
RESEARCH REPORT

Stories of transformational change:
How three Northland school communities came together to make a difference

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Summary

In 2014 Kaikohekohe Education Trust launched the Kaikohekohe Initiative within three rural Northland primary schools (Ohaeawai School, Tautoro School, and Kaikohe West School).

The initiative involved introducing Chromebooks for all students from years 4 – 8, and changing the teaching and learning within these schools. The aim was to reimagine how learning could happen within this community of learners.

This research project captures the voices of students, teachers and whānau as they share their experiences, and how this initiative changed the way education and learning happened in their schools. The stories provide powerful insights into the transformational change that can be achieved for students' learning when teachers embrace significant shifts in their pedagogical beliefs and practice.

This initiative unleashed students' potential and gave them a voice within the classroom. Students were more in control of their learning which in turn changed how they felt about their school experiences, the way they worked with others and their progress and pride in their achievements:

- Thanks to the Chromebooks, students spent less time waiting for instruction, resources and assistance which helped them to stay on task, be more independent and resulted in students working harder and achieving better outcomes.
- Technology increased the visibility around assessment and learning which engaged students, whānau and teachers in the learning process, encouraging mutual support and building students' confidence.
- The students were given more choice and agency around their learning which opened up a new world for them. This was observed both in students who had been disengaged and those who had achieved well under the former system.

The shifts in classroom practices illustrated by this research project owe much to the teachers and school leaders, and the dispositions they held about their role. Such significant transformation was possible because teachers and school leaders had:

- made shifts in both their thinking and pedagogical practice
- learned to work differently because of the technology, becoming different kinds of teachers
- repositioned expertise within the classroom. Teachers were no longer the main source of knowledge. Students also became teachers.

The Kaikohekohe initiative has provided the space for students and teachers in a small rural community to be and act differently. Teachers were encouraged to move from roles of holders and transmitters of knowledge to roles of explorers and facilitators¹ in collaboration with the students. This created transformational change in the classroom and in learning.

¹ Brenda J. Mc Mahon, Putting the elephant into the refrigerator: student engagement, critical pedagogy and antiracist education, McGill Journal of Education. Vol. 38 n° 2 spring 2003.

About the author

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Louise began her career in education as a primary school teacher before managing an early childhood centre for a number of years. Since the mid-1990s Louise has worked as tutor, curriculum designer, education consultant, and professional learning facilitator, primarily in the tertiary sector. She is currently a senior researcher at CORE, and co-leader of the CORE eFellows programme. Louise is a strong advocate for social justice and equity, and has extensive experience working in critical pedagogy and transformational learning. In 2007 Louise completed a PhD in teacher professional learning, examining more specifically how to embed a vision of social justice and equity into everyday teaching practice.

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The Kaikohekohe initiative

This is the story of the Kaikohekohe initiative, which involved three primary schools² in rural Northland³, New Zealand coming together to change how education happens in their communities. The initiative saw the introduction of Chromebooks for all students from years 4–8, but the story is about much more than this. It is a story about learning together, and it is powerful story of change, told primarily through the voices of students, whānau⁴, and teachers. These voices combine to present a story of the transformation experienced by those living and learning in these Northland communities and brings to life the communities' belief that:

Learning together is empowering

The background story

The three Northland schools in this story, Kaikohe West School⁵, Ohaeawai School⁶, and Tautoro School⁷, share a strong belief in the potential that comes from learning and working together, and this is a thread that weaves through the individual and collective stories within this report. It was this belief, and a commitment to providing the best educational opportunities for students in Northland, that saw the birth of the Kaikohekohe initiative⁸. From the outset, this was about communities working together for the common good of students and their whānau, and this is now a reality.

Beginnings

In September 2011, the then principals of Kaikohe West School and Tautoro School⁹ had an idea; a very good idea as it turns out. They took this idea to the Ministry of Education in Wellington, seeking their support.

It was a small meeting held on the third floor of Te Papa¹⁰. We were full of excitement, enthusiasm and hope for the change we could bring about in our schools. We knew we wanted to provide a 21st century learning environment for our Māori children, and here was an opportunity to do this properly. The MOE told us to come up with a plan.

After much ongoing dialogue the plan was accepted by the MOE and the schools began to put their vision for a new kind of learning, into practice.

The plan was for schools to more fully utilise the opportunities afforded by digital technologies and for all students from year 4 upwards to be digitally competent *using their own devices*. The plan also involved working on an achievement challenge – which became writing.

² Primary schools in New Zealand cater for students from years 1–6 or years 1–8.

³ Kaikohe sits in the mid north region of Te Tai Tokerau (Northland). Te Tai Tokerau covers a land area of 1,394,100 hectares, from Mangawhai on the east coast to Kaipara Harbour on the west coast, and north to Cape Reinga.

⁴ Whānau is the Māori term for extended family.

⁵ Kaikohe West School caters for students in years 1–6 and has a roll of 325; 88% of these children are Māori (the indigenous peoples of New Zealand).

⁶ Ohaeawai School caters for students in years 1–6 and has a roll of 156; 55% of students are Māori

⁷ Tautoro School caters for students' years 1–8 and has a roll of 70; 97% of these children are Māori

⁸ At the beginning of 2016 this initiative has grown from 3 schools to 7 schools.

⁹ When they returned from Wellington, Ohaeawai School became involved.

¹⁰ The Museum of New Zealand Te Papa Tongarewa.

Progressions

The next few months were spent unpacking some of the assumptions held about student learning, which involved gathering student perspectives on their learning and writing. As the schools drilled deeper¹¹, new understandings of how students were learning, and what they valued, began to emerge.

We gathered some powerful information. At home students were helping each other – tuakana-teina¹². At school they were helping each other – ako¹³. And all along we as teachers and leaders thought we were doing all the teaching. The tables were well and truly turned.

With this new awareness schools determined to actively support students to learn more, *with and from*, each other. This all happened in 2012.

In 2013 a group of teachers first visited the [Manaiaikalani project in Auckland](#), where they observed students learning in a community with similarities to their own. It was after this that the initiative gained traction. The next step was to engage with their stakeholders, [Boards of Trustees](#),¹⁴ whānau, teachers, and students about their ideas, finding as they did that there was a very supportive wider community behind them.

In the early stages the focus was twofold:

1. Working with students to explore how they could support one another with positive feedback
2. Preparing for the introduction of Chromebooks, so that these could be used to generate more collaborative learning, anywhere, anytime.

Before Chromebooks could be introduced, the following needed to be done:

- Setting up the infrastructure to support the changes
- Training staff in the use of digital skills such as using Google docs and blogging
- Setting up the [Hapara](#) teacher dashboard¹⁵ and learning how to use this
- Sourcing the Chromebooks and working out how to fund these.

As the project gathered momentum, a charitable trust was formed to oversee the expanding initiative. The Kaikohekohe Educational Trust was registered in 2014.

Getting started with Chromebooks

In February 2014, the three schools received Chromebooks for all students in years 4–8. The Chromebooks were paid for by whānau through a weekly payment. The principals describe the day like this:

We rolled it out on the same day. We invited everyone – it was a big opening – there was a laptop cake – it was like Christmas. We made it a whole school thing as well so the younger children could anticipate it. The look on parents' faces was great. There was 100% buy in.

It was the beginning of a new way of learning for everyone and it is the stories of this new way of learning that are captured in the following pages.

¹¹ This process was facilitated by Brian Annan from the University of Auckland.

¹² Tuakana-teina describes an important relationship within Māori society – a buddy system whereby an older more experienced expert – tuakana (originally a sibling or cousin) helps and guides a younger or less expert teina (originally a younger sibling or cousin).

¹³ Ako is a Māori term used to describe the teaching-learning relationship where a teacher also learns from their student.

¹⁴ In New Zealand schools are governed by Boards of Trustees, comprising parents, the school principal, and other elected members. Boards are responsible for setting the school's strategic plan, as well as overseeing the management of personnel, curriculum, property, finance, and administration.

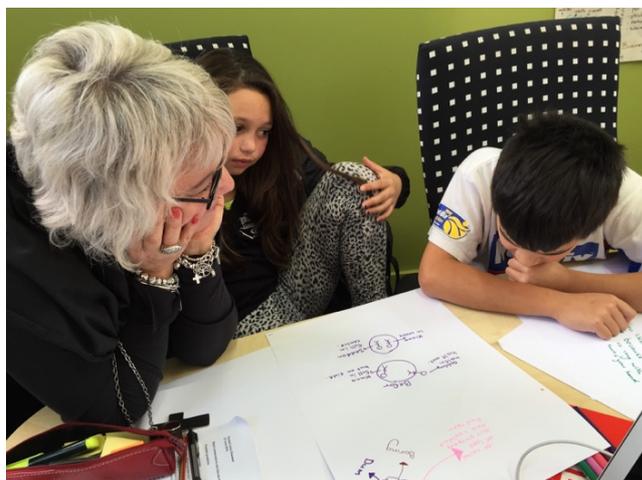
¹⁵ This dashboard allows teachers to see student's work at any time, and both teachers and students can communicate through comments and give feedback to each other.

The research

In mid 2014, a CORE Education research award enabled Louise Taylor (the author of this report) and the Kaikohekohe Educational Trust to collaborate on a research project about this initiative. This report outlines the findings of the research, which are framed around the stories of some of the students, whānau, and teachers who have shared their reflections on the past 2–3 years. The stories were shared with openness and honesty and are retold in this report using everyday language. Sitting behind these stories is a robust research design that has been through an ethics approval process.

The research design was created by a planning group, formed as a collaboration between members of the three school communities and two CORE Education researchers. Together, this group decided the parameters of the project, including who would be invited to share their stories, and how, and when, this would happen.

The collecting of stories happened over six months and involved a total of 24 students, 13 teachers, and a small number of parents. Sharing happened in groups of 2–4 people or individually, depending on preferences and the time available. In addition, three of the current principals provided the background story for this report. Most of this sharing happened through relaxed, semi-structured conversations¹⁶ and there were also some photographs taken. All students and adults, were voluntary participants.



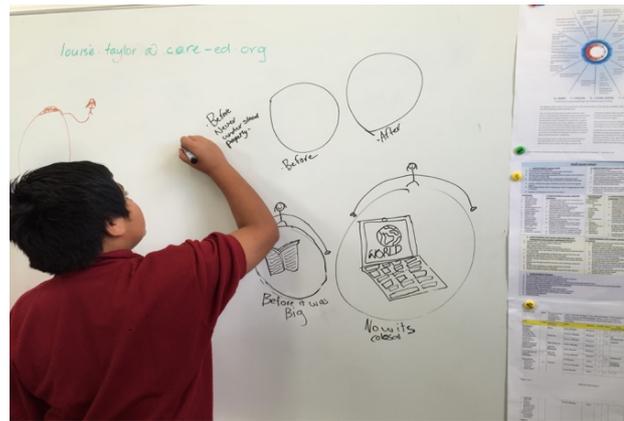
Particular care was taken to ensure students felt comfortable sharing and that they were given more than one way to do this. For example, students shared in groups, they could bring their devices, they chose where they sat, and sessions weren't hurried. Most students were talked to on two occasions, which helped them to feel more relaxed and able to lead the conversation themselves. Students also had a choice about how they shared, and while most were happy to talk about their learning, some chose to draw in response to questions asked, and others preferred to share their work digitally. Most of the time the stories were accompanied by students showing their work which was peppered with jokes and laughing. Most

sessions were audio recorded and transcribed and students gave their permission for this to happen.

A few parents were also interviewed but numbers were restricted by time and availability. These interviews were audio recorded and transcribed and these stories sit alongside those of students. In most instances participants consented to their name being used as they were proud of their stories¹⁷.

¹⁶ Conversations are becoming a more accepted data collection method, which works particularly well with youth and marginalised groups when they are very open-ended (Smyth & McInerney, 2012). This means starting with a simple question, like: "Tell me what's changed for you since you got your Chromebook?" and then following the lead of the participant. This can prove to be less "orderly" in that each conversation is different, but the stories are more individual and authentic.

The focus of data collection was on stories where significant change had occurred for individuals, and groups in and across schools. When combined, the individual and group accounts tell a collective story of the transformations occurring across the three learning communities. The stories told show strong consistency across sites, and they tell a very moving story of the change that is possible when people come together for the common good.



Theoretical positions

The design and analysis of this research has been influenced by the following theoretical positions:

- Future-focused learning
- Transformational change

There is considerable rhetoric in the education community at present about future-focused, 21st century, and transformational learning and change. These concepts are part of the wider conversations that have driven both the Kaikohekohe initiative and this storytelling research project.

Being a future-focused school

Some people describe a future-focused school as one with opened up spaces and combined classes where technology is used for learning. This may be partly so, but being future-focused is about more than this. According to Bolstad, Gilbert, McDowall, Bull, Boyd and Hipkins (2012), future-focused education is an emerging cluster of “ideas, beliefs, knowledge, theories and practices” (p. 1), which fit within the following six key principles.

1. Personalising learning
2. New views of equity, diversity, and inclusivity
3. A curriculum that uses knowledge to develop learning capacity
4. Changing the script: rethinking learners’ and teachers’ roles
5. A culture of continuous learning for teachers and educational leaders
6. New kinds of partnerships and relationships: schools no longer siloed from the community.

Incorporating these principles as part of everyday practice requires ongoing dialogue with those involved. This includes asking how learners and learning are changing, and what this might mean for schools. Future-focused education is not so much about preparing students for the future but rather being responsive to the changes that already exist, then working with students to *create* a future together.¹⁸ This begins by acknowledging that society is changing and working with these changes rather than continuing to maintain traditional practices that no longer have relevance.

In this research project, the future-focused principles mentioned above have been showcased through the stories told. Each story highlights how traditional practices are being challenged and reimagined within a new world framework. Knowledge, the learner, the teacher, diversity, inclusion, and learning for all, are strong themes weaving through this report.

¹⁷ Mostly, when names have not been used, it is because it was difficult to identify the speaker on the audio recording.

¹⁸ Facer (2011)

Transformational change

The term “transformational change” is being used in many contexts today to discuss a range of changes.¹⁹ Typically, transformation will involve making a profound, radical shift resulting in a turnaround in belief and/or practice, which may result in innovative solutions to complex problems.²⁰ From a social justice or critical pedagogical perspective,²¹ transformation occurs in dialogue²² with others and impacts on:

- Knowledge
- Identity²³

Knowledge

Historically, the knowledge that is most valued and widely circulated, is a white, middle-class, western view of the world. Minority perspectives and other ways of knowing have been silenced in the process. In education, academic knowledge has been valued more than human experiences and stories, and those in prestigious and powerful positions have more say about what others should know.²⁴

Traditionally, knowledge has been perceived as fixed and constant and therefore able to be packaged and passed on – often through textbooks, which are not always accessible to all.²⁵ This view of knowledge has been dismantled with the internet.²⁶ This has exposed a new way of understanding the world, which has opened up knowledge to more than an elite few. The explosion of social media has also provided a means for multiple viewpoints to influence what is important to know and value, thus disrupting traditional forms of knowledge.

This storytelling research project has taken a transformative approach by framing the research around personal storytelling and by giving prominence to the voices of students, who are traditionally excluded from knowledge making. Through this deliberate research process, some of the taken-for-granted assumptions about teaching and learning have been opened up for scrutiny.

Identity

Another way to understand transformational change is to consider the impact of change on identity.²⁷ Along with dominant forms of knowledge that influence how we think, society also produces and sustains very specific norms, or ways of being. Conformity to these are often rewarded while resistance incurs some form of punishment or isolation.²⁸ Transformational learning supports and enables diverse ways of thinking and being, where success is measured in a range of ways. An important part of transformational work is challenging the systems and biases that work against this diversity.

Researchers looking for transformational change will therefore seek evidence of how initiatives have supported changes in *ways of being*. They highlight how societal norms have been disrupted, and stereotypes challenged, and provide examples of equitable learning opportunities and outcomes. For people that have been colonised and/or marginalised, this is particularly important, as their freedom to learn is inextricable from their freedom to be and act in a variety of ways.

This research includes stories where students, in particular, have found the freedom to act and be, in ways that are different from before. Throughout students shared freely about how this initiative has made learning more equitable for them. For many, this has changed their lives.

The following stories highlight the transformational change that is possible when the structures around knowledge and identity are opened up and redefined.

¹⁹ Taylor & Cranton, 2012

²⁰ Definitions modified from the one provided on Businessdictionary.com

²¹ A critical pedagogical perspective is one that critiques the biases in society that create inequities. In education this means seeking to create and uphold processes that support socially just outcomes. The stories in this project are chosen for their potential to celebrate and validate a range of voices and ways of being.

²² Freire, 1996; Freire & Shor, 1987; hooks, 1994

²³ Parker & Zajonc, 2010

²⁴ Bishop et al., 2003

²⁵ MacNaughton, 2003, 2005; Taylor, 2007

²⁶ Taylor, et al., 2013

²⁷ Taylor, 2013, 2014

²⁸ Foucault, 1990 (cited in Taylor, 2007)

Our stories

The following section contains the story of the Kaikohekohe initiative told primarily through the voices of students and teachers. These stories are the accounts of a small part of the three school communities, however they show remarkable consistency. Together the stories highlight how transformational change happened in a small, rural part of New Zealand.

The introduction of Chromebooks as an everyday part of classroom learning resulted in an immediate increase in student engagement and participation, which is one of recurring findings in similar initiatives both internationally and nationally²⁹ (for example, the [Manaiakalani Project](#))³⁰ but what does an increase in engagement and participation really mean for learning? More specifically, what do students have to say about how this has changed the learning experience for them?

The conversations and reflections that occurred during the course of this investigation provided a very clear message – students now feel more in control of their learning. As one student noted:

We didn't have as much control of what we used to do – the teacher had the control.

Before Chromebooks became part of *everyday school*, students were more dependent on their teachers for knowledge, direction, feedback, and support, which is no different from what happens in many schools around the globe. But this has changed, and the traditional roles of teacher and learner have been redefined as the benefits of a digital age have been embraced. Knowledge is changing and the identities of both student and teacher are being reimagined.

When students were asked to describe what school was like before, one student said:

School was a little plain – it felt a little bland.

The stories in the rest of this document tell a completely different story of school for the students, whānau, and teachers from Kaikohe West, Ohaeawai, and Tautoro schools.

Student stories

Throughout this investigation, students were clear that they love this new way of being a learner, which is having an impact on the quantity and quality of their work. Being more in-control of learning has changed how students feel about their school experiences, the way they work with others, their progress, and the pride they have in their achievements. Jack describes it his way:

I was pretty low in all my subjects and I got lost in my learning really easily and now I'm in control of my learning and it's really easy to learn and I am in the highest part of my class, and it's just changed the whole situation in my learning.

Having more control of learning, has “changed the whole situation” for Jack and students like him. When asked, students could clearly articulate why this is. For example, Jade. N shared her blog post which says:

²⁹ Similar findings were found in, for example: Burden, et al., 2012; McDowall, 2011; Falloon, 2013; Oven, et al., 2013; and Taylor, et al., 2013.

³⁰ The Manaiakalani Project involves a cluster of decile 1 schools in Tamaki, East Auckland, working together on a programme that gives children the opportunity to be “at home in a digital world”. More information can be found on the website: <http://www.manaiakalani.org/home>

What I mean when I say I'm in control of my learning is that I feel I can work independently. I know what to do and where to go to gather information.

Students said that having more control of their learning is helping them to work harder and achieve better results and from the conversations with students it became clear that there are three reasons for this, which are discussed in the following sections:

- Waiting less.
- Seeing and sharing more.
- Learning differently.

Waiting less

One of the most repeated comments made by students was how much less waiting around there is now. Across all three sites students reported being less bored, with one saying: "There's always stuff to do" – and this has minimised class disruptions. Previously when there wasn't enough to do:

More kids played up because they were hanging around with nothing to do.

Now students say they are waiting less for instructions, resources, and assistance, which is helping them to stay on task and be more independent. Students say that they are working harder and achieving better outcomes as a result.

Waiting for instructions

Waiting for instructions was previously a big part of school for the students who were interviewed.

This included waiting for instructions at the beginning of activities, as well as waiting in line for feedback and further instructions when work was finished. One student shared:

Before we had to go and sit on the mat and Mrs [teacher] used to tell us what to do. Now she sends it [our tasks] to us and now we can work on things at home at night.

Another student described it this way:

We did a worksheet and then we just had to hand it back, and if we finished before our friends we just had to wait ... it was like we were in a paddock, doing one post at a time, and with a computer you can go to whatever post you want to go to at your own speed.

Having digital instructions that can be accessed at any time and revisited with ease, has made a significant difference for students who contributed. Because instructions can be posted by teachers ahead of time, students said they can get on with their work without waiting for the next set of instructions, or needing these to be repeated. Being able to access work tasks digitally also means that students who are absent from school due to sickness or attendance at tangi, for instance, can continue to do their work remotely. This was important for one sick student, as her mother explained:

I could support her at home and talk with the teacher to clarify tasks and the teacher would set new work for her and she could work when she was well enough. It allowed her to continue with her learning.

Online instructions, particularly if there are activities and follow up work to go on with, means that students can keep working, and they can work on more than one task at a time while they are waiting for feedback from their teacher.

[Now] when we turn it in or submit it [our work], we don't need to bother or wait for the teacher. He/she can just comment and see it when they can.

Waiting less for instructions means students can more readily manage their own time and move back and forth between tasks instead of becoming bored and unproductive. Having more options means students have more opportunity to direct their own learning and work ahead of schedule if they choose to.

We can work on things at home at night – at your own speed and doing things ahead of time. For our science fair we had to look up a scientist and I did it like, five days ahead.

Waiting for resources

We used to have to wait for other classes to use the computers. We only had 10 in the school and we had to share them. Then we got some iPads and we had to share them, and then we got our Chromebooks.

Another positive change for students is no longer having to wait for resources like digital devices and research material. With individual Chromebooks, accessing the internet, digital books, and practice activities is much easier than previously, as students can now do this from their own device. Being able to access information is particularly useful when working on inquiries. Students said that they could find information before, but now there is more of it, and it's easier and quicker to access. This optimises the learning moment, as learning occurs when students are most curious and ready to experience something new. As one student put it:

If you like something you want to know more about it.

The internet provides information on almost anything, including tutorials which students are using to learn and challenge themselves. Students and whānau are using tools like YouTube to learn:

- How to draw 3D shapes.
- About making origami.
- To improve netball passes.
- About fractions and decimals.
- About nutrition and exercise.
- How to make chocolate.
- How to dye their hair.

Students particularly like being able to rewind until they have understood what they are trying to learn. Having their own Chromebooks means they can do this from home, creating more seamless learning

between home and school. As the students noted, they no longer need to wait for school hours to carry on their inquiring.

Some students also love the access they have to an instant library. For example, Stella, who is an avid reader, likes the digital library because of the independence this offers her:

I like the library 'cause they have heaps of books and you can search for them and you can change what books you want to read. Like right now we are doing poetry, so there's like a search. You search up poetry and you search your [reading] age, and you can also rate books – and there are all the comments people make.

Like most of today's society, students want to be connected – and quickly – so that they can get started on what they want to do and keep working; Chromebooks give them this speed. As one student pointed out:

It takes 7 seconds to boot up our Chromebook 'cause everything we have is on the Cloud so it doesn't have to load all those things to start up, so it just comes straight up.

Waiting for help

Before, we handed our book to teacher, waited for ages till everyone else was finished, just standing in line getting cross as, and annoying the teacher. With Chromebooks you share your documents with the teacher and the teacher can mark it when they're ready and comment on it, and then you can go back and check it. While you're waiting you can go and do other learning stuff.

Waiting for help in order to edit work was previously a big issue for students, but this has completely changed as a result of Chromebooks. Not only can students carry on with other learning while they wait for feedback from teachers on their work, but correcting and improving work happens *while* students are working, enabling them to finish previously uncompleted work.

Over and over again, students talked about how work before had been inhibited by handwriting and spelling and how this barrier to learning has now been removed.

I didn't know how to spell very good so I got all my words wrong so I had to do it again. I always had to stay in in my breaks and didn't get to eat very much. When we got Chromebooks I could look up words and know how to spell them. It's much easier for me. I can record my voice and it comes up with the right word.

It is a lot easier for me to edit now because a digital voice reads my work out and I can hear my mistakes.

Having editing tools has provided a more equitable learning environment for students who previously had been unable to finish their work due to ongoing obstacles. Chromebooks have provided students with help at the moment they need it so that they can capture their thoughts and ideas when they are fresh and finish their work to a standard they are proud of. Having messy and unfinished work used to trouble students and they shared how disheartening it was to get work back after they had lost interest in it. They didn't like having to rewrite the whole piece of work so that it wouldn't look messy.

I got frustrated. It was really hard to learn handwriting and my teacher couldn't understand it properly and I had to write it again.

And when you have to edit stuff you have to start all over again, as it's all messy and you have to do another one so it won't look all messy – and it will be too much work.

Students shared how annoying it used to be when they wanted to use a word they couldn't spell, and they would have to settle for a less interesting alternative. This is how one student explained this:

... that word didn't pump me up and then it was like, oh, no I have to use a word that doesn't pump me up because I can't spell it. Now, if you put it in your Chromebook, and you don't spell it right the first time, no worries. You get a red line under it or if you just go to Google spelling and click, click, click, click!

When asked if editing tools like spell check were a bit like cheating, students responded that they learn through the spell check tool. For instance:

If I make a mistake in spelling it comes up wrong. I learn as it's correcting, expanding my vocabulary, asking what does it mean, and getting help with pronunciation.

Having Chromebooks has minimised waiting time for students, which in turn has lessened boredom, frustration, and unfinished work. In the conversations with students they shared how much this has meant for both their enjoyment of school and their outputs. Achieving success is high on their agenda and Chromebooks are helping them to do this in diverse ways.

Seeing and sharing more

As a result of the Kaikohekohe initiative, students are experiencing more agency³¹ in their learning. One reason for this is the transparency that is made possible through the use of technology, enabling students to know and understand more about their learning and that of others. This has facilitated more sharing and collaboration, which are strong themes shared across the three school communities.

Before the introduction of Chromebooks and the shift to Google docs, many of the functions of schooling that were understood and practised by teachers were partially obscured from students, making it difficult for them to visualise the whole picture. For students like Riley this was a problem. However, this has now changed. Riley told us:

I did a diagnostic test today and I got the majority of them right ... I like knowing all that ... Before, if you did that on the test, they'd take it away to another school and the principals and teachers would say, "This is what one of my students did." And I didn't like that because they didn't tell me and I mostly got them wrong.

For Riley, and students like him, "knowing all that" has been facilitated through the transparency afforded by a digital platform that is open for viewing by students. Additionally, students have 24/7 access to online skill development exercises where they can practise and improve independently. Riley shared how he is

³¹ Having agency means having some control over outcomes that affect you.

quite competitive with himself and how knowing his score in maths and spelling has encouraged him to practise to improve. He was very detailed in his explanation of his progress. “Knowing all that” has given him more control of his learning and progress, and some agency over what he chooses to share with others.

I don't like working on paper, 'cause when people look over my shoulder, it makes me claustrophobic. Now on the computer only [my teacher] can see them if I screenshot them and she finds the screenshot.

Not only has assessment and learning become more visible, but in some ways it has also provided Riley with a sense of privacy and a newfound confidence in his own knowing. He shared how much he likes “improving without the pressure” and all his mistakes being discussed behind his back. For him it was really important that he could get feedback from the computer and not the teacher. This felt less threatening and he was more responsive to this.

In one group conversation students shared how this new visibility has helped them to manage their learning more. They shared how they can now revisit and re-read or replay instructions without having to go to their teacher for reminders and how they are less likely to lose their work because “it is in the cloud” and can be easily accessed. As a result, they understand more clearly what is expected of them and where they are in the learning process. They said they are now “thinking more than before” and can get their ideas down before they forget them. This is all increasing their independence. Increasingly students are taking more responsibility for their own learning.

The confidence and knowledge students showed about their learning was noticeable at Ohaeawai School's student-led parent conferences³² this year. Instead of paper-based portfolios, students shared knowingly from their digital portfolios, which contained selected pieces of work across curriculum areas, including video clips, links to Google slide presentations, and samples of artwork, writing, and blogs. Because of this the conferences lasted longer than in previous years, with students flicking backwards and forwards through their work with ease and confidence. They knew about their work, and their learning, and they could clearly articulate this knowing to others, including their parents.

One parent reflected afterwards:

[My] children are taking charge more of the conferences. They are feeling more in charge of their learning. They are more confident. They know their way around. It's a good thing ...

The transparency afforded by the use of digital technology has taken away the fog around students' learning, enabling them to have a clearer picture of what they like, what they are learning and how they are progressing – and they are increasingly taking charge of this. This visibility has demystified the learning process and as a result students are more engaged and eager to share, which is what parents have noticed and appreciated. Another parent said:

He is sharing. That is the biggest thing that has changed ... They interact more with us about their learning. Prior to this they would just do it. There was not too much interaction, but with the Chromebooks they want to show us what they were doing and get us more involved.

As a result of this increased sharing, parents are feeling more involved. There is a sense that everyone is more aware and willing to share and support each other, which is helping students to improve.

³² Student-led parent conferences replaces what were traditionally known as parent-teacher interviews. At these conferences students share their learning with their parents and whānau.

Improvement through feedback

Students are no longer just getting feedback from their teachers, nor is this feedback confined geographically. Now, students are regularly receiving feedback from their peers and whānau members. Because of their blogging they are also getting comments on their work from across the globe. Here is what students had to say about this:

You can share your documents with people through Google. You can share your learning – you can go public. Like when you do a proper book, you can't share with other people. You can't let the whole world see it.

We share with a wider audience. 6 days and 2 hours ago, someone visited me from Mountain View California. You can see when others visit you ...

For students it's not just the excitement of someone from the other side of the world looking at their work, though. When asked why this is important to them, one student responded:

People can comment and say good things about you and people might have advice in other parts of the world and it might be good advice for us to help us with our learning.

Students understand and appreciate how this helps them to improve:

I like it because people see my work. It's not just me and the teacher looking at it. It's like heaps of people, and the feedback that they give me helps me improve on my work.

One reason students believe their work has improved is because they are now preparing it for a real audience. Having a wider audience means they need to be clear about their thinking and ideas and that these need to be edited and polished before they can be shared with others.

My learning has changed heaps. One reason why is because I'm getting taught how to share my thoughts, thinking and learning on my blog and YouTube channel (Josemira's blog post 19/5/15).

I think my reading and writing and communicating skills have improved and become better because I know that there is a wider audience who will read the work that I create. NO PRESSURE (Jade. N's blog post 28/11/14).

Blogs have been particularly important for whānau. One parent noted how in their whānau the blog “starts a dialogue”. Whānau shared how much they enjoy hearing about, discussing, and contributing to their children's learning through their blogs. Other whānau expressed how much easier communication is now that learning has become more digital.

Learning through collaboration

Learning together has been a large part of this initiative and collaborations have been made easier with technology. One very simple change that has made a difference to collaboration is being able to work on the same document together, as these students explain:

We can work on the same thing and not both write the same on two books - It's better because you can work with others on the same document.

Previously students had to write in separate books and then rewrite their work in one book, or submit duplicates. Being able to work on the same document saves time that can be spent on more in-depth research and more detailed presentations. Not only this, students can now collaborate remotely after school, which is important for those living in rural communities like these.

Here is one example of how students worked together digitally on a fundraising project, from home.

For a fundraiser we video-chatted each other and we started talking. Like we're saying what we could do and then we set up a document about the fundraiser and then we started planning about it – and then we wrote a notice for it. And then after we finished all of that, we wrote a consent form for leaders to help with the fundraiser and then we just went over it again and checked that we made sense. It's a snack store for a trip – a sleepover.

The remote collaborations are also happening between students and their whānau. One student said she sent her project to her nana and this really helped her.

My nana helped me with my scientist work. We're doing scientists for our science fair. My nana corrected one of the dates on it and I was happy that she helped me.

Whānau also commented on how much they like being more involved in their children's learning, and in real time. For instance, one father shared how he was working on the farm when his daughter emailed him a question. He explained the pleasure he got from being able to contribute ideas right then and there. He also shared the thrill he gets when he goes on his computer and can see his daughter on her document while he is doing his own work. Experiences like this are helping whānau to collaborate more with their children, while they are learning, at any time of the day, and wherever that might be.

Having increased opportunities to collaborate and share work has led to a more open and cooperative learning environment where both students and adults support and are supported by each other. Students understand the benefits with one saying:

If you help others, you achieve more.

Parents have noticed the difference, with one commenting that their son is now more willing to show his work to others and seek out someone who might be able to help him. Students confirmed that this is now a regular occurrence.

If you need help, and you know someone who is a little bit smarter than you, you can just share it with them and they can help you with that, and so it's much easier... it's everybody in

the class. A lot of people share their things, so they can like help other people and a lot of times people share their own work with people, so they can help them.

As a result of the sharing that has been fostered through this research project, students are more aware that everyone is learner and everyone needs help with their learning at some time. For one student in particular this has made all the difference:

Sometimes [before] people would make fun of my work and I didn't feel very happy, but now I can do my work better and everyone is nice to my writing.

Learning differently

Students who shared in this project were very clear about the benefits they have experienced since receiving their Chromebooks. It has not just been about the Chromebooks though, but rather the changes that have been facilitated by digital learning. A digital platform has provided students with a broader way to source, sort, link, represent, and share learning. Because of these students are abler to identify and work differently – and more within their preferences.

One parent reflected that “the internet has opened their world up”, providing students with a wider range of possibilities for how and what they learn. This has helped students to understand more about themselves as learners and enabled them to state with confidence:

We know more of what we like ...

Being able to work in a range of ways has supported different kinds of success, which has been important for Dreziqie who once was quite disengaged. Dreziqie explains:

Mum thinks I learn in different ways to other people. I always do stuff differently to others. In kindergarten I used to do things differently. I use to create ... We can be more creative on the Chromebook and create more stuff. We can do heaps of drawings and animations. [Before] I got really bored having to write for ages and I had to stay in and finish off my work because we had to go up to the teacher to see if our spelling was right, and then write it again. On the Chromebooks there is spell check if ... it's more fun 'cause we are doing it on technology so we can study what we are doing and we just need to share it with the teacher and she can check it.

Dreziqie said he didn't like writing and when he used to get bored he would just remember a TV programme in his head and then he would get reprimanded for being off task. Now, instead of getting bored, Dreziqie uses his time to experiment and research, which his mother says is what he has always liked doing.

Right back in kindy he was getting bored. The kindy teachers gave him some freedom to do what he wanted. He would sit and help others to make things. [Before Chromebooks] he was [again] saying he was bored and he hated writing. I was told that Dreziqie was not conforming and this bothered me. Everyone learns differently. He is funny. He likes teaching himself things and then teaching others. Instead of having to go off to ask someone, he wants to know by himself. It is something that he has done throughout his life. He likes to research himself and find out by himself and then go and tell others.

For Dreziq school is now a place where he can work more within his preferences and be himself. His mother says “he has more passion and excitement”, and this is impacting positively on his achievement.

Being free to be a different kind of learner is transformative for students who, like Dreziq, no longer need to conform to the more restrictive ways of being and learning that just don’t work for them. Students now have more choice about how they gather information, learn new skills, process their learning, and present their findings. They can work on one task at a time, or move between tasks. Furthermore, they are no longer reliant on their teacher being free to get help as they can now access help from different sources. These are just a few of the enablers that make learning more engaging for students who previously may have shown disinterest.

It is not just disengaged students who are benefitting from this different way of learning, however. A whole new world of learning has also opened up for students who achieved well under the old system, but who were held back from going further in their learning. For instance, Daniel shared how he had previously found maths too easy, saying:

Maths is too easy when it’s on paper but on the internet you can search up something more challenging, instead of having to wait. Then you are not restricted ...

Learning without restrictions has meant access to more diverse and challenging learning opportunities. Students are no longer held back by systems that don’t work for them. They may have achieved success before, but now they can continue to be extended and challenged in ways not previously possible. Liona explains:

My learning was pretty big before we got Chromebooks, ‘cause I had already finished year six curriculum. And then we got Chromebooks. It just opened so many more doors to my learning because I could do other work at home and it just made it a lot more fun and it was really boring before because the teachers didn’t know what to do with me!

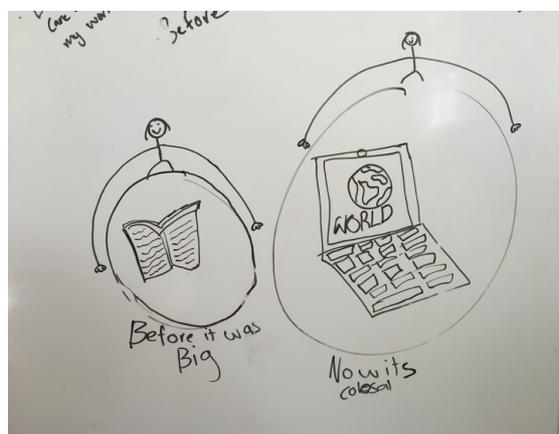
Not only this, Liona said that she felt her teachers understood her capabilities more, saying:

They can see what I’m capable of ...

Liona sums up this new way of being a learner here in her comment and drawing:

My learning used to be big, but now it is colossal.

Students were clearly excited about this new way of learning and they were proud of their achievements. As a world of learning has opened up to them, their teachers have had to respond by becoming different teachers. The next section is about the stories of teachers changing.



Teacher stories

I knew that digital learning would need to involve a lot of collaboration. That was part of our focus, our weekly cluster to learn from each other (teacher comment).

One of the strengths of the Kaikohekohe initiative has been the extensive preparation and ongoing professional learning and development (PLD) that has been offered throughout. One of the biggest benefits of this has been the collaboration and support that has developed as the initiative has unfolded and grown. The PLD has not only provided technical training and support, but has built relationships between teachers and schools. This has created opportunities for teachers to share their expertise, try out ideas together, and share their experiences with one another. Support from colleagues has helped teachers to make the considerable leaps in their learning that have been required of them, particularly in digital literacy. Not only has the PLD produced a valuable toolbox of resources, it has also provided teachers with the assurance that help is on hand when required. More than one teacher noted it is okay to take risks and make mistakes. One teacher said:

I am not so afraid to ask, it's not scary anymore. There is a feeling of being in progress. We are all learning and it's a collaborative journey.

Teachers said that learning the skills associated with digital-based learning has been challenging, particularly as technology keeps changing. The biggest learning however, has not so much been how to use the technology but more how to work differently *because* of the technology. Teachers have had to learn to teach in a completely different way.

A different kind of teacher

I can't do the same thing I have always done.

Every change experienced by students has meant shifts for teachers, and in some instances this has involved a complete turnaround in practice. Teaching has changed, and teachers have had to become a *different kind of teacher*. For Trish, who admits she was a doubter, the changes in her teaching have been significant. Here she explains:

There was resistance on my part. I felt it was imposed and I was fearful 'cause I am not a quick person at doing things and not that intuitive with technology. So many things are coming at you so fast from all directions – there's twitter, there's blogs, there's emails, and then we got the apps, Google documents. I hated Google documents. I already know about Windows so why do I have to learn these? What's the point? But then once you find out how they work, it's like hallelujah!

I haven't had a huge aha moment and I don't know still that I am totally converted, 'cause I still have doubts. I doubt and question everything, so I still have questions out there ... That's how my mind works. I always have questions ... and there's a never-endingness to this and you find yourself wanting to say, yeah I've got it, but ... In a way it's kinda like you've got this wall in your head that you just kinda have to get over. Ok this is just how it is.

The learning for Trish has begun a new wave of thinking and questioning.

Making a pedagogical shift

Throughout this initiative, the most dramatic changes in classrooms have occurred when teachers have made pedagogical shifts³³ impacting on both thinking and practice, which is what Trish experienced. She says:

I used to be content based. In my head, I know what they need to know in each area and I thought, "How do I get this into them?" I used to be really pedantic about covering this – a checklist thing. Now I think more about the ways you can communicate with the children. I try and think more from inside their head. I am not always successful about this, but I do try and think ... "if I was a kid, how would this come across to me?"

Trish's story is mirrored in comments by other teachers who shared how they are now less focused on timetables and feeding information to students. Instead teachers are discussing learning with students more and they are interested in how students are processing their learning along the way. Digital technology is assisting this by helping to make learning more visible.

One teacher shared how students in her class are recording their voice as they do maths computations, which is allowing her to hear their working theories as they solve problems. The same is being done in spelling, with students recording themselves as they work. This new way of learning has not been restricted to the use of Chromebooks, or to the senior school, however. The changes have spread through the whole school, as Lisa from the junior school explains.

We discussed with the class what they knew about kiwis and then one at a time they drew a kiwi on the iPad, recording themselves, drawing and talking about what they were doing.

Lisa explained how she was able to capture and track children's processing and reasoning and as her students' knowledge about kiwis increased, she was able to see and hear this in their work.

The processing of children was captured and revisited as children worked through their ideas at their own pace.

With an increase in visibility, there is more in-the-moment learning and teachers are increasingly working at the pace of students. For Tracey this involved some big shifts in her belief systems. This is her story:

It was at the GAFE [Google apps for education] conference that the proverbial coin dropped for me. You see I'm a power freak in class. Everything in its place and every group learning something – that I thought was what my kids needed. I [realised] I had to stop being a frustrated micro-manager of kids learning and wait so that my students had time to create works of learning. That basically meant I had to change the way I teach. I had to hold my tongue. I had to stop giving clues and answers, and I had to ask questions that helped my students to analyse and evaluate their work.

So I changed my way of teaching on the first day of term 2. So dramatic was the change, my class went quiet, looking at each other with puzzled looks and my teacher-aide came up at interval and asked, "What's happened? Is there anything wrong?" And I silently went –YES!

³³ Broadly speaking, pedagogy means the theory and practice of teaching. Having a pedagogical shift will mean changing both what is believed about teaching and how teaching is practised.

Waiting more, while students are waiting less, has been transformative for Tracey and her students. With these shifts Tracey saw positive results almost immediately, including an increase in student achievement for writing. She also began to see her students differently. She says:

Giving up the power changed everything. I saw the kids in a new light. You saw the thinking, you saw the creativeness. You saw their pride, their eagerness. You saw everything ...

As learning became more visible, teachers saw students and their capabilities in new ways. Mere, is one of these teachers. She said:

I am seeing the children differently. I see their own creativity more. You can give them a tool and they have seen it work in another class and they can go away and spend some time thinking and planning, and then use those communication and teamwork skills they already had and try and put it to something that is going to be shared to the world. It's not just shared with the class or the staff. It was going to the world – that changed the children.

Seeing students differently opened up possibilities for more diversity in learning. Students could now be successful within a wider range of options and they rose to the challenge. As a result, teachers said they are now trusting students to take more control of their learning and engaging more with students about their learning. Teachers reported listening more and becoming more responsive and reflective, and they say they are now considering how their actions will benefit students. Teaching has become a whole new way of working with students.

Standing in front of the class has, for the most part, become a practice of the past and discussions about learning and improving has become more of a partnership. Teachers shared how students are more engaged, how they are enjoying school more, and how they are improving in ways not previously seen, for example:

I have never [before] had major shifts like this in writing.

A new way of learning together

Another unexpected experience for teachers has been the repositioning of expertise within classrooms. Teachers and students are now learning from and with each other in ways that were not possible before the introduction of internet-facilitated learning. As a consequence, teachers are no longer the main source of knowledge and expertise in their classrooms, which has caused some to rethink their purpose and practice. Chrissy is one of these teachers. She explains here:

At the very beginning of our journey, we surveyed students about who they learn from in writing and asked them to list names in order of how much they helped. The highest I ranked was third behind peers and ranking eighth on a few students' lists was absolutely confronting, unsettling, and challenging to my comfortable little world. In fact, this was common across our cluster. As a cluster we discussed this and it was obvious we were missing something about how our students learned.

Once the students had Chromebooks they began to share their work with peers before I even saw it. And students shared their work because they wanted to learn more, not because they cared about fixing it before I saw it.

[I discovered that] the feedback that they care most about comes from peer and whānau blog comments. This is obvious from their loud vocal sharing of who has commented on their work and what has been said.

Chrissy learnt to work with the expertise within her classroom and to utilise and celebrate the potential that students provided for peer support in their learning. While Chrissy had to rethink her position in her classroom, she nevertheless realised she remained crucial to providing the pedagogical context in which this new kind of learning could flourish. She made this comment:

This happened without me, but it did happen because of me.

Seeing students as knowers

The Chromebooks have allowed students to showcase their expertise and to share this with others. In some instances, it was surprising to realise just how competent students already were with using technology. Suddenly students were teaching their teachers. Mere explained it like this:

I didn't have a clue before that these children were using this [digital devices] at home. I didn't think that the kids would take to it, but the technology was already out there, at home. It just opened my eyes. Ok, so I thought, let's see how I can use this in my class and it just took off. I saw a whole new dimension of children. It's very exciting. I learnt from the children and it just moved from there. I love it.

Teachers freely admitted that students have helped them with technology, often picking up new skills more quickly than they had and passing their knowledge on. New experts emerged and teachers said that they now had a resource in their classrooms they had not previously recognised.

Valuing students as teachers

The culture of sharing and collaboration that has been fostered through this community of learners has positioned students as knowers and provided the chance for them to share their knowledge with others. This is being celebrated across all the three schools, and the teachers who have embraced this repositioning of students are now actively creating opportunities for students to use their expertise to teach each other. At Tautoro School, for instance, Mere shared:

When we have something new, I will show two students and then once they understand it, I have them show another two, and so on. I don't always choose the same leaders all the time. It's a level playing field. With something new, I will pick two at random and then they go back to their group and show them.

Some of the students at Kaikohe West School are creating tutorials for other students about things they have learnt themselves off the internet. Daniel shared how he and some other students are doing this.

We're going to make one [a tutorial] on square roots and square numbers, 'cause people need to learn it.

Although technology has helped to reposition students as knowers, their expertise has not been restricted to digital knowledge, as this example from Ohaeawai School shows. A tuakana-teina³⁴ / buddy system exists between the senior and junior school.

The buddying came about when the younger children were writing invitations for Greats' and Grands' Day. They buddied up then and saw what the younger ones were writing, and they started to talk about what they had done for their writing, all on their own, and the writing that came through was great.

This tuakana-teina relationship has also been used a lot in writing and has helped to support the development of unexpected experts within the senior school. Here is another example:

There was a child last year in the junior school who needed some encouragement [in writing]. He was writing factual text and he wrote for the junior children, and at a level they could understand. And he became an author and his writing was on the wall and he was so proud. It was beneficial for the children in the junior class too. This was not a technology exercise, but the technology set this up.

Technology has *set up* a different kind of learning environment where expertise has become more visible. As a result, opportunities for sharing this expertise have been fostered and what schools have discovered is that all students can be experts in some way.

Teachers and students are working together to create a learning experience where contributions come from multiple sources, and as Kiana explained, this is quite something.

... one person from, I don't know, somewhere, might give you advice, and then your teacher might give you advice, and then you mix the two together and you have something amazing.

Learning together is empowering: Some conclusions

This Kaikohekohe initiative has provided the space for students and teachers to be and act differently, and there have been some transformational changes as a result. For students, this has meant having more control of their learning and taking more responsibility for getting help so they can finish their work to a standard suitable for sharing publicly. The visibility and openness that has been created by using a digital format has changed students' work habits, the quantity of output, and the quality of the work produced. Not only this, students say learning is more fun and they now have more pride in what they produce. So why is this, and what can we learn from this initiative?

What did we learn?

Waiting is different

When students were asked what has changed for them, almost all of them talked about the reduction in the waiting around that went on in classrooms. Before, they said, school was all about waiting: waiting for instructions, waiting for resources and waiting for help, all of which led to boredom, unfinished work, disengagement, and disruptive behaviour. But this has changed simply because students can find the

³⁴ The [NZ Ministry of Education defines the tuakana-teina relationship as](#) an integral part of traditional Māori society, which provides a model of a buddy systems whereby an older or more expert tuakana (brother, sister or cousin) helps and guides a younger, less expert teina (originally a younger sibling or cousin of the same gender) (2016).

instructions, the resources, and the help they need, when they need it. This has increased productivity because students are more fully occupied and their motivation for learning has increased because of this. This one factor has made a difference for students who have shown they don't like being idle, but instead prefer to be actively working. Incidentally, while students are waiting less, teachers reported that they are now waiting more, which has altered the pace of learning for everyone. Frustrations have been minimised, and classrooms are now much more conducive to learning.

There is more room for difference

Before the introduction of Chromebooks and the changes that followed, school was more of a one-size-fits-all experience for most of the students who shared their experiences. Now these students say that it is easier for them to work within their preferences. For students like Drezique, this has meant being able to *learn differently* and develop a strong sense of identity within this difference. Furthermore, students are not as limited by barriers to their learning, such as spelling and handwriting, because they now have tools to help them overcome these obstacles and achieve success in ways not possible before. Digital technology is providing students with a wider variety of ways to access, process, and share their learning. It is also providing a way for students to extend themselves beyond the classroom and for Liona, this has meant her learning has gone from “big” to “colossal”. As the options for learning have opened up, every one of the those spoken to reported feeling a sense of achievement, and for some, this has not always been the case. The initiative has been transformative for those students who have now found the place and space to be a different kind of learner.

Roles have been repositioned

Throughout the sharing, teachers reported significant shifts in their pedagogical beliefs and practices, causing them to reposition themselves in their classrooms. The traditional roles of student and teacher have become increasingly blurred as both find alternative ways to understand and be learners together. Students are clear that they want to be more in control of their learning. They want to work *with* teachers more than *for* them. For this to happen teachers have had to rethink most of what they have always done, including:

- What they think about learning.
- What they value.
- What they prioritise.
- How they view timetables.
- How they see and position students.
- The emphasis placed on content.
- Where they position themselves in the classroom.
- How they set tasks, give feedback, monitor progress, and assess work.
- How they report to parents and whānau.

Students said they love how their teachers are changing and the increase in independence that this has facilitated for them. At the same time, they value the contribution teachers make to their learning and they expressed gratitude for the new opportunities they are now experiencing. They also appreciate what their whānau have contributed.

I've been proud of my parents for buying my Chromebook for me, and my learning's increased more.

Expertise has been redefined

The new way of being and learning that is embedded in the stories of this report have not just happened because of the introduction of Chromebooks. However, one thing that Chromebooks have done, is provide a way for teachers to see more of what students are capable of. Teachers reported seeing students in a new light and this has helped them to create contexts for expertise to flourish. Noticing and valuing competence has paved the way for students to share their knowledge and expertise with others, even their teachers. This has developed student confidence, and provided opportunities for students to support the learning of others in ways not previously imagined. For example, tuakana-teina/buddy relationships have been formed between senior and junior school classrooms and students are creating tutorials for other students. Knowledge and expertise no longer reside with teachers alone. Instead, students and teachers of all ages are valued knowers, which is creating a more supportive and vibrant learning community. The possibilities for learning and knowing have been redefined.

Learning together is empowering

One of the most celebrated aspects of the Kaikohekohe initiative, reported by those involved, has been the collaborations that have been central to every part of this project, right from the beginning when the idea was first mooted. It is these collaborations that have added strength to the work and instilled in those involved a sense of shared responsibility for the learning and well-being of others. Everyone has been learning together, which is a significant change from the *usual* way learning occurs in most schools. Never before have the teachers and students from these three schools collaborated on such a scale in their learning and across all levels. Reflecting on this, one teacher commented:

Before this we were living in a parallel universe ...

Learning together has been empowering because people have worked together to support each other through the change process. Through these changes those involved have realised new capabilities for themselves and others, and also the strength, vision, and transformation that is possible through a combined effort. The process has been a success because of the collective skills of all those involved and because of the conversations that have occurred along the way.

For students, their whānau, and teachers, the changes have been profound and those experiencing such change would agree with Jack when he says:

It has changed my life!

Lessons learned

- Have a clear vision that is grounded in sound pedagogy
- Collaborate with others
- Prepare well, and in advance, including:
 - Providing training and support for both teachers and students
 - Making sure infrastructure is in place
- Take the time you need to get it right
- Be prepared to learn as you go
- Don't be afraid to make mistakes along the way
- Learn with, and from, students
- Wait, watch, and listen more in the classroom
- Provide opportunities for students to learn differently and in multiple ways
- Notice and appreciate student competence and support this
- Facilitate the growing of expertise in classrooms and across the school
- Reposition the roles of teacher and learner
- It's about the pedagogy
- Learning together is empowering.

References

- Brenda J. Mc Mahon, Putting the elephant into the refrigerator: student engagement, critical pedagogy and antiracist education, *McGill Journal of Education*. Vol. 38 n° 2 spring 2003.
- Burden, K., Hopkins, P., Male, T., Martin, S., and Trala, C. (2012). *iPad Scotland evaluation*. Report prepared for the University of Hull.
- Bishop, R., Berryman, M., Tiakiwai, S., and Richardson C. (2003). *Te Kōtahitanga: The experiences of Year 9 and 10 Māori Students in Mainstream Classrooms*. Report to the Ministry of Education.
- Bolstad, R., Gilbert, J., McDowall, S., Bull, A., Boyd, S., and Hipkins, R. (2012). *Supporting future-oriented learning & teaching – a New Zealand perspective*. A report to the Ministry of Education.
- Facer, K. (2011). *Learning futures: Education, technology and social change*. London: Routledge.
- Falloon, G. (2013). Creating content: Building literacy skills in year 1 students using open format apps. *Computers in New Zealand Schools: Learning, teaching, technology*, 25 (1–3), 77–95.
- Freire, P. (1996). *Pedagogy of the oppressed*. London: Penguin Books.
- Freire, P., & Shor, I. (1987). *A pedagogy for liberation. Dialogues on transforming education*. New York: Bergin & Garvey.
- Hooks, B. (1994). *Teaching to transgress: Education as the practice of freedom*. New York: Routledge.
- McDowall, S. (2011). Using multimodal texts to build engagement and achievement in literacy. *SET Research information for teachers*, (2), 32–37.
- MacNaughton, G. (2003). *Shaping early childhood: Learners, curriculum and contexts*. Berkshire, England: Open University Press.
- MacNaughton, G. (2005). *Doing Foucault in early childhood studies*. London: Routledge.
- Ovens, A., Garbett, D., Heap, R., and Tolosa, C. (2013). Sustaining high quality pedagogy in the changing technological landscape. *Computers in New Zealand Schools: Learning, teaching, technology*, 25 (1–3), 21–37.
- Parker, J. P. and Zajonc, A. (2010). *A call for renewal: Transforming the academy through collegial conversations*. San Francisco: Jossey-Bass.
- Smyth, J. and McInerney, P. (2012). *From silent witnesses to active agents: Student voice in re-engaging with learning*. New York: Peter Lang Publishing Inc.
- Taylor, E. W., and Cranton, C. (2012). *The handbook of transformative learning. Theory, research and practice*. San Francisco: Jossey-Bass
- Taylor, L. (2007). “Re-imagining professional learning in early education”. Unpublished PhD thesis, University of Melbourne.
- Taylor, L. (2013). Lived childhood experiences: Collective storytelling for teacher professional learning and social change. *Australasian Journal of Early Childhood* 38 (3) 9–16.
- Taylor, L. (2014, August). “Storytelling for transformative change”. Keynote address presented at the CECEAA Annual Conference, Eastern Beach, Auckland.
- Taylor, L, Fagan, T, and Dunmill, M. (2013). “Disrupting the boundaries of teaching and learning: How digital devices became a resource for transformative change in a time of crisis”. The Pegasus Digital Devices Project 2013. Report prepared for CORE Education.

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