Maunu School ICT Vision

Background

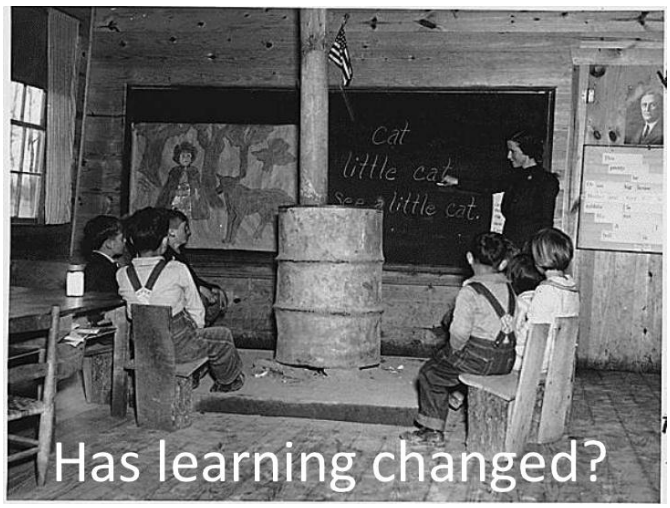
Digital Natives (those born after 1990), learn differently. There's never been a time when computers, the web and digital media haven't existed for these students. They have grown up digital – it's their native tongue. It is therefore a language in which they are digitally fluent.

At Maunu School we must question whether we are speaking the same language as our students, or whether we are conversing in a language that is foreign to the way they think, access, absorb, interpret, process and use information.

Marc Prensky describes the *21st Century Learner as FUNDAMENTALLY different….above all; in the way they view, interact and communicate in and with the modern world.*

This year we have begun a journey to review current ICT pedagogy, practice and product used at Maunu School. Our focus is whether we are preparing our students for an uncertain future, where the only thing certain is that technology will advance at an ever rapid rate.

We live in an ever changing world where schools are not the only source of learning. We need to replicate in the classroom the world in which students are living. Our students are using digital devices outside of school to communicate and learn.
How can we use those devices in school as another tool to further enhance, but more importantly engage their learning?



'If we teach today the way we were taught yesterday we aren't preparing students for today or tomorrow.'

Why BYOD (Bring your Own Any Device)?

It is the intended plan of Maunu School to introduce a BYOD policy in 2014. We will discuss throughout this document how our ultimate vision of full implementation of BYOD will be phased in over the course of three years and managed through careful planning to ensure that student outcomes drive the pedagogy.

The advantages for students who bring in their own device to school are many and varied. A student owned device can be an important part of a student's toolkit that will give them instant access to unlimited resources and enabling them to support, extend, communicate and share their learning in a way that will prepare them for their futures.

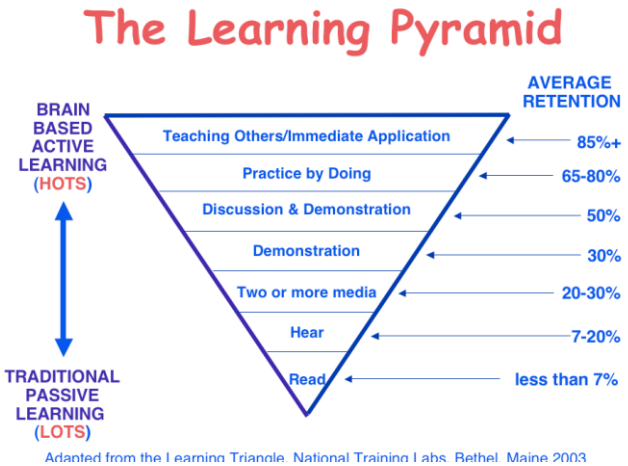
We live in a technological world that is forever changing. We cannot as a school financially support the rapid changes in technology for every student. But equally we cannot ignore the importance technology holds in the 21st Century learner's life.

BYOD allows schools to move learning forward into the 21st Century and provide opportunities to relevant, authentic and meaningful learning opportunities for our students using a device as a tool to support the learning.

Howard Gardner writes that learning is personal. It's all about the relevance of the learning to the learner not the relevance of the learning to the teacher. And if it's not relevant to the learner, even if it is relevant to the teacher, it will quickly be discarded.

The advantages of a student owned device include:

- Anytime, anywhere access to class resources, support and extension activities through a secure, robust, and safe learning environment
- The ability to develop "digital" folders and exercise books for their classes (that can't be lost, and never need replacing)
- The ability to develop a portfolio of their learning using Google Docs
- Greater ability to communicate with teachers, parents and peers to support their learning
- Anytime, anywhere access to unlimited resources and information on the internet
- The ability to draft, redraft and publish their work at the click of a button
- Allowing students to become active partners in their learning
- Increased engagement



‘Capability & Confidence’: Teaching and Learning

‘Teachers do not need to leave the skill set behind from last century that made them excellent practitioners. Instead we must use it as a foundation to bridge the digital divide and address the needs of our 21st Century Learners.’ D. Burt, Pt England School

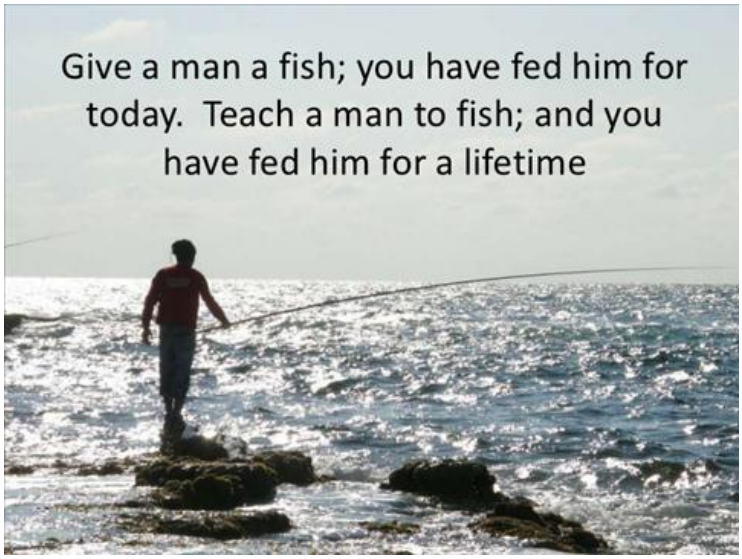
The research we have undertaken this year highlights that the professional learning development that we undertake is paramount in the success of shifting pedagogy and practice.

We propose that teachers at Maunu School need:

- the opportunity to learn with their students with a device in their hand.
- time for surfing, supporting and sharing of resources.
- modelling of best practice.

Where a digital native may simply pick up a device and begin to explore. A digital immigrant does not naturally adopt the mind-set of ‘rapid-fire trial and error learning’. Unlike the digital natives, who are not afraid of making mistakes because they learn more quickly that way, digital immigrants need to have a support network and use modelling as a way to learn.

We have secured a quote from Tania Coutts, from CORE Education, to work in school alongside staff and students to model the ‘how to’ one day a week. We believe that this is a priority in our ICT vision for Maunu School. By investing in the ‘Capability & Confidence’ of the teaching staff, the vision will be driven by the whole staff and we will embed into practice.



Content: Information, Resources & Access

e-Learning in the New Zealand Curriculum

Information and Communication Technology (ICT) has a major impact on the world in which young people live. Similarly, e-learning (that is, supported by or facilitated by ICT) has considerable potential to:

- assist the making of connections by enabling students to enter and explore new learning environments, overcoming barriers of distance and time
- facilitate shared learning by enabling students to join or create communities of learners that extend well beyond the classroom
- assist in the creation of supportive learning environments by offering resources that take account of individual, cultural, or developmental differences
- enhance opportunities to learn by offering students virtual experiences and tools that save them time, allowing them to take their learning further.
- Schools should explore not only how ICT can supplement traditional ways of teaching but also how it can open up new and different ways of learning. (NZC, 2007).

ETAP

In 2012 the school began using ETAP to input assessment data and generate reports to inform teaching and learning. In 2013 we envisage we will use ETAP as an electronic attendance and communication aid for notices.

Teachers can access a vast amount of information through ETAP to inform their planning. As a web based tool the information can be entered and accessed by the teacher from any device, anywhere, anytime.

Device Choice

Our vision is to allow students to BYOAD *(Bring Your Own Any Device)* in February 2014 for ALL students. However even with a BYOD policy there is still a need to have a pool of devices within the school that can be used by individual students or groups as loan devices during class time. It is also important in this interim stage to invest in devices for the purpose of Professional Development and for teaching and learning.

This year we purchased ten iPod touch devices for the purpose of increasing student access to photography, videoing and recording. We have also trialled some Android devices.

Visits to lead schools have given us a vast amount of information as they are already well on the journey. We found that many of these schools are using Apple products. As well as being a user friendly platform, our research has indicated that using one product throughout the school will result in less management time of school devices.

The local schools we visited have all been happy to share their journey as well as give us resources that can support us in the initial set up of school owned devices. We therefore believe after a considerate amount of discussion that the iPad would be our school owned preferred device.

By purchasing a 'Power Sync Cart for iPad', we can synchronize all apps that are purchased to the devices without having to manually synchronize or carry out individual updates. The iPod touch devices purchased this year can also be synchronized using this procedure. This will save a lot of 'man hours' and thus reduce the need for time out of the classroom or unnecessary technician support.

Google Apps

Google Apps is an easy-to-use online word processor, spread sheet and presentation editor that enables students to create, store and share documents instantly and securely, and collaborate online in real time. You can create new documents or upload existing documents, spread sheets or presentations. There is no software to download, and all your work is stored safely online and can be accessed from any computer or student owned device.

We are in the process of changing all school email addresses to an Education Google Apps account. Once we are working in this environment we can share a Google School Calendar and begin to work collaboratively on shared documents for meetings. We envisage that by 2014 every student at Maunu School will have an Education Google Apps account which will include an e-mail address.

By working in an Education Google Apps environment there is no need to be specific about the type of device students can bring to school. Although teachers may use 'APPS' on the iPad, it will not drive the pedagogy and practice for teaching and learning.

We envisage that the device will be a tool that the students use to support their learning and that Google Apps is a way that they may transfer their learning from home to school seamlessly.

Research citing the benefits of e-learning

Noeline Wright's (University of Waikato) literature review looking at 'e-Learning and implications for New Zealand Schools' highlights the following benefits of e-learning afforded by access to internet capable devices:

- Improved motivation and engagement
- Greater independence and personalised learning
- Improved critical thinking and development of multiliteracies
- Greater access to information, resources and experts
- Greater opportunities for collaboration in wide contexts, including international ones

Cyber Safety: Connecting safely

Students have never been so connected to a wealth of content. e-learning opens windows and doors to global learning opportunities and allows them to make endless connections. It is the role of the teacher to provide a relevant context and purposeful use of the content. To not only model to students how to question validity of content and discuss bias but to discuss how to be Cyber Smart.

We have researched 'Keeping Ourselves Safe' Programmes available and sourced examples of 'Cyber Smart' Curriculum progressions being used in lead schools. Consultation with our community revealed that Cyber Safety is a priority to them in our health programme. We will therefore use the examples sourced to further adapt and develop to meet the needs of the Maunu School community for 2013.

We have internet policy and procedures in place. Students and parents sign an internet agreement when they enrol at Maunu School. Teachers review this agreement with students annually.

Watchdog filters are in place to ensure all care is taken to keep students safe on the internet. However our ultimate aim is for students to be 'Cyber Smart' and therefore the expectation is that students are responsible and follow procedures outlined to them if they encounter anything inappropriate.

Maunu School believes in open communication between parents, teachers and students is the best way to keep students safe. Students will often share concerns with each other online. It is important that they tell a teacher and/or parent/caregiver when they are feeling uncomfortable or threatened online. We have a bullying policy at Maunu School that addresses 'Cyber Bullying' procedures within this policy.

Digital Citizenship

Internationally there is an increasing focus on developing the capability of young people as participants in a digital society or 'digital citizens', and the capability of teachers as guides of the digital society. Drawing on the values and key competencies of the New Zealand Curriculum we can begin to define a digital citizen as someone who:

- is a confident and capable user of ICT
- uses ICT to participate in educational, cultural and economic activities
- develops and demonstrates critical thinking skills through ICT
- is literate in the language, symbols and texts of ICT
- is aware of challenges presented by ICT and can manage them effectively
- relates to others in positive, meaningful ways through ICT
- demonstrates honesty and integrity in their use of ICT
- respects the concepts of privacy and freedom of speech in a digital world
- contributes and actively promotes the values of digital citizenship as defined here

As part of the vision at Maunu school we will development a 'digital citizen' programme to maximise the learning opportunities for the 21st Century Learner.

Connection: Infrastructure

Ensuring that we have the very best infrastructure at Maunu School is vital to the success of a BYOD policy. The infrastructure has to be secure, robust, scalable and provides a safe learning environment.

We believe we have a sound infrastructure at Maunu School. We have invested in an 'Aruba' wireless system that can currently maintain up to 256 wireless devices. However if we are to ask our parents to invest in a tool to support their child's learning we want to ensure the infrastructure is capable of managing up to 400 devices throughout **all** areas of the school. We understand that we currently have 8 'Wireless Access Points' in the school. 'Each Wireless Access Point' allows 24 devices to join it. However as more devices join they share bandwidth and this can reduce the performance of the device on the internet. We therefore need to look at mapping the 'Access Points' to ensure we avoid a *bottle-neck* in high volume areas. We must also take advice on whether we will need to add to the current system to meet the required needs in 2014.

We would therefore like an audit to be completed by ICT consultants. We have sourced quotes for this to occur and would recommend completing this audit in time for the UFB roll out in April 2013. It is our recommendation to use a local company UIT as they are independent and will carry out the audit with fresh eyes. Once the audit is complete we can finalize our planning and implementation to a phased approach to BYOD.

UFB

We will have UFB to the door by April 2013. We attended a seminar 'Learning Without Limits' facilitated by the Ministry. We sourced detailed information about the process of receiving UFB. We will begin to seek quotes from local providers in 2012 Term 4 to prepare for the roll out in 2013.

Technical Support

We have sourced quotes to increase technical support once we are in full implementation of a BYOD policy to 4-5 hours a week. As we phase in the BYOD we may gradually increase technical support. After conducting the audit we will have further knowledge to base this increase on. The BYOD policy requires students to maintain their own devices and problem solve any issues that may arise. Technical support will increase as we enter and manage the devices onto the system. We have also been in touch with 'Smart Com' who has indicated they can significantly reduce some of the input time by managing it at their end. This will reduce technician costs dramatically.

Summary of Requirements:

	Equipment	Professional Development	Infrastructure
2012	• Audit current ICT equipment. • Collate wish list. • Trial Devices • Purchase iPod touch x10 • Androids x 4	• Establish research team (pedagogy) • Interface Magazine. • Visit Schools: Pt England Kamo Intermediate Kamo Primary Hurupaki • Google Education Summit • TTS Meeting • Learning Without Limits Seminar (MOE / UFB)	• Audit Infrastructure to ensure robust, secure system for future BYOD requirements. Local Independent Company UIT $1520 +GST
2013	• Purchase devices x 15 iPad devices for teaching staff x 35 iPad devices for Student devices $22,437 excl GST • Trolley $3178 excl GST • Security boxes / cupboards for devices in each classroom.	• Tania Coutts: Core facilitator 1 day a week @ $600 incl GST $20,870 excl GST • Google Docs workshops • Cyber Smart: Netsafe / KOS	• April UFB Secure Provider • Upgrade Wireless to allow 400 devices. Ensure Infrastructure is ready to allow students to begin BYOD Term Price?
2014	• Full Implementation of BYOAD throughout the school. Possibly increase technician support to 4 - .5 hours	• Cyber Citizenship PD Workshops.	