

Project: Technology, learning to read and consolidation of the reading habit  
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This report will highlight the key factors in establishing and maintaining an effective reading and digital ecosystem in a highly functioning 1:1 iPad public primary school in Aotearoa, New Zealand. The aim is to give perspective and insight into how the teacher is integral in driving digital technology to accelerate learning in a balanced, supportive learning environment. With reference to relevant and current literature, this report primarily focuses from a teaching perspective, exploring the experiences of teachers 'at the chalk face'.

At times I include my personal opinions, reflections and musings. These are entirely my own, based on my experiences of teaching literacy over many years both in New Zealand and England.

*“And in the end  
it is the individual adaptation  
made by the expert teacher  
to that child’s idiosyncratic competencies  
and history of past experiences  
that starts him on the upward climb  
to effective literacy performances” Clay (2015).*

## **Rationale**

Considering the aim of E.ducate Uruguay in identifying where technology finds its limits and strengths in the development of reading skills, the attitude and belief system of the teacher can make all the difference. In developing countries such as Uruguay, where digital technology is deemed the cheaper and more preferred tool is this the reality of what students and teachers prefer?

Evidence from E.ducate Uruguay’s project ‘Leer es un Viagen’ highlighted students still prefer hardcopy books to digital. These findings are not surprising internationally. A recent study in Singapore surveyed over 6,000 students, examining reading habits stating “Contrary to popular belief that today’s adolescents are digital natives who are completely immersed in technology, we found that adolescents in Singapore still preferred print books” *Loh & Sun (2019)*. How are schools attending to these needs is an important question educators must reflect on. Exposure to text, text selection and relevance, availability, access and connectivity are all important factors for consideration.

The notion that Digital Technology and hard copy books should complement each other in a way that raises student achievement and enjoyment of reading rather than ‘one is better than the other’ is a

notion to consider. Can students prefer both? What does 'prefer' actually mean? What is the purpose of the reading task? Certainly, individual preference decides which way the pendulum swings; is there merit in suggesting that students enjoy the socialization of reading, rather than the solitude of reading from a device? What does this enjoyment of reading and socialization really look like, sound like & feel like in a classroom setting?

## **Context**

Throughout this report, reference is made to current teaching practice at Te Akau ki Papamoa School. TAKP is a thriving state school with over 700 students from Years 1-6, recognised as the first Apple Distinguished School in New Zealand in 2015. All teachers are accredited Apple Teachers, among them are 3 Apple Distinguished Educators. Collectively growing future leaders, world thinkers, global communicators and change makers, teachers are at the heart of accelerating student success in all areas of the New Zealand Curriculum.

Leading the fish to water takes leadership courage and a shared vision to change. Teachers are faced with a mountain of daily tasks and added responsibilities, so any teacher improvement needs to be carefully considered. Scaling up involves adapting an innovation successful in a local setting to effective usage in a wide range of contexts (Dede, 2006).

Coburn (2003) suggests the following four interrelated dimensions to successful teacher pedagogy: depth, sustainability, spread and shift in ownership. 'Depth' refers to deep and consequential change in classroom practice, altering teachers' beliefs, norms of social interaction and pedagogical principles as enacted in the curriculum. 'Sustainability' involves maintaining these consequential changes over substantial periods of time. 'Spread' is based on the diffusion of the innovation to large numbers of classrooms and schools. 'Shift' requires districts, schools and teachers to assume ownership of the innovation, deepening, sustaining and spreading its impacts.

A fifth possible dimension to extend Coburn's framework is 'evolution', in which the innovation as revised by its adapters is influential in reshaping the thinking of its designers, creating a community of practice that evolves the innovation (Dede, 2006). This is exactly what Te Akau ki Papamoa School have created.

## **The role of the teacher**

Hattie & Clarke (2018) suggest that "the greatest lever for system improvement is developing the capabilities of the adults in the school" (Hattie & Clarke, 2018). If we were to imagine peeling back the layers of an onion to find the heart of best practice in teaching, in my opinion, teachers are at the core. Furthermore, a great teacher develops strong relationships with their students and colleagues. 'Know me Before you teach me' is a phrase that is so intertwined and normalised that we just do it now. New teachers to our school are trained and shown through practice of their own how we form strong relationships with our students and families.

“Teachers have a professional obligation to develop professional relationships with a diverse range of learners and whānau (family) and maintain and raise professional standards”. Teachers Council New Zealand.

The other layers wrapping around the onion include passion, professional development, motivation, reflective practice and a strong set of beliefs and values that underpin a teachers’ practice.

### **The teacher as a model**

New Zealand teachers are well trained to deliver reading lessons that invite conversation, sharing and indeed enjoyment out of reading a text alongside their peers. Training teachers in New Zealand universities are alluded to the importance of the Deliberate Acts of Teaching (DATS) very early on in their learning. From my experience at University, the requirement was to observe best practice in reading. During these valuable observations, a standard requirement was to highlight and reflect on how the teacher was using the DATS. I quickly realised that these DATS implicit or deliberate were valuable tools in my ‘teaching toolbox’ “Instructional strategies are the tools of effective practice. They are the **deliberate acts of teaching** that focus learning in order to meet a particular purpose”. *Effective Literacy Practice in Years 5 to 8*, p. 78

The Deliberate Acts of Teaching in reading are:

- Modelling
- Prompting
- Questioning
- giving feedback
- Telling
- Explaining
- Directing

*“Modelling, or “showing how”, is perhaps the most powerful and pervasive form of instruction. Almost everything the teacher does and says in the course of the school day provides a potential model to the students in the classroom. Much of this modelling is implicit and occurs without either teacher or students being conscious of it. However, deliberate, goal-directed modelling is an essential teaching tool”.* *Effective Literacy Practice Years-1-4.*

Modelling is an explicit act intertwined throughout the Curriculum. The teacher modelling reading to their students promotes a love of reading and the idea that reading is a useful tool in life. Reading for enjoyment is also modelled simply by the teacher sharing personal experiences or connections to certain books from their childhood. “I love this book, I remember my Dad reading this to me when I

was a little girl” is a powerful, yet simple recollection of a childhood memory. Children love to hear stories that they can connect with. After all, teachers are wonderful story tellers.

The teacher's expectation that all students will read at home with a family member is transparent from the first day of schooling. Students are provided with a ‘book bag’ , a reading logbook and a reader from the school. Students are rewarded and celebrated when reading happens at home. Students share their learning with the family at home.

Instructional reading is, I believe the most important aspect of a successful reading program. Instructional reading should occur daily in every classroom, regardless of level or reading ability. Within the instructional reading lesson, the teacher is deliberately planned for the student’s needs by selecting texts of high interest that connect to the immediate world of the learner.

Shared reading is a deliberate instructional reading strategy that focuses on the social nature of reading - reading for meaning and enjoyment. How the teacher behaves motivates the students to read. The teacher modelling a love for reading is powerful.

### **The teacher is an observer and reflective practitioner.**

#### **Observations**

Teachers ‘pull up a chair’ and observe behaviours of students in the way they read and use digital technology. Furthermore, the teacher's role of developing an understanding into the needs of their learners is essential. Student voice and preference has provided valuable data into reflecting on our current practice.

In this investigation, student attitudes towards their reading and the disconnection of teacher perception is worrying. This data leads towards an assumption that teachers in Uruguay need more support in assessing their students’ attitudes and beliefs in reading. Teachers observing their students reading behaviours and observing other teacher’s best practice in teaching reading has proven to develop pedagogy. “Teachers who learn to be observers of successful and unsuccessful learners have data on which to test their assumptions” Clay (1991). Furthermore, Clay (1991) suggest that teachers must continually test their assumptions to develop their own practice.

Considering the teacher as the model, there is no difference in the teacher modelling best practice using technology. We are all consumers of technology, have we considered the notion of the student as a model also?

In classrooms is it not usual to notice staff learning alongside students with digital technology. Powerful in itself, the deliberate act of positioning the student as the ‘expert’ or ‘teacher’ normalises that we are in fact, all learners regardless of age and position.

This highly effective practice nurtures student’s self-confidence and awareness of their learning. The teacher is modelling lifelong learning and showing that all learning is valued. Teachers will often ‘Airplay’ students work onto the Apple TV screen in class - deliberately inviting the student to lead

the learning. Once the 'expert' has shown their work, the teacher directs students towards that 'expert' to run mini workshops to help and guide struggling learners.

### **Governance**

Every state school in New Zealand has a Board of Trustees responsible for the governing of the school. The role of the Board of Trustees is to oversee the governance of the school through the following:

- setting the strategic direction and targets for the school (including decision making on Professional Development opportunities for staff)
- planning towards and reporting on achieving those targets
- curriculum management
- financial and property management (investment in devices & infrastructure for DT)
- policies and procedures
- health and safety
- employment of staff at the school.

The Board of Trustees continues to be extremely supportive of the school's 1:1 digital initiative.

### **Leadership**

This success didn't just randomly happen. The school was a failing school. Data showed below average results in reading, writing and mathematics. Maori boys especially were failing. Student attendance was low and staff turnover was high. With a change in leadership, a visionary, innovative and brave Principal was employed and the school journey to success began. That success was built on teacher pedagogy in reading. The Principal recognised his teachers weren't adequately equipped to teach reading. The Principal made reading a priority and sank all its resources into developing teacher pedagogy in reading. This pedagogical development filtered through to all Curriculum areas and slowly but surely the school changed. With a visionary, innovative and highly effective Principal and Board of Trustees leading change and driving possibilities, the school turned itself around, the data showed an upwards trend of achievement rather than failure.

# Information Technology

We believe that technology is a tool that effective teaching is able to enhance and celebrate. One of the reasons we chose Apple devices, both iPad and MacBook, was because of their low administrative overhead and long term value. The fact that they come out of the box empowered with the creative suite of Apple apps means they are ready for our students to create amazing content.

We have more devices in our school than students! This creates a huge range of possibilities for innovative practice and powerful learning. We use managed Apple ID's and VPP with Managed Distribution to quickly and effectively distribute software to meet teacher and student needs. We use ASM (Apple School Manager) in alignment with our MDM (Mobile Device Manager) Zulu. This allows us ownership and an incredible flexibility in our approach with technology. This means we can wirelessly configure how much control both the teacher and the user has over the device.



We use Seesaw as a platform for sharing and every student has a learning journal that is shared privately with their families, this journal shares the learning that is happening daily within their classroom and travels with them through their years of schooling. Teachers also use Seesaw as a teaching tool to track student assessment and progress made throughout the year.

Our administrative team have been using iPad for visitors, staff and students to sign in and out of school for many years now. All planning and curriculum development is done electronically, and we work hard to save the environment by avoiding printing.

Te Akau ki Papamoa School Multitouch book  
Apple iBook Store

Effective leadership nurtures effective growth. Through deliberate and decisive planning, the right people are developed and grown for the right jobs. Teachers are developed in their area of expertise with the expectation that they share their knowledge and expertise. Sustainability is built in the development of teachers. The school's vast infrastructure with over 800 digital devices almost runs seamlessly due to certain teachers given responsibilities in digital maintenance. Teachers are able to

do what they do best - teach, without concerns of device malfunction or a lack of internet connectivity.

## Learning Culture

Professional Development is an integral part of the strategic direction. All staff embark on purposeful, deliberate and informative professional development in DT linking practice to solid pedagogical theory. In a supportive, collective environment, teachers challenge and motivate each other and collaborate in a safe and nurturing community of learning. Building teacher capacity occurs through a raft of opportunity that is always needs based and purposeful.

**Inspire staff meetings:** Totally student needs based. Needs are identified by the Senior Management Team (Principal, Deputy Principal, Associate Principal & Senior Teachers). Inspire staff meetings occur fortnightly on sight and all teachers are paid to attend.

### Purpose:

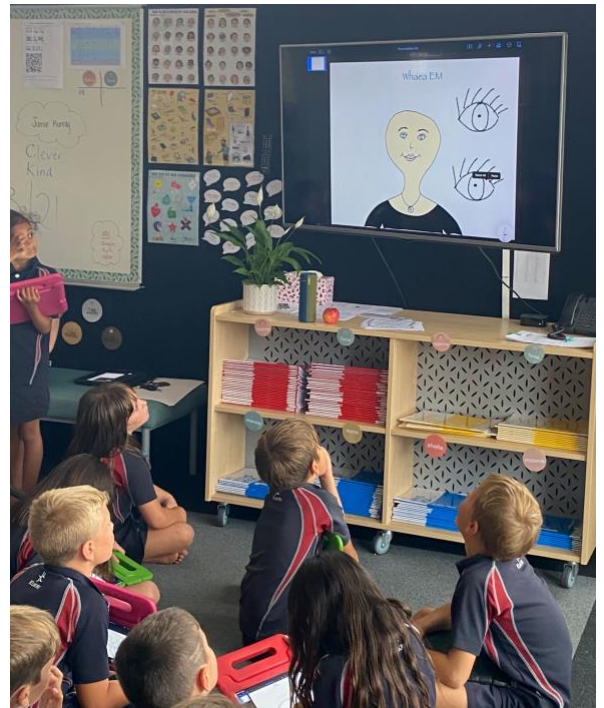
- Staff meetings are designed to cater for the learning needs of the teachers to inspire new knowledge, skills and ideas that teachers can directly use and modify for the needs of their students.
- Different staff members with expertise in a certain area are selected to deliver PD. For example, our Specialist Reading Recovery teacher will lead Professional Development (PD) on reading assessment. An Apple Distinguished Educator may lead PD on the new updates or key features of a tool on iPad. A Junior School Teacher may introduce a new learning App that they are having success with.

## Social Media - utilising social media as a tool for learning

TWITTER - all teachers are expected to have a twitter handle. Teachers follow @AppleEDU for access to PD opportunities, ideas and inspiration.

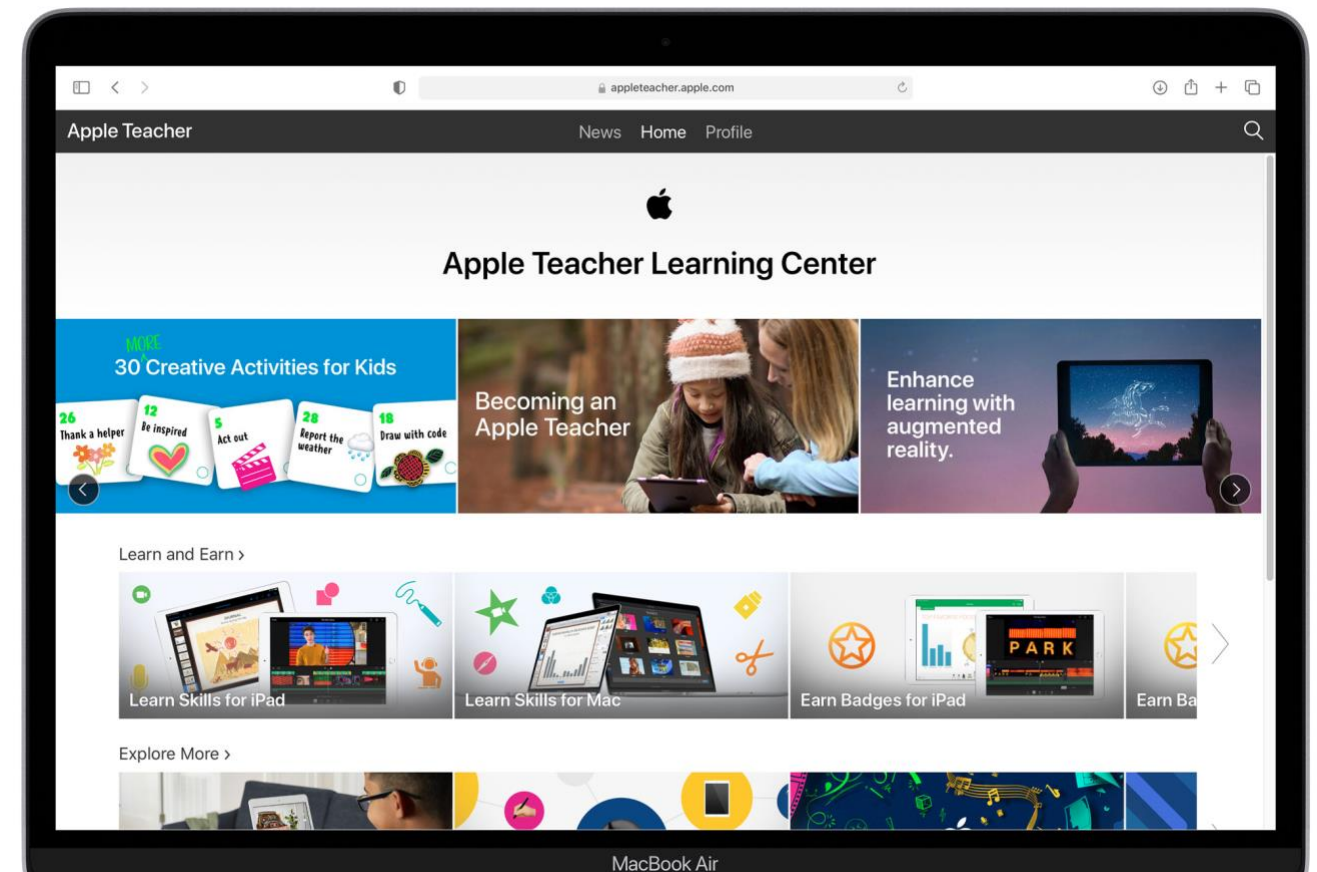
FACEBOOK - Teachers join specific private pages that appeal to their professional development. Ideas are shared, topics are discussed, and practice is reflected upon in these communities.

### Purpose:



- Sharing best practice in DT
- Gaining new ideas & knowledge locally & globally
- Actively participating in a community of digital professionals
- Connectivity
- Conversations #AppleEDUChat provides a window of opportunity into learning conversations into what educators are doing around the globe with Apple products.

### Apple Education Website:



The Apple iPad is the tool of choice for Te Akau ki Papamoa School. From a teaching perspective, the device itself is just part of the ecosystem of DT in the classroom. The learning support and Professional Development that comes with the iPad is priceless. By utilising Apple Education, my development as a literacy teacher has developed exponentially.

Our teachers readily seek and engage in Professional Development through the Apple website. Apple Professional Learning Specialists coach, mentor and support teachers in advancing their technology skills with an emphasis on innovation — to engage students in deeper learning.



## Apple Professional Learning Specialists provide:

- Leadership and planning support
- Professional learning plans to match learning goals
- Research-based strategies for learning with technology
- Hands-on instructional coaching and mentoring

<https://www.apple.com/nz/education/k12/>



Our Apple Distinguished Educators (ADE's) are responsible for supporting and guiding teachers in new and innovative ways of integrating technology into practice. Staff are all at different levels on the continuum of development, because of the strong, supportive learning culture all staff are comfortable with taking risks. Providing explicit and effective professional development ensures all teachers are comfortable and excited to take the new learning back into their classrooms.

Interestingly, teachers are now saying that the iPad is used in more meaningful ways in the teaching of reading, not just as a digital tool to access books. The sophistication of technology is astounding, teachers need to keep their knowledge current to stay on the wheel.

Teachers are steering students towards utilising the built in apps such as Keynote, Pages, Clips and iMovie to create meaningful and purposeful learning, catering for a diverse range of learning needs. Not a lot of money is spent on purchasing apps anymore. Teachers are more inclined to use built in apps for creativity, rather than apps that are usually out of context for our students.

The Classroom & Classwork apps allow teachers to monitor and differentiate the learning quickly and effectively. Apart from the teacher, the camera is one of the most powerful tools in the classroom - especially for students with additional learning needs.

### A Snapshot of how the camera is utilized:

- Students recording themselves reading - playing it back and listening for fluency  
*Teacher uses prompts "How does your reading sound?" "Does it sound smooth?"*
- Teacher recording students reading  
*Teacher uses recordings as observations to make judgements and assessments*
- Teacher recording themselves teaching - playing back to reflect on teaching practice  
*Teacher can make changes to practice from what they have recorded*
- Students taking photos of their world - then using photos to talk & write about  
*Looking through the eyes of the child - what is important to the child?*

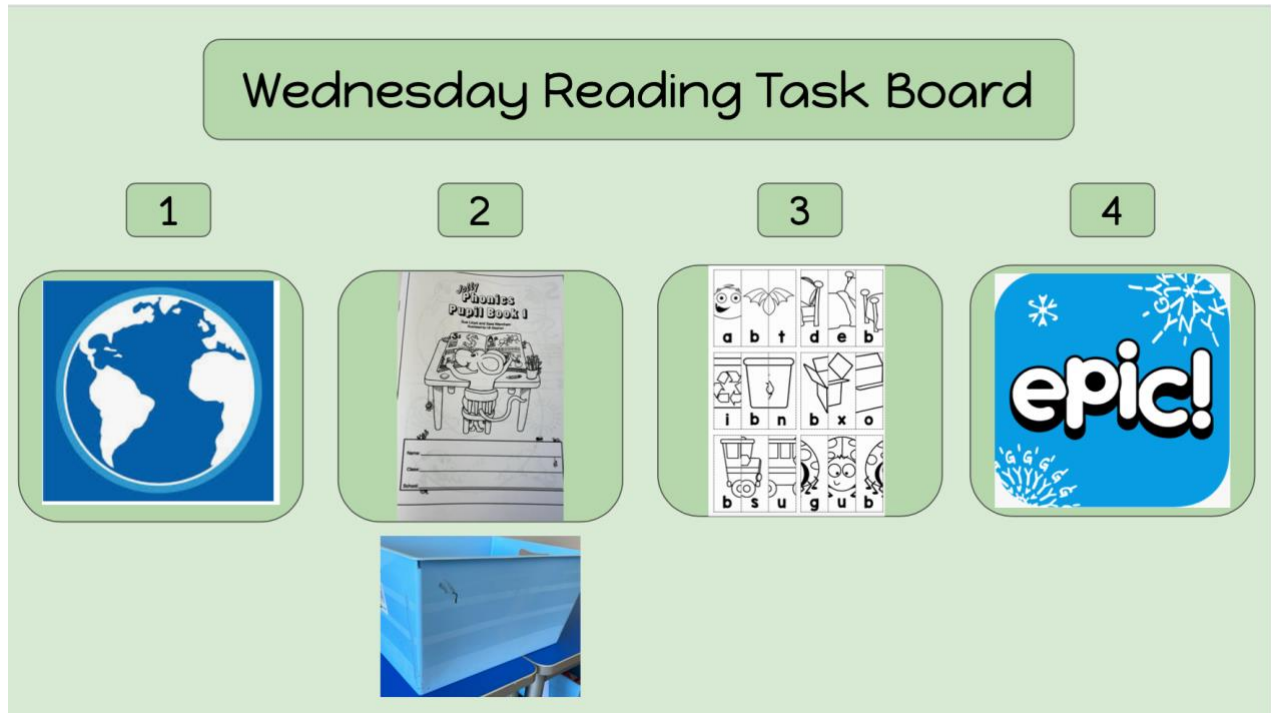


- Recording their reading progress to share with their family on SEESAW  
*Strong partnerships with family strengthens student self-belief.*

This is just one example of how the teacher drives the use of technology.

Another example of best practice utilising Digital Technology in a junior class is the visual timetable example below.

**Figure 1: Example of Reading Task Board in a Junior Classroom**



1. Lexia - App used school wide. Personalized literacy development program.
2. Phonics workbook
3. Worksheet - letter and sound identification activity
4. Epic - Digital Library (Reading for Enjoyment)

A visual reading task board is used in most classrooms. It changes weekly according to the needs of the students. What can be noticed is the balance. Balance between DT and non DT activities. The reading tasks board enables students from a very young age to lead their learning, freeing up the teacher to target teach to small groups or individuals. Much of the activities with iPad are designed as repetition or practice. The teacher is still the driver of the new knowledge or skills introduced in reading but can focus their attention on guided or shared reading sessions while students are working independently.

A range of primary teachers were asked what they think are the strengths and limitations of using Digital Technology in their reading program. The follow table summarizes the findings:

**Table 1: Strengths & Limitations using Digital Technology from a teaching perspective**

Strengths	Limitations
<p>Motivation - although the iPad is just another tool for reading, students love to see the digital characters and settings animated and coming to life before them.</p> <p>Students take risks - students who may be reluctant to answer questions or share their ideas in a whole class setting are able to experience that self-worth behind a screen.</p> <p>Students with learning difficulties experience success and enjoyment in reading at their level, feeling safe and secure.</p> <p>Engagement -</p> <p>Personalized learning that is quick and efficient.</p> <p>The repetition and differentiated learning that iPad offers is exceptional. "I can be teaching a group of students and I know that the other students who are on their iPads are still engaged in meaningful and relevant reading... I don't really".</p> <p>Paperless learning - teachers love that there is less photocopying and paper wastage.</p> <p>Information at their fingertips - students are able to read or research for information &amp; understanding quickly.</p> <p>Nurturing creativity "I love the creativity that excites my students...they love to create characters, puppet shows, cartoons and animations with iPad...they can retell a story so well and have fun along the way".</p> <p>Students have opportunities to lead the learning - the confidence that students feel when they are identified as the expert amongst their classmates is so rewarding.</p> <p>Choice - students have such a huge range of digital books to choose from. "Epic is a brilliant digital reading app that students love...my students that struggle can quietly sit and listen</p>	<p>Upskilling of new teachers - all teachers start on various stages of the learning continuum. With a busy teaching schedule, finding the time to up skill a new teacher/s can be frustrating.</p> <p>The speed and advancements of the technology and upgrades that apps require. Students and teachers become frustrated when the technology isn't responding to the needs of the learning. iPad can require constant updates and the devices once it has aged considerably can lag or progressively tire somewhat.</p> <p>Technology will never replace the face to face interaction between student &amp; teacher. "I still love to sit with my students and hear them read...the conversations and personal connections that we get from shared reading is wonderful..."</p> <p>Paper readers are sent home each night, so parents get to enjoy hearing and sharing a story with their child at home.</p> <p>Parent perception is still somewhat negative around iPad. Upskilling parents to see and hear that the iPad is not used for games or as a babysitter, it is another learning tool.</p>

<p>to a lovely story with their headphones on, without the distraction of the noise in the classroom”.</p> <p>Sharing and connecting with families is so helpful in a child’s progress.</p> <p>Reading mileage – students get to practice reading on iPad.</p>	
<p><b>Apps that we recommend:</b></p> <ul style="list-style-type: none"> <li>● Seesaw</li> <li>● Lexia</li> <li>● Keynote</li> <li>● Epic!</li> <li>● Sunshine Classics</li> </ul>	

### Conclusion

Although the data shows that using Digital Technology as a tool in accelerating learning in reading in schools in New Zealand, the teacher is still the most important tool. Face to face teaching and interaction will always have its place in our classrooms.

The recognition that teachers face ongoing challenges, responsibilities and demands while educating students in the 21<sup>st</sup> century is necessary. Teachers need to feel supported to grow and learn alongside students in a safe and nurturing culture. The teacher who readily seeks new learning opportunities to ignite change and recognises themselves as a lifelong learner will make all the difference in the world.

Depth, Sustainability, Spread and Shift Coburn (2006) are perhaps crucial dimensions in building the desired digital ecosystem in Uruguay.

Certainly, the ongoing sophistication of technology mixed with progressive, relevant and purposeful teacher development is a recipe for success in our evolving world.

### Further Recommendations

- Invest in teacher development - lay the foundations right first. What are the fundamental beliefs and values that your teachers have around reading that shape their teaching practice? This is a must. Do this first, do this well...live, breathe and dream it before introducing any Digital Technology.
- Develop a culture of support and learning for your teachers. They need to converse and share with others. Feeling isolated in rural schools is reality for your teachers.

- Identify models of best practice already happening in your schools - how can you leverage off what you already have? For example - The teacher modelling best practice in reading to other teachers in the area.
- Balance - a balanced reading program with a variety of good quality hardcopy books that interest the students. Saturation of text around the learning environment. Students having the autonomy to 'lead their learning' through personal choice.
- Gather more data from your teachers or school leaders in and around 'what's on top' for them - what do they know they need to accelerate learning? From there, streamlining priorities. 'Pull up a chair' alongside your teachers - do the learning with them, not to them.

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