

Te Puna Taiao – The School Oasis Project:  
Healthy, resilient tamariki and communities through transformed  
outdoor spaces

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## Summary

New Zealand has some of the worst social outcomes in the developed world despite our relative economic prosperity. Our social statistics paint a shameful picture of poor mental and physical health, as well as abysmal rates of domestic violence and child abuse. We have comparatively high rates of inequality and poverty. Through no fault of their own, children bear the worst impacts of poverty and have no power to change their circumstances. Māori are disproportionately represented in many of our negative statistics. For example, New Zealand has the highest youth suicide rate in the OECD, and the rate for Maori is 2.8 times higher than for non-Maori. The personal cost of such issues comes in potential not reached at one end of the spectrum, and in lives and families destroyed at the other. The society-wide economic cost of violence is estimated to cost New Zealanders between \$4.1 billion and \$7 billion every year. Inequity has the potential to worsen over time as automation takes over many low-skilled jobs.

In the last two decades the scientific community has discovered a huge amount about how children's brain development in their pre-school and primary years sets them up for life, for better or for worse. One key finding from that research is that children need the opportunity to play; to test their limits, to build resilience and to learn self-control. Resilience is crucial in helping kids build strategies for coping with life stress. Self-control is equally important for all aspects of life. Lack of self-control at age three is a strong predictor of violence later in life.

A second key theme from child development research shows that children reap a range of physical and mental health benefits from being in natural settings. But, studies confirm what we all know; that many of our children are becoming increasingly disconnected from their natural world. This disconnect has two-directional negative consequences: 1) children are not able to realise the benefits of being in natural settings, and 2) they do not develop an environmental ethic, which is disastrous given the rapidly declining state of the world's biodiversity and natural ecosystems.

Research shows that there is a window of opportunity to develop both the characteristics of self-control and resilience, as well as a connection to the natural world. This window is in the pre-school and primary school years.

Mātauranga Māori / traditional Māori knowledge also provides key insights for what is important for children, especially tamariki Māori. To achieve overall hauora / well-being, we must foster development of all four components of the whare tapa whā: taha tinana / physical health, taha whānau / family health, taha wairua / spiritual health and taha hinengaro / mental health. The foundation upon which these components are built comes from a strong connection with the taiao (natural world/environment), to which Māori literally whakapapa / have lineage. The scientific findings around the need for children to be connected to nature have always been intrinsically understood and acknowledged by Māori. Thus the disconnect from nature experienced by many of our tamariki may be having even more profound implications for the hauora of our tamariki and rangatahi Māori than for their non-Māori peers.

Children in New Zealand spend a significant proportion of their lives in formal schooling; more than half of each day, five days a week from age five to at least 16. A school's outdoor environment therefore provides an excellent opportunity to connect kids to the natural world and to Te Ao Māori. It also provides an opportunity to provide an enriched space to allow kids play opportunities that build the characteristics that will help them to lead happy and productive lives: resilience and self-control. Yet most New Zealand schools fail to take advantage of this opportunity; instead they are largely a relic of the past, looking much as they have for more than a century.

This paper proposes that the hauora (well-being) and in turn, the educational outcomes of our country's tamariki could be improved using a new approach to design the outdoor environments of our schools to apply what we know from child development research and mātauranga Māori. Schools should use their physical environments to: better connect children to nature and Te Ao Māori, provide for building resilience and self-control using play-based learning and teaching, and improve practice of culturally responsive and relational pedagogies. With this kaupapa schools could become a little oasis in the lives of our tamariki and their communities and provide a place where children can connect with each other, their environment, their community, their whakapapa, and themselves, and be stronger for those connections. It would provide key support to many existing programmes of work already underway in schools, such as the Health Promoting Schools initiative, and links into the international Green Schoolyards movement.

An associated document 'Te Puna Taiao at Allandale: Project Plan' details a proposal to put this kaupapa into practice at a decile 2 primary school in Kopeopeo, Whakatāne, and assess the outcomes. If found to be effective, Te Puna Taiao – The School Oasis Project could be scaled up and tested in 10-12 primary schools throughout the country, and if found to be successful, subsequently rolled out in schools across the country with an initial focus on low decile schools.

## New Zealand's social statistics: A shameful picture

New Zealand's social statistics paint a shameful picture of poor mental and physical health as well as abysmal rates of domestic violence and child abuse (Gibson, et al., 2017; Oakley Browne, Wells, & Scott, 2006; UNICEF, 2007; Fanslaw & Robinson, 2004; Child Poverty Action Group Inc, 2013).

Despite our relative economic prosperity, rates of inequality and poverty are high (Marriott & Sim, 2014), with the proportion of children living in poverty growing from 10-15 % of all children in the 1980s to 28% in 2015 (Simpson, et al., 2016). Inequity is likely to worsen over time; economists and policy makers agree that we are heading into a new type of workforce where automation will take over many of today's lower-skilled jobs (King, Lawrence, & Roberts, 2017).

New Zealand has the highest youth suicide rate in the OECD and the rate for our Māori rangatahi is 2.8 times that for other ethnicities (Ministry of Social Development, 2016). It is in fact, the highest of any ethnicity in the world (Ministry of Social Development, 2016). And of course, suicide is one end of the physiological distress spectrum. Many of our rangatahi experience psychological distress such as depression that does not result in suicide but has significant effects on their and their family's lives. Anxiety and depression are our most common mental health problems, with almost forty per cent of New Zealanders experiencing a diagnosable mental health condition over the course of their lives (Oakley Browne, Wells, & Scott, 2006).

Aotearoa fares no better on our physical health statistics. We have the third highest rate of obesity in the OECD, with over half of all adults classified as overweight or obese, and 1 in 10 kiwi kids (OECD, 2017). Obesity is not something we grow out of either; overweight and obese children are more likely to become overweight and obese adults, and in turn to experience the many negative health impacts of obesity (Burniat, Cole, & Lissau, 2002). Experts are increasingly concerned about the lower activity levels of our kids who are spending more and more time inactive, in front of electronic screens, and the associated negative effects (Landhuis, Poulton, Welch, & Hancox, 2008).

Unfortunately, New Zealand also has a shameful record on our family violence and child abuse statistics (Doolan, 2004). On average one child is killed every 5 weeks, and most are pre-schoolers and babies. In 2015, there were 6,491 recorded instances of common and serious assaults on a child, and 1,982 for sexual assaults on a child (UNICEF NZ, 2017). And these were just the reported assaults; we know these figures represent just a fraction of the actual number.

Many of these poor outcomes are inter-related and are closely correlated to poverty (Gibson, et al., 2017; Simpson, et al., 2016). For example, research shows that children who witness or are the victims of abuse in their early years have higher rates of depression, learning and anxiety disorders, mental and physical health problems, drug and alcohol abuse and that they often suffer from low self-esteem (Norman, et al., 2012; Anda, et al., 2006).

## The costs are high and disproportionately affect children and Māori

Wider society bears the cost of these poor social statistics in economic terms. The Glenn inquiry was set up in 2012 to look at our disastrous rates of child abuse and domestic violence. It estimated the costs of this violence in New Zealand to be between \$4.1 billion and \$7 billion *every year*, including \$3.6 billion related to ongoing and long-term pain and suffering (Kahui, Ku, & Snively, 2014). Each homicide costs the country on average \$3.9 million (Roper & Thompson, 2006).

The personal burden of these negative outcomes falls heavily on children who, through no fault of their own, often end up bearing the worst impacts of poverty, and have no power to change their circumstances (Simpson, et al., 2016; Henare, Puckey, & Nicholson, 2011; Gibson, et al., 2017). The

lives of both offenders and victims can be destroyed by violence. Effects can last a lifetime and are often intergenerational. Our Māori communities are disproportionately represented in our poverty statistics and, in turn, in statistics about poor social outcomes (Perry, 2015; Henare, Puckey, & Nicholson, 2011).

## What does the research around child development tell us kids need to thrive?

Research in the 1990s provided leaps in our understanding of the human brain, and in particular, of how children's brain development in their early years sets them up for life, for better or for worse (Tandon, 2008). High quality early childcare centres apply this research effectively and provide enriched natural environments that enable children to test and understand their limits and build their resilience and social competencies. By contrast, many of the practices that are integral to our primary and secondary school education system have failed to keep pace with what the research is clearly telling us.

So, what do kids need that primary schools are not currently doing well?

### 1. Kids need the opportunity to play; to test their own limits, to build resilience and to learn self-control

A key finding from child development research is that play is much more than 'blowing off steam' for children, and that in fact it is a key part of their cognitive, social and emotional development (Ginsberg, 2007). Play is so fundamental to a child's well-being that it is officially recognised by the United Nations as a human right, just like our other human rights, such as the right to freedom (United Nations, 2017).

The commonly understood skills children learn from play include negotiation, sharing, creative thinking and problem-solving. That is, they learn human skills; the very skills they will need most in an automated future. Play also has significant physical health benefits. It builds kids' motor skills and fitness and raises their activity levels.

However, the benefits are even more wide-reaching and important (Miller & Ginsburg, 2012). Play is a child's way of understanding the world around them and allows opportunities to practice skills and develop resilience (Glascott Burriss & Tsao, 2002). Contrary to common belief, play is often not easy for children, it is their work, and it helps them to build perseverance and self-control and to master skills. The well-known 2017 report investigating our unacceptably high rates of youth suicide by Sir Peter Gluckman, science advisor to the Prime Minister, emphasises the importance of building resilience in children to improve their mental health for their whole lives (Office of the Prime Minister's Science Advisory Committee, 2011).

Critically, play is also essential in developing children's self-regulatory skills. The ground-breaking New Zealand longitudinal study known as 'The Dunedin Study' has demonstrated that a child's ability to demonstrate self-control at age three predicts their health, substance dependence, personal finances and criminal offending for their whole lives. (Moffitt, 2011)

Yet our society has become increasingly risk averse in the play we allow our children to experience. There is a growing body of research to indicate that this has had unanticipated detrimental effects (Little & Wyver, 2008). It is theorised that kids who have not had the chance to test their personal limits as youngsters are more likely to undertake risky behaviours when they are older. For example, by getting behind the wheel of a car aged 16 and driving dangerously. It may also impede the

development of children's resilience and confidence in their ability to bounce back after adverse events, and may be contributing to our growing mental health problems in rangatahi.

There is a growing awareness that we may need to reintroduce riskier play, and more free play generally, into our kids' lives to reverse these trends. A recent research project in New Zealand that tried to introduce riskier and more challenging play into primary schools found that study schools were overwhelmingly positive about the changes and considered that their children experienced many benefits, including better behaviour, improved cooperation between children and increases in physical activity (Farmer, me ētahi atu, 2017). An global not-for-profit, the Internal School Grounds Alliance, encourages school grounds to be designed to be "not as safe as possible, but as safe as necessary".

## 2. Kids also need a connection to their natural world/taiao

*A huge body of research shows that kids experience a variety of health and cognitive benefits through a connection with the natural world*

Research clearly shows that being in the natural world has profound effects on the hauora of adults, including better physical and psychological health, better cognitive functioning, and faster recovery from sickness (Hartig, me ētahi atu, 2011; Bratman, Daily, Levy, & Gross, 2015). In acknowledgment of the mental health benefits of being in nature, and for the second year running, the theme for Mental Health Week in New Zealand this year was 'Nature is Key'. The Mental Health Foundation used the week to again promote the value for people of getting out and connecting with the natural world and to encourage us to make a habit of realising those benefits (Mental Health Foundation, 2017).

Research indicates that the benefits experienced by adults may be even greater for children due their stage of development (Wells & Evans, Nearby nature: A buffer of life stress among rural children, 2003). It has been shown that children who play in nature:

- have better concentration and self-discipline (Taylor, Kuo, & Sullivan, Views of nature and self-discipline: evidence from inner city children, 2002)
- have superior cognitive development, reasoning and motor skills (e.g. Crain 2001, Pyle 2002)
- have better well-being (van Lier, me ētahi atu, 2017), fitness, coordination, balance (Crain, 2001) and eyesight (Nowak, 2004).
- are sick less often (Fjortoft, 2001).
- experience less bullying (Malone & Tranter, 2003)
- cope better with stress and adversity (Wells & Evans, Nearby nature: A buffer of life stress among rural children, 2003)
- have reduced symptoms of Attention Deficit Hyperactivity Disorder (ADHD) (Taylor, Kuo, & Sullivan, Coping with ADD: The surprising connection to green play settings, 2001)
- have more positive feelings about each other (Moore, 1996) , and,
- have better imaginations and a sense of wonder – which is an important motivator for learning through life (Cobb, 1977)

## But, children are increasingly disconnected from the natural world

Research confirms what we all know; that many of our children are becoming increasingly disconnected from their natural world (Louv, 2005; Pyle, 1993). Children are now more likely to view nature through an electronic lens, for example by watching nature documentaries on television, and are more likely to think of nature as something far away, rather than in their own gardens and neighbourhoods (Chipeniuk, 1995).

### Biodiversity in crisis – connection is a two-directional necessity

At the same time that kids are becoming more disconnected from nature, the world is going through such significant loss of ecosystems and biodiversity that it is generally accepted that we are in the middle of the Earth's 6<sup>th</sup> mass extinction (Ceballos, Ehrlich, & Dirzo, 2017). The last of which was 65 million years ago. While scientists argue about the level of action required to manage the effects of climate change to acceptable levels, there is less consensus that it is even possible to stop the loss of biodiversity. There is of course agreement that we must still try. A crucial part of doing this is making sure that our children have a strong environmental ethic and are advocates for their environment (Wells & Lekies, Nature and the life course: pathways from childhood nature experiences to adult environmentalism, 2006).

The benefits of connecting kids with nature are therefore two-directional:

- children with a close connection to the natural world are more likely to receive all the benefits of that association, and,
- children who enjoy being in nature are more likely to advocate for the better protection and management of our planet's ecosystems and biodiversity, which is crucial to ensuring the livelihood of future generations (Wells & Lekies, Nature and the life course: pathways from childhood nature experiences to adult environmentalism, 2006).

### There is a window of opportunity for both realising the benefits of play and for connecting children with nature

We now know that the first years of a child's life are the most important in setting their brains up for their futures (Fox, Levitt, & Nelson, 2010). During this time the brain's connections are literally built in response to the environment a child experiences (Huttenlocher, 1999). The pathways that are built during a child's early experiences are the pathways their brains will follow throughout their lives. So, if a child learns while playing in childhood that they can try things, fail, try again a different way and maybe get a better result, it teaches them resilience and self-control. These characteristics can also be taught. The Gluckman report notes that the most effective resilience-building programme for children was carried out on children aged 5-7 year olds. The children who received training had improved outcomes for their whole lives compared with children who did not (Office of the Prime Minister's Science Advisory Committee, 2011). It advocates for all primary schools in New Zealand to adopt some similar form of resilience training with this age group to reduce incidence of many of society's problems such as violence, which are directly linked to a lack of self-control.

Research also shows that the establishment of a connection with the natural world and all the benefits that connection brings for mental and physical health, requires regular experiences in nature and natural environments (Kals & Ittner, 2003). And, like the development of resilience and self-control, the early years are where it counts (Schultz, Shriver, Tabanico, & Khazian, 2004; Wells & Lekies, Nature and the life course: pathways from childhood nature experiences to adult environmentalism, 2006).

### What does mātauranga Māori tell us our tamariki need?

It is not just findings from scientific research that gives us knowledge of child development. Mātauranga Māori, traditional Māori knowledge, also provides important insights for what children, especially tamariki and rangatahi Māori, need for optimal hauora. Holistic hauora according to mātauranga Māori can be understood by the metaphor of the whare tapawhā, the four-sided house. The four taha (parts) are: taha tinana (physical health), taha whānau (family health), taha wairua



(spiritual health) and taha hinengaro (mental health). Fostering each of these taha is crucial to maintaining overall hauora. And the foundation upon which these components are built comes from a connection with the taiao.

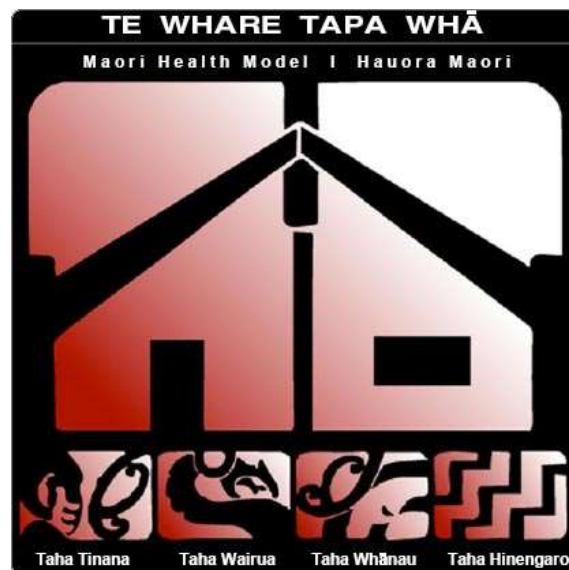


Figure 1. Te whare tapa whā, Māori health model (Drurie, 1982; Ministry of Health, 2017)

### Māori connection with te taiao

For Māori, everything, both living and inanimate has its own mauri. All things are connected by whakapapa and Māori identity and mana is founded, in significant part, on connectedness with the natural world. In the Māori creation myth, all things in nature, including people, descend directly from Papatūānuku, the earth mother, and Ranginui, the sky father.

A local example of the acknowledgment of this relationship and mana whenua comes from Tūhoe. In 2014 as part of their Tiriti o Waitangi settlement, Te Urewera was recognised in law as a legal entity and a person in its own right. This decision was recognised as a landmark action both in New Zealand and around that world by many. But for Ngāi Tūhoe, it was merely acknowledgment of a long-existing relationship. As Tāmati Kruger recently noted in a lecture at Auckland University:

“Giving Te Urewera a legal personality is not a new thing. It’s an old belief, isn’t it, that comes from you and I, and it talks about our whakapapa to the land, our kinship to the land.... And that people should mend their behaviour and their way so it benefits the land. Why? Because our very survival depends on it” (Kruger, 2017).

The benefits of children’s interaction with nature described earlier come from carefully designed scientific research projects, but these things have always been intrinsically understood and acknowledged by Māori. The disconnect from nature experienced by many of our tamariki may be having even more profound implications for the hauora of our tamariki and rangatahi Māori than for their non-Māori peers. This impact has been noted by iwi leaders such as Kruger:

‘The mist marrying the mountain is a metaphor for us saying we did not come from anywhere else. ...we are attached to nature, we are attached to Te Urewera. But there has been great damage to that whakapapa, to that link, over 177 years’ [since colonisation] (Kruger, 2017).

## Primary schools provide an excellent opportunity

Children spend more than 30 hours each week at school, almost one half of their waking hours five days a week. Given this huge amount of time, and our improved understanding of the importance of early intervention to improve life outcomes, schools are increasingly being seen both around the world and in New Zealand as the most effective place for programmes designed to address social issues in our population. For example, the disconnect of children from nature (Forest schools, Green Schools, Nature Schools, Enviroschools), rising rates of inactivity and obesity (fruit in schools, breakfast clubs, Bikes in Schools, Health Promoting Schools, the LIFE Education programme), incidence of problematic social behaviours (e.g. Positive Behaviour for Learning, KiVa anti-bullying programme) and poor youth mental health (e.g. Tu Kotahi, the Year 9 HEEADSSS programme 'Home, Education/Employment, Eating, Activities, Drugs and Alcohol, Sexuality, Suicide and Depression, Safety').

Many primary schools are also following the lead of high quality ECCE providers and are trying to provide for better play based learning for their children and there are initiatives that focus on improving children's transitions through the schooling system (e.g. Communities of Learning/Kāhui Ako).

There is however a missing piece to tie together these and other valuable initiatives: a school's outdoor physical environment. A school's physical environment provides an opportunity to connect kids to the natural world and their cultural heritage. This opportunity is even greater in New Zealand schools than internationally given the cultural connection between Māori and the natural world. As Ka Hikitia, the Māori Education Strategy 2012-2017, notes 'Students do better in education when what and how they learn reflects and positively reinforces where they come from, what they value and what they already know. Learning needs to connect with students' existing knowledge' (Ministry of Education, 2013).

A school's physical environment provides a real opportunity to drive what and how kids learn. It also provides an opportunity to provide an enriched environment to allow kids play opportunities that build the characteristics that will help them to lead happy and productive lives: resilience and self-control, at the right age to improve outcomes for their whole lives.

## But, the role of the outdoor environment of most New Zealand primary school as learning space is neglected

Most primary schools in New Zealand still look much as they have for over a century: a series of buildings plonked on to some often-flat grounds, with a field (or several fields, if the school is lucky), and one or more concreted areas for court games like basketball. There is little to stimulate the senses and at break times children must actively work to generate games with little support from their physical environment. This can lead to children feeling isolated, anxious and excluded if they do not yet have the social skills required to successfully participate in games. As we know, this can result in lower resilience and self-esteem and have a profound impact on a child's experience of school life and life after school. It can also foster bullying as children who are bored look to 'entertain' themselves and others by bullying.

In this traditional sort of school environment teaching occurs largely indoors and this itself increases the tendencies of schools to approach teaching using more traditional, formal and Pākehā methods. These methods are less likely to be responsive to the cultural needs of their Māori students.

Instead, they entrench the history of New Zealand schools failing to present equitable opportunities for Māori learners and learners with special needs.

Recently the Ministry of Education has been applying new practices into the design of the interior spaces of schools. Locally for example, the new building which will house the entire school at Ōhope Beach is made up of innovative and flexible learning environments. By contrast, little attention has been given to applying best practice for learning and connection to a school's outside environment/taiao.

## What things should the grounds of a school promote?

The research about what is currently missing in our children's experiences gives us clear insights into what schools a school's physical environment is currently not doing and should be doing to help improve hauora and educational outcomes for our tamariki.

Through their design, they should:

1. better connect children to nature by providing, beautiful natural spaces and gardens
2. foster co-operative and creative play by providing separate, diverse and connected spaces, catering to a range of the senses
3. provide for building resilience and self-control by providing opportunities for riskier and enriched play-based learning and teaching,
4. foster mana whenua by connecting children to their rohe through clear references and connections to Te Ao Māori in all aspects of design, thereby also improving practice of culturally responsive and relational pedagogies and use of Māori themes in teaching, and
5. create places that the whole community uses thereby connecting school and community and improving outcomes for both.

Instead of being flat concrete and grass, schools should include a range of natural play spaces, trees, hillocks and gardens. Gardens could include productive gardens where children could learn how to grow, harvest and prepare healthy kai. They could also include traditional non-food use gardens (such as harakeke, kawakawa and mānuka) as well as stimulating sensory places, That is, gardens that look and smell beautiful for beauty's sake. The grounds should include quiet spaces where smaller groups of children or individuals can play without feeling isolated or anxious. They should be designed to stimulate all the senses and provide opportunities to manipulate and learn from natural materials. For example, water courses that can be experimented with and manipulated.

The taiao should also provide opportunities for riskier play to allow children the chance to test and understand their personal limits and to be physically active, building their resilience and motor skills. 'Loose parts', a concept borrowed from ECCE, could be provided such as tyres, driftwood, planks and hoses, to encourage collaborative and creative play and help children to build their problem-solving and social skills. All aspects of these designs would help foster the characteristics of resilience and self-control which we know are so essential to growing healthy and productive adults. They would also help to reduce bullying as children became busier and more task-focused.

The grounds should also be designed with clear references and connections the school's particular rohe, referencing for example, bush, mountains, rivers and beaches. They should also include references to aspects of Te Ao Māori such as traditional use species, Māori carvings, art and iconography. Priority in this space is connection to mana whenua first and foremost, with the ability for tamariki to then connect in their own individual whakapapa. Including these elements would not only create enriched play spaces, it has the potential to change *what* and *how* a school teaches, and

to drastically improve their culturally responsive pedagogies. The ethnic composition of a school and its community could also inform the design of each school, with acknowledgment that flexibility is required as a school's demographics may change over time.

Appendix 1 provides more detail on the specific design elements a school's physical environment could include to achieve these design aims. For each element there a link to either the body of scientific child development research and/or mātauranga Māori to explain how it would address current shortcomings in school design.

## What outcomes could be expected if we did enrich our primary schools' taiao?

Changing a school's grounds in the ways detailed in this paper would likely have a range of benefits to children's hauora and academic outcomes. Although the changes may be especially beneficial for our Māori students, it is anticipated that all children would reap benefits; we know that what works to lift Māori achievement lifts the achievement of all students (Ministry of Education, 2013).

The research and mātauranga Māori indicates schools implementing Te Puna Taiao could expect to see several immediate or short-term benefits, including:

- Smoother transitions from ECCE and home to school - the chance to really optimise the mix between formal academic and play-based learning for each child
- Increased co-operation and reduced bullying
- improved attention during class time
- Increased physical activity, and,
- Increased play between tamariki of different ages and within whānau

This first advantage regarding improving transitions to school is a particularly important one. The evidence is clear that patterns established in the first two years of a child's schooling set up their experiences throughout their schooling. Therefore, all schools must give significant attention to getting each child's start right for them.

In New Zealand it is formally lodged in our cultural practice that children start school aged five (though children are not legally obliged to start until their 6<sup>th</sup> birthday). Recent research suggests that starting formal learning later is beneficial for children both developmentally and academically (Suggate, Schaughency, & Reese, 2012; Whitebread & Jameson, 2010). Some education experts are using these results to create debate around optimal school starting age and advocate for parents to apply a differential starting age for their children based on their individual development needs. However, this approach would only serve to entrench unequal outcomes; families, especially low-income families, are under an economic imperative to start their children as soon as they are legally able; 35 hours school a week is technically free, compared with only 20 ECCE hours.

Rather than try to encourage parents to start their children according to their individual developmental needs, primary schools must be better set up to provide a learning environment and teaching practices that cater to the developmental needs of all children who are legally able to attend. That is, they must provide a teaching environment that better optimises the mix between opportunities for both child-led, free play and for more traditional and formal academic learning. This requires a physical environment that reflects the heritage of the children within the school, fosters culturally-responsive teaching practices and themes and provides a welcoming environment

to whānau. It is crucial that schools ensure that each child has experiences that foster a positive early school experience to set them up for success at school and thereafter.

Changing a school's physical environment in line with the kaupapa described here may also result in a number of longer-term outcomes, including:

- Improved academic learning outcomes
- Improved mental health: reduced feelings of isolation, anxiety and loneliness
- Improved physical health: reduced obesity, higher activity levels
- Kids set up with healthier habits for life
- Increased school pride and reduced truancy
- Schools that are the real hubs of their community
- Happier teachers – better retention and ability to attract top teachers
- Reduced inequity – tamariki primed with the skills they need for the future and no discrepancy in outcomes for Māori and non-Māori
- Our children embedded with a love for exploration and the natural world and an environmental ethic to look after it
- More opportunities for Māori to achieve excellence as Māori, through
  - A deeper connection to and understanding of Te Ao Māori
  - Teachers who develop their pedagogy to be more culturally responsive and relational because of their environment
  - Whānau more involved in the school and their skills and knowledge better utilised

The benefits detailed above regarding improved opportunities for Māori to achieve excellence as Māori are particularly important to this kaupapa. We know that through time the New Zealand education system has been persistently inequitable for Māori learners by for example, low inclusion of Māori themes and topics and failure to uphold mana (Berryman & Eley, 2017; Alton-Lee, 2003; Biddulph, Biddulph, & Biddulph, 2003). A taiao firmly grounded in Te Ao Māori, as advocated for here, has potential to help remove these inequities and to actively promote themes within a kura that are uniquely Māori. Making outdoor spaces fantastic teaching spaces as well as great play spaces would also encourage teachers to get outside with their students and use oral teaching practices more. We know that successful Māori students cite 'having their culture and values celebrated at school' and 'developing and maintaining spiritual strength' as key to their success (Berryman & Eley, 2017). A school with a taiao designed in this way would therefore certainly help drive the Ka Hikitia vision of ensuring that 'Māori students will have their identity, language, and culture valued and included in teaching and learning', and in turn to help to address the education debt for tamariki and rangatahi Māori (Ministry of Education, 2013).

The predicted benefits around improved mental health and life habits through better risk assessment, resilience and self-control are also hugely important aims of this kaupapa. We know that providing enriched play opportunities helps to build these skills. And we know that lack of these skills in our tamariki creates both disastrous personal outcomes later in life as well as huge economic costs to society. The Te PunaTaiao kaupapa described here advocates for early intervention to give kids the skills they need to lead happy, healthy and productive lives.

## How much would changing a school's taiao cost?

A significant injection of capital expenditure would be required to transform a school's taiao to align with what the research and mātauranga Māori tells us that kids need. The cost would vary for each

school but is likely to be in the order of many hundreds of thousands of dollars, perhaps around a million dollars, depending on the school and its specific situation.

While this may sound significant, the costs are a one-off capital expense from which many generations of children will benefit. The changes could also be phased in over a period of 15-20 years, thereby spreading the implementation costs. We know that compared with other OECD nations, New Zealand spends considerably less on younger children (OECD, 2009). Scientists and policy makers alike are agreed on calls to increase spending on proactive preventative measures rather than the current focus on crisis response. For example, the Gluckman Report notes that most of the spending on youth mental health and suicide prevention has been responding to symptoms rather than on preventative measures. This despite clear evidence that 'programmes initiated early in life to reduce later risk are generally more effective – and more cost-effective – than attempts at remediation' (Office of the Prime Minister's Science Advisory Committee, 2011). A school's outdoor environment should be considered an equally important learning space as its indoor environment, and funding should be prioritised accordingly.

Furthermore, the cost is insignificant in comparison with the costs to society of many of our social issues such as family violence. This is illustrated well by the statistic cited earlier that a single homicide costs the country on average \$3.9 million dollars. If changing a school's taiao has just a fraction of the anticipated benefits detailed above in helping kids learn self-control and improving their social skills, across multiple generations of children, then pro-active investment in schools in line with this kaupapa seems to be obvious.

## Future mahi: Te Puna Taiao in action

The kaupapa set out in this paper has been developed into a detailed proposal to transform the taiao of Allandale Primary School/Te Kura o Motueka in Kopeopeo, Whakatāne. Kopeopeo is an excellent area to test the kaupapa as it has a high proportion of Māori communities and fares particularly badly on many measures of poor social outcomes. Allandale is a Decile Two school with a role of around 440 tamariki, approximately three quarters of whom identify as Māori. Like most schools, the achievement of Māori students at Allandale lags that of their non-Māori peers. The school is determined to address that gap and provide a more culturally-responsive teaching environment. They see Te Puna Taiao as an exciting opportunity to build mana whenua and resilience in their kids, and in turn improve their hauora and educational outcomes. The kura and community are currently actively prioritising existing resources and seeking additional funding to bring the kaupapa to life as soon as possible.

Once implemented it presents the perfect opportunity to assess the impact of the kaupapa against the many benefits it hopes to achieve. Research questions could include for example:

- Did implementation of Te Puna Taiao affect the hauora of tamariki?
- Did children change their activity patterns before and after implementation? Was there an effect of aspects such as BMI, agility scores etc
- What effect did implementation have on social interactions and bullying at the kura?
- Did teachers report using more Māori themes in their teaching post-implementation?
- Did tamariki Māori report changes in how much they felt their culture was valued, recognised at the kura?
- Were any changes in thinking or activity levels long-term?
- And so on.

If found to be effective, the Te Puna Taiao kaupapa could be scaled up and tested in 10-12 primary schools throughout the country, and if found to be successful, subsequently rolled out in schools across the country with an initial focus on low decile schools.



## References

- Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis*. Wellington: Ministry of Education.
- Anda, R., Felitti, V., Bremner, J., Walker, J., Whitfield, J., & Perry, B. (2006). The enduring effects of abuse and related adverse experiences in childhood: A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience* 256(3), 174-86.
- Berryman, M., & Eley, E. (2017). Succeeding as Māori: Māori Students' Views on Our Stepping Up to the Ka Hikitia Challenge. *New Zealand Journal of Educational Studies* 52(1), 93-107.
- Biddulph, F., Biddulph, J., & Biddulph, C. (2003). *The complexity of community and family influences on children's achievement in Aotearoa New Zealand: Best evidence synthesis*. Wellington: Ministry of Education.
- Bratman, G., Daily, G., Levy, B., & Gross, J. (2015). The benefits of nature experience: Improved affect and cognition. *Landscape and Urban Planning* 138, 41-50.
- Burniat, W., Cole, T., & Lissau, I. (2002). *Child and adolescent obesity: Causes and consequences, prevention and management*. Cambridge: Cambridge University Press.
- Ceballos, G., Ehrlich, P., & Dirzo, R. (2017). Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines. *Proceedings of the National Academy of Sciences of the United States of America* 114(30).
- Child Poverty Action Group Inc. (2013). *Child abuse: an analysis of Child, Youth and Family data*. Auckland: Child Poverty Action Group Inc. Retrieved from <http://www.cpag.org.nz/assets/Publications/130729%20CPAG%20Child%20Abuse%20Report%202%20July%202013.pdf>
- Chipeniuk, R. (1995). Childhood foraging as a means of acquiring competent human cognition about biodiversity. *Environment and Behaviour* 27, 490-512.
- Cobb, E. (1977). *The Ecology of Imagination in Childhood*. New York: Columbia University Press.
- Crain, W. (2001, Summer). How nature helps children develop. *Montessori Life*.
- Doolan, M. (2004). *Child death by homicide in New Zealand: An examination of incidence and child protection actions*. Christchurch: Canterbury University.
- Drurie, M. (1982). Te Whare Tapa Whā Māori health model.
- Fanslaw, J., & Robinson, E. (2004). Violence against women in New Zealand: Prevalence and health consequences. *New Zealand Medical Journal* 117 (1206).
- Farmer, V., Fitzgerald, R., Williams, S., Mann, J., Schofield, G., McPhee, J., & Taylor, R. (2017). What did schools experience from participating in a randomised controlled study (PLAY) that prioritised risk and challenge in active play for children while at school? *Journal of Adventure Education and Outdoor Learning*.
- Fjortoft, I. (2001). The natural environment as a playground for children: the impact of outdoor play activities in pre-primary school children. *Early Childhood Education Journal* 29(2), 111-117.



- Fox, S., Levitt, P., & Nelson, C. (2010). How the Timing and Quality of Early Experiences Influence the Development of Brain Architecture. *Child Development* 81(1).
- Gibson, K., Abraham, Q., Asher, I., Black, R., Turner, N., Waitoki, W., & McMillan, N. (2017). *Child poverty and mental health: A literature review*. Auckland: New Zealand Psychological Society and the Child Poverty Action Group.
- Ginsberg, K. e. (2007). The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics* 119 Issue 1.
- Glascott Burriss, K., & Tsao, L. (2002). Review of Research: How much do we know about the importance of play in child development? *Childhood Education* 78(4).
- Hartig, T., van de Berg, A., Hagerhall, C., Tomalak, M., Bauer, N., Hansmann, R., . . . Waaseth, G. (2011). Health Benefits of Nature Experience: Psychological, Social and Cultural Processes. In N. K. (eds), *Forests, Trees and HUMAN Health*. Dordrecht: Springer.
- Henare, M., Puckey, A., & Nicholson, A. (2011). *He Ara Hou: The Pathway Forward. Getting it right for New Zealand's Māori and Pasifika children*. Wellington: Every Child Counts.
- Huttenlocher, P. (1999). Dendritic and synaptic development in human cerebral cortex: time course and critical periods. *Developmental Psychology* 16.
- Kahui, S., Ku, B., & Snively, S. (2014). *MEasuring the economic cost of child abuse and family violence to New Zealand*. Auckland: The Glenn Inquiry.
- Kals, E., & Ittner, H. (2003). Children's Environmental Identity, Indicators and Behavioral Impacts. In S. Clayton, & S. Opatow, *Identity and the Natural Environment - The Psychological Significance of Nature*. Cambridge, Massachusetts: The MIT Press.
- King, L., Lawrence, M., & Roberts, C. (2017). *Managing Automation: Employment, inequality and ethics in the digital age*. The IPPR Commission on Economic Justice. Retrieved from <https://www.ippr.org/publications/managing-automation>
- Kruger, T. (2017, November 19). We are not who we should be as Tūhoe people. (E-Tangata, Interviewer) Retrieved from <https://e-tangata.co.nz/news/we-are-not-who-we-should-be>
- Landhuis, E., Poulton, R., Welch, D., & Hancox, R. (2008). Programming obesity and poor fitness: The long-term impact of childhood television. *Obesity* 16(6), 1457-1459.
- Little, H., & Wyver, S. (2008). Outdoor play: does avoiding the risks reduce the benefits? *Australian Journal of Early Childhood* 33(2), 33-40.
- Louv, R. (2005). *Last child in the woods*. London: Atlantic Books.
- Malone, K., & Tranter, P. (2003). Children's environmental learning and the use, design and management of schoolgrounds. *Children, Youth and Environments* 13(2).
- Marriott, D., & Sim, L. (2014). *Indicators of Inequality for Māori*. Wellington: Victoria Business School.
- Mental Health Foundation. (2017, December 14). *Mental Health Week: Nature is Key*. Retrieved from Mental Health Foundation: <https://www.mhaw.nz/>

- Miller, R., & Ginsburg, K. (2012). The importance of play in promoting healthy child development and maintaining strong parent-child bond: Focus on children in poverty. *Pediatrics* 129(1), 2011-2953.
- Ministry of Education. (2013). *Ka Hikitia - Accelerating Success: The Māori Education Strategy 2013-2017*. Wellington: NZ Government.
- Ministry of Education. (2017, December 15). *Communities of Learning / Kāhui Ako*. Retrieved from <https://education.govt.nz/communities-of-learning/>
- Ministry of Health. (2017). *Māori health models – Te Whare Tapa Whā*. Retrieved from <http://www.health.govt.nz/our-work/populations/maori-health/maori-health-models/maori-health-models-te-whare-tapa-wha>
- Ministry of Social Development. (2016). *The Social Report - Te pūrongo oranga tangata*. Wellington: The Ministry of Social Development.
- Moffitt, T., Arseneault, L., Belsky, D., Dickson, N., Hancox, R., Harrington, H., . . . Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences of the United States of America* 108(7), 2693-2698.
- Moore, R. (1996). The Role of Playing and Learning Gardens on Children's Lives. *Journal of Therapeutic Horticulture* 8, 72-82.
- Norman, R., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse and neglect: A systematic review and meta-analysis. *Public Library of Science Medicine* 9 (11), 1-31.
- Nowak, R. (2004). Blame lifestyle for myopia, not genes. *New Scientist* 12.
- Oakley Browne, M. A., Wells, J. E., & Scott, K. M. (2006). *Te Rau Hinengaro: The New Zealand Mental Health Survey*. Wellington: Ministry of Health.
- OECD. (2009). *Doing better for children*.
- OECD. (2017). *Overweight or obese population (indicator)*. <http://dx.doi.org/10.1787/86583552-en> : OECD.
- Office of the Prime Minister's Science Advisory Committee. (2011). *Improving the transition: reducing social and psychological morbidity during adolescence*. Wellington: Office of the Prime Minister's Science Advisory Committee.
- Perry, B. (2015). *Household incomes in New Zealand: Trends in indicators of inequality and hardship*. Wellington: Ministry of Social Development.
- Pyle, R. (1993). *The thunder trees: Lessons from an urban wildland*. Boston: Houghton Mifflin.
- Roper, T., & Thompson, A. (2006). *Estimating the costs of crime in New Zealand in 2003/04*. Wellington: New Zealand Treasury Working Paper 06/04.
- Schultz, P., Shriver, C., Tabanico, J., & Khazian, A. (2004). Implicit connections with nature. *Journal of Environmental Psychology*, 31-42.

- Simpson, J., Oben, G., Craig, E., Adams, J., Wicken, A., Duncanson, M., & Reddington, A. (2016). *The Determinants of Health for Children and Young People in New Zealand*. Dunedin: NZ Child and Youth Epidemiological Service, University of Otago.
- Suggate, S., Schaughency, E., & Reese, E. (2012). Children learning to read later catch up to children reading earlier. *Early Childhood Research Quarterly* 28(1), 33-48.
- Sutton, D., & Nicholson, E. (2011). *Sensory modulation in acute mental health wards: A qualitative study of staff and service users' perspectives*. Auckland: Te Pou o Te Whakaaro Nui.
- Tandon, P. (2008). The decade of the brain: a brief review. *Neurol India* 48, 199-207.
- Taylor, A., Kuo, F., & Sullivan, W. (2001). Coping with ADD: The surprising connection to green play settings. *Environment and Behaviour*, 54-77.
- Taylor, A., Kuo, F., & Sullivan, W. (2002). Views of nature and self-discipline: evidence from inner city children. *Journal of Environmental Psychology* 22, 49-63.
- UNICEF. (2007). *Child poverty in perspective: An overview of child well-being in rich countries, Innocenti Report Card 7*. Florence: UNICEF Innocenti Research Centre. Retrieved from <https://www.unicef.org/media/files/ChildPovertyReport.pdf>
- UNICEF NZ. (2017, December). *Keeping kiwi kids safe*. Retrieved from <https://www.unicef.org.nz/in-new-zealand/child-abuse>
- United Nations . (2017, December 15). *Convention on the Rights of the Child*. Retrieved from United Nations: <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>
- van Lier, L., Utter, J., Denny, S., Lucassen, M., Dyson, B., & Clark, T. (2017). Home gardening and the health and wellbeing of adolescents. *Health Promotion Practice* 18(1), 34-43.
- Wallis, N. M. (2017, November 1). Minimising the risk of suicide - what can parents do? (K. Ryan, Interviewer) RNZ. Retrieved from <https://www.radionz.co.nz/national/programmes/ninetoon/audio/2018620145/minimising-the-risk-of-suicide-what-can-parents-do>
- Wells, N. (2000). At Home with Nature, Effects of "Greenness" on Children's Cognitive Functioning. *Environment and Behaviour* 32(6), 775-795.
- Wells, N. (2000). At home with nature: effects of 'greenness' on children's cognitive functioning. *Environment and Behaviour* 32(6), 775-795.
- Wells, N., & Evans, G. (2003). Nearby nature: A buffer of life stress among rural children. *Environment and Behaviour* 35(3), 311-330.
- Wells, N., & Lekies, K. (2006). Nature and the life course: pathways from childhood nature experiences to adult environmentalism. *Children, Youth and Environments* 16(1), 1-24.
- Whitebread, D., & Jameson, H. (2010). Play beyond the foundation stage: Story-telling, creative writing and self-regulation in able 6-7 year olds. In J. Moyles, *The excellence of play 3rd ed.* (pp. 95-107). Maidenhead: Open University Press.

Design Element	Description	Purpose and explanation of mechanism
1. A series of separate, but connected, diverse use spaces	A mix of some small areas designed for a few children, and larger areas for bigger groups	<p>To create areas that can be used equally well for play as for teaching</p> <p>To foster cooperative play</p> <p>To reduce bullying and opportunities for conflict</p> <p>To provide for quiet spaces for individual play and learning without feelings of isolation and anxiety</p> <p>To better cater to the wide variety of learning dispositions of our tamariki</p> <p>To provide for the concept of an outdoor classroom</p>
2. Natural materials and a natural design aesthetic that references the school's rohe	A design focus that references Te Ao Tūroa and wherever possible uses natural materials, including example, sand, pebbles, water and wood referencing for example forests, lakes, mountains, rivers, sea and beach	<p>To provide children with a connection to the natural world, and all the benefits that provides</p> <p>To connect tamariki to Te Ao Tūroa</p> <p>To stimulate the senses</p> <p>To provide opportunities to better connect whānau and community with the kura</p> <p>To build mana whenua and allow tamariki to reference their own whakapapa</p> <p>To engender an environmental ethic</p>
3. Clear references to Te Ao Māori	<p>Inclusion in the grounds of spaces that provide for the leaning tikanga and kawa and help children to learn about and connect to Te Ao Māori, for example:</p> <ul style="list-style-type: none"> <li>• Small whare to be used as teaching and breakout spaces</li> <li>• A permanent hāngī pit</li> </ul>	<p>To be used as fantastic play areas during breaks, and equally, especially by older students, as breakaway areas for small-group work</p> <p>To connect tamariki to Te Ao Māori and traditional ways of life</p> <p>As a setting for transfer of kawa (cultural practices) from both kaiako and members of our kids' whānau and wider community</p> <p>To build mana whenua and allow tamariki to reference their own whakapapa</p> <p>To provide opportunities for whānau to teach traditional skills and tikanga around activities related to traditionally-important species such as Kūmara, Pikopiko, and Mānuka</p> <p>To foster collaboration</p> <p>To provide opportunities to better connect whānau and community with the kura</p>
4. Loose parts - materials that can be manipulated and moved	A concept borrowed from early childhood education and increasingly being adopted by primary schools. Loose parts such as driftwood, tyres, planks, and slices of tree trunks that children can use to work collaboratively to create structures such as huts, sculptures and play areas they've designed and created themselves.	<p>To foster more creative and collaborative play</p> <p>To provide for riskier play experiences to help children learn and practise making judgments around risk, build their motor skills, perseverance, self-control and resilience</p> <p>To foster opportunities for tamariki and whānau to engage in creative and collaborative play together, fostering relationships and building connectivity</p>
5. Components that are physically challenging	<p>For example, things like:</p> <ul style="list-style-type: none"> <li>• Flying foxes</li> <li>• Climbing frames</li> <li>• Skate park</li> <li>• In ground trampoline/s</li> </ul>	<p>To provide for riskier play experiences to help children learn and practise making judgments around risk, build motor skills, perseverance, self-control and resilience – the very skills research shows our kids need to thrive,</p>

and provide for risk-taking	<ul style="list-style-type: none"> <li>• More trees (exotic and native species selected carefully for their play potential)</li> <li>• A tree house area with platforms, cargo net and balancing strops</li> <li>• A road bike park, with markings and signage to practice safe road bike skills</li> <li>• Mountain bike track</li> </ul>	<p>focused on the principle that “school grounds should not be as safe as possible, but as safe as necessary” (International Schoolground Alliance)</p> <p>To build physical fitness and motor skills</p>
6. An outdoor performance area	An outdoor stage and seating area that can be used for both formal and informal performances, by small and large groups alike. The area will also encourage collaborative and creative play in break times	<p>To provide a venue for outdoor performances such as kapa haka</p> <p>As settings for transfer of kawa (cultural practices) from both kaiako and members of our kids’ whānau and wider community – relating for example to poi, rākau, taiaha etc</p> <p>To encourage the performing arts and oral teaching practices</p>
7. Beautiful and productive gardens	<p>A wide range of gardens, both productive and aesthetic, including:</p> <ul style="list-style-type: none"> <li>• Fruit</li> <li>• Nut</li> <li>• Vegetable</li> <li>• Traditional use (e.g. pikopiko, mānuka, kawakawa)</li> </ul> <p>A focus on native species, but also inclusion of exotics as appropriate</p>	<p>To give tamariki opportunities to experience all the benefits of better understanding where their kai comes from and how to grow things</p> <p>To foster a connection with the natural world</p> <p>To engender an environmental ethic</p> <p>To encourage activity and reduce obesity</p> <p>To provide opportunities for our whānau to teach our tamariki traditional skills and tikanga around activities such as kūmara, pikopiko, and mānuka cultivation, harvest and use.</p> <p>To be beautiful for beauty’s sake</p>
8. Sensory areas	<p>A number of areas designed to stimulate all the senses, including for example:</p> <ul style="list-style-type: none"> <li>• Outdoor musical instruments</li> <li>• Water play areas, with pumps etc</li> <li>• Areas designed for stimulating the sense of touch – pumice, stones etc</li> <li>• Edible gardens and trees</li> <li>• A focus on making sure these areas are designed to cater to the needs and abilities of all members of our kura and community</li> </ul>	<p>To awaken all the senses in our kids and stimulate their brains for learning and improved emotional resilience</p> <p>To provide for the wide ranging benefits linked to creating music</p> <p>To provide quiet and calming areas for children experiencing stress – e.g. a child acting out disruptively, or a child feeling anxiety about a new situation (refer the body of research on sensory modulation – especially for treating anxiety and sensory disorders)</p> <p>To build mana whenua in our kids and allow them to reference their own whakapapa</p>
9. Art and Sculpture	Artworks and sculptures that can be added to over time with a focus on work connecting children to Te Ao Māori and stimulating all the senses.	<p>To connect tamariki to Te Ao Māori and traditional ways of life</p> <p>To awaken all the senses in our kids and stimulate their brains for learning and improved emotional resilience</p> <p>To improve mental health</p>