Sabbatical Report

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Investigating best practice approaches and policy around Bring Your Own Device (BYOD)

Term 2 2014

Background
Our school's thinking around BYOD has been part of an ICT journey begun in 2009. Cromwell College has been involved as the lead school in ICT initiatives supported by funding through our local trust, 'The Central Lakes Trust' and the Ministry of Education. The first project was a network upgrade of Central Otago Schools and then an ICT professional development contract 'E-Central' that focussed on sustainable use of ICT's (2010-2012). Our school's involvement continues with the appointment of an E-Central ICT facilitator for Central Otago schools.

One of Cromwell College's strategic goals has been to build the e-learning capacity of our staff and develop ICT infrastructure to provide increased opportunities for e-learning in our school. Our staff have had access to a wide range of professional development opportunities on ICT's and e-learning through professional development provided through the E-Central Cluster. We have made use of two skilled facilitators and also appointed ICT lead teachers from within our staff. Our school has held Teacher Only Days and run a Thursday morning staff ICT 'snippet' that introduces new web tools/applications or reinforces knowledge and skills. These initiatives have been well supported by our Board through funding for staffing, professional development and hardware such as mobile computer pods, desktops, iPad, laptops and cameras. We have focussed on Google Applications for Education as well as exploring the range of Web 2 applications available. We are a PC school but have purchased a number of Apple devices to support learning in some areas (e.g. art and music.)

In the past two years we have been planning for the use of fibre or high speed internet and the introduction of N4L. Fibre was installed in Term 2 2014. Many of our staff are now enabled to make effective and innovative use of ICT's for student learning. More recently students have been encouraged to bring their own computer devices to school and connect them to the school's network. Around 20% of our students already do this, mainly in the senior school. Our two contributing primary schools have both trialed programmes of 1 to 1

computing devices with their year 5 and 6 students in 2014 using Google Applications and a range of devices including Chromebooks. A more formal BYOD programme had always been part of the 'why' in our strategic plan as a school and we felt the timing was right to explore this opportunity thoroughly, hence the focus of my sabbatical. What is best practice around BYOD, what process should be followed to make it successful? The 'why' is critical because it establishes a rationale for the decisions to be made.

Implementing a more formal BYOD programme raised a number of questions. From reading and collegial discussions I was aware of many different models of BYOD 'roll out' from the mandated 'you shall bring X device at these year levels' to 'bring any device at any level'.

Initial questions
1. What are the steps to follow, is there a best sequence?
2. What are the infrastructure requirements: network, wireless, internet security?
3. What technical support is required to make it robust, stable and sustainable?
4. What skills, knowledge and professional development do staff need to make best use of the devices so that they enhance learning and are not a distraction to learning? The device is not just a substitute, practice does need to change. On-going ICT support.
5. Funding considerations for the school. Yes, there may be savings with students bringing devices but technical requirements will increase.
6. How should we start - a pilot at a year level with a few teachers or a full year level or wider?
7. How do we effectively communicate the initiatives to key stakeholders?
8. How do we best manage digital citizenship and issues of cyber safety?
9. What device should we recommend students bring? Directed, recommended or free choice?
10. How do we cope with equity issues and support those who cannot afford or choose not to support the initiative?

One of my major dilemmas has been around ensuring that teachers have the pedagogies to use the devices effectively with their students so that learning is enhanced. What are the skills and tools they will need so that the device is not a glorified electronic 1B5? The investment by the school and family's needs to provide the potential for improved outcomes for students and teacher. This 'pitfall' of BYOD is noted in many of my readings, e.g. Fullan (2014) and Wright (2010).   Another 'pitfall' I pondered was how to avoid the device becoming the focus and consequently a distraction to learning. My thoughts on this question evolved throughout my sabbatical project.

Approach
I undertook the following during my sabbatical:
- Reviewed a number of readings on e-learning best practice and BYOD.
- Considered approaches from previous school visits to Wellington and Dunedin.
- Reflected on our own school's ICT journey over the past 6 years, the lessons learnt and our next steps.
- Visited 5 very different Auckland secondary schools and learnt of their approach to BYOD.
- Enjoyed many informal discussions on BYOD best practice with Principals and ICT staff from around New Zealand.

The 'Why'
I believe a starting point with any BYOD discussion is the 'why' and this was confirmed in my readings and discussions. It is not just going with the latest fad in teaching or about competition between schools. There needs to be a context or rationale that ties the initiative

closely to the learning outcomes in your school. If it is not going to make a difference to learning then the investment in time, energy and resource is wasted. The 'why' has to provide the reason, your motivation for doing and learning.

There is much written about the 'why'. The detailed literature review by Noeline Wright "e-learning and implications for New Zealand Schools gives a good summary of the positive impacts of e-learning (Wright, 2010 p ii):

"e-learning tools can motivate and engage students. These may be critical factors leading to improved educational outcomes".

"Learning in an e-Learning rich environment may make peer and collaborative learning opportunities easier, thus supporting students' cognitive, affective and social interactions."

Furthermore pedagogies that use these collaborative approaches "appear to lead to effective learning and better student/teacher relationships".

Wright also notes these benefits (Wright 2010 pp37-38):

1. Motivation and engagement
2. Independence and personalised learning
3. Critical thinking and multi-literacies
4. Access to information, resources and experts
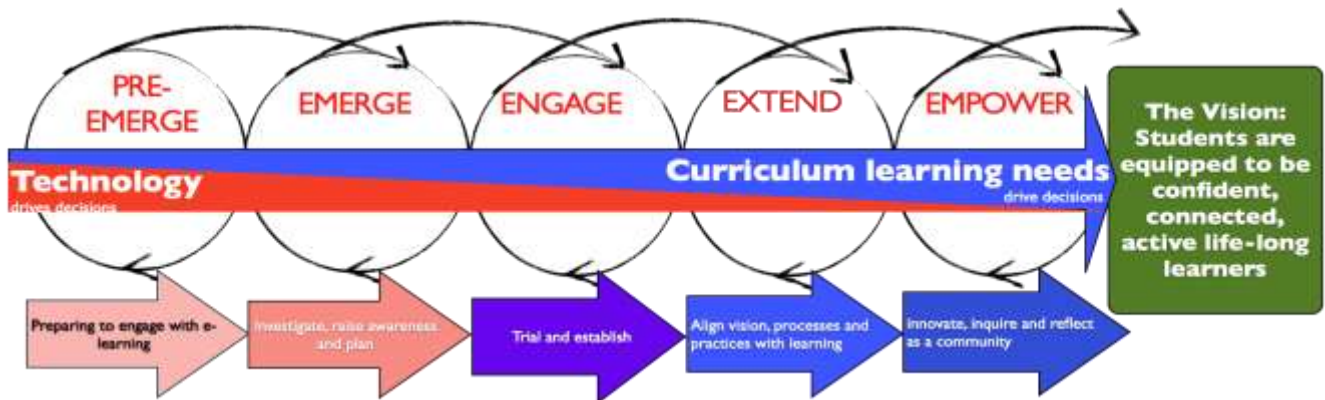5. Collaboration in wide contexts including international ones

There are other financial 'rationales' such as the expense of pursuing a 1 to 1 computer programme. Most schools are unable to achieve this without parental involvement in the BYOD programme.

Another factor that has become apparent is the growth in the richness and expanse of the internet and the ever increasing development of resources that provide huge potential for learning. It is a resource that cannot be ignored in education. Having 1 to 1 devices provides greater access to an expanding range of learning opportunities. For example, Interface February 2014 noted 12 'significant signs of e-learning' such as 3D printing, gamification, digital text books, flipped classrooms, the power of the Network for Learning, N4L, and the power of social media. The range and variety of resources available through the internet will only increase and schools need to be placed to make best use of this.

Helpful Review Tools
There are numerous tools to assist with school self review on progress and next steps with e-learning. These are helpful in considering the implementation of a BYOD programme. BYOD is just part of an e-learning journey and these frameworks provide a check on whether conditions are met and the next possible steps.
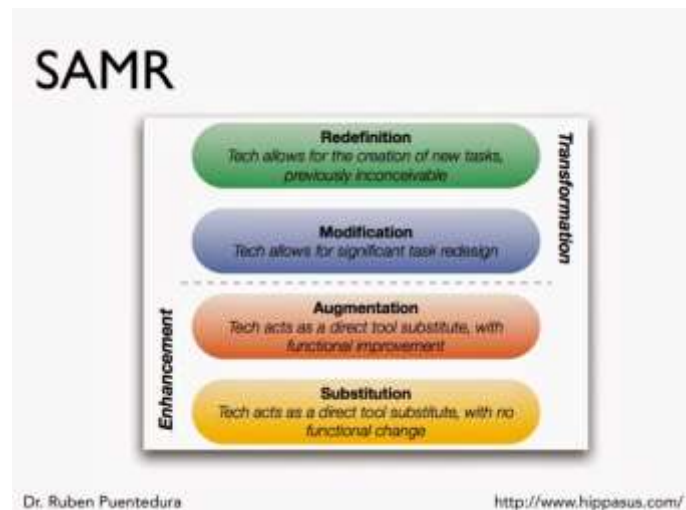
The revised e-Learning Planning Framework available through the Ministry of Education is one such resource and provides a detailed self review tool showing the phases for schools and learners. The focus is on the learning needs increasingly driving decisions rather than technology.   Schools move from 'pre emerging' through to 'empowering'. (See over)

PRE-EMERGE   EMERGE   ENGAGE   EXTEND   EMPOWER

The Vision: Students are equipped to be confident, connected, active life-long learners

Technology drives decisions

Curriculum learning needs drive decisions

Preparing to engage with e-learning

Investigate, raise awareness and plan

Trial and establish

Align vision, processes and practices with learning

Innovate, inquire and reflect as a community

The revised e-Learning planning framework (English-medium) (2014) page 1.

Another simple model that I found useful was SAMR, developed by Dr Ruben Puentedura. It provides a helpful check on where your school is on the e-learning pathway. There are four stages:

1. Substitution - ICT's are used to perform the same task, e.g. writing using word processing.
2. Augmentation - substitution that leads to functional improvement e.g. a quiz on Google form or Quizlet instead of using paper. Provides immediate feedback.
3. Modification - ICT's lead to significant task redesign e.g. Google doc collaboration on peer creative writing task or creating audio recordings.
4. Redefinition - Creation of new tasks – e.g. Claymation time lapse, green screen movie to create and tell a story.

SAMR

Transformation

Redefinition
Tech allows for the creation of new tasks, previously inconceivable

Modification
Tech allows for significant task redesign

Enhancement

Augmentation
Tech acts as a direct tool substitute, with functional improvement

Substitution
Tech acts as a direct tool substitute, with no functional change

Dr. Ruben Puentedura   http://www.hippasus.com/

These review tools are important as they challenge thinking around readiness for BYOD. Would it be worth proceeding down a BYOD path at the early stages of these models and when is the tipping point of readiness. Is there such a point? I would argue that the first two stages of SAMR do not require a 1 to 1 programme to be realised. A BYOD programme though will more easily realise stages 3 and 4.

One of my dilemmas or questions was on what skills and professional development teachers needed to be ready for BYOD and e-learning. My thinking now is that there is not an 'ICT pedagogy' that you teach teachers and then they deliver. I believe it evolves and effective e-learning pedagogies will be co-constructed between students and teachers through stages 3 and 4 of the SMAR model. A key is ensuring the infrastructure is there and that teachers have a base of skills and a willingness to learn. Part of this readiness is a platform that allows ubiquitous learning such as Google Applications for Education and management of this using Hapara or Google Classroom. Teachers then need permission to move to collaborating and negotiating curriculum with students in line with stages 3 and 4 of SAMR.

An effective BYOD programme will facilitate ubiquitous or 24/7 learning and such pedagogical approaches as the 'flipped classroom'. It also has the potential to create more inclusive and personalised learning. Students are able to engage with content and learning at home and then come to school to interact with this and make meaning with their peers. This requires a shift for students to become more self-directed learners and there is some debate about whether the majority of learners will. Not all students currently place a priority on homework and may have a similar view to having to access learning online beyond the classroom.

The resource 'K-12 Blueprint – A planning resource for personalised learning (2012)' is helpful in reviewing a move to BYOD. The resource notes that greater access to ICT's is about preparing students for a 21st Century world with technologically rich working, home and leisure environments. Teachers need to actively engage with the tools and learning because the tools alone will not lead to improved learning and outcomes.

The K-12 Blueprint also provides an excellent overview of the steps to consider in implementing BYOD in a school.

Steps
1. Engage the community: identify stake holders and communicate the vision for your students e.g. improved engagement, managing learning, access at home 24/7.
2. Develop an ICT team to assist with implementation, policy development, planning problem solving. This could involve BOT/parents, teaching and management staff and students.
3. Develop the physical infrastructure: network capability, wireless, high speed internet, accessible from home, data security and management.
4. Develop software infrastructure: what applications and how will they be accessed. Platform independent tools needed, e.g. Web 2, cloud based, online.
5. A central portal or place to collect resources: Intranet Learning Management system e.g. Moodle or Ultranet or Google Drive.
6. Development of BYOD and acceptable use policies both in and out of class, digital citizenship and cyber safety.
7. Build a curriculum: learning anywhere, anytime, ubiquitous. How does your approach support this?, e.g. course materials, resources and homework available online at home, e.g. Hapara dashboard or Google Classroom.
8. Consider devices: e.g. will you require a keyboard, screen size, charging, processing power, security, care, wireless capable. One device mandated, recommended or multiple devices?
9. Provide ongoing professional development support. Supporting teachers with BYOD implementation, tools training, management in class, making best use.

Dealing with the distraction
Another of my questions was around the device not becoming a distraction to learning. The article above stimulated my thinking on this. I am aware of several schools where teachers are frustrated by the device being a distraction. Students have also commented to me personally that getting distracted is very easy and tempting. Within any BYOD programme the teacher must remain in the lead role in providing the best environment for respectful learning. One could argue that a pencil is also a distraction and teachers need to manage this distraction. BYOD is no different. The device, for example, would not be used all of the time, it is a tool, not the focus of learning. I would also argue there will be less likelihood of distraction in a learning environment where the focus is more on stages 3 and 4 of the SAMR model, combined with effective in-class management of the device.

Choosing Devices

Another helpful resource was "Bring Your Own Device to School", a Microsoft briefing paper by Bruce Dixon and Sean Teirey. They note that the internet has become richer and more accessible and there has been a dual growth in hardware and software that has meant learning is now anywhere, anytime. They highlight again that simply equipping students with devices and digitising curriculums is not an effective e-learning approach. The aim must be to create confident, flexible, self-directed life-long learners through use of ICT's for connection, collaboration and creation.

This resource provides some excellent questions around the models of device to purchase or recommend – should one device be recommended or multiple devices? Who owns the device? What capabilities do you want from the device?

The decision on which device must focus on optimising pedagogical use: not just bowing to fashion, or trend, or what can be afforded. Our school for example has reasoned that a student will need two devices through their schooling. As students move through from Year 7 to 13 the complexity of needs increases such as specialist programmes requiring greater processing and storage capacity. The limited 'life expectancy" of devices is also a factor to consider.

Dixon and Tierney (2013) outline three BYOD myths:
1. BYOD is always financially sustainable – you need an awareness of the capability of your school community to pay and how they will be supported.
2. BYOD is cheaper – it is not. Costs are moved from device purchase to managing the complexity of the network, professional development, security and technology issues that arise from a greater number of widely different devices being used.
3. Just get the device in their hands – The device alone is not the answer because students do not intuitively know how to use technology for learning. Teachers need to employ a pedagogy and management style that allows effective e-learning. This can be more challenging with a range of devices.

Their report gives some helpful questions to stimulate thinking around BYOD:
- Is the physical and personnel infrastructure and resourcing in place?
- Does the funding model ensure equity? Avoid the digital divide.
- Will the variety of devices have the same level of functionality?
- Are teachers confident in managing a BYOD classroom? The device must not make this more difficult. Leaders need to work with not only the 'innovators or early adopters' but also the 'transformers', those teachers who want to make it work as simply as possible with a focus on learning.
- Does the school's philosophy on self-directed learning align with students having input into the what, when and how of learning, not just the choice of device?

Reflections on school visits

In Term 2 2014 I visited five secondary schools in Auckland ranging from Decile 1 to Decile 10. I considered the following areas in my discussions with ICT staff, Principals and teachers.

- **What devices had been chosen for BYOD and the reasoning for this.**

Reflection: There was a variety of devices used, both MAC and PC, with increasing use of Chromebooks. Parents paid for devices either directly or through Trust leasing options. Students owned them. Few tablets were used with preference for a keypad and at least a 10 inch screen. The device was not relevant using Google. Most schools started with a particular year level. One still promoted optional BYOD.

You need to have spare devices in the school to overcome inequity and instances of breakage, not charging, or left at home.

Very clear expectations on use needed. Responsibilities for charging, security, safe responsible use, breakage and repair.

- **Software platform and programme**

<u>Reflection:</u> *Google Applications for Education were a feature of all schools. Use of Gmail, Sites, Drive and management of this through Hapara and plans to use Google Classroom. The use of dedicated Learning Management Systems had declined in all but one of the schools. E.g. Moodle initially used but now overtaken by Google sites and Drive. Google did it all anyway.*

All but one school allowed open access to the internet, e.g. Facebook and UTUBE. The philosophy was that students need to be good digital citizens. They felt that a school needed to prepare students for when they are at home with their devices and there may be few restrictions on their computer use and browsing. A programme needs to be taught though. Programmes were in place for this in all schools as part of long form times and ICT classes or within curriculum teaching.

Although there was a diversity of implementation each school's BYOD programme was well planned, well supported and staged.

- **Professional development**

<u>Reflection:</u> *This was important and again an evolution had occurred in some schools. A move from directed professional development, e.g. TOD, school wide PD and ICT snippets for staff to teachers taking responsibility through their appraisal inquiry and school wide goals on ICT. Need to meet the Registered Teacher Criteria on this. Still some regular ICT PD offered through optional sessions for staff or with communication of new systems. ICT lead teachers or faculty ICT leaders appointed. Clear leadership is important e.g. a Director of e-learning.*

The SAMR model was seen as a valuable resource for guiding development and review and was mentioned in 3 of the schools visited. The MOE e-learning framework was seen as valuable but more complex and less easy to implement.

- **IT support**

<u>Reflection:</u> *All schools saw this as a priority and resourced it well. Some external support but internal IT management provided. One school provided IT support for students a couple of days a week at lunch times even though the device was owned by the students.*

- **Classroom observations**

<u>Reflection:</u> *Devices were being used authentically in the classes observed for a range of tasks, e.g. research, creating personal notes from a variety of sources and programming. Schools were flipping the classroom with BYOD - a natural progression.*

- **Rationale for BYOD and e-learning**

<u>Reflection:</u> *An extension of the New Zealand Curriculum - connected, confident and lifelong learners. E-learning and BYOD makes a difference to learning and engagement and the implementation was seen as no big deal. The device is there to support learning and it should be seamless. There is a focus on pedagogy, how to use the device to enhance learning.*

Interestingly there was a range of thought and practice on communication with the wider community. In most cases it was mainly Board, Principal and leadership team driven. The rationale apparently is BYOD is a tool and we need to get on with it and manage the process. It is simply a part of 21ˢᵗ Century learning.

- **Other thoughts/reflections**
  - *The devices are engaging!*
  - *The schools could have made greater use of their contributing schools e-learning experiences. This is an opportunity lost. Were some students starting again with little transition?*
  - *Modern Learning Environments are part of effective e-learning e.g. a variety of learning spaces, flexible, open, transparent, a variety of furniture.*
  - *IT students from one school provided regular IT support for its community members. This was a nice idea.*
  - *Identifying your people is important, the leaders and transformers.*
  - *Interesting to see that the bookable computer rooms and specialist IT facilities are still needed.*
  - *There is always a range of staff capability even in the most IT savvy schools. You need to work with and encourage people but also make the expectations and direction clear.*

Understandings gained

As a result of my investigation and reflection I have determined the following key thoughts for best practice with BYOD. My reflection has also highlighted that some of these things we have done well and others not so well. Our journey is a work in progress.

1. There are a multitude of possible approaches to implementing BYOD. A school needs to find its own way. The starting point must be the 'why' related to a school's strategic direction to teaching and learning. Use a team to do this.
2. Check the readiness of staff, students, Board and community. Review where you are at using a review tool such as the e-learning framework or SAMR and considering review questions such as those provided here. I believe our school is near the Emerging Phase, or transitioning from Modification to Augmentation. I question whether a BYOD programme would be successful unless core staff were at this stage of readiness.
3. Your physical and personnel infrastructure needs to be stable and robust. It helps to have a reliable wireless network with high speed fibre internet access.
4. Communicate with teachers, Board, student and parents so they know the plan and reasons for it. Invite feedback. Make the specifications for devices, purchase options and responsibilities clear.
5. Investment in ongoing PD is a must. Staff and students are going to need ICT PD and IT support. Grow that capacity within your staff and use your flag bearers and champions to promote and enthuse.
6. Implement your BYOD programme where your team is strongest, most ready and keen to learn along with the students. Identify them and support them. They need to develop the pedagogy with each other and with their students. What are the classroom management expectations, how is the device most effectively used?
7. Your staffing resource will determine whether the roll out is for 1 or 2 e-learning classes or a full year level or larger group. Piloting and trialing are appealing.
8. Make use of the expertise and experiences of your contributing schools. Our work across Central Otago with the E-Central Cluster ICT PD has greatly assisted this. What devices, applications and pedagogies are contributing schools utilising? There is an opportunity for positive transition.

9. Google Applications for Education has facilitated the move to BYOD and allows for a range of devices to be used.
10. Equity must be considered. Mandating one device and requiring families to purchase this is not equitable. Some will already have made an investment in a computer. Furthermore a student is likely to have two devices in their time at a secondary school. With Google the focus is on fast access to the internet, not the power of the device, at least in the junior school. There is a balance between cost and what you need the device to do.
11. Resource the programme well - the people, hardware and infrastructure. Otherwise frustration inhibits the best use of the devices.

Actions resulting from my sabbatical

- We did not proceed until high speed fibre internet had been installed and supporting infrastructure was reliable e.g. wireless. Our wireless network is now at capacity and we are waiting for a network upgrade.

- We decided to roll out formal BYOD to our new 2015 Year 7 intake. Many of these students had been well exposed to e-learning using Google Application with Chromebooks and other devices through their final years of primary school. It made sense for us to continue this. We communicated this to parents and students at the end of Term 3. The material we shared with parents is in the appendix.

- We continue to work with our contributing primary schools and learn from their experiences.

- We recommended a Chromebook to families that wished to purchase a device but provided specifications for any device that met requirements. Our focus was on a good web browser. Our starting point will be Google Applications and management through Google Classroom.

- We purchased 3 Chromebooks per classroom as spare devices to cover those left at home, uncharged, broken or for students who do not have access to a device. This have given us 100% coverage.

- A Year 7 staff team was identified that would support e-learning in their curriculum areas. One of our ICT lead teachers will be dedicated to supporting the Year 7 programme. Further PD is planned through the E-Central ICT PD facilitator. A regional school visit is planned to observe a similar BYOD programme and learn from it.

We are underway and have much to learn. We feel we have reached a point where we are ready and are keen to explore with our students the potential of e-learning. We are very aware of the challenges but these are countered by the opportunities a 1 : 1 programme has to enhance the learning and engagement and the educational outcomes for our students.

Appendix A - School Visit notes

Auckland school visits

1. All schools had wireless fibre with at least a 100MB connection.
2. All still had issues with wireless coverage and students doing things they should not.
3. All impressed on students the cybersafety responsible use requirements. Self management etc. They did not block sites.
4. None used an intranet - Ultranet etc waste of time. Google does it all or SMS e.g. KAMAR.

SCHOOL A
- 550 pupils
- BYOD for 3 years

Devices
- A Trust supports purchase of Chrome books at $3.50 per week. About $550 for the three years. Important to include a case which costs about $60 v's a new screen for $120.
- Students like them and use them.
- Plan to roll out fibre wireless to the community so that the families can access from home using the student device.
- Some students beginning to bring other devices. This is not an issue because the browser link to Google is the key.
- About 30 out at a time broken. Each class has 5-6 wireless desktops for students. No excuses.
- Some specialist ones for Art and Music.

Platform
- Google applications.
- All students have a Google site for their work.
- Each faculty has a site for their content and activities.
- Students all use Google Drive, no issue.
- All staff use Dashboard and monitor work.
- Google+ seen as a great media to link with students. This is like Facebook with tighter controls for classes.
- Moodle not helpful too complex
- No special filtering. Can access Facebook and will during the lunch time etc. This is teaching self management and being cyber smart.

Professional development
- Staff PD in the morning snippits.
- IT lead teacher with at least 10-15 hours to support staff.
- Staff PD days and after school help. Big focus on sites and Google Drive. Getting content on Google.
- Used the SAMR model. Simple and understandable for teachers.
- E-learning through the RTC's and need to show evidence of this. Coaching model of appraisal now.
- Was a full time resource for PD support but now HOF's now given 0.2 to drive e-learning in faculties.

Approach to cyber safety
- Responsible use document.
- Lease documents.

- Great cyber site created. Delivered by tutor teachers.
- Getting students to be cyber smart. Teaching skills for life.

IT support
- External people plus full internal IT tech people.
- Fixers for the devices, one room.

Classes
- Watched a Year 11 Mathematics class on Google Drive, making notes with links sharing good sites etc.
- Saw English and DVC. All using Drive as the base. Accessing quizzes through Google.
- Students respectful, interested, engaged. Lovely atmosphere.
- Flipping occurring now: Ubiquitous Learning.

Rationale
- Focussed on learning enhancement and engagement. Life long learning self management the NZC 4 goals all key to the policies.
- Staff on board and using the technology. Positive.

Thoughts
- Students wanted the device and access.
- Contributing schools using them.
- No real resistance, families supportive with payments.
- Mixing up seating in classes, bean bags couches, forms, chairs desks etc Trying MLE within the constraints of older buildings.
- Geek Cafe with members of the community coming in for support, scanning, setting up computers. Hospitality and Catering doing the coffees, lunches etc.

SCHOOL B
- 750 students Decile 10 Modern learning.
- 3 time 100 minute periods with project Wednesdays - solo based.
- Learning commons idea -pods shared teaching.

Devices
- No stipulated BYOD policy. Students bring all sorts, mainly laptops to school. No limit to the number of devices or type.
- Responsible use important. Must tick box when first sign in.
- Still pods of computers for students. Not everyone has them. Can't book spaces regularly.

Platform
- A Wiki interface but Google is the basis. More Google Drive than sites. Intranet.
- Open source software.
- My Portfolio to show evidence of learning for project. This links well.

Professional development
- No staff wide PD. All part of Teaching as Inquiry approach now. No appraisal as such. Looked at on going conversations on RTC's and Goals. Must identify a gap or crisis and fill it. Theories interventions review. E learning will feed out of this.
- Not app focused.
- What is the learning need and then what ICT will help. The App does not necessarily fix things. Great resources on Wiki.
- Staff PD support. Staff driven if they want it but part of appraisal inquiry. PI. Professional Inquiry.

IT Support
- IT leader meets with technicians re wireless issues etc setting up labs, printers.
- He teaches only a tutor group. Full time on IT.
- Students look after their own devices completely.

Rationale
- Learning is the focus and devices there to support, seamless, no big deal. Staff integrate ICT's into teaching naturally.

Thoughts
- Tertiary feel, just like Otago University Library, relaxed, teacher's first name.
- Strong engagement.
- Ubiquitous. Happening all the time and part of the curriculum.
- Need to think of desks, chairs etc variety.
- Wow what a learning environment.

SCHOOL C

Devices
- 70% iPads the rest a mix of tablets Chromebooks etc.
- 300 megabit connection $20,000 a year fibre fees.
- They have to get permission to fix devices as these are not leased from school.
- Expectation that they bring the device charged ready to go. Not acceptable to leave at home. Students know this so they bring them.

Programme
- Started in Year 7 three years ago. Now Year 10 have them.
- Board directive, little staff input.
- They have a deal with Noel Leemings but no lease to buy etc. Not responsible for device in any way.
- Not at all concerned about the type of machine with Google. Very skilled with Google Drive etc.
- Staff students use Drive and sites. No LMS. I think they tried some but no longer useful.
- MUSAC school heading to KAMAR at the end of the year. Would wait for MUSAC Edge if able to. Principal initiative.
- Moodle used initially but now not.
- No Dashboard as Google will do this anyway soon for free.

Professional development
- 45 minutes of every week. School wide delivery. Google Apps. Sites Google docs. Not all are keen.
- Real time staff support.
- Having to run whole staff PD, not a good model.
- Getting staff to upload material very important first step. SAMR model used. E learning framework seen as complex.
- Some staff resistance. (Students are easy, it is staff who are the challenge) What difference will it make to learning?

IT Support
- Full time network manager and IT manager. They buy in any special needs requirements.
- They have an office area and students and staff bring computers/questions there.

Rationale
- Competition. Some background but little movement before that.
- E-learning being pushed as pedagogy.
- Recommended they bring. Not mandating a device but most bring iPad, lap tops.

Thoughts
- Still a large number of desktops, bookable spaces.
- Some lovely learning spaces, library, atriums, break out. Mix of furniture.
- Year 11-13 bringing devices anyway.
- Need skilled passionate people who can drive inspire encourage people to move.
- What will it look like in 5 years. Google wear. Can't stop it. Watches Glasses etc.

SCHOOL D
- Decile 9, 1000 students, older school but refurbishing.
- Full up. Enrolment scheme.
- Nice fields and spaces. Quite a small campus
- Mostly NZ European and Asian. 8% PI Maori.

Devices
- Clear specs provided. Only allowed one, 10" screen.
- Most bring lap tops some Chromebooks.
- 40% bringing them.
- Fibre only last year and SNUP this year. Good wireless apart from admin area.
- Faculties have pods of netbooks. This can be tricky as some won't bring device.
- Still Desktops labs. e.g. Art, Graphics.

Programme
- Been through a well planned process for the past 5 years.
- This year launched BYOD optional. Outlines of specs and also communication that it will not be used all of the time.
- No real consultation. Principal wrote to community and said this is what we are doing. Go buy them and bring them to school. No one year level. Not enough skilled staff for an e-learning class. Year 9-13 school.
- Some teachers reluctant to move.
- Moodle with Google and KAMAR. Moodle a key resource for them still despite Google. Not much on sites but plenty on Drive.
- A bit wary of Google. Too open. Not enough constraints.
- Does not use Dashboard. Uses Moodle.
- Filtering open?. Teaching KC's through this.
- Good surveys showing students want to bring devices and want staff to make more use of them in class.
- Only one device and mainly laptop is limiting for creation e.g. video and photos. Only one device connected.
- Really good info online.
- Cyber safety and skills etc delivered in the long form time swap with junior and senior assemblies. You need a programme of training for this and a time allocation. What do we want staff and students to know to get started on this?
- Booklets produced.
- My Portfolio?

Professional Development
- Lead teachers with middle management units, one per faculty 7 in total.
- Strong links to inquiry and appraisal. A major push in the school. Inquiry as part of teachers looking at their classes and identifying needs and addressing them.
- Links also to thinking programmes HOT, SOLO, Blooms etc.
- Professional development held Wednesdays for 45 minutes. Students stay at home. A mix of delivery.
- Optional sessions on e.g. Drive and Web 2 like Wordle, Quizlet and quizzes on Moodle.
- Constrained by few innovators on staff wanting to push IT e-learning.
- Variable delivery e.g. Maths resistant.

IT Support
- The ICT leader oversees the PLD. She has an IT tech and student support. DP has oversight.
- Network sound as is the wireless network. Goes well.

Rationale
- Strongly learning focussed. E-learning pedagogy MOE materials and SAMR model ideas. What will make a difference to learning? The Higher Order Thinking (HOT) has helped.
- Well communicated to staff and students.
- Looking to see if it is compulsory at one level next or an e-learning class approach to push things.

Thoughts
- Can't force staff. But they do need the device in front of them to figure out how to cope. They do need to start getting content online for students, links etc. It helps if you have keen ones.
- Not for note taking - waste of time!
- Flipping the classroom is important.
- The teacher is still in charge. If it is not time for the device then they keep it away. Need to ask for cell phone out. No texting or Facebook. e.g. laptop screens down. Manage the class from the back. Move around. Can't just sit at the front.
- If you go BYOD you need to have spares. 5 in each class. They bring pen and paper.
- Need to be prepared when the Net goes down.
- What if it all crashes?
- Preparing for life beyond school. What application will they use. Does it matter about Word or Excel. Will they pick it up anyway? Specialist apps maybe. Clerical?
- Not good knowledge of what contributing schools doing. Transition important.

SCHOOL E
- 1050 students Decile 10 – Year 7-10
- 10 year old school
- Big pods with atriums and break out. Pretty standard classrooms. Good facilities.

Devices
- Lots of lap tops mainly, with an increasing number of Chromebooks.
- Gives guidelines for device $400 to $1200. Needs the processing and creation power.
- No limit to number of devices.
- Students bring, no deals, no responsibility. PC platform.
- Watch iPads as do not do Google presentations well. Better to have android device.
- 5-6 old desktops in each class. Thin client.

Programme
- Strong Google for everything. Drive was it. Used sites etc
- My portfolio too.
- Teaching skills by homerooms at the start of the year. Modular programmes too in IT.
- Secondary curriculum 5 periods a day.
- Cybersafety all part of Digital citizenship programme. From website….
  To that end we have a dedicated "Learn IT" ICT period for the Integrated Programme at Years 7 and 8 that has specific lessons that focus on Cybersafety and the concept of responsible Digital Citizenship. Our Community Constable spends time with each of our Year 7 and 8 classes to look at Cyber Safety and the criminal aspects of bad online behaviour. Each year a company from Australia called "My Friends Dot Com" uses music and humour to teach Year 8 students about Internet issues. The Year 7 Health unit on Bullying has Cyber bullying as a focus. Students then create posters to make other students aware of bullying and how to behave. In year 9 there is a dedicated ICT period that also has a focus on Cyber Safety and Digital Citizenship as part of the unit. ICT is also integrated into most units of work and Cybersafety issues are discussed as it naturally occurs.
- Very controlled network with firewalling, their own. A bit of a constraint for staff and students at times. No Facebook etc. Very layered.
- Wireless goes well but only provide 50 Meg that still costs $30,000/year.
- Must watch contention rate. Too many others on it. This will cost.
- Staff have material online.
- Moodle not used anymore.

IT support
- New Era IT doing well. Great support for them.
- No issues with wireless. But must watch 'flooding' and powering up of wireless points.

Professional Development
- Nothing structured now on IT. Part of inquiry approach. In house.
- Support offered. Just part of what they do.
- Still a range of practice and uptake by staff. Science good Maths less so.

Rationale
- Learning, blended. Several skilled teachers.
- No big deal.

Thoughts
- Not really clear on contributing schools' approaches.
- Some flash devices.
- Still not used all the time.
- Creation content and understanding.
- Library developing itself as a hub of e-learning. Chromebooks in the library for use. Can get out.
- Not apps focussed.
- Email newsletters home. No hard copy.
- ICT support for students is available at lunch times. Students cannot be released from class for ICT Support.
- We need a director of e-learning.

Appendix B – Communication to parents on BYOD

Cromwell College

26 September 2014

Kia ora koutou Year 6 Parents and Children

WELCOME TO CROMWELL COLLEGE – MAKING THE TRANSITION FOR 2015

Our staff and students are looking forward to welcoming prospective Year 7 students and whanau to the College. There are a number of activities planned with Cromwell Primary and Goldfields Primary to enable a smooth transition to life at our school. These are as follows:

- Friday 7 November – small groups of our Year 7's will head to each of the primary schools for question and answer sessions.

- Tuesday 11 November - Year 6 students will visit the College for an orientation morning from 9.45am until 11.15am. This will involve time in Year 7 classes, a tour and some games.

- Thursday 27 November – Parents and Year 6 students will meet for a welcome in our Auditorium at 6.30pm and a tour of our school. It is also a chance to meet key staff such as the Year 7 Dean, and Homeroom Teachers.

If you have any questions about this programme then please contact our Year 7 Dean through school.

Year 7 Bring Your Own Computing Device (BYOD)
I would like to signal that our Board have agreed to a proposal for all of our Year 7 students to bring a computer to school. We realise that there have been programmes within our two primary schools using computers as part of their classroom learning. Our staff have been preparing for this initiative over the past few years.

We have surveyed our Year 7 and 8 parents over the past two years and there is strong support for this initiative. One of the major concerns is cost. The Board is considering how this can be managed for families through a lease to buy scheme.

Students will be able to bring any computer device that connects to the internet and need not purchase a new computer. Our preference is for a computer with a keyboard but a tablet would still be acceptable. Our recommendation is for a Google Chromebook as it is well priced ($350), robust, quick and provides direct access to Google Applications. We will be looking to organise a bulk purchase deal with a provider.

We will provide more information on our BYOD plan, computer specifications and purchase arrangements later next term. If you have any questions in the interim please contact me through school.

We look forward to making the transition to College for your son or daughter a smooth and successful one.

Yours sincerely

Mason Stretch
Principal

Cromwell College
CENTRAL OTAGO

Cromwell College Bring Your Own Device

After feedback from parents and consideration of the trials at our two primary schools, we are planning for a BYOD e-learning approach in our two Year 7 classes in 2015.

What Device to Bring?

- Students will be able to bring any computer device that connects to the internet.
- A new computer is not required.

If you already have a computer then below is a list of the **minimum specifications** to ensure that the device supports your child's learning and connects easily to our school computer network:

- Wireless capable (802.11 a/b/g/n)
- Ipad, netbook, tablet or laptop. A keypad is preferred
- Ideally less than 3 years old
- If it is a PC laptop then it needs to be running at least Windows 7
- Battery life of 5-6 hours
- 2 GB of RAM
- At least a 10 inch screen
- Protected by a robust carry case

Smart phones do not have the functionality required to be part of our BYOD programme.

If you are unsure whether your current computer will meet the required specifications then please contact our IT Manager, through school.

Purchase of a new Chromebook

I understand that Year 6 students at Cromwell Primary have the option of purchasing an HP Chromebook, with case and insurance for $459 including GST through a bulk order. Families from Goldfields Primary are also welcome to purchase their Chromebook through Cromwell Primary. Payment is required to the Cromwell Primary office by Friday 21 November.

Our preferred device is a Google Chromebook and the various brands are very comparable e.g. HP, Acer and Samsung. We have been in discussion with Cyclone Computers and they have put together a 'bundle' at a discounted price for students that includes an HP Chromebook, protective case and warranty for a cost of $471, including GST and freight.

This can be accessed from www.cyclone.co.nz by choosing Cromwell College from the drop down menu and inputting the password CC2015.

We realise that the cost of this initiative will be significant for families. Families are welcome to purchase their Chromebook from another business such as Noel Leemings or Harvey Norman that have 6-12 month interest free payment options.

We will also be purchasing a small number of devices for use in the Year 7 classes to cover for students with no device, breakage, break down or low battery.

If you have any questions or concerns about the purchase of a computer for your child then please contact our Executive Officer.

How the device will be used

We will be developing how best to use BYOD in the Year 7 classroom through the year. Our staff have been preparing for this over the past two years. Initially Google Drive will be used for sharing, creating, completing and editing tasks, with work stored in the cloud. The device will also be used for internet research, communication, presentation and as a means for creating a portfolio of a student's work. There are a number of computer applications that will be utilised to support learning. Students will still practice the craft of handwriting.

Students will be expected to have their device charged overnight ready for school the next day. Our school is not able to provide technical support, insurance or repair services. Secure lockers are provided for students.

Our Year 7 classes will discuss cybersafety, how to use their devises appropriately and how to keep themselves safe online.

A new Chromebook should last for 3-4 years. For Year 11-13 we recommend that students use a laptop.

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