



Special feature: • Building sustainable communities

Fearless science •

Te Ao Máori in PD and pedagogy •

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Photos

Contributors supplied the many photos in this issue. (Thank you!).

Contributions

Contributions of articles and photos are welcome from the early childhood community. Please keep copies of any contributions as we cannot guarantee to return what is sent. Cover photos need to be 'high resolution'.

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Imagining our becoming

Jenny Ritchie

Some time ago, Roger Simon envisioned a pedagogy of empowerment with the fundamental purpose being 'to expand what it is to be human and contribute to the establishment of a just and compassionate community' (Simon, 1987, p. 372). For Simon, educators 'are always implicated in the construction of a horizon of possibility for ourselves, our students, our communities' (Simon, 1992, p. 56). Another very wise educational philosopher, Maxine Greene, has advocated for democratic processes involving collaboration, networking, connectedness, moral commitment and communities of care. She stated that in our thinking around notions of community, we should emphasize 'process words' like creating, weaving and so forth. Building community requires that people are offered spaces infused with 'imaginative awareness' that enables those involved to create 'alternative possibilities for their own becoming and their group's becoming'. This space allows for exploration of questions pertaining to 'different ways of being together, of attaining mutuality, of reaching toward some common world' (Greene, 1995, p. 39). In Barbara Rogoff's community of learners model, 'adults and children make varying contributions to each others' learning, with all active and involved' (Rogoff, 1998, p. 715).

In this edition of Early Education, our contributors share journeys of creating such early childhood spaces which foster collective becomings. At Takaro Kindergarten the teachers sent a camera home with children, asking whānau to choose what they wanted to capture of their 'home and culture, routines and rules'. The teachers found 'that children's learning is most productive, authentic and engaging when activities are based on children's and their families' own interests and funds of knowledge'. During a research project at Dannevirke's First Years Preschool focussing on 'fearless science', the teachers encountered some challenges around different cultural perspectives when exploration of a dead ruru inadvertently raised some unexpected 'fears'. The strong relationships with members of the Māori community both within and beyond the centre ensured that effective consultation took place, with learning extending into the centre community, 'reinforcing increased understandings'.

At Koromiko Kindergarten in Hawera, the teachers worked to bring a Māori component into their programme's existing commitment to ecological sustainability as they participated in a research project. Their involvement in the research meant that they learnt more about some of their families' existing commitment to environmentally sustainable practices and

received feedback from others that the centre's 'emphasis on caring for the environment is valued by many families'.

The teachers of Richard Hudson Kindergarten in Dunedin introduced their children to the creation story of Aotearoa as a way of enabling children to feel a connection with their research kaupapa of caring for ourselves, others and the environment. Weaving in this Māori perspective brought 'a depth of emotion, identity and wholeness' to their work, which proceeds 'in a spiral of promoting, acting, teaching, learning and enthusing', shared with their wider kindergarten community.

In her article, Cheryl Rau outlines a process of professional learning focussed on supporting teachers' journeys of Tiritibased practice, centred strongly on enabling teachers to strengthen their connections with local community stories.

In his 'letter', Peter Watson evocatively describes for us his visit to early childhood centres in Indonesia, a stark reminder of our comparatively privileged position in Aotearoa, and of how seemingly small contributions can make a real difference to children's lives.

All the contributors to this edition have shared examples of their 'imaginative awareness' in pursuit of stronger, more caring communities, and a healthier planet. I would like to thank them all very much for their willingness to allow us these glimpses of their wonderful work.

"Mehemea ka moemoea ahau, ko ahau anake. Ka moemoea tātou, ka taea e tātou."-Te Puea Herangi

"If I dream, it is just me. If we all dream together, we will achieve."

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Letter from ... Joq iakarta

Peter Watson

Dear friends and colleagues,

Here I am at an internet cafe in Jogjakarta, nearly at the end of a month in Indonesia. I thought I'd share some stories of my time here to give you a glimpse into early childhood in this country.

In Sumatra riding on the back of motorbike (with no helmet!), I visited a refugee community where I stayed in the basic house of one of the teachers at the newly established pre-school. Having been run for nearly a year as a twice a week playgroup, the preschool had been organised by the community to run five mornings a week with seven volunteer teachers and about 40 children.

The middle of the morning was time for a break, and the children gathered their bags and moved outside, putting their sandals on before moving across the unsealed road past their building to a shady spot a few metres away. This was very much like an excursion to the local park. Once there they gathered in a circle on a large tarp that the teachers had spread out. Lower branches of the tree provided convenient hooks for their bags. After some fingergames and songs together, they retrieved their bags to have something to eat and drink. Most girls wore hijab head covering, so I was really surprised to see that their bags included the familiar 'Barbie' variety. It certainly set me thinking about the sociocultural context in which these children lived, and the global reach of certain symbols, and the meaning they carry. Their food was very different from that of New Zealand children. I was relieved to see nothing pre-packaged. In some cases the rice-based mini meal was wrapped in banana leaves, which was untypical of what I saw elsewhere; there was massive use of plastic which littered the environment.

This community moved to their present location as a result of the war in Aceh that only came to an end after the tsunami in 2004; they were forced off their land because they were of Javanese descent, not Acehese. The children I saw were born after the relocation, but they will have suffered from the physical and emotional challenges that their parents have faced. All the people we work with are facilitators of Alternatives to Violence Project (AVP) workshops. Besides facing the tsunami, these people had also faced 30 years of war. Their preschool came into existence out of action taken to address the parents' trauma, and their desire to live in equality and nonviolence as a community. Once they had started to practice nonviolence



A new experience - water play

they wanted to know how to make a better future for their children.

The building and the basic equipment they use were provided by funds raised through Friends Peace Teams (amazingly less than \$NZ 3,000!) within the home community of an American Quaker volunteer.

In Aceh, I was present to help change a preschool from a traditional curriculum to a developmental based one. This centre had a staff of four with a maximum of 20 three and four year olds. I enjoyed the challenges of the shopping trip in the town, with almost nothing available sold as a 'toy.' While in a hardware shop, I noticed they were selling nuts and bolts, so bought several sets of varying sizes, and



Time to eat - outside

also recalled seeing padlocks and keys being used at a Montessori preschool at home. Fortunately the hardware store had three different sizes, creating a cheap but effective manipulative challenge for the children.

The space at the rear of the small building was shaded by large coconut trees in the neighbour's property. But it had to be cleared of old wood and plastic rubbish to create a few square metres of clear space for large plastic bowls of water play. This site had no tap water, but did have a well. I chuckled to myself as I struggled to manipulate the rope with the bucket so that it did fill with water rather than float. I also recalled an occasion when my centre in Whanganui was closed because there was no water available from the taps.

I can't finish without also telling you about the part that was most personally satisfying. I was delighted that in the space of only four days, I was able to work with a group of young men in their twenties, to start production of some wooden educational toys, which are virtually unavailable in Indonesia. As a result of the partnership that Friends Peace Teams has formed with an Indonesian NGO, we were able to link up with a group of men who have good woodworking skills but are struggling financially as a result of the downturn of furniture industry. Using fairly basic borrowed equipment we were able to work together to reproduce one of my designs (a set of twelve small blocks that fit into their box in a large number of different ways) and another three designs. On the last day we walked around the corner to visit a small family operation where two people were busy cutting curved unit blocks freehand. This was done with amazing skill and accuracy, quite wonderful to watch. They were using large industrial jig saws, located under a flimsy lean-to roof next to their modest house. We finished the day with a 'play opportunity' for the men, using the unit blocks that had been produced, almost certainly the first time they had ever done this.

It has been a really amazing month, and my mind is full of the contrasts; the different density of people, opportunities for children, and the environment. The implications and meanings of symbols such as 'Barbie' and 'Spiderman' in totally different cultural contexts will continue to challenge my mind for a long time to come. It has felt like a privilege to be able to make a small contribution to the lives of a few children in the neighbouring country to our neighbour Australia.

Transforming curriculum

Seeking 'hard and soft knowledge' in a kindergarten's community of learners

Wilai Payne, Claire Wilson, and Noeline Corley with Barbara Jordan.

'Tuia te kawe tairanga te kawe oi te kawe o te haere'

This is a complex story of teachers' courage in shifting their philosophical paradigms leading to changes in kindergarten routines and hui to accommodate their new ways of working with whānau and with children. It is a story of shared leadership that celebrates the success of all others in their learning community enabling every member to become a leader. The learning stories that children and whānau share privilege the knowledge about learning that is written and re-told with pride. In this manner, the learning culture of whole communities is being influenced.

As articulated and represented in their philosophy statements depicted on their walls and fences, 'hard and soft' knowledge is valued. Teacher-parent partnerships are both the source of, and the reinforcement for, ways of 'being' learners and ways of 'doing' learning.

This is a transformative story from Takaro Kindergarten, a community of learners.

An invitation

In early 2008 Takaro Kindergarten in Palmerston North received an invitation from our senior teachers of the Ruahine Kindergarten Association to participate in an action research project with Massey University College of Education. The research focus was to be on diverse families shaping the early childhood curriculum.

As a team we felt that this challenge came at an opportune time. Although the celebration and fostering of our children's learning was already present, the concept that we are all (children, family, and teachers) bearers of 'funds of knowledge' (Hedges, 2007; Moll, Avant, Neff & Gonzalez, 1992) took us out of our comfort zone and presented us with an altered concept of what this new learning community would look like.

During the days that followed we had many questions and discussions regarding the challenge that the research posed. The research questions were:

- What happens for children's learning when their families and teachers learn about each others' belief systems and negotiate the ways these are expressed in their practices?
- What are some outcomes and issues for teachers when they attempt to engage in curriculum negotiation with families?
- Are there 'bottom lines'? What practices are open for negotiation, given good teacher-parent communication?

These questions provoked further 'in house' questions for

- How would a shift work so that we moved from planning for and imparting knowledge to collectively deriving it?
- How would our whanau feel about this venture?

While issues of ethics, such as confidentiality and the protection of privacy were dealt with through the human ethics committee at Massey University, our more personal concerns included:

- Might the research be intrusive in families' lives? and
- Could it pose privacy issues? through to
- What would we encounter along the way? and
- How would we find out what children's home funds of knowledge were?

The answers were soon to arrive in the form of a shiny silver 'cube' – a digital camera became the window or the open portal into the whare. Whānau were invited to take the camera into their homes and encouraged to capture what they felt comfortable about sharing with their teachers. The camera thus became a bridge building vehicle, inviting us into the culture and the 'being' of families' home lives. This invaluable piece of equipment enabled us to really get into the 'hub' of the family home without creating any feelings of our intrusion as the whānau felt more comfortable with the camera as the 'information gatherer'.

¹Translation courtesy of Gary Leaf: 'Let us once again take up our load packs and continue in unison on our journey'

This meant that whānau could choose what they wanted to show us of their home and culture, routines and rules. It immediately broke down barriers while feelings of increased trust, respect and deeper understandings were created on viewing and discussions between teachers and families of their 'home videos'.

One of the video sequences is of a teacher, Noeline, extending a group of four year old boys' interests in using tools to extract pieces of equipment from old electronic gadgets. In the process one very competent and confident boy's actions are reinforced and another less confident boy who expresses his feelings of inferiority ('No, I can't do it; I have no brains') is also acknowledged and challenged to success.

A further sequence depicts a family with the same equipment set up at home, with Mum reinforcing home rules and discipline alongside supporting, challenging and admiring her kindergarten and her school-aged boys' skills in tool use. When Dad arrives home he is immediately drawn into the experiences. This family, consisting of a Japanese mother, Samoan father, three boys and a younger girl, has little in material possessions but is rich in developing family culture and mores. The family clearly treasures their four year-old's constructions and paintings from kindergarten, which are proudly displayed on a wall. His interests expressed at kindergarten in technology, gardening and healthy eating have been reinforced at home.

The whole process was responsive and positive for whānau, children and teachers alike. The 'funds of knowledge' viewpoint is seen incredibly clearly and as teachers we asked ourselves, 'Why had we not done or thought of this before?' It just seemed so right, natural and enlightening to see the child in his/her own environment. It certainly made a lot of what children pursued, said or acted out at kindergarten fall into place. The 'light bulb' clicked on for us! We could clearly see and articulate how 'the personal qualities of children's knowledge are based on the unique informal family and community experiences' contribute to 'their foundational knowledge' (Hedges, 2007, p. 45). Encompassing the child's home environment, who they are and what they bring with them enabled us to engage more closely with the child and whānau. It seems ridiculous to us now that we thought we knew the children so thoroughly before this research process began.

We realised that in our kindergarten sessions, we were not extending children's interests from their home lives, or and their family 'funds of knowledge'. We knew that 'it takes enthusiasm and commitment from the teachers' to establish 'reciprocal and responsive relationships with families' (Ramsay, Breen, Sturm, Lee & Carr, 2005, p. 27) so we as teachers embraced this paradigm shift towards a co-constructive pattern of planning curriculum involving this 'triad' of learners: the children, their whānau and their teachers.

Transformation

Our usual mihimihi time provides a good forum for us

The Humongous Toadstool.

A pair of big black boots and a pair of little green gumboots covered in freshly mown grass and mud are carefully taken off on the mat at the front door of the kindergarten. The boy and his mum wander in their socks towards one of the tables balancing a humongous brown toad stool. Upside down, on top of the cardboard it sat. The biggest toadstool we had ever seen! (Once again). The spark of excitement begins! Tamariki immediately crowd the pair and start firing questions at them. The teachers are also highly inquisitive and join the tamariki in their curiosity. The boy and his mum smile as they know that the boy will be able to satisfy/expound all of these enquiries later at mihimihi time (large group time) as he has done on a number of previous occasions.

The humongous toadstool is a typical example of how the children and whānau know and can expect that their contributions will be celebrated. Takaro Kindergarten has for many years exhibited a strongly socio-cultural perspective in their work with children and their whānau. Our teaching practises actively sustain and celebrate children's emergent learning. Encouragement for the child to take on the mantle of expert and to 'show their findings', is an integral part of what we hold as critical for the constant affirmation we give the children that their offerings of learning and knowledge are accepted here.

to plan and capture the children's 'brainwaves'. A web-style formatted inquiry - our usual method of planning - was used focusing on:

- What do we know already about bugs and insects?, and
- What would we like to know about bugs and insects? The tamariki were quick to fire questions, such as:
- Do bugs chew chewing gum and what do they chew?
- How can we find out if it is a biting bug or not?
- Do bumblebees live in flowers?
- What is the strongest bug in the world?

The next step in this process was to fully involve parents in the planning. The head teacher, Wilai, facilitated this hui, encouraging the parents to express their aspirations and funds of knowledge regarding 'bugs and insects'. The atmosphere at a whānau hui was one of enthusiasm and excitement as they brainstormed and negotiated using the very same format of planning that the children had done that morning. The ideas, hypothesis and questions of inquiry came thick and fast. Most of the time it was difficult to keep up the parents' suggestions, including:

- Why do we have bugs?
- What is the life cycle of bugs and insects?
- Are bugs pests and what do we do with them?'

- I'll come in and make a terrarium!! and
- · I've got a praying mantis to bring in.

The planning then moved to yet another level in which we provoked the wider community to contribute their individual 'funds of knowledge' to planning the kindergarten curriculum. A community planning board was set up in the front foyer of the kindergarten and the results were even more encouraging and exciting to see, as parents continue to contribute their thinking and their questions to the investigation:

- How do bugs breathe and do they have feelings?
- Do bugs have ears on their feet?
- What are dangers that come with insects, especially spiders like the white tail spider?

Takaro's new paradigm has led to many families contributing to their curriculum, from their own funds of knowledge, their family's happenings. A weta rescued from a shower is immediately recognised as an object in which the teachers and other children will be interested. Similarly, parents bring in eggs of the praying mantis. They contribute snails for the aquarium and find ants and gnats, all of which they are prepared to talk about with children and with each other. Takaro has indeed become a learning community.

Reflections

Documented Learning Stories (Carr, 2001) at Takaro provide evidence that kindergarten plans are now building on the home funds of knowledge (Hedges, 2007; Moll et al, 1992) that children and their parents bring with them to the kindergarten. Such outcomes of their research are what Hildreth and Kimble (2002) would describe as 'hard'

knowledge, or that which is explicit, measurable and can be expressed clearly.

What is more difficult is to explain the 'soft' knowledge: the implicit, informal, cultural ways of 'being' in the kindergarten. Evidence is documented of outcomes for childrens' learning as a result of their parents' engagement in with them and their teachers, in their investigations.

Takaro Kindergarten's practices of akonga, through which children and teachers demonstrate aroha, tikangarua, virtues and boundaries, have drawn in their whānau and developed shared understandings about what the community wants for themselves and for their children. These practices of 'soft knowledge' (Hildred & Kimble, 2002) remain the foundations, extending to the overt inclusion of families' 'funds of knowledge' in the teachers' thinking and planning for kindergarten investigations.

As Hill (2001) advised, 'an understanding of the word "planning" must include a sense of shared decision making and the creation of responsive, reciprocal and emotional relationships' (p. 13). Planning and sharing the interests, ideologies and even the idiosyncrasies of themselves as parents and their offspring made for a sense of connectedness and a deeper relationship base which in turn created optimal learning/work opportunities for the children.

The wairua, the 'soft knowledge' and the 'being', and underlying philosophy of this kindergarten community provokes social inclusion and responsiveness. We live and breathe ako, aroha, tikangarua, virtues, boundaries and whānau involvement, as the very backbone of our everyday practice. From the initial contact with our families, making links, giving time and acceptance of whānau in a holistic

way, we begin to build the bridge of shared understandings.

Each of these tools of our curriculum contributes to this process of getting to know each other, creating further understandings and deeper relationships. As Wadham, Pudsey and Boyd (2007) have said, 'Culture shapes education and education shapes culture' (p.1). The multi-faceted way in which this knowledge bridge is built continues to strengthen and connect threads within this learning group.

On the kindergarten wall and at homes, and in each child's portfolio, the re-visiting of these stories provides a means of continually reinforcing the

William and the Wasp's Home



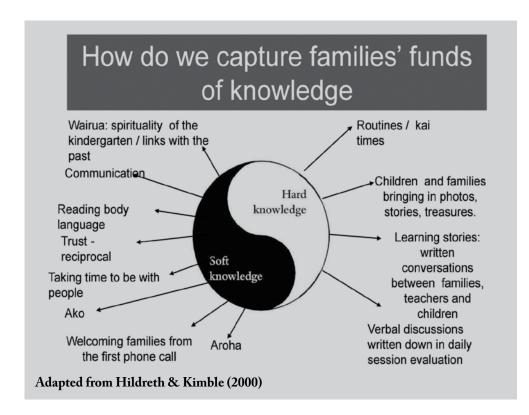




Term3 week 3 2009

"Can I touch it William?", "What is it?", "It looks like a piece of wood!", "Where did you find it William?", "How did it get like that?". So many questions were fired at you this morning William when you proudly strutted into kindergarten with your treasure that you had found with the expertise help from your 'just as crazy about bugs as you' Mum! How amazing is this find though? A wasp's nest In all it's glory and you tenderly took good care of it, answering some of the questions as you passed the nest around for inspection from your peers. "You have to be gentle, its delicate" you said. "Wasps made it like this, it is their home and they then got wood and then they put it together" you explained every detail like the expert you are and in such a matter of fact way as if you had explained this a million times before, and I'm sure you have with your Dr. Bug Mum!

Wiliam I love to hear your conversations that you have when you come in, you and Mum have taught me and the whole whanau to be more respectful, thoughtful and understanding towards bugs and insects, and you have displayed your families funds of knowledge, this you have shared so willingly and boy what depth you have between those ears young man, I am astounded to be in such intelligent company!! Please keep enlightening us little family with 'big bug brains'!!! Much Love Whaea Claire.



...genuine and constructive home-ECE centre partnerships ... integrated programmes that empower parents ...and programmes that respect the dignity and cultural values of parents' (p.175).

The Takaro Kindergarten teaching team is providing a model programme in support of such outcomes, as evidenced by the frequent visits to the kindergarten by educators from around the world as well as local, as other communities seek inspiration for their own changes.

¹Developed from papers presented to the NZARE National Conference, Rotorua, 30th November- December 4, 2009 and to the Ruahine Kindergarten Association Network, 3rd March 2010.

'soft' and the 'hard' knowledge that the Takaro community values from and with their families.

What originally seemed so hard to the teachers is now so obvious: that children's learning is most productive, authentic and engaging when activities are based on children's and their families' own interests and funds of knowledge. The generation of contributions from the families and the eager engagement of the children in their self-initiated activities have stunned us teachers. The whole learning community is abuzz with new enthusiasm for their authentic learning.

Conclusion

At the beginning of their two year facilitated action research, Takaro teachers demonstrated sustained practices of supporting their families' sense of belonging in the kindergarten and the extension of learning into children's homes and communities. However, it required a paradigm shift in their thinking for these teachers to fully welcome, celebrate and document the funds of knowledge that their tamariki bring from their work day at kindergarten. Children often have interests in common with each other, and group projects, in contrast to the previously more individualised projects, are emerging more frequently. Parents/whānau are visibly displaying an increased understanding that they are an integral part of their child's goals and that these are valid and valued, thus creating an environment of mutual respect. As a result of knowing their children and families at a deeper level, teachers now engage in a more authentic, responsive and reciprocal curriculum planning process.

According to Biddulph, Biddulph and Biddulph (2003), several aspects of early childhood having 'major positive impacts' on children's achievements include a 'range of quality experiences, activities and interactions at home and beyond

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Fostering communities

Ecological sustainability within early childhood education

Jenny Ritchie

Abstract:

We are now at the half-way point of the UNESCO decade for education for sustainable development, promulgated in recognition of the seriousness of the global climate crisis, and positioning educators as potential leaders in generating the cultural changes needed to address this crisis (UNESCO, 2005).

This article reports on one key focus of a recent study, 'Titiro Whakamuri, Hoki Whakamua. We are the future, the present and the past: Caring for self, others and the environment in early years' teaching and learning', which had the aim of investigating how centres can work with their local communities in fostering ecologically sustainable practices. This project utilised a philosophical framework grounded in kaupapa Māori notions such as manaakitanga (caring) and kaitiakitanga (stewardship), along with an ethic of care (Noddings, 2005). The work of teachers from ten early childhood centres produced evidence of teachers proactively raising awareness amongst tamariki and whānau of strategies for caring for our environment, and ways in which this extended more broadly into their communities, some of which are described below.

Introduction

This paper outlines how some early childhood centres are working to raise awareness with tamariki and their communities of issues of pertaining to the care of our environment. There is widespread international concern about the impact of climate change. An international treaty that sets general goals and rules for confronting climate change, the United Nations Framework Convention on Climate Change (UNFCCC) has secured the involvement of 192 countries around the world. The UNFCCC 'has the goal of preventing 'dangerous' human interference with the climate system' (United Nations, 2010, p 1). It is therefore, extremely concerning that recent attempts to define specific targets for reducing emissions have failed to achieve a consensus.

As oil and other resources reach their foreseeable limits, we are now faced with the realisation that we need to enact widespread collective changes in our attitudes and ways

of being in the world, towards much more ecologically sustainable ways of life. Education can be considered to be 'the great hope for creating a more sustainable future' (UNESCO, 2005, p. 11). Early childhood centres can be viewed as being sites of possibility with regard to transformative education. When educators in these services work closely with both tamariki and whānau, changes such as those required to move our collective societal consciousness towards ecological sustainability may be reinforced not only in the centre, but also in homes and further into the community.

Such an approach falls within our curriculum guidelines (Ministry of Education, 1996). The *Te Whāriki* principle of 'Family and Community - Whānau Tangata', positions the 'wider world of family and community [as] an integral part of the early childhood curriculum' and recognises that the 'well-being of children is interdependent with the well-being and culture of adults in the early childhood education setting; whānau/families; [and] local communities and neighbourhoods' (Ministry of Education, 1996, p. 42). Te Whāriki also stipulates that 'The curriculum builds on what children bring to it and makes links with the everyday activities and special events of families, whānau, local communities, and cultures' (p. 42). Following from this principle, the curriculum strand of 'Belonging' reinforces this emphasis on connection with families and community, stating that 'Children and their families experience an environment where: connecting links with the family and the wider world are affirmed and extended' (p. 54).

Early childhood educators have the potential to consciously focus on building a sense of community, in order to enhance this sense of belonging. Peter Block (2008) considers that wellbeing at a community level is dependent on the quality of relationships amongst members of that community. He advocates for a credit-based approach, whereby 'community is built by focussing on people's gifts rather than their deficiencies' (p. 12), fostering an appreciation of each person's contribution.

Education for ecological sustainability also involves the conscious fostering of a sense of community, which is viewed as being central to building strong sustainability (Alvarez, 2007; Sustainable Aotearoa New Zealand Inc, 2009). In our recent project, the focus on fostering an

ethic of care towards ourselves, others and the environment was viewed as having the potential to enhance both community wellbeing and that of our local and wider environments (Gruenewald, 2003). Families provided the link between the work of centres and that of local communities, around this focus of collective and environmental wellbeing. In alignment with Te Whāriki's framework, teachers in our study 'wove' their own ways to integrate environmental understandings in meaningful ways, relevant to their own centre and community contexts (Basile & White, 2000).

The overall research questions for this study were:

- 1. What philosophies and policies guide teachers/whānau in their efforts to integrate issues of ecological sustainability into their current practices?
- 2. How are Māori ecological principles informing and enhancing a kaupapa of ecological sustainability, as articulated by teachers, tamariki and whānau?
- 3. In what ways do teachers/whānau articulate and/ or work with pedagogies that emphasise the interrelationships between an ethics of care for self, others and the environment in local contexts?
- 4. How do/can centres work with their local community in the process of producing ecologically sustainable practices?

This paper focuses on offering some examples from the data gathered from some of the participating early childhood centres in response to the fourth of these questions.

Theoretical framework

Nel Noddings (2005, 2007) has challenged educators to consider how we might promote an ethic of care as an integral philosophy within our educational settings. An ethic of care is 'an ethic of relation', with an emphasis 'on living together, on creating, maintaining, and enhancing positive relations' (Noddings, 2005, p. 21). It implies a focus on motivating the 'attitudes and skills required to sustain caring relations and the desire to do so' (Noddings, 2005, p. 21-22). Noddings highlights also the reciprocal relationship of mutual responsibility between 'carer' and 'cared-for' (Noddings, 2007, p. 225).

Peter Martin (2007) draws upon Noddings' work to further point out that in order to foster a genuine relational sense of caring for the natural world, educators can focus on encouraging children to care for aspects of the environment in an intimate relationship. Martin considers that, 'For educators interested in encouraging an ethic of care the capacity to think with the heart as well as the head is vital' (Martin, 2007, p. 61). David Gruenewald asks us to consider, 'Where in a community ... might students



Led by Hinemania, the children of Raglan Childcare centre are creating a garden using layers of straw and compost

and teachers witness and develop forms of empathetic connection with other human beings?' (2003, p. 8). As early childhood educators we can certainly respond emphatically that early childhood services are sites in which this empathic connection can be facilitated.

There were a number of Māori conceptualisations underpinning the enactment within this study, such as manaakitanga, aroha, whānaungatanga, wairuatanga and kaitiakitanga. Manaakitanga has been defined as 'The process of showing and receiving care, respect, kindness, hospitality' and implies 'that the giving and acceptance of kindness and hospitality bestows mana on both host and guest' (Benton, Frame, & Meredith, 2007, p. 186). Inherent within the notion of manaakitanga is the concept of mutual respect (Benton, et al., 2007). According to Hirini Moko Mead, 'All tikanga are underpinned by the high value placed upon manaakitanga - nurturing relationships, looking after people, and being very careful about how others are treated' (Mead, 2003, p. 29).

Aroha is explained as conveying a sense of 'overwhelming feeling, pity, affectionate passionate yearning, personal warmth towards another, compassion and empathy, originally especially in the context of strong bonds to people and places' (Benton, et al., 2007, p. 34). Further, 'Aroha is an essential part of manaakitanga and is an expected dimension of whānaungatanga' (Mead, 2003, p. 29). Whānaungatanga is the sense of being connected, traditionally through kinship. Whakawhānaungatanga is the active process of generating this sense of being a collective. A Māori world view can be viewed as upholding this implicit sense of reciprocal obligation to care for others, both family and guests.

Wairuatanga refers to the spiritual dimension. A sense of spiritual interconnectedness is evident in the following statement from the Waitangi Tribunal: 'Flowing from the oneness of the spiritual and physical worlds, and the indivisibility of the natural world (including people as part of that world, not masters of it), there is a mutuality in the

relationship between people and land (Waitangi Tribunal, 2004, p. 8). Kaitiakitanga is a Māori construct meaning stewardship, guardianship, or protection. According to the Waitangi Tribunal, kaitiakitanga includes the obligation to proactively care for the environment rather than merely taking a more passive caretaking role. 'Kaitiakitanga best explains the mutual nurturing and protection of people and their natural world' (Waitangi Tribunal, 2004, p. 8). Teachers, in this view, can be considered to be kaitiaki of the mauri (life forces) within their early childhood centre. All these constructs were actively applied within their teaching by teachers in this study, as will be illustrated later in this article.

Methodology

Teachers from ten early childhood centres agreed to participate in this study, supported by four co-directors and a research facilitator. We were privileged to have had the guidance of a kuia, Rahera Barrett-Douglas, and kaumātua Huata Holmes. Using a methodology informed by kaupapa Māori and narrative approaches (Clandinin, 2007; Smith, 1999), data were gathered primarily by the teachers, through documentation, interviews, audio and videotaping, and through collective co-theorising discussions which also facilitated our analysis of the data. Data included narratives, photographs, children's art and stories, field-notes, videotaped activities, transcriptions of interviews with children, parents, and transcriptions of discussions between teacher co-researchers and research co-directors.

Building communities of ecological awareness: Some examples

In this section, selected data from transcriptions of conversations with teachers, and from reflections they wrote serve to illustrate some ways in which manaakitanga, aroha, kaitiakitanga, whānaungatanga, and wairuatanga were fostered during the period of the study, leading to enhanced involvement of the centres' communities in the kaupapa of caring for ourselves, others and the environment.

One of the ways that educators fostered manaakitanga was through the provision of kai to tamariki and whānau, including fruit and vegetables grown at the centre. Bellmont Kindergarten Te Kupenga in Hamilton, operates under Te Korowai o Whānaungatanga - the cloak of whānaungatanga (which they translate as 'including families'). This embraces their three philosophical principles of: Whakapiripiri mai - 'coming together'; Manaakitanga – caring and sharing, making people feel at ease; and Rangimarie - 'peace'.

Pat Leyland, head teacher at Belmont Kindergarten Te Kupenga, explains her kindergarten's practices around kai, which involve caring and a sense of collective responsibility:

Kai is really important in this kindergarten and feeding people, and making it simple for people. So our kai philosophy here is, they don't bring lunchboxes, they don't bring juice bottles, they bring kai to share. So we have shared fruit. People donate bread and spreads, so those people who can afford to do it, do so, and those people who can't - no one's counting,

no one's looking. The food just comes in and the children get fed. Simple healthy food, water in the tap. And people pick up on that and it's so much simpler than everyone bringing in their own individual lunchboxes and ... we grow food in our gardens...And so we're renewing our gardens all the time and we've got fruit trees out there that are starting to all get fruit. A mum gave us a black raspberry plant, so we've got raspberries and the children can go and pick them and we must encourage them to pick them because they've got raspberries on there now. Our feijoa tree - last year was our first fruit. This year we're going to have heaps of fruit and they go out and pick the food off the ground and bring them in so we can share

Belmont Kindergarten Te Kupenga, along with several others in the study, has a 'community basket', in which excess produce is made available to anyone who can use it.

Families proved to be incredibly responsive to initiatives by the teachers to involve them in the ecological sustainability focus. The following excerpt from a discussion with Hinemania, a teacher at Raglan Childcare and Education Centre is another example of centre practices generating manaakitanga, reciprocity and an ethic of a caring, sharing community:

Hinemania: So we've had all the tomato plants self-seed and they've gone home. The strawberries have gone home. Even the sunflowers went home and the lettuces have gone home.

Jenny: And parents keep sending things in like more seeds?

Hinemania: Yeah, so we've just received this week corn, tomatoes, beans and I think someone brought in a swan plant

Jenny: Wow! All in one week?

Hinemania: Yeah!

A reciprocal cycle was occurring over time, whereby seedlings generated in the centre were taken home by children to their home gardens, with some of the eventual harvest then being returned back, along with other excess produce, to the centre's 000BY ('out of our own back yards') bowl. This bounty included lettuces which were used in shared sandwich-making, fruit which the children juiced, and vegetables which children cooked into soups.

A parent, 'Kate', whose daughters attended Maungatapu Kindergarten, identified the key role of the teachers in generating a sense of caring community within that centre, through their caring relationships and philosophy, in the following excerpt from a taped conversation:

Jenny: So you could sort of sense that the things that were being offered here, they resonated with your key core values about how you wanted to care for your children and how you wanted your children to be surrounded, the kind of

Kate: The big thing, was how those three [teachers], how they worked together as a team too, and the whole atmosphere that they create between themselves.

Jenny: So you sense the teachers have a common empathy of how they work together? A common philosophy or something?

Kate: It's a common comment between parents, 'Aren't we lucky?!' You know, it's not uncommon to hear people - everyone speaks really highly of everybody here.

Jenny: So the community of parents really appreciate what the children are receiving here?

Kate: Yeah. Absolutely.

Jenny: Can you give me an example of how you see that common philosophy coming out for you?

K: I suppose through the teachers, the relationship with the teachers. And you watch them with the kids and they make you feel that you're part of this community and they acknowledge you. They're busy and yet they will take that moment just to connect with you and make you feel like what you've got to ask them is valid. Yeah, everybody feels like that I think.

This warmth of relationship is consistent with the notions of aroha and whānaungatanga, as well as an ethic of care.

Papamoa Kindergarten is part of the Enviroschools movement (Enviroschools/Kura Taiao, 2009). Carolyn O'Connor, a teacher at Papamoa Kindergarten, outlined how kaitiakitanga is applied within their programme:

Kaitiakitanga is looking after places, things and people. We have observed our children gain a sense of pride and respect for our kindergarten environment. We believe that when children have the opportunity to engage and care for the natural environment they will gain the skills, knowledge and desire to care for it in the future. The environment is the third teacher. There is a learning opportunity in every space. We have gardens that are sensory, edible, native and flowering. We have composting and recycling systems, including water conservation and eco-systems. Children are having a shared responsibility to look after our place and this is valued as real work, so everything we do in the kindergarten here is included with the children.

In keeping with the Enviroschools' philosophy, the Papamoa Kindergarten teachers established a parent support group focussed on kaitiakitanga, caring for the environment. Julie Sullivan, head teacher at Papamoa, locates this process within the Māori construct of Ako:

Ako is the concept of co-constructing; teachers as learners and learners as teachers. We continue to explore and gain knowledge to implement new ways to reduce waste, conserve water and involve family and community at different levels. We value the opportunities to network with colleagues and the wider community. We've also developed an enviro-group in our kindergarten which is part of a group that we ask families if they're interested in coming along to meetings that give them information about things that we're doing in the kindergarten and also we work on projects and we also give them information on things maybe that they could be doing at home or things that we need at the kindergarten. We've found it a wonderful group because people have become inspired to



Creating a garden, one plant at a time at Raglan Childcare Centre

help us. They've also become really resourceful because say we need maybe to make a water system in the sandpit and so we've got fathers coming along, putting their barrels in and connecting things [to create] this water system.

In addition to the tree-planting undertaken by the Papamoa Kindergarten community, there were many other examples of the enactment of kaitiakitanga, whereby teachers, families and children actively and intimately cared for local environments (Martin, 2007), such as the beach clean-ups undertaken by Meadowbank Kindergarten, Auckland, and Richard Hudson Kindergarten in Dunedin.

Towards the end of the project, the teaching team at Papamoa Kindergarten reflected on how they felt their approach had fostered a sense of both whānaungatanga or community, and wairuatanga, spiritual interconnectedness:

A sense of community 'whakawhānaungatanga' with our families learning alongside their children has been achieved. As teachers we have continued to learn and improve our practice. We have broadened our outlook. We have a great relationship with our neighbouring school. We access our community more, we link with children's homes and this has deepened our relationships. We were very pleased with our ERO [Education Review Office] review last year that reflected how important relationships with our children and whānau are, and that this was evident in the kindergarten 'vibe', the wairua of our place. We also realise that things take time we continue to review discuss and implement new plans with both a bicultural and environmental influence. It is about taking small steps learning with children and families. Empowering people with many different skills and ideas to come on the journey with us.

Teachers came together for a final co-theorising hui, sharing their many experiences, and expressing a collective sense of the value of their work. Although some of the teachers voiced their ongoing apprehension in regard to the seriousness of the climate crisis, and in particular its inequitable impact on the lives of children and families in less 'developed' countries, they also considered that being involved in such work offered them a sense of making some contribution towards change. As Marina Bachmann from Collectively Kids Childcare and Education Centre in Auckland stated at the hui, 'Unfortunately there isn't an easy solution and I'm under no illusion that our actions have much impact on the grand scale, but it is important to do something, and the small meaningful actions make ripples'.

Conclusion

Space constraints have allowed presentation here of only a small number of examples from the much wider pool of data gathered during this study. It is hoped however, that these serve to illustrate some of the many ways teachers used the research kaupapa of caring for ourselves, others and the environment, underpinned by key constructs from Te Ao Māori such as whānaungatanga, manaakitanga, and kaitiakitanga, to engage children and their families in their particular local contexts, thus contributing to the much wider, global project of generating communities which are caring for both people and the planet. The data has shown that both children and parents were responsive to the practices initiated by the teachers, and that these endeavours reached out into the wider community through such kaitiakitanga projects as beach-care and tree-planting. The reciprocity implied in the constructs of manaakitanga and an ethic of care evident in these centres' practices holds promise for the wider cultural changes required towards an ethos of better caring for ourselves, others and our environment.

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Building sustainable communities

'Manaaki whenua. Manaaki tangata. Haere whakamua.' 1

Gwyneth Barker

A three teacher kindergarten with a roll of 54 children aged 3 and 4 years, Koromiko Kindergarten is located in Hawera, a small town surrounded by a major Taranaki farming district. Our families are a mixture of rural and urban and a variety of socioeconomic levels, including solo parents and others on benefits as well as business people and professionals. Underlying most of what we do at kindergarten is our philosophy of education for sustainability which began in 2006 when I attended the 'Hand-In-Hand' Conference in November 2006 hosted by Christchurch College of Education which introduced practices that followed the principles of 'reduce, reuse and recycle', as well as educating children, their families and the wider community.

One of the keynote speakers, Dr Barry Law, told us that where education systems reorient teaching practices and systems for sustainability, it leads to 'attitudes and values that create a nation of innovative and motivated people who think and act sustainably'.

I had been interested in environmental issues for some time but these were on the periphery of my practice and I came back from the conference enthusiastic to incorporate education for sustainability into our kindergarten.

It began slowly as part of my own professional development but, with a supportive Head Teacher, Avis Mercer, and a growing awareness of sustainability issues in the wider community, we began to embed education for sustainability into our philosophy, our strategic plan for the next five years and our everyday practices. In addition to the principles of 'reduce, reuse and recycle', we chose to add 'conserve'.

One of the ideas from the 'Hand-In-Hand' Conference was how our teaching acts are like the ripples in a pond when a pebble is thrown in. The ripples start off small but grow in size as they reach out from the centre point, eventually travelling a long distance. As more and more people toss in their pebbles, there are more ripples which begin to overlap one another. Soon the whole pool is covered in ripples. This imagery fits the 'education' aspect of education for sustainability aptly.

While each teacher might think that their efforts have little impact in the wider scheme of things, the ripple effect from that small input can have a far-reaching effect and, alongside other people's efforts, the impact can be greater than you believed possible.

The opportunity to be involved in the research project, 'Titiro Whakamuri, Hoki Whakamua' 2, meant our efforts were put into a national context and we began to gain a picture of how important and far-reaching the whole education for sustainability movement was becoming. When the teachers from the participating early childhood centres all met at the first hui, it was an opportunity to share philosophies, our sustainability journeys and to develop some ideas of where we would head during the period of the research. The focus for the research had two main areas - gaining the child's perspective and looking at how sustainability fitted with Māori beliefs and values. To encapsulate our beliefs, we chose the whakatauki 'Manaaki whenua. Manaaki tangata. Haere whakamua.'

The data we gathered reflected our own interests in caring for the environment. We began to see and talk about what we were doing and teaching the children in terms of the principle of 'kaitiakitanga'; that we were being guardians/caretakers (kaitiaki) of the environment and all living things in that environment. Books portraying Māori legends, particularly about Tane and Tangaroa being guardians of the forests and the sea, and all living creatures in these areas, proved effective in helping the children to grasp some of the concepts.

We had been talking the sustainability talk for some years at the Kindergarten. We occasionally revisited some of our practices, through mat-time activities and both formal and informal discussion during sessions, in order to remind the older children and introduce the newer children and their families to the concepts. We had written about our philosophy of education for sustainability in our Parent Information Book, we put newsletters out to inform our community about what we were already doing and what we were planning to work on in the future and we had noticeboards to display information about sustainability.

^{&#}x27;Care for the land. Care for the people. Go forward.'

What we hadn't done was to gauge how much the children understood about the principles of 'reduce, reuse, recycle and conserve' or investigate what impact, if any, we were having on our whānau. The research project meant that we began to investigate both of these issues.

We initially used two different methods of collecting data. The first sounds simple but was probably the hardest to achieve. This involved talking to the children about environmentally sustainable practices and what the children's understandings were about these. Sometimes we manufactured opportunities by, for example, finding good books that looked at concepts of pollution or recycling and using these to talk to the children about the issues. Occasionally a child would spontaneously volunteer information, such as when Conal told unprompted about how he and his siblings all had jobs to do at home. His brothers' jobs changed on a roster system but he did his 'cycling' job, of sorting all the rubbish into categories for recycling, permanently. He was very proud about his role and that he took the material to the recycling centre each week with his dad.

The second method involved informing our families about the research and asking for their input regarding their children's ideas and practices on sustainability. This showed how much environmentally sustainable practices were a part of the lives of many families. Sometimes, it reinforced that what we were doing at Kindergarten was having an impact and may have even been the starting point for some families to look at what they did for the environment in their own homes.

Some of the regular activities that are incorporated into our programme revolve around caring for our environment and living things. These range from gardening to caring for our pets to periodically making recycled paper. All of the activities involve the children and learning opportunities about environmental issues. We continued these practices during the research period but were more aware of documenting the children's involvement and any feedback from them.

The research provided the impetus for a visit to the Taranaki Environment Centre which practices sustainable ways of living and provides educational tours to inform the wider community. Our teaching team visited the Centre during term break so that we could discuss the programme for the excursion and tailor it to fit our philosophy and our children. The children would be divided into groups which would rotate around four different activities. The visit began with an acting out of the story about Tane and the baskets of knowledge. Each of the activities was then portrayed as a story from the basket of knowledge relating to one of the elements. Story one was planting and gathering - from the element of earth. Story two was making compost 'tea' - which was about the element of water. Story three was making damper - with the element of fire. Story four was juicing - also exploring the element of earth.

Our excursions have always been well supported by our whānau in the past and this was the case again. With a ratio of 1:2, there were plenty of adults to support and guide the children's experiences.

We documented the children's learning from the trip, in part, through informal discussions and also with artwork they produced over the next few days.

As a direct result of documenting the children's perspectives about environmental sustainability, we came out of the research with a much clearer picture of what the children were absorbing. To some extend, we could also see the influence our practices had on our wider whānau.

Chloe is child who illustrates how much information the children can absorb and how they can initiate change. We had introduced a policy encouraging litterless lunch boxes for our children. This meant that families needed to look for more environmentally friendly forms of packaging rather than individually wrapped items from supermarkets or using gladwrap. Chloe's mother wrote that, when we had talked about this at kindergarten, Chloe 'came home ...and explained to her mommy all about her lunchbox and how mommy was not doing it properly and that we must change it. They had been learning all about recycling and their lunchboxes.' From then on, Chloe and her mother packed her lunch box together, wrapping her sandwiches in paper instead of a plastic bag and Chloe 'always checks and packs her lunchbox so that it is correct and healthy'.

Quite a few of our families have changed their practices around what they put into their children's lunch boxes. More than just to fit within our Litterless Lunch Boxes policy, parents have also adjusted what they put into older siblings' lunch boxes and some parents have commented that it is something they will continue to practice as their children move on to school.

Composting food scraps is a regular part of our kindergarten and children are involved in all the processes putting food scraps into the bowl at the kai table, emptying the contents into the Bokashi Bin at the end of the session and adding compost zing and, when the Bin was full, digging a trench in the garden to bury it all. As we later planted and cared for seedlings in the same patch of garden, we could relate the plants growing to getting nutrients from the food scraps. Acacia knew that the Bokashi Bin contents 'grows food'. Zane said, 'It makes the plants grow big'. All of these steps were concrete, visible and meant the children were actively involved.

Whānau also have been fascinated by the Bokashi Bin and have participated as well in our gardening. The children help to plant the gardens at Kindergarten and care for the plants. We also frequently pot seeds or seedlings with the children then they take them home to their own gardens. Through feedback about caring for these plants and some of the comments made after the excursion to the Taranaki Environment Centre, we have found out about how many families grow their own vegetables.

Other aspects of 'recycle, reuse, reduce and conserve' are much less visible and so the children's understandings are

harder to measure. However through discussions with the children during the research, we could now see that many of the children were understanding environmental messages. For example, Kaylee pronounced that it was 'naughty' to throw rubbish into the pond and that 'they should have put it in the rubbish bins'. When asked what pollution means, Kaylee stated that 'It means that it's dirty. You're not allowed to go in it'.

At another mat-time, we read 'Michael Recycle' and talked about it again. Kaylee, once again, showed a high level of understanding about difficult concepts. When asked the question 'What is recycling?', she responded, 'It means that you get something that's rubbish and then you change it into something good'.

One discussion at the kai table, about recycling, revealed that Jordan knew what the recycle symbol on plastics looked like but, more than that, he knew that only those items with number '1' or '2' could be recycled.

The conversations with children and the feedback from families have both shown that recycling is a widely implemented sustainable practice. When practiced at home as well as at Kindergarten, the children have a good understanding of what recycling means. One of our children, Anne, took home a Kindergarten camera to record all the ways in which her family had sustainable practices, including recycling and composting.

One family volunteered information about their son, Tane, who has an absolute passion for fishing which has been acted out in so many ways at Kindergarten. He has an amazing grasp of conservation principles. After going whitebaiting with Dad and only catching a few, he elected to put them all back in the water because, he realised that he might catch more next time and have enough to eat. Tane also does not tolerate littering, collecting any rubbish he sees, when out and about with his parents, and delivering it to the nearest rubbish bin.

Prior to this research project, our sustainability journey felt like it occurred in isolation. The research has made the level of support from our families more obvious as parents have volunteered stories about their children or provided comments and information when we've asked for it.

When we decided to adopt education for sustainability as part of our philosophy and, therefore, a major part of how we operated, we put out a newsletter to our parents to explain what this all meant. We asked for any feedback, queries or ideas from our whānau. The Clancy family wrote down their whole-hearted support for what we were about to do. They also wrote several pages of ideas about more sustainable practices, that we hadn't yet considered, and even ways of exploring concepts with the children (how to help the children understand about power generation, for instance).

When Clancy family encountered an innovative item that extended their sustainable practices, they have shared it with us. Sometimes this has led to an educational experience with the Kindergarten children. An example of this was the



Introducing the compost bin to kindergarten

cent-o-meter. This device is connected to the electricity meter box, enabling you to record how much power any electrical appliance uses, and how much it costs to run. The Clancy family use this to monitor their power usage and encourage themselves to turn off any non-essential electrical items. We borrowed the device for about a week and tested, with the children, what power we were using.

When the Clancy Family developed organic no-dig gardens, we were invited to find out how they worked. Once again, this enables us to work collaboratively as the kindergarten has had long-term plans to develop more edible gardens to feed the children and our pets, to do more healthy cooking with the children during sessions and to offer surplus vegetables and fruit to our families to take home.

For the research project, the Clancys wrote about the ways in which their involvement with Koromiko Kindergarten has influenced them with their own sustainability journey. We were entirely humbled by this as they are truly living and breathing sustainability and are much further on in the journey than we are.

Conclusions

Our involvement in the research has led to a greater feeling that our commitment to education for sustainability is making a difference to both the children who attend Koromiko Kindergarten and some of their families. We now have concrete evidence that some of the concepts of sustainability are being understood by the children. There has been greater whānau feedback that the emphasis on caring for the environment is valued by many families and sits alongside their own beliefs and practices. We have had an influence on some families to bring about change at a small level, as with the Litterless Lunch Boxes policy, and a major impact with at least one family who live the sustainable lifestyle, although, I suspect, the Clancys were committed to this long before our own journey really began.

I, personally, believe that we are now much closer to working in partnership with our parents to achieve an environmentally sustainable future.

To read with children:

Books about 'caring for the earth' recommended by the teachers of Koromiko Kindergarten

Michael Recucle

By Ellie Bethel; Illustrated by Alexandra Colombo. Meadowside Children's Books, London. (2008)

Michael comes to Abber-doo-Rimey -a place "where garbage was left to grow rotten and slimy". He teaches the importance of recycling.

Lester and Clude

By James H Reece. Ashton Scholastic, Australia (1976)

Lester and Clyde are frogs living in a pristine environment. When Lester pulls one too many jokes on Clyde and gets banished, Lester looks for other ponds but finds pollution.

One world

By Michael Foreman. Andersen Press. London. (1990).

Two children find a rock pool at the beach and find out how easily pollution can spoil it. They relate this to the wider world and the need to keep it clean for children living everywhere because they all share one world.

Long live earth

By Meighan Morrison. Ashton Scholastic. Auckland.

This is about how wonderful the earth is, how humans are harming it and what we need to do to save it.

Whole world

By Christopher Corr and Fred Penner. Barefoot Books, Bath, UK. (2007).

Includes a CD and is a song adapted from "He's got the whole world in his hands" but with an ecological message. We have the earth in our hands and so we need to recycle etc.

I am Tangaroa and Tane and his children

by Ron Bacon and Manu Smith. Waiatarua Publishing, Auckland (1995).

Tane and Tangaroa care for all living things in their domains. We used these books from Bacon's Māori Legends series to help the children to understand the idea of Kaitiakitanga - being guardians or caretakers of the living environment and everything in it.

Hemi and the whale

By Ron Bacon; illustrated by Sharon O'Callaghan. Waiatarua Publishing, Auckland (1988).

Hemi finds a stranded whale and cares for it until the tide comes back in and it is able to be floated off the sand and swims back out to sea.

Grandma Gordon's gorgeous garden

By Dianne Bardsley; illustrated by Judi Press. APB Publishing, Wellington (1996).

Grandma is a conservationist, does composting, attracts all sorts of insects, birds and animals to her garden and provides food, preserves etc for her family all from her gorgeous garden.

Turtle Bau

By Saviour Pirotta; illustrated by Nilesh Mistry. Frances Lincoln, London. (1997).

A story about caring for the environment and the endangered sea turtles that come to Japanese beaches to lay their eggs.

Another fine mess

By Tony Bonning; illustrated by Sally Hobson. Koala Books, Australia. (1999).

Fox tries to get rid of his rubbish by sweeping it down the nearest hole - into someone else's den! All the recipients act in the same way until the mouse family pass by and are delighted to find all this useful treasure.

Mouse finds a seed

By Nicola Moon; Illustrated by Anthony Morris. Pavilion Books, London. (1997).

A simple story where Mouse finds out what a seed needs to grow.

Keep out

Noela Young. Wm. Collins Publishers, Sydney. (1975)

A group of inner city children find a derelict section that is boarded up and full of all sorts of junk. They start off wrecking but end up building a playground using their imaginations and rubbish to create a great site for adventure.

Caring for Papatuanuku

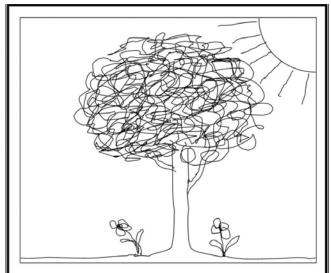
Yesterday, today and tomorrow

Adele Ellwood

Richard Hudson Kindergarten (RHK) is a beautiful 80-year-old kindergarten located in Caversham, a lowmid socio-economic suburb in the south of Dunedin. The bicultural journey of RHK has been evolving for over a decade. The teachers (all non-Māori) are committed to a programme where te reo Māori is used, along with sign language, as part of daily kindergarten life. This journey ebbs and flows in intensity, as the teachers tuakana-teina relationship supports and motivates each other's learning and teaching. The teachers are passionate about being life-long learners, and take advantage of professional learning opportunities in many forms, both formally and informally. We have been fortunate to be involved with two bicultural early childhood education research projects -Te Puawaitanga in 2006 and Titiro Whakamuri Hoki Whakamua in 2008¹. These projects have given us the opportunity to reflect and move forward on our journey, and also to feel validated in our practice.

This paper is focused on the second research project which centred around teaching ecological sustainability from both Māori and Western perspectives. Teachers in this study agreed to research their own centre practice with a focus on two philosophical domains: an ethic care, drawing on the theorising of Nel Noddings (1995) and Gunilla Dalhberg and Peter Moss (2005); alongside the Māori concepts of manaakitanga and kaitiakitanga.

The teaching team of five come from globally diverse backgrounds. But within that diversity a common ethic of care pervades - caring for ourselves, caring for others and also caring for the environment. This was evident in some of our longstanding kindergarten practices, and the degree of our commitment was realised with a self review of our current sustainable practices at kindergarten. These practices included having hens at kindergarten and feeding them our food scraps, then using their eggs for cooking and baking, using low energy light bulbs, a planned vegetable garden (funded from a grant from Healthy Eating Healthy Action), our own Richard Hudson Kindergarten Treaty, a culture of gardening and an awareness of the seasonal changes in our park-like kindergarten setting. Empowered by a statement from one of the researchers that 'change is possible' and



RICHARD HUDSON KINDERGARTEN PHILOSOPHY

Richard Hudson Kindergarten provides a rich, stimulating and challenging environment, which encourages curiosity, creativity, learning and growth. We are passionately committed to our bicultural journey. We endeavour to honour te Tiriti o Waitangi in spirit and in practice. We believe that children are like young and tender plants. In partnership, we teachers, parents, whānau and caregivers are the loving and caring gardeners who nurture, water and support them so that they can grow into mighty and fruitful trees. 'Na te moa i takahi te rātā.' The rātā which was trodden on by a moa when young will never grow straight, so early influences cannot be altered."

through shared discussion, brain storming, our individual knowledge, passion and responsibility to our earth mother, consultation with our Kaumātua and Senior Teacher and by looking to our kindergarten philosophy, we identified shared beliefs and understandings. Over a period of (many) days, and through much korero, an idea germinated. We began to see a statement emerge: If you look after Papatuanuku, she will look after you! And with that - our own question evolved:

By learning about Rakinui/Ranginui and Papatuanuku, can we inspire our children and whānau to consider making ecologically sustainable choices?

¹Acknowledgements to the Teaching and Learning Research Initiative for funding these studies.

Having our own question brought clarity for the team as to our direction, our ara. The 'hard part' over, we then began eight months of some of the most exhilarating and rewarding teaching and learning.

Myths

In a culture that lives and grows, there need be nothing outmoded or discredited about mythology.... All that is needed is that these myth-messages be more clearly signposted.

Ranginui Walker (1992, p. 170)

When we decided on using the creation story of Ranginui and Papatuanuku as the basis of our mahi – and in particular the idea that if you look after Papatuanuku, she will look after you – we were surprised at how readily the tamariki took this concept on board, and to heart. We heard them in the playground telling each other that Papatuanuku would not be happy about a piece of rubbish they could see on her. Parents and grandparents came to kindergarten with tales of being scolded at home by their four year olds for alleged crimes against Papa! In fact, it was a surprise when the children began talking about Rangi and Papa as if they were someone's Mum and Dad. We couldn't believe the genuine care, concern and understanding that the children displayed – and these people are our future! The children articulated the ancient story of Rangi and Papa very well, and were able to use the story in their own lives in a practical way, such as working towards a litterless lunchbox, keeping the kindergarten playground and a local park litter free, sorting their rubbish into reusable, recyclable and compostable categories. Our tamariki heard the message embedded within the myth, and acted on it.

Urie Bronfenbrenner's ecological model of human development (1981) depicts the child being at the centre engaged with the learning environment, and then the emanating rings of social, cultural and political influence beyond. This is just how it has been for our young people learning to care for our earth mother, Papatuanuku, then that learning radiating out into the community, and being affected by other factors.

We shared our mahi with our local schools because we wanted the tamariki to be able to continue to be supported in their ecological thinking and practice once they moved on from us. One school was already strongly on board with the Enviro-schools initiative, and they were interested that we were doing well teaching sustainability biculturally. Now we are sharing our mahi with interested others within our kindergarten association.

Community and the ethic of care

They were nothing more than people, by themselves. Even paired, any pairing, they would have been nothing more than people by themselves. But all together, they had become the heart and muscles and mind of something perilous and new, something strange and growing and great. Together, all together, they were instruments of change.

Keri Hulme (1985, p. 4)

Increasingly, over a decade, the Richard Hudson Kindergarten community's ethic of care has positively evolved. Longstanding innovations such as a free weekly aerobics session for adults' fitness, and reciprocal visits to a nearby Rest Home through to recent additions such as a termly clean-up of our local park, a 'free' shelf for recycling clothing and goods, the option of receiving monthly newsletters electronically, special 'days' to acknowledge autism, heart health, cancer, St Patrick and sporting teams, collections of pet food for the SPCA and spontaneous collections of food, money and goods for our own whānau in times of crisis illustrate our manakitanga, whānaungatanga, and the richness of our awhi and aroha. Although not a rich community, whenever we put the word out for help in any sort of way, it doesn't take long to get a response.

Children's stories

The interest and enthusiasm of our tamariki was the driving force of this research study. Initially we introduced the creation story of the tangata whenua of Aotearoa, Ranginui and Papatuanuku. The tamariki were fascinated by the thought of this family where the 'Dad' was the sky, the 'Mum' was the ground and the children were stuck in between in the dark with no room to play and run. The spontaneous questions of the children 'Is there a lady under the ground?' and 'Where are the lady's legs?' (her legs were not shown in a poster we used to help relate the story') resulted in us having to reassure them and clarify the story. After several months, the children could easily tell the creation story themselves. The following story is the result of a half hour wandering around the playground asking a variety of children what they knew of the story of Rangi and Papa...

The Story of Ranginui and Papatuanuku

(as told by the tamariki of RHK—October 2008)

Rangi and Papa were cuddling together. The kids pushed Rangi and Papa because they wanted light. The children wanted to push, but the biggest one pushed them apart. They were too squashed up and it was dark. They needed to get light. The children got squashed up and the baby didn't want to push Rangi and Papa apart. The baby is the volcano.

Tane pushed Rangi with his legs. Rangi flew into the sky and Papa stayed on the ground. Rangi cries tears when he misses her. The tears are when it rains.

The father's in the sky. Papatuanuku is the earth mother.

You are not allowed to mess up Papatuanuku because it's not good for Papatuanuku. No throwing rubbish! Papa would be angry!

We weren't alive yet!

It was great to see such understanding by the children, especially when Portia was able to articulate her comprehension that it was an ancient story, a story not in our time - 'we weren't alive yet'. We had never put the story in any timeframe. The tamariki demonstrated a genuine disposition of ecological awareness, and increasingly the children became empowered to look after Papatuanuku. She became the one that we respected and nurtured, and in turn she provided us, both directly and indirectly, with food.



They learnt that they could make less rubbish by choosing reusable containers for their lunch box food. They learnt that we could make wonderful compost out of the food scraps that the animals didn't eat and that we could reuse our yoghurt pottles for art or planting. We admire and tend our vegetable gardens daily. Our cleaner was amazed by how much less rubbish we were producing. A visual recreation of the creation story was created on our veranda by the teachers, student teachers and the tamariki.

The children understand the story of Rakinui/Ranginui and Papatuanuku, a story from long ago and can link it to caring for the earth today, and into the future. Titiro whakamuri, hoki whakamua. We are the past, the present and the future.

The story of Rakinui/Ranginui and Papatuanuku is a wonderful story for young children to be exposed to. It gives them a personification of sky and earth to embrace and understand. It invites them to see the earth and sky through their own eyes and through their understanding of family. A mother, a father and some children – just like themselves. A family. A family who have had to face challenges and change, and who have new challenges to face and problems to solve. Perhaps, just like them...

Petra has used the information given to her at mat times to add depth and concern to what she knows of the world. She has spontaneously decided to pick up rubbish in her neighbourhood because of her concern for the earth mother. The personification has allowed her to deduce that the smoke from chimneys would not be beneficial to Rangi's lungs, making it hard for him to breathe. Petra is thinking further afield too. She wants to go to the beach and do a clean up with her family. She has thought a lot about these

things. She has also talked about 'Sad Wrap' at kindergarten recently. She wanted to make sure that it did not get blown away.

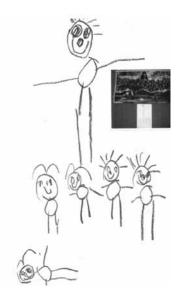
'Sad Wrap' is our name for plastic food wrap - we believe that its use makes Papatuanuku sad, because it does not break down. We have tried an experiment where we have buried it for three months, along with food scraps and tin foil to see what happened. The food scraps disappeared, while the foil and plastic remained unchanged.

Another child, Kate, who was very concerned and empowered by what she was learning, had shared her knowledge with her whānau. Her father and grandmother, both primary school teachers, were personally and professionally interested.

Artwork depicted the children's understandings of the creation story. Emily and Stirling both showed an immediate understanding of the concept of Rakinui/ Ranginui and

Papatuanuku. They both chose to represent their understandings through art work.

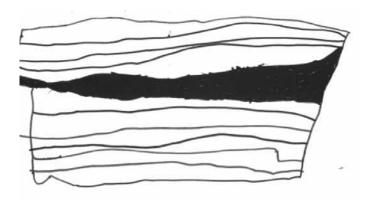
Emily's picture was her identical representation of the poster that was used to teach the story at mat time, after the initial full story was told. She has correctly shown Papatuanuku lying down and the children between her and Rakinui/ Ranginui up above.





Like Papatuanuku, Tavarn spreads his arms wide; a model for those drawing

Stirling's artwork depicting 'Papanuku' is more abstract. He has interpreted the story as layers – the most dramatic being the dark layer between the sky and earth (the children). His picture was drawn after being taught about leaves turning to humus and then to soil and how it nourishes Papa. Leaves from our kindergarten's trees were used to show the graduation of the decomposition.



Parents' stories

Many of our whānau were happy to contribute to our mahi in whatever way they could. Some were already committed to living in an ecologically sustainable manner. It was empowering and enlightening to have the opportunity to make time to talk to some parents about some of the topics we covered in the research. Sean, one of our Dads, spoke about who Papatuanuku was to him. His rich, heartfelt kōrero painted Papatuanuku as a beautiful mother, a 'person' to be cherished, loved, respected and defended.

When Sean heard the overview of our kindergarten's te ao Māori research focus on Ranginui, and particularly Papatuanuku, he stated that he sees Papatuanuku as a living being. She is of utmost importance to him because we come from our mother, then go back to Papa. Further, he stated that Papatuanuku is 'the most beautiful person in the world' and that looking after her is, without a doubt, the right thing to do. Sean believes that we not only need to look after Papa, but that caring for 'Tane's turf' was very important too. 'It just doesn't look nice', he said of rubbish in our environment.

Centre happenings influencing the community

In conclusion, by introducing the children to the creation story of Aotearoa and facilitating contextual, practical, achievable goals, the research project made a difference to Papatuanuku in our part of the world. We are producing less rubbish every day, our playground and the local park are cleaner; but the amazing thing was how the concept radiated out into our homes and community. The kindergarten community included the children, their families/whānau and relatives, the teachers and (unexpectedly) their families, friends and our student teachers as well.

Our mahi with the research has become part of our kindergarten culture. This is only possible because of the reciprocal trust and respect that is part of our partnership with our community. Our families trust our professional decisions and show their support of what we teach the children both verbally and in practical ways, such as bringing plants for our vegetable gardens and by providing their children with reusable containers to encourage reuse.

Our mahi in Titiro Whakamuri Hoki Whakamua has given the teachers and children opportunities to share our knowledge and spread our enthusiasm as kaitiaki/guardians wider than initially thought. We must acknowledge the support of the whānau of our kindergarten throughout the project. The challenge is to keep it going – to teach the next, and the next wave of children. Will the children exposed to and enthused by this teaching remember what they have learnt? Will they still know it in six weeks, in six months, in six years? Will they have concerns for the state of Papatuanuku, and act on them?

We, as teachers and co-researchers, were hoping to inspire others into ecological friendliness through this research project, but we feel that we have inspired ourselves as much as the many others we have come into contact with. We are in a spiral of promoting, acting, teaching, learning and enthusing and it feels very satisfying. If we hadn't had the challenge of bringing in a Māori component to the project, it just would never have had the depth, the emotion, the identity and the wholeness that weaving te ao Māori has accorded.

As Nelson Mandela once said 'Education is the most powerful weapon which you can use to change the world'.

Heoi ano – so be it.

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Ako ngatahi

Children, teachers and whānau learning together in a rural early childhood service

Barbara Jordan, Sue Smorti and the teaching team at First Years Preschool

Located in Dannevirke, First Years Preschool was chosen as a Centre of Innovation in 2009 to research the question: How does our fearless teaching and learning approach to science, in a rural early childhood setting, involve children and their families in investigating real life science experiences? Because children at First Years Preschool are viewed as capable, competent and fearless scientists, the teachers fearlessly engage in the co-construction of science learning with children, embracing controversial topics such as death and the gore that might accompany this, animal mating habits and faeces. Their action research involved eleven First Years Preschool teachers researching case studies of co-constructed science investigations, as they supported children in extending their interests, at the centre and in their homes (see Bond, Cooper, Jordan, Sargent & Smorti, 2010).

Children and families in this setting are viewed as having 'funds of knowledge' (Hedges, 2007). They are active participants and leaders of the learning community, where every person knows that they belong, that they have important roles to play in children's learning and that their contributions are valued. The strong 'respectful, positive and caring relationships' in the centre were highlighted by a recent ERO audit which drew attention to the way the environment enhances positive outcomes for children (Education Review Office, 2010).

This reflects the centre's drive for learning to be experienced as 'a cooperative and communicative activity, in which children construct knowledge, make meaning of the world, together with adults and, equally important, other children' (Dahlberg, Moss and Pence, 1999, p. 50). A bicultural curriculum is continually negotiated, as staff members with relevant expertise and their whanau are consulted and their values appreciated by all staff members.

The involvement of parents was evident early in the COI research when over 90% of parents attended the parent/ community meeting which reinforced the importance of their contributions to the science programme. Teachers report that parents contribute more of their own thinking to their children's documented learning stories than they did prior to the parents' evening on fearless science, but also that teachers have had to remain vigilant to recognise the ethical issues arising out of documenting personal family situations.

Joint planning is the norm: Planning can occur at unexpected times. A teacher, Julie, was reflecting on

children's learning when she was approached by Jack and Alex, two children. She decided to involve them in her planning consideration of each child's interests and was surprised that they knew each others' interests in areas of which she was unaware. She wrote:

The boys knew what each child was interested in as I mentioned their name. In fact, they knew more about the children than I

I didn't know, for instance, that Harlan is interested in spiders, and that Zella (Jack's sister) loves music. I wrote this all down, and then I asked what they thought I was interested in, they replied:

- Work in the office...
- Playing pillow fights (This is a surprise for me, as I don't recall ever doing pillow fights!);
- Going like this... 'la la la la la' (by this I think they mean I sing and talk a lot);
- Playing with Demi (at the time Demi was leaning all over me, but she is my transition child, so she is around
- Playing with lungs (reference to the dissection experiences)

Then the boys wanted to talk about Lisa (teacher): "

Lisa likes the trachea, and the brain, and the heart, and the poos in the bowel. And she likes letters, and glasses.'

I found this a really powerful interaction between these boys and myself. I am astounded at their knowledge of their teachers, friends and children in the centre. Planning for children by

Community planning and the willingness to understand and learn from each other, born of mutual respect, are evident in the story of the dead ruru (morepork) brought to the centre (see box).

Open dialogue in the team and respectful reflection led to direct outcomes and new understandings for members of the teaching team and parents, of Māori tikanga and practices. As one teacher wrote:

The reflection on the morepork...tikanga perspective... (was) really good learning for me. Five years ago I would have thought 'what a load of crap'.

Parents are comfortable spending time at the centre, engaging with children's learning: Ryan's Dad explored his son's interest in dinosaurs with him, both at home and at the centre. The subsequent learning story includes photos of Dad and Ryan, discussions between them of their joint viewing of a video about dinosaurs, and affirmation of this parent's contributions:

Dad is part of the story and the 4 photos show Dad exploring dinosaurs with Ryan at the centre. Dad agreed that you have this movie ['Land before Time'] at home and you like to watch it a lot. We love that your dad is so supportive of your learning of this topic and we can tell this interest is also very strong at home.

Documenting the child's voice in learning stories reinforces the child's own actions and thinking: 'Running commentary' can be used such as when Sarah, a teacher, documented what Ryan was saying while playing:

- This is a sharp tooth...its eats other little baby dinosaurs out of their nests;
- Triceratops... This one stamps like that...it stomps to other dinosaurs;
- Those ones have straight tails;
- These ones flick these ones over with their tails.

Teachers, children and parents plan collaboratively:

Teachers continually reinforce the value of their parents and their supportive community. A teacher, Casey, described the community as becoming 'wider' and being 'right behind us':

We talk to parents on a daily basis about what's happening at home... Potentially in the future I'd like to have another learning night.

Tikanga me te reo Māori are authentically part of the this community of learners

As they were concerned that tikanga me te reo Māori did not seem to be on the team's agenda, the teaching/researching team had been encouraged by the COI facilitators (Barbara and Sue) to engage with the local tangata whenua for guidance. Aunty Bo, a local kuia, had attended a research session at which she had suggested that learning about things Māori needed to be in the context of authentic activity. Sue and Barbara were therefore keen to organise a session of Māori craft to explore tikanga and science activity within the centre. However, the team appeared resistant which the facilitators understood reflecting how the centre was in a climate of upheaval caused by changes in the research, in management and in supervision. Their decision to be patient, to await an opportune moment to reinforce the need for professional development in this area, met with an unexpected outcome. During the February interviews with the teacher-researchers, the learning story of the ruru was brought to the research table and it provided clear evidence that the centre team could collaborate in resolving differences in values and beliefs between Māori and Pakeha.

Māori members of the community were consulted within and beyond the centre, and the processes provided valuable authentic learning for the whole teaching team.

Learning for the facilitators was also significant. That the teacher-researchers had not previously articulated their skills in communicating Māori values and understandings, did not mean that they lacked these skills. The facilitators wrongly assumed that they required specific support and learning in these areas in order to address issues as they arose. When the occasion arose, the whole team was prepared to consult and discuss until full understanding and a satisfactory solution for all was achieved. This learning rippled into the community, reinforcing increased understandings and the likelihood of changed practices and earlier consultation in the future – without the need for specific professional development because of the centre's foundational processes of mutual respect and collaboration that was inherent in their distributed leadership. The teachers with the required expertise were able to step up and take the lead as and when the situation demanded.

Discussion

To shape a discussion about the 'fearless' science innovations at the First Years Preschool, we found particularly useful Rogoff's three planes of analysis: the institutional, the interpersonal and the personal planes (Rogoff, 1998). The focus on 'fearless science' requires active support across all three planes.

In the institutional plane, the centre's operational elements - such as philosophy of collaboration, distributed leadership practices, curriculum and assessment approaches - create rules, roles, routines and responsibilities that allow for 'fearless science' to be investigated. These lead to:

- The team culture of reciprocal respect and collegial support;
- Ongoing teacher reflection on and valuing of their own and each others' practices.

The interpersonal plane – the relationships between all members of the community and extending into the wider community – is illustrated by supportive relationships between teachers and community members. It is significant that this is a stable teaching team and all the teachers live in the local community. On the interpersonal plane, the learning community is recognised through:

- Teachers and children knowing each other well;
- Acknowledgement of each other's strengths;
- Continuity of learning between home and centre.

In the third plane – the personal plane – the benefits of engaging in fearless science were demonstrated in the data gathered. This focus on one subject domain – science – has contributed to the children's general competence in all aspects of the curriculum.

- Children themselves frequently:
 - take leadership roles in their own investigations;

- draw other children in to their particular interests;
- request photographs to be taken; and
- take their own photographs for inclusion in their learning portfolios.
- Children take the incentive in maintaining home-centre continuity of learning.
- Teachers and parents are respectful of each other
 - Joint planning is the norm, with all parties aware of each others' 'funds of knowledge';
- Teachers are aware of multi-literate possibilities of science providing access to all other domains of understanding;
- Parents are comfortable spending time at the centre, engaging with children's learning;
- Teachers know their own and each others' strengths and funds of knowledge;
- Each teacher demonstrates trust and pride in their centre and in other team members.

The First Years Preschool data provides further evidence of the role of the community of learning in supporting both a specific science domain curriculum and a holistic,

multi-literate learning environment, in their particular, rural environment of small-town central North Island, New Zealand.

Developed from a presentation at NZEALS Conference 'Leadership: A juggling act?', 7-9 April 2010, Christchurch

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The Dead ruru: A reflection by Julie 10ct. 20091

Jack's Mum came in with a dead ruru (morepork) in a paper bag. It had been killed by flying into a windmill and had a broken back and bones sticking out of the wing. Sarah N. got some gloves out, and the children sat by her as she displayed the wings and the children were asked questions about how it had died, and where Jack had found it. The ruru was seen as an object of beauty and a discussion ensued about the damage that windmills can do in the natural environment.

Donna was over by the fire, and when she heard it was a ruru, she backed further away, refusing to even look over at the children. She said that in her culture, a ruru was a sign of death. I asked if she wanted us to remove the ruru from the centre, but she said no, the opportunity to inspect a native bird was valuable in terms of our fearless science approach. She said it was okay, so long as she didn't look at it.

We decided to respect Donna's beliefs and not share the ruru at mat time. Then Lee Lee came down from the under two's area and saw the dead bird. She rang her Mum, who said absolutely the ruru should not be touched by children or teachers.

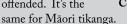
Lee Lee explained to me that while she didn't realise the significance of ruru in te Ao Māori, after her phone call to her Mum she did not want the bird near her child, and didn't think we should have it at all.

As a teaching team we decided to immediately take the ruru away from the children and out of the centre.

Donna sat down with Jack and explained to him that in her family, it wasn't okay to handle ruru or even see one. Jack could see that Donna didn't want the bird in the centre, and seemed to understand that the ruru couldn't be shared.

Kelsey (a beginning teacher) couldn't understand the

significance, as she was still learning the concept of tikanga. I explained that tikanga was like a set of rules and customs, and some things that pakeha think is perfectly okay is deeply offensive to Māori. I described it by saying that she is never late, as she has this unspoken rule in her upbringing that demands her being on time. If people are late, Kelsey is offended. It's the





Considering a dead ruru

I have found the whole morning to be really challenging. As soon as Donna told me she was uncomfortable, I wanted the carcass removed, but other teachers were right into the learning opportunity. I looked at the bird, and it was beautiful, but I was still reluctant to touch it. Even just having it on the teachers' desk in the paper bag, I felt a heightened sense of awareness and an edginess around the animal. I felt relieved when Lee Lee took her stand and said no to having her child near, or any children near the dead animal. This made the decision really simple.

I'm not an overly suspicious person but I'm feeling a bit spooked now and I'm a bit weird about any future consequences. It's a weird, challenging, spiritual feeling. I can't describe it.

From the margins to the centre

Ngahihi experiences in privileging Te Ao Māori

Cheryl Rau

Abstract:

A Māori organisation sited in the Waikato, Aotearoa, Ngahihi upholds indigenous knowledge systems as integral to education for tamariki/mokopuna. This article illustrates how a Ngahihi professional development approach is both theorised and experienced in an early childhood community where as partners to Te Tiriti o Waitangi, mokopuna and whānau encounter education embedded in a Te Ao Māori context.

The paper shares insights of early childhood educator enactment at the cutting edge; educators who embrace Māori theories and who find ways through obstructing complexities. It is a site of convergence where educators, tamariki/mokopuna and whānau across English mediumspeaking settings are co-constructors in re-envisioning the early childhood domain to one of Māori potentiality.

Introduction

Ngahihi is positioned in a milieu of a colonial heritage which has seen a majority of early childhood educators without the skills and knowledges to implement Te Whariki as a Te Tiriti-based curriculum (Ministry of Education, 1996). Non-Māori educators comprise 93% of the early childhood teaching sector and lack capacity in te reo fluency and a thorough understanding of matauranga and tikanga Māori (Group Māori: Ministry of Education, 2004). The consequence for tamariki Māori is the inability to see one's values, beliefs and arts reflected back within early childhood services. Russell Bishop (2005) highlights the significance of initiation, legitimation, representation and accountability back to Māori as the indigenous people of Aotearoa in conceptualising, resourcing and implementing countercolonial discourse. Ngahihi as a community initiative views this as integral to upholding and validating culture, language and integrity across the early childhood sector.

Ngahihi has been journeying within the Aotearoa early childhood landscape since 1996. A community of predominantly Māori women passionately involved in early years education, this ropū has sought to inspire a deepened teachers' connectivity with Te Ao Māori knowledges and understandings in order to challenge and lift educator outputs and increase quality experiences for tamariki/ whānau Māori, children and families across early childhood services. My involvement with Ngahihi began in 1996 as the coordinator of professional development programmes in the Tainui region progressing as a director/coordinator through to 2009.

Te Tiriti o Waitangi articulates the partnership between Māori as tangata whenua of Aōtearoa and the government or Crown. Of particular relevance to employees of Crown agents, who receive crown funding for their work are articles Two, Three and Four which highlight the responsibility of preserving Māori rights, self-determination and protections (Rau & Ritchie, 2008).

Māori philosophy and Māori theories are ancient, real and indigenous. Their teachings offer new possibilities towards generating openness and responsiveness to Te Ao Māori. In articulating what is specific to us as Māori, we explore, share and experience universalities which create pathways towards intensified deepened dimensions of clarification and truth. Manulani Meyer considers these truths to be, 'spiritual truth within ancient streams of knowing' (2008 p. 217). In constructing our narratives we articulate our truths from our centre, - not from the periphery - speaking to our Te Ao Māori existence and rejoicing in the affirmation of our indigeneity. Māori have had 'to decolonise our minds, to recover ourselves, to claim a space in which to develop a sense of authentic humanity' (Smith, 1999, p. 23).

Amidst this commitment towards reshaping consciousness, Ngahihi is articulating the stories of the tūpuna, sharing deeply embedded values and beliefs of whakapapa and our ecological interconnectedness. In reaffirming our indigenous links to Ranginui and Papatuanuku, we celebrate our holistic world, one in which we come to know and be integrated beings within the universe. A Māori worldview is that we look back towards the past to know the present and to move forwards into the future. The wise words of our elders/seers articulate the significance of an indigenous lens in positioning the past and the present.

Indigenous narratives

'Denarrativization' is a term used by Martin Jay, (1993, cited in Rose, 2004, p. 183) to explain a colonising construct in which people conspire to create a world free of narratives. The impacting negative subtext to this western view is

that it assumes land is void and therefore without narrative. Ngahihi's counter-colonial cosmological narratives of the procreative pūrākau Ranginui and Papatuanuku highlight ancient philosophical values of integrity and relatedness, of existence and connectedness. Māori are intertwined in a spiritual and cultural relationship with nature. In Māori lore, the creation story is a great prologue; one in which the deep love that Ranginui and Papatuanuku shared is sacrificed through separation: 'All living things "in its smallest microbial form" descend from Ranginui and Papatuanuku. This notion is not a vague one, rather Māori ancestry is very specific' (Mead, 1998, p. 23).

Wally Penitito states that 'full personhood is itself defined in part by one's authority to tell one's own story' (1996, p. 10). Māori epistemology disrupts colonial discourse and Ngahihi, positioned at the early childhood interface, espouses counternarratives as potential for progressing through complexities, challenges and changes.

For Ngahihi, ngā tamariki are the pulsating heartbeat of the professional development programmes facilitated under the umbrella of the Ministry of Education. It is their potential that needs to be realised. Ngahihi philosophy both fosters the liberating of Māori psyche from enforced colonial constructs, as well as mobilising Tauiwi/Pākehā thinking beyond their own Eurocentric mindset: 'As a nation, for groups and individuals to truly shift towards a post-colonial era, we will need to undertake journeys of introspection' (Lang, 2006, p. 560).

The decolonisation discourse is one which seeks to address the injustices of the colonial past. Ngahihi, as an indigenous partner to Te Tiriti o Waitangi, embraces dialogue alongside non-indigenous early childhood educators. Rose (2004) proposes that an 'ethical alternative to monologue is dialogue' (p. 21). In facilitating movement towards decolonisation, Ngahihi cultural transmission upholds this form of dialogue as one which honours relationships and uniqueness. Positioned at the centre of korero, the specificities of this dialogical approach are that it is always located at the heart of conversations and that dialogue is always open, therefore one cannot presume fixed outcomes (Rau, 2008).

A significant context for Ngahihi is the national indigenous curriculum which validates Te Ao Māori values and beliefs alongside Western culture stating: 'All children should be given the opportunity to develop knowledge and an understanding of the cultural heritages of both partners to Te Tiriti o Waitangi' (Ministry of Education, 1996, p. 9).

Pathways to the future: Nga Huarahi Arataki includes three goals which are to enhance the relationship between Māori and the crown; to improve the appropriateness and effectiveness of ECE services for Māori and to increase the participation of Māori children and their whānau' (Ministry of Education 2002, p. 7). Ka Hikitia (Ministry of Education, 2007, p. 23) states, 'Professional development needs to challenge teachers' beliefs so teachers value and reflect the identities and experiences of all students. Māori children and students are more likely to achieve when they see themselves

reflected in the teaching content, and are able to be Māori in all learning contexts'.

This paper applies a Māori lens in delving into the above mentioned contexts and in considering ensuing implications and outcomes for Ngahihi professional development programmes across the early childhood education domain in Aotearoa. It asserts that the expectations within Te Whāriki to validate our indigenous culture are being upheld by steadfast indigenous and non-Māori early childhood educators.

For Ngahihi, ngā tamariki are the pulsating heartbeat of the professional development programmes

Stories of journeying

In 2008 Ngahihi journeyed alongside educators from a Gisborne bilingual centre, North Taranaki and Gisborne kindergartens, and Gisborne childcare early learning centres, facilitating professional development programmes under the auspices of the Ministry of Education. Narratives gathered from educator responses and centre presentations have been utilised, illuminating pathways that educators have chosen to pursue on this journey. I thank managers and educators for their commitment to uphold Te Tiriti o Waitangi partnerships in early childhood education in Aotearoa and for granting permission to have their narratives included in this paper.

Conversations and interactions between Ngahihi, educators, management and tamariki/whānau initiate the beginning of a shared professional learning journey of Te Ao Māori. An initial entry analysis process took place with educators from each centre. The following response is representative of many participant voices:

Initially I was a little anxious about the Ngahihi professional development. I didn't know what would be expected of me and anxiousness arose because of my lack of knowledge in regard to te reo and tikanga Māori (Te Whare Tiaki Tamariki)

Educator diffidence can be a gatekeeper to shifting personal perceptions, however teachers and early childhood services who opted into Ngahihi programmes had already begun their journeys, highlighting capacities and quality outputs for tamariki. A critical component of the procedure is that Ngahihi facilitates an entry approach which is 'kanohi ki te kanohi' (face to face), whereby facilitators arrange with the educators/management to visit the centre in action and then arrange follow-up times outside centre time to discuss and reflect upon practice, to be transformative. This practice acknowledges a Ngahihi protocol; that dialogue needs to be grounded in a place of shared knowing. Facilitators need to be responsive, able to speak to centre praxis, to give guidance, affirmation and support in helping educators articulate their visions for professional learning:

After the first meeting with the facilitators I felt a LOT less anxious because all the details of the journey were laid out and I knew what was expected of me and or our AWESOME teaching team (Te Whare Tiaki Tamariki).

It became clear during the discussion that educators within Te Whare Tiaki Tamariki were unaware of their collective educator capacity so they made a commitment to share personalised stories reflective of what they knew within the centre and with other childcare services. A Māori educator from Te Whare Tiaki Tamariki described the Ngahihi professional development evening hui with educators and managers from five early childhood services as one of anticipation, excitement and spiritually moving. She considered it to have been the start of a kaupapa Māori haerenga as a rōpu;

We had communication, laughter, singing, tears and what encompassed each everyone of us on the night was the spirituality, which made it such a beautiful night of sharing, that is what Māori are as a people. What I thought this night did was bring the staff together.

Building respectful relationships requires contribution, active listening and responsiveness. A sense of shared encouragement is articulated as the educators progress; shifts occur both individually and in the teams' collaborative construction.

Although Ngahihi process encourages educators to take responsibility for their actions and commitments to Te Ao Māori, there is a thoughtful balance between challenge and tautoko.

During the first wānanga, Ngahihi invited centre educators to present their chosen foci to the rest of the teams. These are some of the educator responses:

The next morning I got to work; there was a different atmosphere within the centre. A sense of connectedness between all staff members was evident in the way teachers were sharing their experience (Te Whare Tiaki Tamariki).

I liked the sharing and exploring ideas within our own teams and with other teachers which fostered positive energies and ideas...there were new concepts and ideas, and I liked the way that Māori share with Pakeha and let us on board te waka. Kia Ora, Thank You (Ngamotu Kindergarten).

Educators demonstrated generosity of spirit and time to anchor themselves in a commitment to uphold Te Tiriti o Waitangi partnership in Aotearoa early childhood education. Integral to the introductory wānanga is a focus on Māori philosophy and epistemology. Ngahihi utilises key questions as a tool to explore Māori philosophical frames and reflect upon personal philosophies. This data presentation is a sensory experience of sound, light and colour, which highlights underpinning principles of Te Ao Māori. Indigenous narratives expressive of our origins, our atua and the learning child are shared:

The whole presentation was pitched for gaining the hearts of the participants (Brooklands Kindergarten).

...the philosophy was amazing to listen to and watch, what a tool of knowledge and a great insight of a child's life from beginning to birth ... (Pickering Street Kindergarten).

Educators responded passionately to 'Kupu Huna' (the hidden layers of meaning embedded within Māori words). Their comments reflect movement as they began to apply a different lens to te reo Māori:

From the first workshop I had what I can only describe as a TRULY light-bulb moment. When the facilitator began discussing the concept of 'Kupu Huna' EVERYTHING made sense and I found myself nodding constantly and just wanting to know more. It gave me REAL meaning and understanding. I started thinking about words/names I knew and tried to apply meaning to them (Te Whare Tiaki Tamariki).

As a Pakeha I look at the literal meaning of words and how they fit, here I was being introduced to the purpose of the word. I was made so very aware. I understood the importance of the kaupapa of the kupu hou.... It was magical (Te Whare Tiaki Tamariki).

Building respectful relationships requires contribution, active listening and responsiveness

Ngahihi support shifts from sharing and utilising te reo at a superficial level to a more deepening engagement with our whakatauki, metaphors and kupu. Māori view te reo as a taonga, acknowledging the complexities and layers of meaning inherent in our words. Educators are embracing a multidimensional approach to te reo Māori and there is a heartfelt appreciation of te reo as a vibrant rich living

After completing the Ngahihi workshop I have gained a lot more knowledge, confidence and respect towards the Māori language (Te Whare Tiaki Tamariki).

I came up with a phrase that encapsulated who and what we are ... pondering and brainstorming I nutted out what I thought we aimed to achieve and what we achieve (Te Whare Tiaki Tamariki).

Kupu Huna has motivated educators to revisit the names of their centre. Te Whare Tiaki Tamariki explored the inherent meanings within to support a statement about their centre. The respectful acknowledgement of te reo as a valued language is integral to strengthening enactment within

Ngahihi process requires centre educators to narrate their journeys at a final wānanga. The presentation is up to 20 minutes in length and educators reflect on the professional learning process and its impact for themselves, the centres, tamariki and whānau. The process has been integral to building effective team strategies and increasing Te Ao Māori capacity and understanding. Some of the outcomes from Te

Whare Tiaki Tamariki were:

- Empathy for one another has been strengthened, where our pedagogy is about relationships and our practice is about collaboration. This has strengthened our collective sense of wellbeing and belonging.
- More te reo Māori is spoken with more care taken in pronunciation.
- This journey has laid a foundation of belonging to this area for our tamariki. They are gaining knowledge about the physical features of this area as well as the spiritual significance of these landmarks through consultation with tangata whenua.
- We are moving in a direction of establishing a bicultural pedagogy that will empower our children and enhance the complexity of not only the learning for our tamariki but also the teachers and in turn the centre community.

The educators' respectfulness of Te Ao Māori resonates in the shared narratives alongside acknowledgement of the varying cultures within centres; difference being credited as positive. As Manulani Meyer recently stated 'Our differences define us, not divide us' (Meyer, 2010).

Conclusion

Ka Hikitia contains the aspiration that in five years early childhood services will 'promote and reinforce Māori cultural distinctiveness' (Ministry of Education, 2007, p. 31). Educators are bridging the cultural divide as they aspire to illuminate Māori cultural distinctiveness in an Aotearoa Te Tiriti-based early childhood community.

Ngahihi facilitators sought to build community through deepening educator understandings of Te Ao Māori and to increase their capacity to filter new possibilities through to tamariki/whānau and children/families. Progressive movement from rhetoric to enactment was voiced by educators as they shared their stories of journeying. Early childhood Te Tiriti-based community building is evident through strong commitment within teaching teams with increased educator confidence expressed in narratives and implementation. A leadership focus from both managers and centre educators is evident with guidance and support in strengthening knowledge and skills integral to a whole centre approach. The responsibility to honour Māori values and beliefs is being sited at the centre rather than on the periphery with educator and tamariki shifts from an additive approach to integrative enactment. Centre teams have built a collective consciousness towards normalising te reo Māori and culture as central to daily centre interactions. This is counter-colonial praxis, a discourse that repositions Māori, indigenous to Aotearoa, from the margins to the centre.

This paper draws from a presentation at the World Indigenous Peoples Education Conference Indigenous Education in the 21st century Respecting tradition, shaping the future', Melbourne 2007.

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Engaging souls, too

A review of The subject of childhood by Michael O'Loughlin

Peter Lang Publishing, New York

Cost: AUD \$39.95

Reviewed by Jenny Ritchie and Yo Heta-Lensen

"Do educators have a responsibility for nurturing and preserving visions of a more just and equitable world?" (p. 141)

"Is it possible for westernized academics, curriculum writers, and teachers to cast off what appears to be an inherently colonizing gaze?"(p. 146).

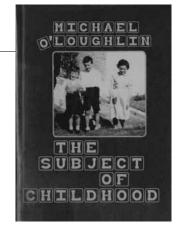
These are important questions to consider in relation to our philosophy and role as educators. Irish American Michael O'Loughlin has for many years been profoundly concerned with the inequities of social injustice. In this thoughtprovoking and passionate book, Michael draws upon his dual experiences as an educator and psychoanalyst to challenge us to consider employing an "evocative pedagogy" to move beyond colonised patterns of being and teaching. From the psychoanalysis field, he identifies "a vocabulary for speaking about loss and creativity through conceputalizing the unconscious", which provides mechanisms for "conceptualizing individual and collective responses to pain and suffering" (p. 147). Teachers "can use myth, ritual, and narrative, to engage children's minds, hearts, bodies, and souls in the reclamation of embedded memories [which] currently unthought and unspoken, represent a psychic burden for children and communities" (p. 147).

In our early childhood discourse in Aotearoa New Zealand, we are encouraged to promote a sense of belonging for children and their families. Michael goes further to suggest a therapeutic pedagogical process in which the classroom becomes a "place for close existential encounters" where "each child can find a sense of identity and self-respect, and a fundamental recognition of their own worth that allows them to take pride in their ethnic, cultural and class origins" (p. 161). Michael's "evocative pedagogy" begins with recognising that children (and adults) carry a "culturally constituted unconscious" which reflects our ancestors' collective history (p. 160).

Michael's evocative pedagogy requires really listening to children, listening for "the questions that really matter to the child, and behind the questions, to hear the unspoken desires that animate the child's life" (p. 80). He advocates that we devise our curriculum and pedagogy in support of children's desire to understand about being in the world. Pointedly, he recognises that understanding his own background, his autobiography, is central to understanding himself as a teacher. Michael's is a hopeful pedagogy.

Jenny Ritchie

Michael O'Loughlin has bravely tackled the subject of childhood from a narrative perspective, laying bare for all to read the influences on him as a child and how they shaped who he has become. The reader is left feeling admiration for a mother and father who clearly had



dignity in the face of adversity, and given insight into Irish resilience that only those who are deeply in touch with the psyche of their people can encapsulate. Michael O'Loughlin challenges readers to consider childhood as that which 'happens' to children and the price that is paid for trauma that occurs, including historical trauma.

Never having been particularly interested in the merit of psychoanalysis as a teaching tool, much less its potential as a personal healing tool, I was surprised at the almost 'ancient knowing'his narrative accounts stirred in me. Michael O'Loughlin visiblised the injured souls of my ancestors for me. As a Māori who also had a migrant parent who suffered at the hands of Nazi Germany in World War II, I instantly resonated with the notion that people carry ancient memories and that generations of family can suffer for historical injustices in insidious ways that are not necessarily tangible nor easily identified, which walk alongside us like injured souls calling out for recognition in order to heal.

His candid admissions of his reaction to his oppressed and marginalised position as a working class Irish Catholic left me critically reflecting whether I have also been guilty of making children feel 'less than' or 'othered' on the basis of language, culture, class and the life-time impact my actions can have on the young.

This book challenges teacher education providers to rethink whether they are adequately preparing teachers for the critical roles they are about to play in the lives of children from diverse backgrounds by providing them with appropriate opportunities to practice, experience and understand socially just, culturally relevant and respectful pedagogies in order to provide rich and fulfilling educational opportunities and outcomes for all children. Compelling, complex and diverse in the range of topics covered, this book changed my view of my self, my people, my culture, my profession, and of psycho-analysis.

Yo Heta-Lensen

Glossary

Ako Learning and teaching as a mutual

process

Akonga Pupil, learner, protégé, student

(as far as the Māori language is concerned, we are all learners; learning is not distinguished from

teaching)

World Ao

Land of the Long White Cloud, Aotearoa

Māori name for New Zealand (pre European arrival)

Aroha Affectionate emotion, compassion,

empathy

Awhi Help

Haere To come towards

Haerenga Journey Hoki whakamua Return Hou New

Hui Gathering, meeting

Huna Hide

Tribe, collection of hapu, people Iwi

Kai

Kaitiakitanga Stewardship, protection Kaumātua Elders, male elders

Plan, theoretical framework, Kaupapa

philosophy

Kia ora Greeting (informal) Kōrero Discussion, speech, to speak Kuia Female Māori elder(s)

Kupu Word Mahi Work

Mana Prestige, power (metaphysical

concept), authority, prestige,

influence

Manaaki Hospitality, generosity, compassion,

respect, kindness

Manaakitanga Ethic of hospitality, generosity, care

Matauranga Curriculum Matua Father

One of the demigods Maui

Mauri Life force(s)

Oral greeting, oral introduction, a Mihimihi

speech

Mokopuna Grandchild/ren All together Ngatahi Mother Earth Papatuanuku Pungawerewere Spider

Pūrākau Stories of the gods and demi-gods

Sky father Rakinui/Ranginui Rangimarie Peace

Rōpu Group

Ruru Morepork (night owl)

Takaro Play Children Tamariki Tangaroa God of the seas

Tangata whenua People of the land, locals Valued possession - tangible or Taonga

intangible

People who are not Māori Tauiwi

Tautoko Support

Tawhirimatea God of the winds and storms

The Māori world Te Ao Māori Te reo (Māori) Māori language

Younger sibling, cousin, same gender Teina

Tiaki Care for

Māori customary practice Tikanga

Tikanga rua Bi-culturalism Timatanga Beginning Tipuna Ancestor(s) Tiriti Treaty

Titiro whakamuri Looking ahead, prediction Tuakana Elder sibling/cousin, same gender

Ancestor(s) Tupuna Waiata Songs Wairua Spirit

Wairuatanga The spiritual dimension

Waka Canoe

Wananga A learning place

Whaea Mother, aunt, respected lady

Whakaaro Ideas, thinking Whakamua Going ahead

Whakapapa Origins, oral narrative history of

genealogy

Whakapiripiri mai Coming together

Whakatauki Proverb

Whakawhanaungatanga Relating to others as you would

a member of your family, as kin; process of generating a sense of relatedness and connectedness

Whakawhitiwhiti Exchanges

Whānau Families, extended families Whanaungatanga Sense of being a family,

connectedness

Whare House, building

Whāriki Woven mat

Whenua Land, the natural environment, also

refers to the placenta

Contributors

Noeline Corley teaches at Takaro Kindergarten in Palmerston North. She is of Scottish heritage, has double qualifications from in EC teaching and management from Massey so brings a rich background in teaching and in the business world.

My name is Gwyneth Barker. I am a qualified early childhood teacher, working in Kindergartens since 1996. I currently work in Koromiko Kindergarten, a 3 teacher Centre in Hawera. We are committed to the ideas of education for sustainability. We incorporate practices, into our everyday operations that are good for the environment and pass the sustainability message on to our children and families. The research project I've written about was the first time I was involved in such a project.

Ko Yo Heta-Lensen taku ingoa. I have a background in kaupapa Māori education and have worked and taught across a diverse range of levels and sectors from kohanga reo through to tertiary level. My research interests centre around Māori pedagogies in ECE and Māori theories of play. Current research activity includes investigating bilingual approaches to teaching and learning te reo Māori me ona tikanga in mainstream ECE settings. I currently teach in the Early childhood degree programme at Te Whare Wananga o Wairaka, Unitec Institute of Technology

Barbara Jordan is Senior Lecturer, Early Years group of the School of Arts Development and Health Education at Massey University College of Education. She enjoys co-constructing understandings and learning with teachers, from their initial teacher education through to fostering their reflection on practices and gaining their post graduate qualifications.

Wilai Payne is head teacher at Takaro Kindergarten in Palmerston North. She is Thai-born, US and NZ-trained. Wilai is passionate about providing a holistic learning environment for the community.

Jenny Ritchie is Associate Professor in Early Childhood Teacher Education at Te Whare Wananga o Wairaka - Unitec Institute of Technology, Auckland. Her teaching and research has focused on supporting early childhood educators to enhance their practice in terms of applying an awareness of cultural and social justice issues.

Cheryl Rau is of Tainui, Kahungungu and Rangitane descent. Her educational and research focus has centred on Te Tiriti o Waitangi partnerships in Aotearoa, with Māori educators articulating strategies which nurture tamariki Māori potentiality across the early childhood community. Cheryl's background in education has been across sector, including primary, secondary and tertiary. During the past thirteen years she has been an early childhood educator and coordinator/director of Ngahihi professional learning programmes. Last year she joined Te Tari Puna Ora o Aotearoa as the Central Regional Manager.

Sue Smorti is an experienced professional development facilitator working with teaching teams and students in early childhood settings to implement NZ curriculum and assessment resources over the past 15 years. She has a particular interest in the documentation of children and teachers learning which reflects the aspects of curriculum valued by each individual learning community/ early childhood setting. She works for Te Tari Puna Ora o Aotearoa New Zealand Childcare Association.

The Teaching Team at First Years Preschool (Dannevirke) consists of eight committed teachers: Casey Gilmore, Julie Sargent, Michelle Mullins, Kristi Withey, Sarah Newell, Sarah Graham, Kelsey Newell, and Lisa Bond.

Peter Watson teaches part-time at a kindergarten in Whanganui. He designs and makes wooden educational toys and equipment. In March he travelled to Indonesia under the auspices of the US Quaker-based Friends Peace Teams who work with an Indonesian NGO to create developmental play opportunities for young children in both Java and Sumatra. He spent part of his time with a woodwork cooperative in Java to help them start production of wooden educational equipment.

Claire Wilson is a teacher at Takaro Kindergarten, Palmerston North. She is a recent graduate from Massey. As a descendant of Ngati Raukawa, Claire brings the valuable contribution of Te Ao Māori to the teaching team.

