Whole Child Holistic Approach To Learning:

It is time for disruptive change.
The system that brought us to this point is no longer fit for purpose - that of preparing our learners to live, work, commune, play, explore, inquire, create and learn in the 21st Century.

I contend we must undertake a paradigm shift.
That paradigm shift is not some new, unknown or mystical way of teaching and learning.
It is instead the way of learning that served humanity for several hundred thousand years.
Caroline Pratt was a visionary who realised this and did something about it - creating her own school, City and Country School in Greenwich Village, New York, in 1914. A school that was, in her own words, fitted to the child and not the other way around. (1)
Pratt's thoughts, encapsulated in the following quotes, are representative of the paradigm shift I believe schools must undertake.
Pratt believed our job, as educators, is to prepare children to be deep and powerful learners, "the freest child is the child who is most interested in what he is doing, and at whose hand are the materials for his work or play."
"Childhood's work is learning, and it is in his play...that the child works at his job."
"Education is not an end in itself but is the first step in a progress which should continue during a lifetime."
"In his play he is no longer an onlooker merely; he is a part of the busy world of adults. He is practising to take his place in that world when he is grown. He is getting his education."

School as we know it is about 200 years old. It was a new model designed to prepare workers for automaton work in the new industrial age of factories - it was a factory model.

Alvin Toffler in Chapter 18 of his 1970 book, 'Future Shock, says this, "Mass education was the ingenious machine constructed by industrialism to produce the kind of adults it needed. The problem was … how to pre-adapt children for a new world – a world of repetitive indoor toil, smoke, noise, machines, crowded living conditions, collective discipline, a world in which time was to be regulated not by the cycle of sun and moon, but by the factory whistle and the clock.
The solution was an educational system that, in its very structure, simulated this new world. This system did not emerge instantly. Even today it retains throw-back elements from pre-industrial society. Yet the whole idea of assembling masses of students (raw material) to be processed by teachers (workers) in a centrally located school (factory) was a stroke of industrial genius. The whole administrative hierarchy of education, as it grew up, followed the model of industrial bureaucracy. The very organisation of knowledge into permanent disciplines was grounded in industrial assumptions. Children marched from place to place and sat in assigned stations. Bells rang to announce changes of time.
The inner life of the school thus became an anticipatory mirror, a perfect introduction to industrial society. The most criticised features of education today – the regimentation, lack of individualisation, the rigid systems of seating, grouping, grading and marking, the authoritarian role of the teacher – are precisely those that made mass public education so effective an instrument of adaptation for its place and time." (2)

That model is no longer relevant. The previous principles that worked incredibly successfully - we wouldn't be here now if they hadn't - can be resumed. This brief flirtation with the industrial model of learning should be treated as a blip or a road-bump in the incredibly long roadmap of history. It is time to move forward again - by looking to our past.

Caroline Pratt even referenced this in this quote from her book, “children do not grow up all of a piece; look for the child of seven, especially to take many backward glances at the way he has come, while he bounds and leaps unevenly ahead in his growth.” (1)

It seems in Education we are always looking for the next great new thing. A recent and well-attended conference in New Zealand was entitled “Next Practices - Moving Beyond National Standards” (3).
Next practices is a worthy focus but I think it misses the point.
James Burke asks, “Why should we look to the past in order to prepare for the future? Because there is nowhere else to look.” (4)

The answers lie in our past.
We need to look beyond searching for the next best thing, the latest shiny pedagogy or gadget-enabled approach, and instead see what has worked for generation upon generation of humans.

Kia whakatōmuri te haere whakamua.
I walk backwards into the future with my eyes fixed on my past. (5)
This indicates the past is central to, and shapes, both present and future identity. From this perspective, the individual carries their past into the future.

Ka mua, ka muri is a Māori proverb that refers to a person walking backwards into the future. From this, we understand the past is visible but the future is not. We cannot tell what or where the road ahead leads to. The past provides us with clues to the way forward, but we understand that the future is yet to be written. Our future in effect is born out of our past.

Ehara taku toa i te toa takitahi engari he toa takitini.
I come not with my own strengths but bring with me the gifts, talents and strengths of my family, tribe and ancestors. (6)
This whakataukī emphasises the importance of knowing ourselves, our essence of being, and taking strength from our family, iwi, hapu and ancestors.

As Rameka says, “the past is central to and shapes the present and the future. Māori perspectives of the past can provide models, inspiration and guides to re-conceptualise learning provision in Aotearoa New Zealand if they are approached with honesty, humility and a genuine desire to make a difference.” (5)

At a recent colloquium, I heard an analogy that put this further into perspective for me as an educational leader. I walk backwards into the future, leading change. I do so, looking backwards to make sure I am taking everyone with me. Facing forward I lose sight of what brought us to this point, of what we bring with us, and of whom we are asking to accompany us as we forge a new path into the future.

Our world may be changing exponentially, but we as people remain essentially the same. More easily distracted perhaps, more susceptible to fake news perhaps, and certainly much more connected than ever before - but still human at our core.

New, Emerging or Disruptive Education?
New can be shiny, appealing, fresh - it has lots of positive connotations. Almost everybody loves new. Advertisements promote ‘new’ - often followed by ‘improved’. Sometimes it is just ‘all-new’. However it is accompanied, new is presented as what we need, and what we need now. There is often urgency with new.

Emerging is like new. It is so new it is not even here yet, but we can't wait until it is - because it will be new, and new is great, shiny, appealing, fresh.

In fact, new is not necessarily better - often it can be much worse. One such example was Doramad Radioactive Toothpaste (ca. 1940-1945). Its radioactive content was promoted as imparting health benefits, including antibacterial action and a contribution to strengthening the "defences of teeth and gums". (7)
You can imagine the outcome of regular brushing with it.

There is no question we live in times of exponential change. The government's current thirty-year review of education is a clear indication of the understanding that that which got us here, does not get us to the new and the next, there.
Rather than looking for an elusive 'new' answer, we should be disrupting the status quo.

Disruptive innovation, which disrupts the norm, and the status-quo.
- Is the catalyst for bringing about more equitable access to high-quality education.
- Is the mechanism for bringing about a personalised education system.
- Circumvents the political battles that have historically been at the center stage of education reform. (8)

So how do we disrupt?
- Research creates disruption
- Asking hard, deep and constructive questions.
- Asking questions that touch at the core of WHY.

In "Thrive: Schools Reinvented for the Real Challenges We Face:" by Valerie Hannon, (9) Valerie focuses on the question she was tasked with answering for a report on the Future of Learning - "What Is The Purpose of School?"
Valerie started with WHY, which is what Simon Sinek - https://startwithwhy.com/ - teaches we must always do.

Valerie contends our great purpose must be 'Learning to Thrive in a Transforming world' - she refers to the theory we are on the cusp of change so great that there has never been a time of greater promise or greater peril.
Valerie identifies three key challenge areas requiring disruptive thinking:
- Our Planet
    - The sixth great extinction
    - The Anthropocene age
    - Climate change
- Apotheosis of technology
    - Robotics
    - AI - Artificial Intelligence
    - Global Connectivity
        - Big Mind
        - Big Data
        - Outsourcing
- Our evolution as a species - evolution in our own hands
    - Genetic engineering
    - Convergence of human bodies with artificial intelligence
    - Human enhancement technologies (HET)

As a response to the inspiration Valerie provided, and to address a gnawing feeling that had been with me for a number of years, I recently led a comprehensive consultation with our Board of Trustees, our staff, our children and our wider community to seek their answer to 'what are the two most important things in the world?'.
We arrived at the people and the land as our two answers.

As our discussions evolved, it became apparent to all that our ‘why’ directly related to and is embedded in these two elements of the people and the land. Our ‘Why’ is thus twofold

- Thriving People
- Thriving Land

We cannot have one without the other.

The People

He aha te mea nui o te ao
He tangata, he tangata, he tangata
This whakatauki asks what is the most important thing in the world?
The answer, It is the people, it is the people, it is the people.
To my knowledge, only one whakatauki follows the above principle - ask a question, and give the answer not once, but three times.
Why is this so? I believe because the answer, in this case, was a fundamental principle, something that forms the foundation for all kaupapa, they gave the answer three times. It is people. It is people. It is people.

The Land

Maori refer to the land as Papatūānuku - Mother Earth
Papatūānuku represents the generative foundation of all life. (10)
Earth is our mother, the source of all good things.
All things are born from her and nurtured by her, including humankind.
Our relationship with our mother is key to the life and success of us both.
Our debt to our mother is beyond measure. Without her, we do not begin. Without her love and nurture, we do not survive.
These ideas inform the concept of tūrangawaewae – a place to stand. Tūrangawaewae are places where we feel especially empowered and connected. (11)
Tūrangawaewae is our foundation, our place in the world, our home.

The Importance of Community

Evolution has taught us that humans survive and thrive best in a community. Over many years, the scientific community has devoted much time and effort to the study of cooperation among humans.
Cooperation can be seen at all levels of biological organisation from molecules to populations. Societies are only possible through cooperation. Cooperation contributed to the survival and evolutionary success of man as a species. (12)

Cooperation, taken to its natural extension leads us to serve others. This is our highest calling according to such luminaries as Martin Luther King, Mahatma Gandi, the Dalai Llama and others.
“Life’s most persistent and urgent question is, ‘What are you doing for others?’“ King once said to an audience in Montgomery, Alabama in 1957. (13)
“The best way to find yourself is to lose yourself in the service of others.” Mahatma Gandhi. (14)

"People working together in a strong community with a shared goal and a common purpose can make the impossible possible." ~ Tom Vilsack (15)
Frances Moore Lappé, Author of ‘You Have the Power: Choosing Courage in a Culture of Fear and Daring Democracy: Igniting Power, Meaning, and Connection for the America We Want’, said,
“Community — meaning for me “nurturing human connection” — is our survival. We humans wither outside of community. It isn’t a luxury, a nice thing; community is essential to our well being.” (16)
This isn’t community that just comes from the local area in which we live, but community that comes from our shared humanity.

In the Sufi tradition, it is taught that the primary purpose of life is to awaken to the essence of who we are. Once we do so, we are invited to embrace this realisation. The gift of community is that it offers each of us the motivation and support to achieve this. (17)

Community is important, because community saves us from being alone. Much more than that, community gives us a sense of shared purpose, allows us to be part of something greater than ourselves. It brings meaning to our life and takes us beyond the realm of self.
Conversely, some of the most selfish people in the world are also the unhappiest because, in the end, serving self is empty and soon becomes boring and pointless. Howard Hughes - Autobiography of Howard Hughes : Confessions of an Unhappy Billionaire (18) - would be a prime example.

By contrast, some of the most fulfilled people in the world lived a life of service to and for their fellow human, and their mother earth. Dame Whina Cooper, Florence Nightingale, Harriet Tubman, Marta Mya Thwe, Henri Burin des Roziers, Christopher Hartley, Rafaela Wlodarczak, Rosemary Nyirumbe, Jane Goodall, Desmond Tutu, Jacques Cousteau, Jack Johnson, Henry David Thoreau, Rachel Carson, Senator Gaylord Nelson, David Attenborough, Wangari Maathai and Al Gore are examples of those who have devoted their lives to the service of fellow humans, wildlife and our planet.

“Albert Einstein said, “Strange is our situation here upon earth. Each of us comes for a short visit, not knowing why, yet sometimes seeming to divine a purpose. From the standpoint of daily life, however, there is one thing we do know - that man is here for the sake of other men.” (19)
“None of us can do great things. We can only do a small thing with great love every day!” —Mother Teresa. (20)

The Age of Consequences
Historically many have not lived their lives according to this calling. As a result, we have now entered the ‘Age of Consequences’. This is not referring to the movie that makes a connection between environmental disaster and terrorism, and which “observes that “advanced societies were very vulnerable to confusing lifestyle with life itself.” (21)
Instead, the Age of Consequences applies to both the disenfranchised, dispirited, disadvantaged, indigenous people, as well as to the land.

A recent study identifies a common link between three huge issues for the people and the land - The Global Syndemic: How obesity, climate change and under-nutrition are linked. (22)
This study says obesity, under-nutrition and climate change are so closely linked that they can no longer be tackled separately. Population Nutrition and Global Health professor, Boyd Swinburn is the co-chair of a major new report commissioned by The Lancet. The report found obesity, undernutrition and climate change are together the greatest threat to human and planetary health.

"It's a synergy of epidemics which occur in time and place that interact with each other and have common drivers," Prof Swinburn says.
"We've got climate change, which is going out of control and not enough action, and we've got obesity going out of control and not enough action - and hello, they're caused by the same societal problems."
He says we can no longer fight obesity, or global under nutrition, in isolation from climate change.
Indigenous Health expert, Dr Ihi Heke, says if our planet's sick, we get sick.
"Whakapapa show causal links between environment, such as climate change, and how we can acknowledge those and cause changes in people," he explains.
"So we're closely tied to the environment. Whatever happens to the environment happens to us.” (23)

The Age of Consequences applies in a learning context too. New Zealand has invested millions in trying to reverse the trend of underachievement in Maori and Pasifika students. This is an issue for indigenous people in all countries. The rates of poverty, unemployment, ill health, life expectancy and incarceration are

worse for indigenous peoples in New Zealand, Australia and USA than they are for non-indigenous people. (23)

While progress is being made, the gaps are still pronounced. Examples of reported gaps in performance in a recent report include:

- A secondary school retention rate (to age 17) for Māori students of 50.6% (75.4% for non-Māori)
- Unemployment rate for Māori youth of 25.7% (14.2% for non-Māori)
- School leavers achieving University Entrance standard (NCEA Level 2) for Māori Youth of 25% (47.9% for non-Māori);
- A higher rate of Māori youth not in education or employment or training at 22.4 per cent (9.1 per cent for the non-Māori population) (Te Puni Kōkiri, 2012). (24)

All of this demonstrates a need to bring education back on track. Our aberrant continuing focus on the industrial model and the resultant narrowing of the curriculum to focus on reading writing and maths flies in the face of all of the above. We need a paradigm shift takes us back to original practice, practice that focuses on what makes us human, that focuses on community, empathy, and a service mindset.

For our school, that has meant a major change in focus, particularly from 2019 onwards. Two areas of 'people' focus are social-emotional learning and play-based learning. Within that are focuses on 'Paying It Forward', Kindness and 'Bucket Filling'.
Areas of 'land' focus are being 'Zero Heroes' as we work towards becoming a Zero Waste school, our enviro-garden and an up-cycling programme.

Introducing Original Learning Practice
Original Learning Practice involved hands-on, practical, experiential, play and practice-based learning. It was social, interactive, mentor-based, relationship driven, involved mixed ages and a mix of fun and challenge. It had a clear purpose. Often songs and stories were involved. It was visual - you saw what to do. It involved problem-solving and finding out.
The village raised and educated the child
It was successful - for hundreds of thousands of years.

Piaget Vygotsky Montessori, John Dewey and Sir Ken Robinson have all grasped key parts of the whole picture. As did the people of Regio Emelia in Italy. As does our New Zealand curriculum's focus on the spiral of inquiry.
Until now all of these have not been pulled together into the greater whole.

Original practice acknowledges all these pillars of learning but also draws upon the original knowledge of tribal elders of all cultures - such as Native Americans of the Americas, the Aboriginal of Australia, and the Kaumatua and Kuia of New Zealand .
From the Mammoth Hunter to the Moa Hunter - original practice principles and practices were the same.

As a school, we are revisiting our approach to teaching and learning to move us closer to the principals of original practice.

Making the Connection
The Land and the People - this is what education, and life, are about in their simplest form.
So how do we ensure our learners make the connection?

We can consider a light bulb and an electrical cable - until a connection is made nothing can happen. From being in a state of stasis surrounded by darkness, we move to the presence of light, energy and enlightenment. The key is the connection.

In learning, that connection is via that which makes us human - emotion, passion, desire, love, longing, fun, humour, belonging, cooperation and commonality.

The source, or more particularly the switch, for that connection is via three pathways that are rooted in our DNA.
The three pathways are what I refer to as the Three Original Languages - languages embedded into our DNA, present since Neanderthal times, and more relevant than ever today.

The Three Original Languages
No matter where we call home, where we were raised, or what we ate for breakfast, our brains process information pretty much the same as anyone else in the world.
Which makes sense - our genomes are 99.9% identical, which makes our brains nearly so. (25)

Learning is life. The only way we survive and thrive is through learning. Our brains are hard-wired to process learning and communicate learning in three ancient and distinct ways. These are via the three Original Languages.

- Music
- Visual Language
- Story Telling

Buckminster Fuller famously said, “If you want to teach people a new way of thinking, don’t bother trying to teach them. Instead, give them a tool, the use of which will lead to new ways of thinking.” (26)
Music, Visual Language and Story Telling are three such tools.

Engaging Emotion
Emotion is essential to learning, and should not be underestimated or misunderstood as a trend.
Emotion is where learning begins, or, as is often the case, where it ends.
“It is literally neurobiologically impossible to think deeply about things that you don’t care about.” (27)

This rule holds true even across subjects and disciplines. Even in academic subjects that are traditionally considered unemotional, such as physics, engineering or math, deep understanding depends on making emotional connections between concepts. (28)
Using a functional M.R.I., a scanner that reveals brain function in real time, we can physically see when students are emotionally engaged. We see activations all around the cortex, in regions involved in cognition, memory and meaning-making, and even all the way down into the brain stem. (29)
Great teachers understand that the best, most durable learning happens when content sparks interest, when learning is relevant to a child’s life, and when the learners form an emotional bond with either the subject or the teacher in front of them, or preferably, both.
Meaningful learning happens when teachers create an emotional connection to what might otherwise remain abstract concepts, ideas or skills.
Jessica Lahey, reflecting on Dr. Immordino-Yang’s book, “Emotions, Learning, and the Brain” (30) states, “The emotional connection that can result when teachers make learning personally relevant to students is what differentiates superficial, rote, topical assimilation of material from a superlative education marked by deep mastery and durable learning. There are no silver bullets in education, but emotional engagement and personal relevance are the tools that can improve the educational experience, and performance, of every child, in every school…” (31)
The three original languages are perfect vehicles for engaging and employing emotions in learning.

The importance of these three original languages will be developed in a separate writing.
How they fit is shown in the diagram that shows the paradigm shift and how everything fits together in a primary education learning overview.

Change Practice Action Plan:
As Einstein has been credited with saying - or perhaps paraphrased (32) - "everything should be as simple as possible, but not simpler".
So how does that apply to education?

Working with our staff and Board of Trustees, we looked at the implications arising from this.

The Implications - Our Goals Need to Focus On
- Learning to live sustainably
- Protecting the earth's ecosystem - reverencing Papatuanuku
- Demonstrating empathy
- Demonstrating Culturally Responsive Practice
- Demonstrating flexibility of thinking and responding
- Emphasising Social Emotional Learning
- Demonstrating an ability to learn, re-learn, un-learn and LOVE learning
- Fostering Equity of voice and opportunity
- Regular, meaningful connections with older generations
- Providing Structured Play Based Learning opportunities
- Relationships as the foundation for learning
- Teaching mindfulness
- Mentor-Modeler model

Our focus on the People and the Land leads us to describe our preferred future:
- Global competence for our learners when they leave our school
- Consistent collective contribution to local sustainability
- Academic achievement evidenced by appropriate assessment, also by application of knowledge and skills in real-life situations
- Entrepreneurial skill and achievement evidenced by real-world learning, and outcomes
- Effective engagement in community programs, campaigns and civic involvement,
- Experience of a learning relationship with individuals from an older generation
- Contributions to the school as a thriving micro-community with positive, caring relationships as the norm
- Good mental health indicated by interactions and surveys
- Strong learner agency – evidenced by learners' initiation and leadership of aspects of learning
- Physical fitness habits and evidenced application of knowledge and understanding of personal health.

Collaboration:
Many of the elements of the paradigm shift I believe is needed have been developed in consultation with a wide range of colleagues and professionals over a period of 25 years of principalship.
I have consulted with and presented to the New Zealand Maori School Trustees, Rural Principals Association, First Time Principals via Ministry of Education, UNESCO Conference, Health Promoting Schools International Conference and International Confederation of Principals.
Until recently these elements had not been pulled into a cohesive whole that could be clearly represented visually. This study of Contemporary Practice has helped me to finally and coherently do that.
I have shared this assignment with my Leadership Team and asked for their feedback. The response was exceptionally positive. They underlined points they liked, added comments showing agreement and my Deputy Principal even put love hearts on it in places with comments such as, "I love this!"
From here I will share this with our Board of Trustees at our next meeting, and following discussion and consultation with them will share a synthesis of this with our parent community.
Aspects of this change process have already been summarised into a presentation to be shared at our upcoming "Meet Our Teachers" Open Evening.

Conclusion - to this point:

The Land and the People - this is what education, and life, are about in their simplest form.
Earth is our mother, the source of all good things. Our relationship with our mother is key to the life and success of us both.
John Donne said, “No man is an island entire of itself; every man is a piece of the continent, a part of the main; … any man's death diminishes me, because I am involved in mankind.” (33)
In other words, human beings do badly when isolated from others and need to be part of a community in order to thrive.

Learning is life. The only way we survive and thrive is through learning. Our brains are hard-wired to process learning and communicate learning in three ancient and distinct ways.
The three Original Languages - embedded in our DNA.

- Music
- Visual Language
- Story Telling

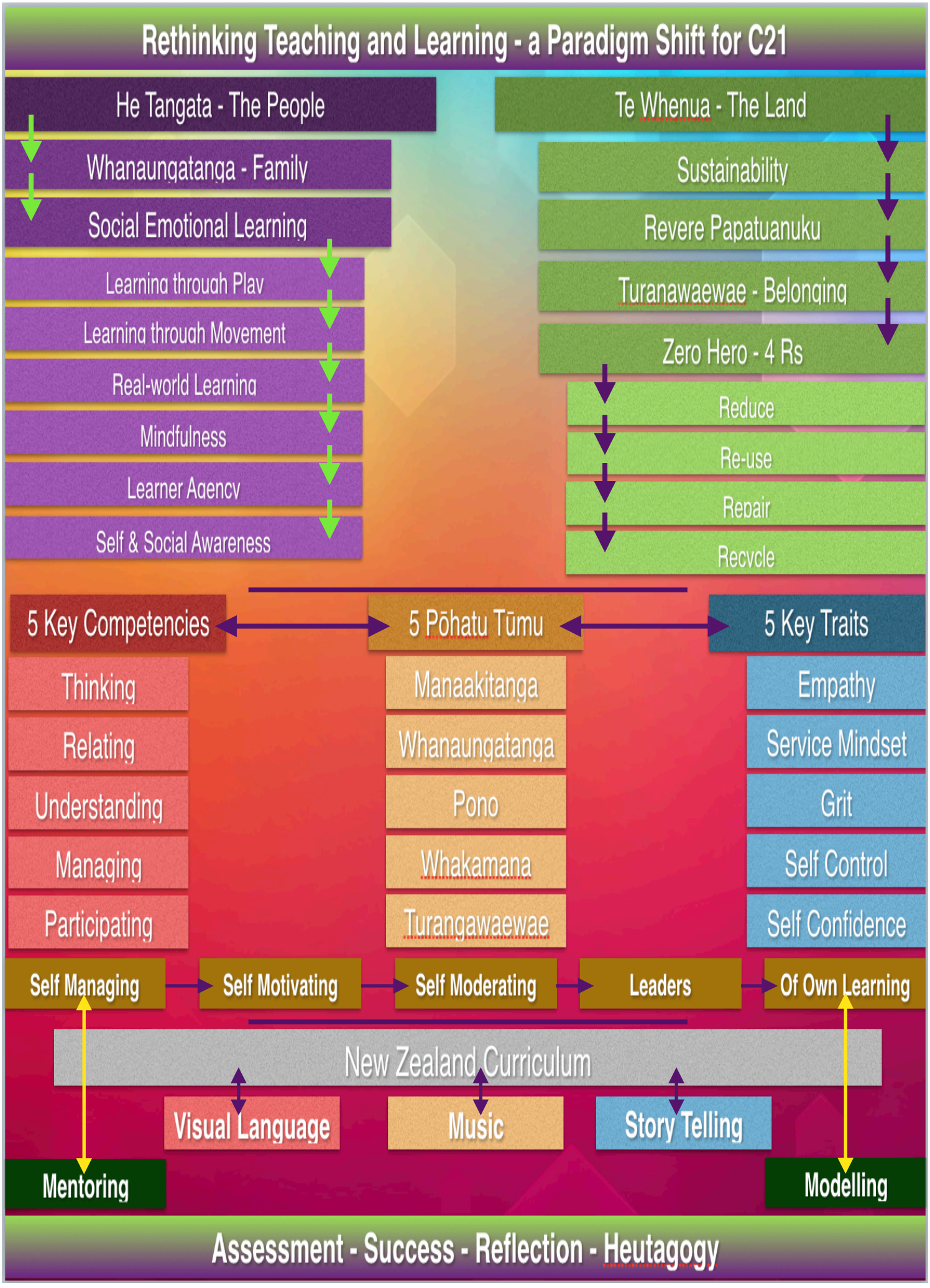
All learning needs to come back to two priorities - the people and the land.
We have been on a narrow railway track headed towards a goal of Literacy, Numeracy and keeping children in school until NCEA Level Two is achieved.

We have been on the wrong railway line, ignoring all the breadth, depth, possibility, complexity and joy to be found in our broad and beautiful New Zealand Curriculum.

Our previous government wished to drive us to a singular destination. It was to be pursued single-mindedly with public pronouncements of how many children are travelling with us and which of the four carriages they are travelling in - ‘Well Below’, ‘Below’, At’ or ‘Above.’

Despite Minister Hekia Parata declaring it a national disgrace that one in five children were failing, the project was declared a success when it was announced that 80% of children were now succeeding.
I contend that the destination - not at the end of the line because the journey never ends - is a life-long love of learning.

The Beatles taught us that “All You Need Is Love”. It’s a great place to start.
Love for people. Love for the land. Love for learning - inspired by social-emotional and play-based learning, and engaged and enhanced by the three original languages.


Rethinking Teaching and Learning - a Paradigm Shift for C21
He Tangata - The People
Whanaungatanga - Family
Social Emotional Learning
Learning through Play
Learning through Movement
Real-world Learning
Mindfulness
Learner Agency
Self & Social Awareness
Te Whenua - The Land
Sustainability
Revere Papatuanuku
Turanawaewae - Belonging
Zero Hero - 4 Rs
Reduce
Re-use
Repair
Recycle
5 Key Competencies
5 Pōhatu Tūmu
5 Key Traits
Thinking
Relating
Understanding
Managing
Participating
Manaakitanga
Whanaungatanga
Pono
Whakamana
Turangawaewae
Empathy
Service Mindset
Grit
Self Control
Self Confidence
Self Managing
Self Motivating
Self Moderating
Leaders
Of Own Learning
New Zealand Curriculum
Visual Language
Music
Story Telling
Mentoring
Modelling
Assessment - Success - Reflection - Heutagogy

1 Pratt, C. (1948). I learn from children. New York: Simon & Schuster. https://www.goodreads.com/author/quotes/733013.Caroline_Pratt

2 Toffler, A. (1990). Chapter 18 EDUCATION IN THE FUTURE TENSE |. In Future Shock. New York, NY: Bantam. https://www.e-reading.club/chapter.php/71380/128/Toffler_-_Future_Shock.html

3 https://goo.gl/EFBk2h 26 May 2018, Northland

4 James Burke, Connections - Simon & Schuster Paperbacks - 2007
Connections, & Burke, J. (2019). Connections. Goodreads.com. Retrieved 26 January 2019, from https://www.goodreads.com/book/show/55024.Connections

5 Lesley Rameka - University of Waikato, New Zealand. (2019). Core.ac.uk. Retrieved 26 January 2019, from https://core.ac.uk/download/pdf/85165388.pdf

6 Te Whāriki - Ministry of Education - https://goo.gl/yhLfm2
Early Childhood Curriculum » Te Whāriki Online. (2019). Tewhariki.tki.org.nz. Retrieved 26 January 2019, from https://tewhariki.tki.org.nz/en/early-childhood-curriculum/

7 Doramad Radioactive Toothpaste (ca. 1940-1945)". Health Physics Historical Instrumentation Museum Collection. Oak Ridge Associated Universities. Retrieved 2011-10-01. Doramad radioactive toothpaste was produced during World War II by Auergesellschaft of Berlin.

8 https://www.christenseninstitute.org/blog/why-disruptive-innovation-matters-to-education/

9 “Thrive: schools reinvented for the real challenges we face” - Innovation Unit Press - 2017

10 https://teara.govt.nz/en/papatuanuku-the-land/page-2

11 https://teara.govt.nz/en/papatuanuku-the-land/page-5

12 http://nectunt.bifi.es/cooperation-among-humans/cooperation-in-humans/

13 MLK, Jr. Asked Us 'What Are You Doing For Others?' Here's How We Answered. (2015). HuffPost UK. Retrieved 26 January 2019, from https://www.huffingtonpost.com/2015/01/19/mlk-day-serving-others_n_6489236.html

14 Mahatma Gandhi Quotes. (2019). BrainyQuote. Retrieved 26 January 2019, from https://www.brainyquote.com/quotes/mahatma_gandhi_150725

15 Tom Vilsack, speech, Jan. 10, 2006
Tom Vilsack Quotes. (2019). Notable-quotes.com. Retrieved 28 January 2019, from http://www.notable-quotes.com/v/vilsack_tom.html
Thomas James Vilsack is an American politician and lawyer who served as the United States Secretary of Agriculture from January 2009 until January 2017. A member of the Iowa Democratic Party, Vilsack also served as the 40th Governor of Iowa from 1999 to 2007. (Wikipedia)

16 Lappe, F. M., & Perkins, J. (2005). You Have the Power: Choosing Courage in a Culture of Fear. London, England: Penguin.

17 What Is Community, and Why Is It Important? | The Ikeda Center for Peace, Learning & Dialogue | Cambridge, MA. (2019). Ikedacenter.org. Retrieved 27 January 2019, from https://www.ikedacenter.org/thinkers-themes/themes/community/what-is-community-responses

18 Irving, C. (2008). Howard Hughes My Story. John Blake Publishing.

19 A quote by Albert Einstein. (2019). Goodreads.com. Retrieved 26 January 2019, from https://www.goodreads.com/quotes/175261-strange-is-our-situation-here-on-earth-each-of-us

20 A quote by Mother Teresa. (2019). Goodreads.com. Retrieved 26 January 2019, from https://www.goodreads.com/quotes/6946-not-all-of-us-can-do-great-things-but-we

21 Review: Climate Change and Conflicts in 'The Age of Consequences'. (2019). Nytimes.com. Retrieved 26 January 2019, from https://www.nytimes.com/2017/01/26/movies/the-age-of-consequences-review.html

22 Climate change to blame for obesity, undernutrition: Lancet - Health news, Medibulletin. (2019). Health news, Medibulletin. Retrieved 28 January 2019, from https://medibulletin.com/climate-change-to-blame-for-obesity-undernutrition-lancet/

23 Warhurst, L. (2019). The Global Syndemic: How obesity, climate change and under-nutrition are linked. Newshub. Retrieved 28 January 2019, from https://www.newshub.co.nz/home/world/2019/01/the-global-syndemic-how-obesity-climate-change-and-under-nutrition-are-linked.html

24 Indicators of Inequality for Māori and Pacific People
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25 Roger Highfield, S. (2002). DNA survey finds all humans are 99.9pc the same. Telegraph.co.uk. Retrieved 26 January 2019, from https://www.telegraph.co.uk/news/worldnews/northamerica/usa/1416706/DNA-survey-finds-all-humans-are-99.9pc-the-same.html
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26 A quote by R. Buckminster Fuller. (2019). Goodreads.com. Retrieved 26 January 2019, from https://www.goodreads.com/quotes/467583-if-you-want-to-teach-people-a-new-way-of

27 Freedman, J. (2017). Learning About Learning & the Brain - Interview with Neuroscientist Mary-Helen Immordino-Yang • Six Seconds. Six Seconds. Retrieved 28 January 2019, from https://www.6seconds.org/2017/08/03/learning-about-learning-neuroscience-immordino-yang/

28 https://www.kqed.org/mindshift/45201/why-emotions-are-integral-to-learning

29 Garrison, K., Scheinost, D., Worhunsky, P., Elwafi, H., Thornhill, T., & Thompson, E. et al. (2013). Real-time fMRI links subjective experience with brain activity during focused attention. Neuroimage, 81, 110-118. doi:10.1016/j.neuroimage.2013.05.030

30 Immordino-Yang, D., Gardner, H. and Damasio, A. (2015). Emotions, learning, and the brain. W. W. Norton & Company.

31 Student Learning Linked To Emotions. (2019). Icanread.org. Retrieved 3 February 2019, from https://icanread.org/2016/05/student-learning-linked-to-emotions/

32 Everything Should Be Made as Simple as Possible, But Not Simpler – Quote Investigator. (2019). Quoteinvestigator.com. Retrieved 26 January 2019, from https://quoteinvestigator.com/2011/05/13/einstein-simple/

33 Gurteen, D. (2019). No man is an island by John Donne (Gurteen Knowledge). Gurteen.com. Retrieved 26 January 2019, from http://www.gurteen.com/gurteen/gurteen.nsf/id/L001092/