Sabbatical Report 2018 Margaret Aikman Principal Takanini School

Developing a curriculum for deep learning

'If we want learners who can thrive in turbulent, complex times, apply thinking to new situations, and change the world, we must reimagine learning: what's important to be learned, how learning is fostered, where learning happens, and how we measure success'

Fullan, Quinn and McEachen (2018)

Acknowledgment

This sabbatical was made possible through Teach NZ with the support of the Board of Trustees and staff of Takanini School. Thank you to the principals and leaders who shared their stories of deep learning with me; your insights have helped me to think through many aspects of my work and enabled me to reflect on what we have done, what we are doing and what we could do next to deepen learning in our school.

Introduction

Some presentations about engaging disadvantaged children at a recent conference in Vancouver changed my perspective on the approach to teaching. As a principal of a decile 1 school I have seen many students struggle with learning and disengage from school despite their teachers best efforts. This conference captivated me with its rationale and inspiring ideas to get all students engaged in learning.

Deep learning occurs when students are encouraged to engage with the world and work on issues that are relevant to their lives. Rather than organising our teaching and curriculum around traditional core subjects such as science or technology, teachers organise students to work collaboratively to inquire into real world problems and to complete their work by taking action that contributes to a solution. Tasks in a deep learning environment are not based on learning set facts and knowledge but require students to work across a range of subjects while developing skills such as entrepreneurship, creativity and problem solving.

At the heart of deep learning are six global competencies that describe the skills and attitudes needed for learners to thrive as citizens in the future. It is these six competencies – character, citizenship, collaboration, communication, creativity and critical thinking – that deep learning proponents believe will help all students to develop a sense of belonging and self-worth that is critical to engagement and learning. For students from disadvantage, however, these competencies are seen to be even more beneficial as they develop the life skills and protective factors students need to stave off developing mental health problems.

Although impressed by all the presentations around deep learning and inspired by its potential to strengthen our students wellbeing, the conference highlighted the critical role that school leadership plays when implementing a new initiative. Key inspirations in my work as a principal have been the leadership work of Michael Fullan, the architect of Ontario's well known education reform strategy, and the work of New Zealand academic, Viviane Robinson, who researches and writes about leadership for schooling improvement. While Fullan and his colleagues (Fullan, Quinn & McEachen, 2018) encourage us to get underway with deep learning and make it 'the positive pull factor of the decade' (p. 10), Robinson (2018) is clear that not all change leads to improvement and for that reason we need to proceed with care and careful planning.

This brought me to the point of my sabbatical inquiry which was to better understand deep learning within the New Pedagogies for Deep Learning (NPDL) framework and to gain clarity around the leadership needed for it to be successfully implemented in our school.

Background

The key focus of my work as principal over the last three years has been to respond to an urgent need to raise our students' achievement. In 2015 the school was tasked with

achieving compliance in the areas of personnel, property, finance, governance, health and safety and curriculum. As a newly appointed principal I began to address this task with a professional learning focus on improving students' reading and writing achievement and continued this work as achievement improved each year. These foundation skills were considered essential to tackle first as our students' persistently low literacy and numeracy achievement data had labelled the school as 'low performing' and our students were at risk of not being able to access a wider school curriculum.

The school context includes many students who deal with the effects associated with poverty, including poor mental and physical health and challenging behaviour, which adds layers of complexity to our improvement agenda. Teaching in classrooms with many students who have high learning and behaviour needs is challenging work - the classroom tone can quickly shift from settled to disrupted and teachers need to be highly skilled with behaviour support strategies if they are to successfully manage student learning. As teachers engaged in professional learning, to adapt their literacy practice away from traditional teacher-directed approaches, we also began to implement a school-wide positive behaviour programme that helped our students to be 'learning ready'.

During 2017 leaders and teachers began to discuss their anecdotal evidence of the gaps in students' cross curriculum knowledge and skills. These gaps were not surprising given widespread concerns expressed by educators about the narrowing of the school curriculum that occurred as a result of the implementation of National Standards in New Zealand (Thrupp & White, 2013; O'Connor, & McTaggart, 2017). While numeracy and literacy are foundation skills for learning and will continue to be essential, there was a growing acceptance among our school leaders that they are no longer sufficient to prepare students for the complex world they face. An improvement agenda requires prioritization and it was becoming clear that, despite our best intentions, the pressures of implementing National Standards had reduced and limited the potential of our broad New Zealand curriculum.

The abolition of National Standards provided the impetus to review the breadth and depth of the school curriculum. We began by reviewing our local school curriculum and student outcomes and this helped us to identify major gaps in our students' understandings, particularly in the learning strands of science and technology.

During this review the 'crowded curriculum' became a topic of discussion with teachers who were feeling under pressure to address all the necessary academic and social skills of our students. It became clear to school leaders that the introduction of the new digital technologies curriculum could not be an add-on. With the growing realisation that our students needed to have more opportunities to work across the curriculum, leaders began to consider the way in which we would go about designing, developing and implementing a more relevant and integrated curriculum for our students.

As part of our curriculum review we also considered the effectiveness of our current school professional learning by looking at data and seeking feedback from external reviewers, teachers, facilitators and leaders. We asked what lessons we could take from what we had achieved that could inform our next professional learning plan. Overall there was evidence of improvements in both achievement and leadership goals. Our students' reading

achievement has lifted significantly and leaders have new strategies to lead professional learning. As part of our goal to distribute leadership across the school we have been able to identify new teacher leaders who will sustain and continue to grow the work we have done. During this time, external reviewers from the Education Review Office encouraged us to explore ways to deepen students learning across the curriculum.

Our review did, however, highlight some of the complexities of professional learning implementation, including challenges with leaders being able to focus on the core business of teaching and learning during a staffing crisis, the need for professional learning to go deeper to engage with teachers' real beliefs and understandings, leaders having the confidence and ability to engage in difficult conversations and the need for leaders to better support teachers to integrate new learning into their existing practice. The costs of professional learning increase when teachers and leaders need to be released from the classroom, often at the same time, and sometimes for lengthy periods of the day.

Following our curriculum review a school team engaged in a wide-ranging stakeholder consultation process to learn more about parents, whanau and community aspirations for our students. Focus group discussions, interviews and stakeholder meetings resulted in feedback about the value of giving our senior students opportunities to continue to learn through their identity and culture and to also engage them in some of the major challenges the community faces. These challenges included homelessness, inadequate public transport and community facilities, domestic violence, gangs and drug use. Participants in our consultation sessions also talked about the need for our students to know more about global issues, such as climate change, poverty and hunger. Some parents talked about how work and employment opportunities are changing and factories and workplaces are reducing staff as the use of technology and robots increases. We kept returning to the question of how our students are likely to be employed in the near future and what skills they will need to be successful.

Stakeholders also discussed their concerns about our students' physical and mental wellbeing and their sense of identity and belonging. Some reported worries about increasing incidences of students self-harming, having suicidal thoughts and the numbers of students suffering from anxiety and depression. Concerns were also expressed about the lack of support from agencies for parents and teachers dealing with many students who have mental health issues. Students disengaging from school was also raised as an issue, particularly for those who struggle with learning and come to see school as increasingly irrelevant. Our consultation feedback also highlighted the belief that students' sense of personal identity and pride and their understanding of 'place' was being strengthened through our focus on local history, connections with mana whenua, iwi and kaumatua and the development of the school pepeha. This emerging sense of pride needs to be further developed throughout the school.

Through the consultation process the community and stakeholders have given the school leaders a mandate to develop a curriculum that will better prepare our students for the rapidly changing world they are growing up in. Our school curriculum needs to address the aspects identified through our consultation process place-based learning to develop students identity and sense of pride, strategies to build students mental wellbeing,

resilience and confidence and a focus on the global competencies and skills that will ensure our students work readiness. This clear community and stakeholder voice is my driver as a leader. Working with moral purpose means that every student in the school will be affected for the better and in order to do this we need to continue to actively work to reduce the gap in academic and wellbeing achievement outcomes for students that persists in NZ.

The stakes are high, for it is disadvantaged students who have the most to lose when schools set out to change. As Fullan (2010) reminds us, 'the life chances of the poor have become deeply mired in the muck of failed reform after failed reform... with race and poverty tag-teaming to hold people down' (p. 8). If this curriculum initiative is to truly contribute to the improved life chances of our students, then leaders in the school will need to spark the passion, purpose and capacity of teachers in the service of all of our students. The community places its trust in the school leaders; they are depending on us.

Literature Review

This sabbatical inquiry is framed within the context of change currently occurring in the New Zealand education system. Questions about the success and purpose of our New Zealand education system are driving a system wide review, actioned by the government in 2018. Currently widespread public and sector consultation is taking place and new national education priorities are being identified. As part of this process a Ministerial Advisory Group on Curriculum Progress and Achievement has been tasked to report on how 'all students can have the opportunity to learn to be successful in life, learning and work and to contribute to society' (Ministry of Education, 2018).

This ambitious goal signals a greater importance on school curricula that emphasise learning for life and education that equips learners to make a contribution to society. The curriculum goal has highlighted the role of equity in education and what effective teaching and learning would look like for all, particularly for those learners in schools serving low socioeconomic communities, such as ours. The biggest challenge for the New Zealand education system is the persistent disparities in achievement, particularly for Maori and Pasifika students who are over represented in the underachievement statistics.

Equity has emerged as a strong theme in recent media statements from the Independent Taskforce on Tomorrow School's set up by the government as part of the system review. The Independent Taskforce chairperson, Bali Haque (2018), believes that leaving schools' governance and management to the market forces of competition has increased the disparity between the rich and the poor. According to the Independent Taskforce, major changes are needed if we are to reduce the inequality gap and improve outcomes for learners in schools that serve some of the most disadvantaged communities in New Zealand.

As part of this national review questions are being raised about the purpose and content of a school curriculum and what learning should be prioritised, taught and assessed. Where some curriculum experts believe there is a need to keep powerful knowledge at the heart of the curriculum, others disagree believing that a more future oriented curriculum is not

based on traditional 'learning areas' but has a greater focus on student competencies that integrate knowing, doing and being (Bolstad et al, 2012). The relative importance of the key subjects of disciplinary knowledge, such as science or technology are lessening as many educators now believe that in order to be responsive to global and societal changes our curricula needs to foreground competencies such as entrepreneurship, collaboration, creativity, problem solving and communication.

As competencies take a more important role in curriculum, the roles of learners, teachers and parents change. In a more traditional curriculum based on learning areas the teachers' role is to transmit knowledge and the learners' job is to absorb and assimilate that knowledge and then demonstrate how well they have done through various assessments. In a more future focused curriculum the teachers role is to work together with the learner to build new knowledge. The learners' role involves creating and using new knowledge to solve real world problems and find solutions to challenges as they arise. The focus is more on doing things with knowledge, taking action and learning from peers and as this happens new relationships between learners, teachers and outside learning partners develop.

New pedagogies, based on new learning partnerships between and among students and teachers, develop in the process of the students taking action and real world problem solving. As students build skills, knowledge, self-confidence and self-efficacy, working on tasks that are personally and collectively meaningful, new relationships are formed between the learner, their family, their teachers and their communities. These new pedagogies provide the intrinsic motivation for students and teachers. New developments spread via digital technology and are picked up by educators in other countries and it is when these forces converge that Fullan, Quinn & McEachen (2018) believe deep learning occurs.

Deep learning, defined by Fullan, Quinn & McEachen (2018) is 'doing something in depth that has personal and collective meaning' (p. 24) and is closely linked to the work of Paulo Freire's ideas about equity and empowerment. Freire, a Brazilian critical philosopher stated that our ultimate vocation in times of transition is to engage the world to change the world (1974). Deep learning has a strong focus on Freire's (2000) beliefs about 'taking action to improve the world and in doing so moving toward a fuller and richer life individually and collectively' (p. 32). This idea of people collaboratively transforming themselves and the world itself is fundamental to deep learning.

Deep learning is built on an equity hypothesis that 'deep learning is good for all but is especially effective for those most disconnected from schooling' (Fullan & Gallagher, 2017, p. 7). Jean Clinton (2018), a clinical professor of child psychiatry, supports this view, stating that a deep learning environment can level the playing field for children from challenging backgrounds. She argues that a deep learning classroom is more likely to engage those students who come from disadvantage as teachers see the child as capable and competent and no longer view them as an empty vessel waiting to be filled. As students have the opportunity to learn through collaborative inquiry they are able to bring their experiences and life knowledge to the learning, rather than being labelled as inadequate or deficient. Clinton also sees a safe and collaborative classroom environment as critically important for children from disadvantage who are more primed to perceive a threat in the environment and in turn need to shift to a survival strategy. She explains how this stress interferes with

learning as the brain focuses on threat and survival and how a classroom environment, where students collaborate, feel safe and have a sense of belonging, can play a huge role in protecting children against stress and supporting their learning.

Although there appear to be no large scale research studies to support Fullan et al's (2018) ambitious claim that deep learning 'could turn out to be a force for reversing the damaging effects of intergenerational poverty and racism' (p. 24), they state that 'preliminary data show that the trajectory of alienation for poor and rich kids alike could be very different' (p. 8).

How to go about framing a plan to make the necessary changes to improve outcomes for all learners in a low decile school is a challenging task. Robinson and Timperley (2007) note that nearly every evaluation of school improvement will partially attribute its degree of success to the quality of leadership. Other researchers have also found that school leadership is the second most important, after teaching quality, in-school influence on student outcomes (Leithwood, Harris & Hopkins, 2008).

Leadership for school improvement has come under the spotlight recently as both international and national research has identified the limited outcomes of some large scale and costly school improvement initiatives. While Bryk et al. (2015) state that we consistently fail to appreciate what it actually takes to make some promising idea work reliably in practice' (p. 6) Robinson (2018) suggests that we challenge the idea that change will lead to improvement until we know we have the 'structures and processes in place for ensuring that all involved can learn how to turn change into the intended improvement' (p. 5).

Clearly some types of school leadership are more likely to make a positive difference to students than others, however there are changing views on what effective leadership for school improvement looks like. The traditional notion of the exceptional heroic leader who sets the direction, makes key decisions and energises staff is changing. Effective school leadership is now seen as more of a collaborative endeavour with multiple people distributed across the school. It is now also seen as being intensely focused on learning at all levels of the school.

As leadership has come to be seen as more collaborative and focused on learning at all levels of the school, leaders' capabilities have been reframed. Three key capabilities central to school improvement have been identified by Robinson (2017). The first is using relevant knowledge, the second is solving complex problems and the third is building relational trust. According to Robinson, these three capabilities all need to work together if leaders' work is to improve student outcomes.

Robinson writes that if school leaders are to effectively lead teachers in professional learning initiatives they need to have the interpersonal and communication skills to engage teachers in deep dialogue. Such dialogue needs to unpack teachers' views and reasoning about their work; sometimes these views are not explicitly stated. Robinson states that leaders need to 'engage' with the teachers views as opposed to ignoring or bypassing them. Leaders run the risk of having teachers comply at best or resist or undermine the initiative if they bypass teachers' beliefs and theories. In order to positively influence teachers, leaders

need to be able to challenge teachers' assumptions and practises honestly and in respectful ways (Robinson, 2018).

There are also changing views around what effective schooling improvement programmes look like. Sustainable professional learning and development is about change and a culture shift and it is now generally accepted that one-off workshops or listening to speakers rarely changes teacher practice enough to have an impact on student outcomes (Timperley, 2008). However large top-down linear approaches to professional learning are also being scrutinised as they have often failed to deliver the improved student outcomes they promised. Clearly school context is important, and as the complexity of school improvement is identified and documented, schools are being encouraged to move away from a one size fits all approach that is rolled out across multiple schools to a more individual school targeted, collaborative and inquiry based approach.

This approach means that there is now a greater focus on identifying exactly what a school's specific problem is and carefully investigating the factors that may be contributing to the problem. Deciding on the priority problem is recognised as particularly difficult for leaders in schools serving low socioeconomic communities who face many challenges and with an array of potential problems to tackle. Once a goal is prioritised the strategies needed to change teachers' practice can be designed and implemented. Evaluation criteria then need to be designed and communicated to all participants prior to starting any intervention. There also needs to be close alignment between the goal, the strategies and the ways to evaluate success prior to implementation. This enables leaders to closely monitor the outcomes to ensure the change is leading to improvement.

An example of this challenge has surfaced recently as many New Zealand teachers have been involved in a national professional learning initiative to raise students mathematical achievement. Several researchers have questioned why our students have achieved so poorly on international mathematics tests given the intensive professional learning. Not only are more students reporting not enjoying maths but there has been a further decline in achievement. Some researchers (Hattie et al, 2017; Anthony & Hunter, 2017) have questioned the prevalence of the teachers' pedagogical practice of ability grouping and streaming in New Zealand schools as a possible reason for the decline. Hattie et al (2017) state that the 'greatest effects of ability grouping are to disrupt the learning community, socially ostracise some learners, and compromise social skills' (p. 228). They go on to explain how the effects on minority students are 'much more serious as they are likely to be in lower ability classes, destined to low performance based on low expectations, and often with the least effective teachers' (p. 228)

Engaging in an inquiry process is central to the way in which teachers and leaders build new knowledge and learn together. Effective professional learning is now seen to be better framed around collaborative and recurring cycles of teacher inquiry that are based on a clear goal focus, along with a process that involves investigating causes of the problems. Timperley, Kaser & Halberg (2014) state that the inquiry question needs to be addressed in tight cycles of 'small wins' that provide motivation for teachers and traction to improve outcomes.

There are very few easily accessible, evidence-based frameworks to assist schools to develop their curricula and little professional support for schools to develop the new leadership skills that are necessary to ensure the initiative improves outcomes for all learners. One framework, New Pedagogies for Deep Learning (NPDL), has a growing number of educators, school districts and schools in seven countries working in a global partnership and it shows promise as a potential framework for implementation. Although the framework is designed to bring about change across whole education systems and nations there is some direction provided for individual schools and clusters to get underway. The NPDL model is described below.

The NPDL Model

Deep learning has been embedded in a global partnership called New Pedagogies for Deep Learning (NPDL) designed and led by Michael Fullan, Joanne Quinn and Joanne McEachen. The Deep Learning Framework depicted in Figure 1 below identifies the components that need to be in place for whole-system change and transformation of learning.

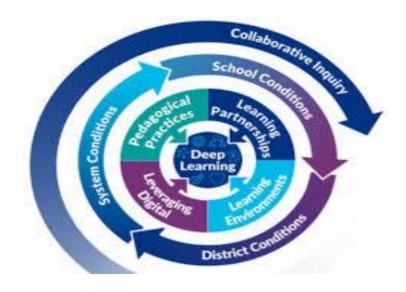


Figure 1: Deep Learning Framework

Source: Copyright 2014 by New Pedagogies for Deep Learning ™ (NPDL)

The framework depicts four layers as circles of support.

Layer 1: **Deep Learning** refers to the intended outcomes of deep learning defined as the **6C's.**

Layer 2: The **four elements of learning design** shows the elements that support the development of deep learning experiences.

Layer 3: **Conditions for deep learning** describes the conditions that are necessary for schools, clusters and systems to change.

Layer 4: **Collaborative inquiry** surrounds the whole framework, highlighting the need for continual learning at all levels of the framework.

At the heart of the deep learning framework are the competencies or 6C's, (collaboration, critical thinking, creativity, citizenship, communication, character) as they are better known. These deep learning competencies describe the skills and attributes that need to be

mastered if learners are to thrive. Each of these competencies has a deep learning progression rubric that can be used to assess students' current levels and to measure and report on progress.

The second layer outlines the four elements of learning design that teachers need to use when designing experiences that will build the 6C's using real-life problem solving. These elements of learning design are interlinked and outline a set of decisions to be made in the four areas of learning partnerships, learning environments, leveraging digital and pedagogical practices.

The first element of learning design in NPDL, 'learning partnerships', refers to the new relationships that are created between leaders, students, teachers, families and those beyond school when teachers become active partners with their students. Students roles change as they come to understand how to manage their own learning. Teachers roles change as they shift away from explicitly structuring learning tasks to becoming more 'activators' (Hattie, 2012) of learning. They activate learning by establishing challenging learning goals and learning tasks that create and use knowledge. Leaders roles also change as they become lead learners, who model learning and shape the collaborative culture. Families and whanau take on a more important role as digital users and joint decision makers with the school in this element of the framework.

The second element of learning design in NPDL is the 'learning environment'. This is a broad term that refers to several modern learning spaces, including physical and virtual spaces and cultural and relationship spaces. Both the design of physical and virtual spaces and the cultivation of a culture of learning are considered as part of the design of learning environments.

'Leveraging digital' is the third element of learning design. This phrase refers to the use of technology such as devices, apps and software that can support teachers to accelerate learning. In the learning design process teachers need to ensure students have the skills to do more than just use the technology; they need to discriminate in how they can use it to build new knowledge, collaborate and share their learning.

'Pedagogical practices' are not considered in isolation but integrated as part of the fourelement design, linking all aspects together. They refer to a mix of known or familiar pedagogical practices, for example constructivism, with emerging innovative practices, such as problem-based learning and digital innovations. These familiar and new pedagogical practices together foster the application of new ideas and knowledge in real life settings. Teachers as models of learning need to continually learn and hone their extensive repertoire of practices.

The final layer of the NPDL framework refers to the Collaborative Inquiry process depicted in Figure 2 over page. This collaborative inquiry process is seen as a powerful part of the capacity-building approach to deep learning and although it is shown as the outer circle of the framework, it is not the final step in implementation. Collaborative Inquiry is used at every level of NPDL. The inquiry process has four phases that cycle from assess to design to implement and then measure, reflect and change. An inquiry approach is widely advocated

for teachers in New Zealand (Timperley et al, 2014) however, the clear focus in NPDL is on inquiry through collaboration and engagement with colleagues.

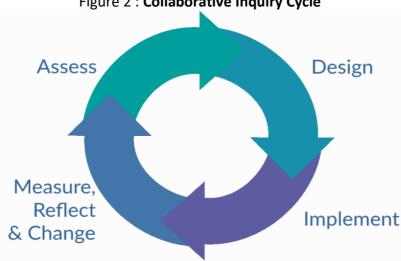


Figure 2: Collaborative Inquiry Cycle

Source: New Pedagogies for Deep Learning ™(NPDL) Retrieved from www.npdl.global/Deep Learning Hub

A strong feature of NPDL is the focus on leading school transformation. The leadership emphasis however is not on the qualities of individuals who rise to the fore and rally the troops in times of crises but more on a leader who is able to model being a learner. Such a leader will learn alongside their team members, monitor the changes that occur and measure the impact. This evaluative capability is essential to ensure that there is genuine evidence of improvement. Being an effective leader of school improvement requires also having the skills to build a high trust and collaborative work culture for all. It is this high trust environment that is critical for successful transformation and improvement.

NPDL leadership for implementation moves away from an implementation mindset of 'rolling out' to more of an organic process of co-learning and co-development'. Leadership is seen as a collaborative responsibility with teachers, learners and the community all playing a part.

As leaders implement NPDL they move through three identifiable phases that progress from clarity to depth and finally sustainability. Clarity of goals is important. Clarity occurs as people develop shared understandings, use new approaches, share their results and engage in dialogue about their work. Strong relationships are built on a culture of trust and transparency and are bound by shared norms. High trust relationships are actively developed as people collaborate and inquire into and learn from their work. Sharing, risk taking and organising visits and observations are all part of the leaders' role as they build clarity.

The second phase, depth, emerges after teachers have engaged in one collaborative inquiry cycle. As teachers are motivated to review their pedagogical practices and the scaffolding provided to students, the implementation process gains momentum. Teachers collectively engage in more frequent inquiry cycles, moderate the progress of their students and see

opportunities to learn within and outside the school. In this way, capacity is built and motivation is increased to design new learning experiences.

The third phase, sustainability, occurs as teachers embed learning design cycles across the whole school and then move out to the wider system. Coherence making is cumulative, ongoing and built across schools, districts and systems by teachers who have developed confidence designing and assessing deep learning and who then reach out to help others. As new staff come in to the school and bring new ideas continuous professional learning becomes part of culture of the school.

Methodology

In April 2018 I attended a NPDL conference in Vancouver and following the main conference I spent time visiting three NPDL schools in the Vancouver region. Following that, in July, four staff from our leadership team attended a two-day Deep Learning Lab at Stonefields School in Auckland. During the Learning Lab the leadership team discussed our understanding and when back at school we met and collated our responses. These learning experiences, written information about deep learning and professional reading, informed the design of key questions for this paper, which then formed a loose interview guide.

I used semi structured interviews to collect data from principals and senior leaders from three New Zealand schools involved in NPDL and from three Vancouver schools. Interviews are useful for getting the story behind a participant's experiences and are a more personal form of research than written questionnaires. In an interview, the interviewer has the opportunity to probe or ask follow up questions.

The questions formed a general interview guide that was intended to ensure that the same general areas of information were collected from each interviewee. While this provides some focus it still allows a degree of freedom and adaptability in getting the information from the interviewee.

The six school leaders from three different schools interviewed in New Zealand were from high-performing, high-decile primary schools at varying stages of NPDL implementation. They had been working with NPDL for two, three and four years. School leaders in Vancouver were from schools that served the equivalent of mid to high decile schools in New Zealand. One Vancouver school was equivalent to a NZ high school or college.

A group of Auckland principals and leaders were then approached to participate in a semistructured interview designed to understand their school's NPDL journey. I chose face toface interviews rather than a survey as I wanted to get the story behind the schools and leaders' experience and wanted in-depth information. Semi-structured interviews allowed me to probe more deeply and to ask follow up questions. After reviewing my notes from each interview, I then analysed the data for key themes.

Results

This section reports the results from the interviews with school leaders in both New Zealand and Vancouver. The key questions for the semi structured interviews included:

- 1. How does NPDL align with recent and current initiatives in your school?
- 2. Describe how you got started with Deep Learning and NPDL.
- 3. What do you see as the benefits of a school being part of NPDL?
- 4. What do you see as the challenges of implementing deep learning within NPDL framework?
- 5. Can you comment on the role of teacher inquiry within NPDL?
- 6. What advice do you have for a school embarking on the NPDL journey?

The results of the interviews are summarised below.

1. How does NPDL align with recent and current initiatives in your school?

Overall school leaders in NZ feel that recent professional learning work they have done aligns well with previous curriculum work and current education initiatives. They discussed the 6C's being similar to the Key Competencies in the New Zealand Curriculum (Ministry of Education, 2007) and the core learning design elements that drive NPDL: leveraging digital, learning environments, partnerships and pedagogical practices as all aligning with recent curriculum work. The elements of learning design were seen to form a powerful lens through which schools could explore and evaluate their learning activities and topics. None of these elements were very different from previous professional learning, however, what was new was the placement of all elements into a framework that could be used to evaluate a school's strengths and needs. These four elements are likely to be familiar to most New Zealand leaders and teachers.

School leaders spoke about integrating previous and current professional learning into their NPDL work. Some examples of recent professional learning that were seen to align with NPDL are Carol Dweck's work on Growth Mindset (Dweck, 2008), John Hattie's work on Visible Learning (2012), teacher inquiry models and national professional learning on Assessment for Learning. In Vancouver the leaders spoke about the power of their recent professional learning with the Halbert and Kaser Spiral of Inquiry (2013). Teacher Inquiry was seen as particularly relevant given the important role it plays within NPDL.

2. Describe how you got started with Deep Learning and NPDL

School leaders all acknowledged feeling inspired when first learning about deep learning, albeit for different reasons. Michael Fullan's long standing commitment to principal leadership work is well known in New Zealand and this was acknowledged as a strong pull factor for one principal. Another principal spoke about the range of supporting tools and resources available as very attractive and helpful for schools.

The three New Zealand principals talked in different ways about a lack of clarity in the early stages of NPDL around how to get staff on board with deep learning. They all noted the range of teacher capability in their schools. Some schools identified teachers who emerged as early adopters of deep learning and worked with them as a small team to get underway. One principal spoke of using the traditional school leadership structure to drive the NPDL work. One principal commented that some teachers were still not able to engage with deep learning after several years' input and that this was a real challenge for the school.

Leaders discussed the various ways they began to implement NPDL. Two leaders discussed forming a professional learning group with others in the school to work through the book 'Coherence' by Michael Fullan and Joanne Quinn (2016). This was seen as an extremely effective way to help people understand the framework and get to grips with aspects of leadership. These groups took up to six months to work through the material and explore the issues relevant to the school.

3. What do you see as the benefits of a school being part of NPDL?

All leaders spoke positively about the usefulness of the key components of NPDL in terms of planning and implementing a more child-centred school curriculum. Low student achievement was not a major concern for these schools and NPDL did not appear to compete with any initiative to accelerate achievement. All principals and leaders see the NPDL framework as accessible for staff, board of trustees and parents and the 6C's as accessible and powerful for learners. Two schools have adapted the 6C's into kidspeak to facilitate students understanding of them. Most students are able to discuss their learning in terms of the competencies and teachers have rubrics to guide their decision making about what has been learnt and what needs to happen next.

The resources and tools that accompany NPDL are also seen as extremely helpful as is the moderation process in place to ensure that student learning can be assessed and tracked in a consistent way. Leaders talked about the power of the NPDL moderation tools and processes to support their work. School, cluster and global moderation processes supported by professional expertise and tools are seen by most leaders as having a powerful impact on teachers and leaders' work.

The principals and leaders spoke about the power of the cluster to support collaboration across schools and the importance of having support from external facilitators, provided by CORE Education. Cluster meetings are organised to plan and moderate units of work and expertise is being shared across schools. These learning opportunities are seen as mutually beneficial for all schools with leadership being demonstrated at all levels of the schools.

There are effective structures to support schools with a New Zealand hub, face-to-face and webinar facilitator support, books, a website and conferences and Deep Learning Labs held each year. Opportunities to attend these are seen as vital. All principals and leaders spoke about the clarity that occurred for the school leaders to move forward that occurred as a result of attending the NPDL Christchurch Learning Lab in 2017. All spoke of the need to have as many staff as possible attend the conference for real momentum to occur.

The fact that NPDL is seen as dynamic, with resources constantly being created and new ideas generated, was seen as a key benefit. The resources draw from a wide net of educators both nationally and globally and conferences and seminars provide stimulating input to NPDL and support the NPDL writers' claim of it being a 'living laboratory' (Fullan et al, 2018; p. 39).

The fact that NPDL aims to provide an organising framework but not a prescription for working on a more future focused curriculum is seen as a benefit. The model is able to be implemented by schools in a variety of contexts and can be integrated with other aligned initiatives.

4. What do you see as the challenges of implementing deep learning within NPDL framework?

Leaders and principals talked about the leadership challenges they faced when implementing NPDL. Several discussed the challenge of being able to build and maintain trust within a team while simultaneously encouraging teachers to adapt their practice. Some people are more open to feedback than others. Some are more able to give feedback in deeply respectful and helpful ways than others. It is these aspects that challenge leaders' practice and can lead to mistrust and a lack of staff unity if not managed well. Leaders discussed understanding that their behaviour played a critical role when implementing NPDL as they needed to model being open. Senior leaders need to be able to build a culture of trust based on inquiry, collaboration, risk taking and honesty and it is this complex piece of leadership work that several people felt requires skilled external expertise for support.

Building all teachers' capability was also discussed as a challenge by interviewees. There is general agreement that staff need to have an open-to-learning mindset and also be willing to give things a go. They also need to be able to work collaboratively and engage as learners and risk takers if they are to be successful in a deep learning environment. The issue of how to proceed when staff are unable to work in this way or become resistant and undermine the work of others provides a real leadership challenge. Leaders acknowledged that supporting teachers to change or adapt their practice needs to be seen as a multi-year venture.

Practical issues around giving teachers adequate time to meet and work were raised – timetabling release, obtaining relief teachers and finding extra resources to support teachers when gaps are identified often prove difficult for leaders. Schools that were further down the implementation track also talked about the need for teachers to have ongoing opportunities to engage in and deepen their knowledge and skills and to learn collaboratively with colleagues.

One leader discussed the challenge of fulfilling the 'change the world' aspect of deep learning where students use their learning to make a positive difference in the world. Social action has traditionally not been a big part of schools' integrated curriculum work and can be difficult to successfully plan for and effectively implement without expert support at the planning stage.

5. Can you comment on the role of teacher inquiry within NPDL?

In Vancouver the schools I visited had recently undertaken professional learning with Halbert and Kaser using their Spiral of Inquiry (2013) and teachers and leaders were positive about its value, seeing the potential of the model to help them improve their practice 'by going deeper'. The biggest challenge teachers and leaders reported was getting uninterrupted time to engage in the collaborative practices required to engage in inquiry.

Some leaders spoke of the need to have external support and expertise to run effective teacher inquiry and post-observation feedback sessions, recognising the considerable skills and expertise required to truly engage teachers in talk about their beliefs, values and theories of action. Two leaders spoke of the tendency to avoid addressing difficult issues in order to maintain relationships and retain staff.

Two principals I spoke with about the use of the inquiry process in their schools noted the challenges of supporting teachers to see inquiry as a professional 'way of being' rather than a one-off exercise. In some schools the Teaching as Inquiry process occurs solely within the appraisal process and is framed as an individual activity for accountability purposes. In others it is seen as a key mechanism for collaborative culture building that drives group learning at the same time. Teachers using the Teaching as Inquiry model in a collaborative way spoke about the benefits of the support they received from their colleagues – the power of 'having the group's brains' to solve problems was more time consuming but very important to develop new understandings. Teachers and leaders talked about the trust that was built up between people in collaborative inquiry sessions that are well structured and facilitated. This idea of culture building through inquiry is a key aspect of NPDL.

6. What advice do you have for a school embarking on the NPDL journey?

Some of the points reported above in the results section form advice for school leaders embarking on NPDL work. In essence, the suggestions given relate to the implementation and leadership of a new initiative. All interviewees stressed the need to complete the School Conditions Rubric as the first step and to then design next steps based on the strengths and needs identified. Principals spoke about the need to devise a small number of achievable goals for the year and to ensure everyone was on board with them. One leader spoke about the assumptions that can be made about people's prior knowledge and that time to talk and question is essential for all staff. A small team comprising leaders and teachers who show enthusiasm and expertise with deep learning should get underway ahead of the rest of the staff in order to build knowledge and experience. They need to build their ability to work collaboratively, inquire into their practice and support others to trial new practices. The need for outside expertise to support leaders to work with teachers was also seen as critically important and joining the NPDL partnership would enable this to happen.

Forming an in-school professional learning group with the deep learning team to read and discuss Fullan and Quinn's book Coherence was also recommended, as was participation in a cluster with other schools and attendance at a Deep Learning Lab. These professional

learning opportunities were seen as critical to NPDL success. Two principals spoke about the need to get going with the 6C's as these are well described and have supporting rubrics for assessment that are based on developmental progressions. One principal spoke about the work the school had undertaken to build the learning partnership with parents. She explained how parents had been invited to participate in the planning process for new units of inquiry two years ago and how many more parents were now taking up this opportunity.

Findings

Six findings emerged around the implementation of NPDL based on the results from semi structured interviews, professional reading and discussions with facilitators and conference attendance, which I will discuss here in more detail. These findings are: alignment with education initiatives, teacher inquiry, learning partnerships, staff recruitment, leadership matters and equity and wellbeing. Although the findings are written separately they are all interlinked.

Alignment with education initiatives

NPDL provides a framework for developing a school's localised curriculum that aligns with several NZ education initiatives that are in place or in development in 2018/2019. Some of these initiatives discussed below include The Ministerial Advisory Group on Curriculum Progress and Achievement (Ministry of Education, 2018), the new Education Leadership Strategy and Capabilities Framework (Education Council, 2018) and Communities of Learning (COL's).

The Ministerial Advisory Group on Curriculum Progress and Achievement (Ministry of Education, 2018) is due to report on how 'all students can have the opportunity to learn – to be successful in life, learning and working, and to contribute to society'. This goal captures key aspects of NPDL with reference to success in all aspects of life, makes reference to students' future work and includes a social action element with the phrase 'making a contribution to society'.

The NPDL global competencies or 6C's align with the New Zealand Curriculum Key Competencies and those proposed more recently by future thinkers and educators. Work undertaken by researchers and writers (Alton Lee, 2017; Bolstad et al, 2012; Harari, 2018) highlights the need for learning to be organised around competencies that students will need to be successful in future workforces and life, as opposed to subject-based instruction. There is general agreement around the value of the 'C' competencies with Harari (2018) writing that 'most important of all will be the ability to deal with change, to learn new things, and to preserve your mental balance in unfamiliar situations' (p. 162).

Communities of Learning (CoL's), in place since 2017, are predicated on the power of school clusters collaborating and working on shared achievement challenges. Across-cluster learning and leadership are features of CoL's and this aligns with the strong emphasis on the local and global networks and school clusters that are part of NPDL.

A recently published Leadership Strategy for the teaching profession of Aotearoa New Zealand by the Education Council (2018) has a focus on leadership capabilities that signal the need for leaders' practice to be more future focused, inquiry driven and collaborative. The strategy also lists one of the leadership capabilities as the need for leaders to accept some responsibility for intentionally building a preferred future and includes 'showing moral purpose' within the teacher-capability framework. This notion of equity and moral purpose is clearly embedded in NPDL.

Teacher Inquiry

Teaching as inquiry is a cyclical process that involves educators posing questions, gathering evidence and investigating the impact of their decisions and practice on students. There are varying models of teacher inquiry in use in schools and varying levels of commitment to it as a lever for improved outcomes for students. In Vancouver, the schools visited had recently undertaken professional learning with Halbert and Kaser (2013) using their Spiral of Inquiry. Teachers were very positive about its value, seeing the potential of the model to help them improve their practice by going deeper and also as a means to strengthen professional relationships.

The cycle of collaborative teacher inquiry is a key tool for fostering positive learning relationships between people within NPDL. Teacher inquiry is not seen as something an individual teacher undertakes on their own in order to meet appraisal expectations but is seen as a more dynamic and powerful process when undertaken with others. Inquiry is the means of developing and accessing good ideas. For example, teachers themselves are seen to engage in deep learning as they collaborate and inquire into their students' progress during a moderation session. As they discuss students' work they are generating shared professional knowledge, problem solving and refining their practice.

Teacher inquiry has been a key part of New Zealand teachers' appraisal process, however it could be used more effectively across all professional learning in the school. The Spiral of Inquiry (Halbert & Kaser, 2013) that we use will need to be shared and modelled for new staff in 2019. Additional support will need to be provided for beginning teachers and overseas trained teachers. Protocols for working collaboratively need to be established and more time allocated to inquiry as a deliberate mechanism to build a more collaborative culture across the school. As a staff we need to build a more in depth understanding of what collaboration means and how to facilitate it.

Learning Partnerships

The notion of the future being about more innovative partnerships and collective endeavour emerged as a theme in this inquiry. Schools are clearly changing as they work in clusters, develop new partnerships and draw on partners and sources of knowledge outside the traditional school boundaries. Some of these partnerships discussed with schools include businesses, cultural organisations, local agencies and research and academic organisations, such as universities and technical institutes.

Our school's inquiry to develop a more student-led breakfast club led to interactions and partnerships with a range of people and organisations that have expanded the learning environment. During the students' inquiry they interacted with the local supermarket manager, students and teachers in other schools, students across our school, philanthropists and a charity that supplies food to schools to name a few. As students engaged in these new partnerships they were making sense of new information and working on creating a new format breakfast club. Such learning that creates new knowledge is very different from the traditional transmission of knowledge that already exists.

Building educationally powerful connections with families and communities of diverse students in the school has been identified in the research literature as a significant lever for improving educational outcomes (Robinson et.al, 2009). If we are to engage in the transformative change that we need to and continue to strengthen our connections and partnerships with our parents, families and whanau we need to empower our parents to come on board with the decision making around learning in our school. Our next step is to work towards engaging our parents in the planning process, storying back to them the work that we are undertaking and helping them to frame new questions to ask of the teachers. Not just questions about meeting the standard or student behaviour but questions such as 'How is my child developing with collaboration?, Are they learning how to be with others through conflict and getting through to the other side?'

As school principals and leaders innovate they are having to confront an increasing range of issues that were not traditionally in their domain. They often need to draw on partners and sources of knowledge outside the traditional school boundaries. Sahlberg, speaking on a panel at ULearn (Core Education, 2018) in Auckland, described leadership as a collective endeavour, giving as an example the global concern of the declining mental health of our students. He believes that the prevalence of issues, such as self-harm and anxiety, has forced school leaders to ask new questions, seek new partnerships and to look and think outside the traditional boundaries for assistance. This has occurred in our school as we seek support for these issues beyond traditional agencies. Prioritising and developing these partnerships has become important leadership work.

Staff Recruitment

Research tells us that teachers make a significant difference as it is what teachers know, do and care about that is very powerful for improving student outcomes (Hattie, 2003). The best performing school systems in the world provide high quality education so that every student benefits from excellent teaching. In order to achieve this, countries with successful education systems attract the strongest principals to the toughest schools and the most talented teachers to the most challenging classrooms (Schleicher, 2018). Our challenging school context needs the very best teachers who are learners themselves and who are able to work together with students in a knowledge building, deep learning environment.

Clinton's (2018) work on student wellbeing points to the need for teachers to see their role as human developers who are teachers of the person not just content deliverers. Clinton stresses that teachers talk about students should be free from deficit thinking and explanations and that they need to have a strong desire and ability to learn about their

students. She believes that teachers need to actively find out about their students' identities, their experiences and their families and be able to value the students and families' cultural magnificence that is often not seen or valued.

In order to attract the most talented staff we are developing a recruitment and onboarding programme that enables us to be clear about the personal and professional qualities that enable people to succeed in our school. We need staff who are not only able to develop effective student and family relationships that are necessary to work in our challenging environment but who are also deeply committed to ongoing personal and professional learning and working together with students and colleagues.

Similarly, we need influential teacher leaders who have professional authority, who choose to support their colleagues and believe strongly in the progress of the school and its students. These teacher leaders need to be able to lead improvement in the school by exercising influence in ways that move a team of teachers forward. At the moment our leaders do not have adequate access to the skilled professional support they need to learn and grow in their crucially important leadership roles.

Our recruitment process and interviewing needs to place greater emphasis on the complex set of skills, experiences and dispositions needed to lead and teach in our setting. Some of these skills and dispositions are discussed below.

Leadership Matters

Leadership for school improvement is now seen as distributed across multiple people and situations and intensely focused on learning at all levels of the school. Leadership supports ongoing professional learning that is now framed around more collaborative and iterative cycles of teacher inquiry. These cycles of inquiry are based on a clear goal focus, along with a process that involves investigating causes of the problems. The inquiry question needs to be addressed in tight cycles of 'small wins' that provide motivation for teachers and traction to improve outcomes (Timperley, Kaser & Halberg, 2014). A teaching as inquiry cycle is central to the NPDL model and several leaders discussed the need for leaders and teachers to spend time becoming familiar with its use as a way of building teacher capability.

The NPDL model emphasises a process for leaders to get underway with deep learning by having the major leadership goal of developing coherence or shared understandings (Fullan & Quinn, 2016). This coherence-making process has four components that interact as the leaders get deep learning underway, beginning by focusing direction with clear goals and an action plan. Goal setting needs to be done in a data based and collaborative way. Secondly, leaders participate as learners and build collective purpose and cultivate a collaborative culture. Thirdly, they develop pedagogical practices, and fourth, through the first three leadership components, they secure accountability within the school.

As leaders develop coherence across the school they need to strengthen three essential capabilities that are focused on learning. Robinson (2017) writes that the three capabilities - of using relevant knowledge, solving complex problems and building relational trust are central to effective school leadership for improvement.

A key tenet of NPDL is building a high trust culture for deep inquiry to thrive. If this is to happen then leaders need to become adept with using and supporting teacher inquiry at all levels of the school and they need to be able to facilitate collaborative work. As a school we need to have sound structures and processes in place to ensure the intended improvement occurs. For example, collaborative work protocols need to be established if people are not familiar with this way of working. Leaders also need to be able to engage in challenging teachers' assumptions and practices in respectful ways. Ideally, all leaders and teachers would be able to provide and seek critical feedback and express their views honestly and respectfully. Leaders also need to be able to do more than support teachers by demonstrating a new pedagogy or practice or giving post observation feedback on its use. They need to engage in the more complex process of helping the teacher to integrate and align the new practice with hundreds of their existing practices (Robinson, 2018). These skills are crucial if teachers and leaders are to learn. We will need to carefully plan how we build leaders' capability to learn alongside teachers.

Schools are not organised in ways that make it easy for the adults to learn, therefore the practical issues around giving teachers adequate time to meet and work need to be solved in advance. This includes timetabling release, securing relief teachers and finding extra resources to support when gaps are identified. Time for teachers to work together, though often challenging to organise, is essential if we are to engage in extended dialogue, challenge assumptions and lead deep inquiry into teachers' thinking and beliefs. Schools that were further down the implementation track also talked about the need for teachers to have ongoing opportunities to engage in and deepen their knowledge and skills and to learn collaboratively with colleagues.

Effective sustainable professional learning and development is about change and a culture shift and as such requires thought, discussion and planning. It is clear that effective leaders tackle the right problems in the right way in order to reach their goals., however, as noted earlier, the difficulty for leaders in schools serving low socioeconomic communities facing many challenges is to decide what problem is the priority problem. It will be important to spend time with staff and facilitators to focus the direction, inquire into and develop real clarity around a key goal. It will also be necessary to plan the key strategies that we need to use and identify the practices that need to be addressed to meet the goal. We will also need to set key evaluative questions around our goal so that we can closely monitor them for improvement.

Our professional learning plan needs to include more time for teachers and leaders to collaborate and engage in classroom observations and dialogue, provide individual student support, visit professionals in other schools, talk to parents, attend learning labs and interact with skilled facilitators. Schleicher (2018) notes that these are the hallmarks of high performing schools.

We will need the support of external facilitators if we are to make headway with our plan and continue to develop enough support within a culture that encourages risk taking and maintains trust. In addition we need to give more time and attention to growing our middle leaders. These are people who are grounded in instructional practice and able to command

professional authority by supporting their colleagues. We have begun to identify middle leaders who believe strongly in the progress of the school and our students.

Equity and Wellbeing

Deep learning is built on an equity hypothesis that 'deep learning is good for all but is especially effective for those most disconnected from schooling' (Fullan et al, 2018, p. 5). This hypothesis is reiterated throughout NPDL and seen as an important drawcard for our decile 1 school setting. Can we make a real difference for all of our students if we reimagine what's important to be learned, how learning is fostered, where learning happens and how we measure success?

Our deep learning trial with our student-led breakfast club leaves us keen to learn more. High achieving and underachieving students became involved in the breakfast club inquiry, acquiring skills as stock controllers, donation hustlers, problem solvers, communicators, schedulers, budgeters, observers, behaviour managers, health and safety experts, hosts, cooks and planners. Although only a small trial, our breakfast club inquiry supports the views about the trajectory of alienation. Students at risk of disconnecting from school took an active role working alongside their peers and adults. They expressed their sense of satisfaction with their results as more students attended and the breakfast area became a social space for networking and sharing. In turn their sense of identity and wellbeing appeared to improve as they engaged in meaningful work in a safe learning environment.

Although there are no large scale research studies to back up the deep learning equity hypothesis, the writers refer to two American studies with low-income minority students that report improved outcomes for academic achievement, student attendance and behaviour.

As a principal in a decile 1 school I find the focus on equity within NPDL very compelling. Fullan et al (2018) believe deep learning is essential for some, but necessary for all and see it as the newest lever to accomplish the moral imperative, which is to have everybody moving up but the gap being reduced. Achieving this moral imperative means that we need staff who believe strongly in supporting the full human talent development of every student and all groups of students. Moral leadership however cannot be taught; it is part of a process of personal and professional development based on coaching, networking and reflection-in-action and this needs to be carefully considered as part of the professional learning work we undertake to build staff and leader capability (West-Burnham, 2009).

In summary, NPDL provides a comprehensive strategy for developing a more relevant, localised curriculum based on a set of global learner competencies and the key elements of learning design for deep learning. NPDL outlines the conditions leaders need to create for transformational change to occur, weaving collaborative inquiry and culture building through all aspects of the framework. It incorporates practical tools and processes to engage students, educators, and families in new partnerships to drive deep learning and offers national and global opportunities to link with educators, schools and clusters through participation in annual conferences and learning labs. A New Zealand resource hub and all research developed through international participation and regular webinars are also

available. New Zealand schools are also able to access external expertise for professional learning delivered by a range of facilitators, tailored to the school needs.

It will be important to proceed with care as we develop our goals and action plan, as researchers warn that many initiatives designed to 'close the gap' often have unintended consequences of further disadvantaging the most needy (Datnow, 2017). We need to focus on the value we are adding for all of our learners by closely monitoring student outcomes and ensuring there is evidence that NPDL is not only raising the bar for all of our learners but also closing the achievement gap between them.

Conclusion

Both the benefits and challenges of implementing NPDL in our school have been identified through this inquiry. NPDL closely aligns with current thinking in New Zealand around the need for a future focused curriculum with an emphasis on student competencies. It also appears to address the emerging national priorities with the development of evaluative capability to improve student academic and wellbeing outcomes, as well as the development of collaborative cultures and leadership at all levels of the school that enable it to continuously learn. Developing local and global partnerships with schools and educators, business communities and academics and our own community are attractive aspects of NPDL, as is the strong sense of equity and social justice that permeate the work. As New Zealand undertakes a system-wide review of the purpose of education to ensure that all students can have the opportunity to learn, NPDL appears to offer schools a lens for curriculum review and development.

The challenges of bringing about school improvement and transformation through a curriculum focused on deep learning have also been identified. These challenges include the need to employ staff who are willing to learn and grow, work in a collaborative way and who have a strong commitment to reducing the persistent achievement gap between our students and those in more affluent schools. Another challenge is to develop the leadership team's strength, expertise and informed optimism to build a high trust school culture, solve the complex problems they encounter and learn fast from the data. In exploring these challenges I recognise the challenge of the complexity of our environment and the need to listen and respond to the voices of our parents, families, whanau and community. This challenge sits alongside the passion and commitment of our teaching staff to do what they can for positive change.

Our Ministry of Education faces challenges too. It needs to better support all schools, but particularly low decile schools such as ours, to make the changes they need to remain relevant. We need the staffing and resourcing to give educators the time and skilled support they need to collaboratively inquire and reflect deeply on their work if we are to be part of the solution to address the persistent underachievement of Maori and Pasifika students and the persistent inequality in our education system. A further challenge for the Ministry of Education is around making more visible evidence-based supports to allow busy school leaders to review, localise and lead their school improvement and curriculum initiatives.

Any findings from this inquiry will inform the school action plan and will need to be integrated with the outcomes from the Ministerial Advisory groups that are in process.

Our school community is relying on our leadership and commitment to bring about the changes needed for the future their children are moving into. As Fullan (2018) says, 'our best hope collectively is that deep learners inherit the world'

References

Anthony, G., & Hunter, R. (2017). 'Grouping practices in New Zealand mathematics classrooms: Where are we at and where should we be?' *New Zealand Journal of Educational Studies*, 1-20.

Bryk, A.S, Gomez, L. M., Grunow, A., & LeMahieu, P.G. (2015). *Learning to improve: How America's schools can get better at getting better*. Cambridge, MA: Harvard Education Press.

Bolstad, R., Gilbert, J., McDowall, S., Bull, A., Boyd, S., & Hipkins, R. (2012). *Supporting future-oriented learning and teaching – a New Zealand perspective*. Wellington: Ministry of Education. Retrieved from: https://www.educationcounts.govt.nz/publications/schooling-/109306.

Clinton, J. (2018). Deep learning and well-being - levelling the playing field for all children. The Learning Exchange. Retrieved from: https://thelearningexchange.ca/deep-learning-and-well-being-levelling-the-playing-field-for-all-children

Datnow, A. (2017). Opening or closing doors for students. Equity and data-driven decision-making.

Dweck, C. S. (2008). Mindset: The new psychology of success. New York: Ballantine Books.

Education Council of Aotearoa (2018). *The leadership strategy for the teaching profession of Aotearoa New Zealand*. Wellington: Education Council.

Freire, P. (1974). Education for critical consciousness. London, UK Bloomsbury.

Freire, P. (2000). Pedagogy of the oppressed. New York, NY: Bloomsbury.

Fullan, M. (2010). *All systems go: The change imperative for whole system reform*. California, USA: Corwin.

Fullan, M., & Gallagher, M.J. (2107). *Transforming systems: Deep learning and the equity hypothesis.* Palo Alto, CA: Learning Policy Institute.

Fullan, M., & Quinn, J. (2016). *Coherence: The right drivers in action for schools, districts, and systems*. California, USA: Corwin.

Fullan, M., & Quinn, J., McEachen, J. (2018). *Deep Learning: Engage the world, change the world*. California, USA: Corwin.

Halbert, J., and Kaser, L., (2013). Spirals of inquiry for equity and quality, BCPVPA Press, Vancouver.

Haque, B. (2018). *Tomorrows Schools review must deal with the market's failure*. Retrieved from: https://www.nzherald.co.nz/nz/news/article.cfm?c id=1&objectid=1208286

Hariri, Y. N. (2018). 21 lessons for the 21st century. London, UK. Jonathan Cape, Vintage.

Hattie, J. (2012). Visible learning for teachers: Maximising impact on learning. USA: Routledge.

Hattie, J., Fisher, D., Frey, N., Gojak, L., Moore, S., & Mellman, W. (2017). *Visible learning for mathematics, grades K-12: What works best to optimize student learning*. CA: Corwin.

Leithwood, K., Harris, A., & Hopkins, D. (2008). Seven strong claims about successful school leadership. *School Leadership and Management, 28 (1),* 27-42.

Ministry of Education. (2007). The New Zealand Curriculum. Wellington: Ministry of Education.

Ministry of Education (2018). *Curriculum, progress, and achievement* Ministerial Advisory Group Conversation Document. Wellington: New Zealand. Retrieved from: https://conversationeducation.govt.nz/assets/CPA/CPA-Programme-Conversation-Document.pdf

O'Connor, P., & McTaggart, S. (2017). The collapse of the broad curriculum: The collapse of democracy. *Waikato Journal of Education*, *22(1)*, 61-72.

Robinson, V. (2017). Capabilities required for leading improvement: Challenges for researchers and developers. In *Leadership for improving learning: Insights from research*. Paper presented at the Australian Council for Education Research Conference 2017. Victoria: Australia

Robinson, V. (2018). Reduce change to increase improvement. California, USA: Corwin.

Robinson, V., Hohepa, M., & Lloyd, D. (2009). School leadership and student outcomes: Identifying what works and why. Best evidence synthesis iteration [BES]. Wellington, New Zealand: Ministry of Education.

Robinson, V. & Timperley, H. (2007). The leadership of the improvement teaching and learning: Lessons from nitiatives with positive outcomes for students. *Australian Journal of Education*. 51.

Sahlberg. P., Hutchinson, M., Wano, W. (October, 2018). Chairperson Wenmoth, D. 'Leadership as a collective endeavour'. Sofa session conducted at the Core Education Conference. Auckland, New Zealand. Retrieved from http://core-ed.org/livestream

Schleicher, A. (2018). Educating students for their future, not our past. Column in *Teacher Magazine* published online, Melbourne: ACER

Retrieved from: https://www.teachermagazine.com.au/columnists/andreas-schleicher/educating-students-for-their-future-not-our-past

Thrupp, M., & White, M. (2013). Research, analysis and insight into National Standards (RAINS) Project. Final report: National Standards and the Damage Done. Wellington, New Zealand: The New Zealand Educational Institute Te Riu Roa (NZEI). Retrieved from http://www.education2014.org.nz/

Timperley, H., Kaser, L., & Halbert, J. (2014). *A framework for transforming learning in schools: Innovation and the Spiral of Inquiry.* Centre for Strategic Education, Seminar Series, 234. Melbourne: CSE.

Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration*. Wellington NZ: Ministry of Education.

West-Burnham, J., (2009). *Moral leadership*. Retrieved from: https://www.unrwa.org/userfiles/file/leading_4_the_future/module1/moral-leadership