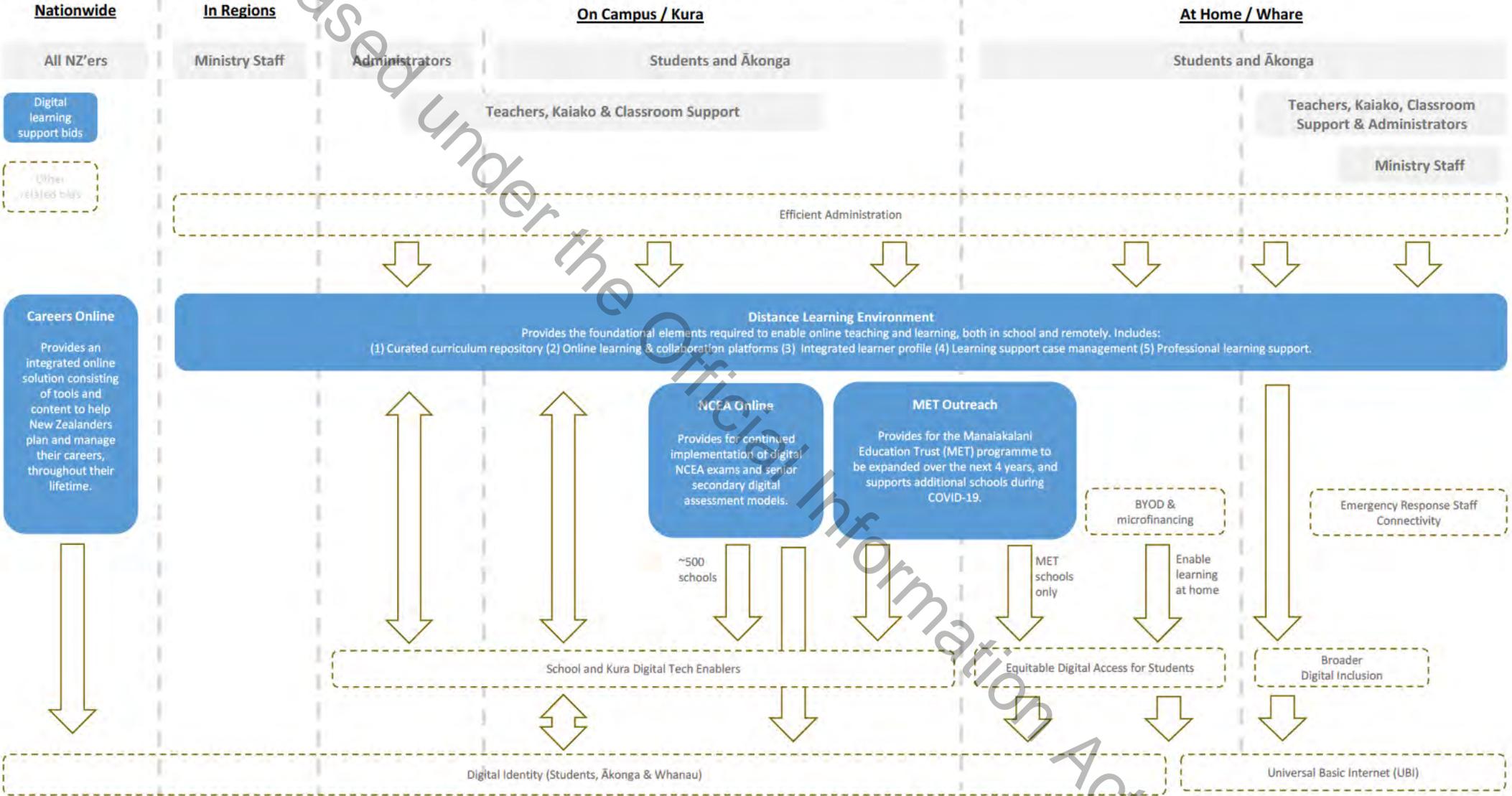
Comments

This initiative will deliver subsidised internet access to 60,000 households with school-aged children. The service will be available to all members of the household and will use the most appropriate access technologies across the country including Fibre, Copper, Mobile, and Rural Wireless.

The community engagement component ensures families get the skills required to take advantage of online services at home. The model is based on delivery of a year-long training services to 200 community clusters.

Safety and security services ensures children’s access is filtered alongside an unfiltered service for the adults.

Interdependent Elements of the Digital Transformation Bid: Support for Online Teaching and Learning



Interdependent Elements of the Digital Transformation Bid: Core digital services and infrastructure bids

