



A Kindergarten's Journey Into Sustainability Through the *Enviroschools in the Early Years Programme*

New Zealand Journal of Teachers' Work, Volume 12, Issue 1, 14-29, 2015

AVRIL MAXWELL

Open Polytechnic

BRENT MAWSON

University of Auckland

ABSTRACT

*Over the past decade there has been an increasing visibility and focus on environmentally sustainable practices in early childhood centres in Aotearoa New Zealand. This article discusses a small-scale research project, which investigated a teaching team's journey into sustainability in one rural kindergarten over a nine-month period. Joining the *Enviroschools in the Early Years* programme provided the teachers with support, resources and a shared focus, and contributed to a sustained commitment to and on-going emphasis on sustainability as a key part of the kindergarten's philosophy and practices. The research found the *Enviroschools* programme to be a good fit with the early childhood sector and offers support to other early childhood educators contemplating a similar journey. This article also identifies factors significant to the successful transition into sustainability through the *Enviroschools in the Early Years* programme and the challenges that need to be overcome.*

INTRODUCTION

This was a small case study research project involving one kindergarten and four teachers. Green kindergarten (a pseudonym) opened a few years ago. In the planning process prior to opening, the initial teaching team committed to sustainability as a key feature of the kindergarten. As part of this ethical imperative, the kindergarten joined the *Enviroschools* programme. Green kindergarten was identified as a pilot project in that region with the view that other kindergartens within the local Kindergarten Association would follow. The pilot, which was also initiated in other regions, involved working with Kindergarten Associations and training a small number of teachers who would act as facilitators initially in their own kindergartens and later in other kindergartens. This was a way of meeting the demands, which exceeded resources, of the early childhood sector to join the *Enviroschools* programme (The *Enviroschools* Foundation, 2013).

An increasing awareness of the importance of fostering values and attitudes in young children which relate to sustainability (Ritchie, 2013a) has emerged as awareness and concern grows in response to climatic and environmental changes. The early childhood sector has responded and more and more centres are engaging in sustainable practices in their programmes (Prince, 2010; Ritchie, 2013a). The term sustainability refers to “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Bruntland, 1987, p. 8, cited in Davis, 2010a, p. 2). Sustainability in early childhood education has been commonly linked to environmental sustainability, but more recently has taken on a broader meaning which includes social, economic and environmental factors (Davis, 2010a; Pramling Samuelsson & Kaga, 2008) all of which are interrelated. Education for Sustainability (EfS) is another key term used by this research project and emphasises the importance of action for change in relation to the environment (Davis, 2010a).

Early childhood centres in Aotearoa New Zealand have picked up the challenge to emphasise sustainability in their programmes in two main ways. The first is through a notable increase in nature-based education (Bullick, 2013) where for part of the day children are immersed in nature (education *in* the environment). Nature based programmes had their origins in the forest kindergartens of northern Europe and are arguably a response to a growing concern that young children are spending increasing amounts of time indoors and have fewer opportunities to engage in play involving supervised risk opportunities in the natural environment. Richard Louv (2010) coined the phrase ‘nature- deficit disorder’ as a way of describing this development. Nature based programmes do not necessarily have a focus on the wider global environmental issues and this tension is being explored through place based education (Hill, 2013). The second way involves the increasing focus and visibility on sustainable practices in the early childhood sector with early childhood centres engaged in practices such as planting gardens, composting and recycling (Pratt, 2010). Davis (2010a) refers to this as education *about* the environment, but argues that education *for* the environment is what teachers should be working toward as this includes active participation “aimed at learners making informed judgments, participating in decision making and taking action on environment-related issues” (p. 9).

The national *Enviroschools in the Early Years* programme aims to give young children in Aotearoa New Zealand a sense of connection with the environment and the community. It began in the Waikato region in the 1990s with an original focus on the compulsory school sector. The *Enviroschools* programme was set up as a non-profit making initiative as a direct response to increasing environmental and social issues being faced by communities¹ The programme has an action-based *kaupapa*². Programmes have now spread to most regions in New Zealand and include early childhood centres as well as schools. The title *Enviroschools in the Early Years* refers to the early childhood sector.

¹ <http://www.enviroschools.org.nz/about-the-enviroschools-foundation>

² Kaupapa in the Māori language means theme or subject.

There has been a slow and gradual increase in numbers of early childhood centres joining *Enviroschools* since 2006. As at October 2013 (Enviroschools Foundation, 2013) there were approximately 3% of early childhood centres who were participants in the programme. In reporting on the shape of the *Enviroschools* network it was stated that “working with the ECE sector has been a focus in the *Enviroschools* Programme, although we have needed to carefully manage this growth as it is a very large sector” (Enviroschools Foundation, 2013, p.12). This may mean that because the current level of resourcing and funding is finite and contestable, growth of services into the programme needs to be carefully managed. The first *Enviroschools* national early childhood *hui*³ was held in April of 2014. Its purpose was to “build strength, capacity and knowledge in the early childhood sector” (Enviroschools National Early Childhood *hui*, 2014, p.4). This shows the growing support and awareness of the early childhood sector as part of the *Enviroschools* programme, however clearly uptake has been affected because of resourcing and funding.

The New Zealand *Enviroschools* programme is one of a number of similar international whole school environmental programmes around the world. Internationally, these include *ENSI Eco-Schools*, *FEE International Eco-Schools*, China's *Green Schools Project*, Sweden's *Green School Award Programme*, *Australian Sustainable Schools* programmes and New Zealand's *Enviroschools* programme (Tilbury & Wortman, 2005). A consistent theme in the international literature is that the impact of these programmes appears to be related to growth in teacher knowledge without change in children's practices (de Pauw & Van Petegem, 2011; Gough, 2006; Krnel, 2009). Although there are many local newspaper articles reporting individual projects there is little research-based literature on the impact of the *Enviroschool* programme in New Zealand especially in relation to the early childhood sector. Pamela Williams (2012) identifies increased community awareness and participation in environmental sustainability issues, improved knowledge, and an increasing sense of place and understanding of one's own unique heritage as important outcomes. Ritchie's (2013b) two-year study in 10 New Zealand early childhood centres combined indigenous Māori cultural understandings such as *mauri* (life force), *manaakitanga* (caring, generosity) and *kaitiakitanga* (environmental stewardship) with concepts of the ethics of care that resulted in stronger parent, child and *whānau*⁴ involvement with the centres and also greater understanding of and empathy with the environment. Wilson-Hill (2010) found involvement in *Enviroschool* projects led to significant literacy gains. Her short term investigation into the link between literacy learning and action competence in three primary sector *Enviroschools* showed involvement in the units of work enhanced students vocabulary, increased their critical thinking and meaning making, and their ability to communicate new knowledge and understanding.

Eames, Barker, Wilson-Hill and Law (2010) developed and trialled a framework for developing whole-school approaches to education for sustainability with six *Enviroschools*, (four primary, two secondary). The

³ 'Hui' in the Māori language means meeting.

⁴ 'Whānau' means family group.

framework comprises of four dimensions: people, programmes, practices, and place. Each dimension has between 3 and 10 aspects with indicators that enable a school to consider its current situation on a five-point scale. Their work has had a positive impact on the viability of the programme in schools since that time.

THE RESEARCH PROJECT

The researchers involved in this small project seized on the opportunity to work with the first early childhood centre in its region to join the *Enviroschools* programme and to investigate whether this involvement resulted in changes to teacher practice and knowledge. The main research question was 'how does teacher practice and knowledge change as a result of involvement in the national *Enviroschools in the Early Years* programme'? A secondary focus was 'what factors underpin the successful introduction of an environmentally sustainable programme in an early childhood setting? This second question is the focus of this article.

Background.

Green Kindergarten is rurally located on the outskirts of a city and is adjacent to a full primary school. It operates as part of a Kindergarten Association (community based, not-for-profit organisations which are regionally based and independent bodies) and under the kindergarten day model, which typically means daily sessions between 8.30 and 2.30. The kindergarten has three full time qualified teachers and a part-time support person. Some changes in the teaching team occurred about the same time as the research commenced.

Green Kindergarten opened in 2011. At this time the head teacher approached the regional *Enviroschools* coordinator about joining the *Enviroschools* programme. The contact was timely and the kindergarten became the first early childhood centre in the region to join the national *Enviroschools in the Early Years* programme. Eight months after the kindergarten opened, *Enviroschools* coordinated a half-day Expo to showcase the pilot centre. In April 2012 the head teacher attended a national facilitator's workshop. After attending the workshop participants are given a Facilitators Handbook, sometimes referred to as a kit. In April 2013 the acting head teacher also attended the facilitator's workshop. This coincided with the research project beginning.

Four teachers (referred to as T1, T2, T3 and T4) were involved in the research project. The head (T4) and acting head teacher (T1) were part of the inaugural teaching team, whilst T2 started at the time the kindergarten joined *Enviroschools*; T3 joined the team as a long term reliever later that same year. The research formally began a year after the kindergarten had joined the *Enviroschools* programme. Ethics approval to complete the research was obtained through The Open Polytechnic's ethics committee and also through the relevant kindergarten association.

Research methodology

Data was collected between May-November 2013 and included:

- focus group discussions, one at the beginning and one near the end of this period with an additional follow up discussion.
- individual interviews with teachers
- reflective journals kept over terms two and three 2013.
- interview with Enviroschools coordinator.

Four teachers were involved in the majority of discussions (focus groups and interviews) and three teachers kept a reflective journal from May through to September, which covered the majority of terms 2 and 3. One teacher was in a relieving position and left the kindergarten at the end of term 2 and thus the time frame for this teacher in keeping reflective journal entries was over one term rather than two. The head teacher was on leave during this time so did not keep a reflective journal, but participated in focus group discussions and an individual interview. All verbal data was recorded and transcribed, verbatim. This was sent to participants for confirmation and corrections made where necessary.

Questions at focus groups and individual interviews were open ended, each building on themes and patterns emerging from the previous data collection point. The individual interview allowed us to explore in greater depth different perspectives that had emerged in the focus group discussion. After a first reading of the journals and completion of the individual interviews the second focus group meeting was held and themes identified by the researchers were discussed with the teachers. The individual interview with the Enviroschools coordinator acted as a triangulation tool in which dialogue from individual interviews with teachers and group discussions and reflective journals was validated.

Approach to analysis

A thematic approach was used to analyse the data. Braun and Clarke (2006) argue that this is a valid approach to analysing qualitative data. This approach identifies themes or patterns in the data, grouping them. The researchers mainly based the selection of themes on the relevance and interest to the overall research. During the initial focus group and individual interviews themes had started to become apparent to the researchers. When the reflective journals were analysed, themes were identified by the number of times an idea or theme appeared and correlated with earlier themes identified. Braun and Clarke (2006) address the question of what counts as a theme and argue that this is a professional judgement call rather than this being based on the number of times a theme occurs across the data sets. Braun and Clarke (2006) suggest that what constitutes a theme is less about “quantifiable measures” (p. 82) and more about its relationship to the research question. We, the researchers, had an active role in the process of selecting themes, which were either of interest to us or perceived to be of interest to key stakeholders. An example of researcher interest is the role of the Enviroschools programme (resources and facilitation) and how this is applied to an early childhood context. Braun and Clarke (2006) identify the importance of acknowledging that the researcher assumes an active rather than passive role in identifying of themes.

DISCUSSION

This article focuses on the factors that contributed to the successful implementation of sustainability through the Enviroschools programme. Success was defined as the teachers continuing focus and enthusiasm to journey further into sustainability. Central to the enthusiasm for their sustainability journey was membership of the Enviroschools programme. Four key factors were identified through the thematic analysis as success factors, namely:

- the personal commitment to sustainability and the cohesion of the teaching team,
- the role of the regional Enviroschools coordinator,
- Enviroschools resources (mainly the facilitator training and facilitators book) and
- a whole centre approach involving community, parents and children.

These four factors are discussed below with data from focus groups, individual interviews and reflective journal entries providing illustrations.

Personal commitment and cohesion/shared commitment of the teaching team

All of the teachers already had a personal commitment to sustainability prior to the decision to focus the curriculum and philosophy of the new kindergarten on education for sustainability. T3 was a member of Greenpeace, and T4 said, “I am really passionate about having a sustainable future and about having it in the kindergarten, but also at home. So I find it really easy to implement into my teaching practice” (Interview, T4).

From the teachers’ perspectives, having a sustainability focus goes hand in hand with being in early childhood education. It is an integral part of *Te Whāriki* (Ministry of Education, 1996), the New Zealand early childhood curriculum, and was not viewed by the teachers as a new area. The teachers mentioned this often especially in their journals. The Enviroschools programme is open, flexible and contextual and aligns with the approach of *Te Whāriki* in that each ECE centre has the space to create its own curriculum:

That’s the thing with this whole programme too. It’s not something that you can only do one way. It’s up to your kindergarten and how your programme works and what your philosophy is and what you believe in and how you work as a team and what your families are like in relation to what you do (Focus group meeting, 1); and:

Education for sustainability is woven throughout the programme, not separate within it. They (the children) are still learning maths and science, sustainability is just an umbrella over our programme and it is not a separate part of the curriculum, it’s interlinked. We find it very easy to incorporate into the programme. (Focus group meeting, 2)

The importance and acknowledgement of a bicultural framework is also explicit in the Enviroschools programme and resources and in the early childhood curriculum: "*Te Whāriki*. It kind of all fits in together, so it's not something that is separate. The whole *kaupapa* of Enviroschools is so interlinked with *Te Whāriki*, now that I've actually looked at it more in-depth" (Focus group meeting, 1).

A shared commitment to sustainable living reinforced the cohesion of the teaching team and the success of the kindergarten team's move into the Enviroschools programme: "It was something we all decided to focus on" (Interview, T1). This was strengthened during the first focus group when T1 said, "We were all really keen and we thought it would fit well with our kindergarten (being a new kindergarten and starting from scratch) to get people into those sorts of practices right from the beginning." One of the original teachers left several months after the kindergarten opened, mainly because the same vision was not shared. A shared vision amongst the teaching team seemed to contribute to EfS remaining a high priority for the teachers. T2 wrote in her journal, "I believe having the whole team on board, having the same vision has been vital for the continuation of having a sustainable kindergarten."

Being part of the Enviroschools programme was timely as a new kindergarten and evolved as the kindergarten was being established. The head teacher made the first approach to the Enviroschools coordinator following attendance at a professional development day. Whilst it was not initially specifically part of their policies or their written philosophy, it was an important and integral part of the culture of the setting and teachers were all committed to having sustainability as a fundamental part of their programme.

Support from regional Enviroschools coordinator.

A second factor contributing to the success was the involvement of the regional Enviroschools coordinator. At the time Green Kindergarten opened, the head teacher approached the regional Enviroschools coordinator about joining the Enviroschools programme:

I went to a PD day and that's where I met the Enviroschools coordinator, and I thought this programme is awesome, and wondered how we could get this into early childhood? She was really supportive and we emailed and I met up with her and looked at how we could implement it into the kindergarten environment. (Interview, T4)

The regional coordinator organised the half-day Expo to showcase the programme and the kindergarten's involvement. Eight stations covering a range of experiences were available for children, which introduced them (and their families) to concepts of sustainability. The regional coordinator's continuing interactions with the teachers was crucial to their developing understanding of education for sustainability and how to relate it to the kindergarten context.

She's been pretty much our guiding person...We didn't really know which direction we were heading. We knew we wanted to provide a nature programme with natural resources and teaching our children about our sustainable future. She's been our mentor. She was huge

because we had really no idea about what the whole Enviroschools umbrella could provide. (Interview, T4)

This view was echoed by the other teachers. T1 said, “I don’t think we would have got to where we are without her support” (Interview, T1). At the first focus group meeting T1 said,

we definitely needed (her) for reassurance and guidance. Definitely in getting us off the ground, her support at the parents evening and the team professional development—it was challenging at the beginning. She organised the Expo, which was a huge community event. (Focus group meeting, 1)

The teaching team received a lot of support, especially initially, from the regional coordinator. However, there are limited resources, including personnel, within the Enviroschools programme, and there would not be sufficient resources to enable each centre in the Association to have individualised support. Nevertheless, having a mentor would seem to be important. This situation was described as an on going tension by the Enviroschools coordinator.

When it was recognised that demand from the early childhood sector exceeded resources in regions, a project was initiated which involved working with kindergarten associations. As stated earlier, a small number of teachers were trained to act as facilitators initially in their own kindergartens and then to other kindergartens. This was identified as an effective and affordable approach and one expected to continue. A similar initiative is being explored through the Playcentre association (Enviroschools National Early Childhood *hui*, 2014).

Regional cluster groups would seem to be a useful model of support for centres with mentors selected to provide guidance and leadership. Targeted funding for the early childhood sector managed through the Enviroschools programme would be useful.

Being part of the Enviroschools programme—resources and focus

The involvement in the facilitator training (part of the *Enviroschools* programme), which both head teacher and acting teacher attended, played an important part in the developing understanding of the Green Kindergarten teaching team. For these two participants, the opportunity to attend this workshop had an impact on their understanding of the programme and their ability to explain it to other people. The workshop also linked sustainability in personal and professional domains of their lives. T4 said, “You went outside and you appreciated what nature had for you, what you saw. It was quite a spiritual experience” (Interview, T4).

An important aspect of the facilitator training was the increased confidence that it gave the teachers who attended:

I felt more confident. I felt that it wasn’t just an idea, but there were so many different support networks around the whole of New Zealand that were willing to support us through this programme. So I felt really confident and I could actually speak to parents really openly and honestly. (Interview, T4)

T1 also had a similar reaction to her participation in the facilitator training: "Going to the facilitators training gave me an understanding of the Māori perspective and how to get it in the programme" (Focus group meeting, 2).

Being a part of the *Enviroschools* programme helped make teachers more conscious of their practice decisions. The very first journal entry for T2 begins,

often we empty the scraps prior to or after kindergarten and many children don't know where they go after the scrap bucket. I consciously thought today the bucket is getting full, here's a good opportunity to explain [to the children] our composting system. (Journal entry, T2)

The same reflective notes later referred to a relevant section of the *Enviroschools* kit on zero waste and future practice involving children in the cycle of scraps-composting-gardens producing food.

A similar point was made in the first focus group meeting and in interviews: "It's great having an *Enviroschools* focus because I do now look around and notice resources I can use from nature to complement our kindergarten programme" (Focus group meeting, 1). This view was also reflected in T1's comment: "I notice things, more nature-based things that I can bring because we are a part of the Enviro school and because we know that that's what we want to be, sustainable in nature" (Interview, T1). Using natural resources in the programme does not necessarily make a centre sustainable, but is part of the journey into sustainability for the teachers at Green Kindergarten as they explore and refine their ideas about what it means to be sustainable.

A whole centre approach.

The active involvement of children, parents and the wider community was also a major reason for the successful implementation of the *Enviroschools* programme at Green Kindergarten. Teachers identified the Expo organised by the regional coordinator as a really useful and important way to disseminate their sustainability focus and involve families:

It (the Expo) was great and it got lots of parents interested and taught them and us a lot of things that we didn't know about different sustainable practices. Parents started getting more involved. They helped us create our garden area...We did a lot of work with parents around zero waste and trying not to put lots of packaging in lunch boxes. (Focus group meeting, 1)

The involvement of the children in the planning and development of the natural environment was an important aspect of the creation of an EfS ethos throughout the kindergarten and local community. Being involved in the *Enviroschools* programme seemed to be an empowering process for teachers and the action-based approach aligns well with an early childhood *kaupapa*. Children were encouraged to be part of the decision-making, planning and design of projects. The joint project in the creation of the rock garden was an important part of this process:

The children were really involved in the gardening, how we were going to do it, what it would look like. We had planning up on the board and we got the kids to think and talk and draw. That type of thing keeps going on all the time. (Focus group meeting, 1)

This view was replicated in her journal by another teacher:

The whole process (planting in the rock garden) affirmed for me that everyone is able to contribute something valuable to a project, we all had important parts to play and we got to learn from each other. I could see how this process affirmed a child's individuality through their differing interests, skills, knowledge and dispositions but also affirmed the importance of the individual belonging to and being able to contribute to the whole. (Journal, T3)

Another teacher (T1) referring to the zero waste project wrote in her journal, "it has been awesome to see our children accept the ideas of reusing our food waste and they are learning about sustainable ways to look after our environment."

Davis (2010b) outlines a model of three interrelated strategies (whole centre, action research and a systems approach), which can enhance the implementation of education for sustainability (EfS) in an early childhood centre. This research also indicated links between the personal and early childhood professional domains that contributed positively to attitudes and values in support of education for sustainability in a centre (2010b).

CHALLENGES.

During their journey into sustainability the teaching team faced several challenges. One challenge involved resources, money and time for making changes. An early emphasis for the teachers' was on the environment and working with natural materials. While EfS is about making ecologically responsible practice decisions, being aware of human-focused world views (anthropocentric), as opposed to the seemingly simple decision of selecting natural resources over plastic (Young & Elliott, 2014), this was part of their journey, and reflected developing understandings about sustainability. Thus with their focus on natural resources, plastic materials, purchased when the kindergarten first opened, were quickly replaced with second-hand real objects or natural materials. This change exposed philosophical clashes in the implementation of sustainability practices and contributed significantly to one of the inaugural teachers leaving. T4 observed, "We found out it didn't work if you don't have the whole team on board" (Interview, T4). This supports a whole team approach on a journey into sustainability.

Less was deemed to be best, but building up resources takes time and comes with a cost. A large and open outdoor area is still being developed around a rock garden, plantings, a garden, orchard, a chicken coop and living shade over the sand area. The teachers are well aware that time and financial constraints are the major barriers to rapidly implementing these projects, but

because they are in the *Enviroschools* programme for the long term they are prepared to be patient:

So I think starting from scratch is awesome, like you can do it how you want, but I think there is a lot more money that needs to be spent to get us to where we want to be. (Interview, T4)

An on going challenge is clarifying the relationship between the groups involved. The relationship and initiative between *Enviroschools*, kindergartens (teachers as facilitators) and the Kindergarten Association is quite new and because of this there are systems and processes to be worked through. A lack of resources means that further expansion of the *Enviroschools* programme to other kindergartens in the local Association is dependent on the use of kindergarten teachers in the role taken by the regional coordinator with Green kindergarten. There was some uncertainty expressed from teachers taking on the role of the facilitator and what this might entail. As this was a pilot project for *Enviroschools* in relation to building a relationship with the kindergarten association, it is expected that the roles will be confirmed as the new initiative is worked through. The lack of specific funding for the early childhood sector in the *Enviroschools* programme means a different model has had to be explored.

Teachers also commented about the challenge in maintaining impetus and understanding about the programme focus on sustainability from parents and families at times. As naturally happens over time, the children and parents changed at Green Kindergarten and the understandings and commitment to EfS engendered by the initial Expo are no longer as firmly established. Bringing new children and families on board is something the teaching team are well aware of:

I think when the kindergarten was first opened and an Expo was organised the parents and *whānau* were able to be part of the process and see what it was all about. Now it is about continuing to make it visible and part of the programme. (Journal, T2).

The children play an important part in this process: "The kids that do know tend to tell other kids how it works, what happens" (Interview, T1).

Maintaining the impetus of the programme was a problem that surfaced during the first twelve months of the implementation of the *Enviroschools* programme. It was originally a head teacher initiative. After the initial contact to the *Enviroschools* co-coordinator the head teacher approached the teachers to gauge their interest. This leadership role was reinforced after the head teacher attended the facilitator's workshop. The initial impetus waned a bit over winter months. Although the *Enviroschools* Facilitator's manual was in the kindergarten the teaching team did not make use of it. Nearly a year after the centre became an *Enviroschools* kindergarten the acting head teacher attended the same facilitator's course and following this the journey seemed to pick up momentum once again. Teachers identified that the facilitator's kit was used frequently following this. It might be useful to have more than one teacher attend relevant courses, which would enable shared understandings and support.

Sector-wide there is growing awareness that educators need to move beyond implementing sustainable practices to a broader look at sustainability and a whole curriculum approach that includes economic and social dimensions. Duhn (2012) argues that teachers need to include these as an integral part of the curriculum.

While there is growing awareness in parts of the sector, there also can be resistance. Elliott and Davis (2009) propose several reasons for this. First, some educators think that there is no real need to focus on sustainability beyond what is currently done in the sector; that is, children generally have access to outdoor play and this provides sufficient focus for environmental awareness. A second reason is related to the image of the child as vulnerable and needing protecting from the bigger issues facing the world in relation to climatic and social changes. Third, teachers in early childhood centres may not have shared understandings of what EfS means in their curriculum and what their responsibilities are in relation to this.

The Ministry of Education could support this by producing guidelines on EfS in the early childhood sector. At the same time the Education Review Office could prioritise this as a focus area that every centre being reviewed is required to report on over a year.

CONCLUSION

The experience of Green Kindergarten in successfully integrating into the *Enviroschools* programme can provide a model for other early childhood centres considering their own journey into sustainability. The *Enviroschools* programme appears to be successful in supporting schools (and early childhood centres) to become more environmentally aware.

Our research found that the *Enviroschools* programme is a good fit with the early childhood sector. A whole centre approach is enabled more readily in relation to size of work places and smaller teams of teachers, and also in relation to communication and partnerships with families, which are usually strong in early childhood. There are also clear connections with the early childhood curriculum in regards to relationships with the natural environment and *te ao Māori*. Being a part of the *Enviroschools* programme has definitely impacted on teachers' practice and knowledge at Green kindergarten by providing support, resources and a shared whole centre focus. The original driver for joining the programme came from a personal/professional interest and sense of responsibility to be more sustainable in actions at the kindergarten.

The *Enviroschools* programme to date has focused mainly on the school sector and there has been little research completed at this time on the inclusion of early childhood centres into the programme. The limited uptake of early childhood centres into the *Enviroschools* programme seems more related to limited funding and resources and does not appear to reflect a lack of intent by early childhood centres to be more sustainable.

We hope our research might help provide justification for an increase in support and funding to the early childhood sector as part of the *Enviroschools* network. Dissemination of our findings might also serve as an incentive to attract additional centres into the *Enviroschools* programme and/ or into starting or continuing their own journey into sustainability. This is important as we look

toward the future and to ensuring that there are sufficient resources to sustain humanity.

Manuscript Submitted: July 29, 2015

Manuscript Accepted: November 23, 2015

REFERENCES

- Bullick, T. (2013). Connecting and reconnecting with nature. Retrieved from: <http://elp.co.nz/EducationalLeadershipProjectResources> Articles
ELP.php
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology, *Qualitative Research in Psychology*, 3(2), 77-101.
- Davis, J. M. (Ed.) (2010a). *Young children and the environment. Early education for sustainability*. Cambridge, England: Cambridge University Press.
- Davis, J. M. (2010b). Early childhood education for sustainability: Why it matters, what it is, and how whole centre action research and systems thinking can help. *Journal of Action Research Today in Early Childhood (Education for Sustainability in Asia and the Pacific)*, 35-44.
- Duhn, I. (2012). Making 'place' for ecological sustainability in early childhood education *Environmental Education Research*, 18(1), 19-29.
- Eames, C., Barker, M., Wilson-Hill, F., & Law, B. (2010). *Investigating the relationship between whole-school approaches to education for sustainability and student learning. A summary*. Wellington: New Zealand Council for Educational Research.
- Elliott, S. (2010). Children in the natural world. In J.M. Davis (Ed.), *Young children and the environment. Early education for sustainability* (pp.43-75). Cambridge, England: Cambridge University Press.
- Elliott, S. & Davis, J. (2009). Exploring the resistance: An Australian perspective on educating for sustainability in early childhood education. *International Journal of Early childhood*, 41(2), 65-77.
- Enviroschools Foundation. (2013). *Pūrongo 2012-2013 Celebrating success*. The Enviroschools Foundation.
- Gough, A. (2006). Sustainable Schools in the UN Decade of Education for Sustainable Development: Meeting the challenge? *Southern African Journal of Environmental Education*, 23, 48-63.
- Hill, A. (2013). The place of experience and the experience of place: Intersections between sustainability education and outdoor learning. *Australian Journal of Environmental education*, 29(1), 18-32.
- Krnel, D. (2009). Environmental literacy comparison between eco-schools and ordinary schools in Slovenia. *Science Education International*, 20(1/2), 5-24.
- Louv, R. (2010). *Last child in the woods. Saving our children from nature-deficit disorder*. London, England: Atlantic Books.
- Ministry of Education. (1996). *Te Whāriki: He Whāriki mātauranga mō ngā mokopuna o Aotearoa/Early childhood curriculum*. Wellington, New Zealand: Learning Media.

- De Pauw, J. B., & Petegem, P. V. (2011). The Effect of Flemish Eco-Schools on Student Environmental Knowledge, Attitudes, and Affect. *Journal of Science Education International*, 33(11), 1513-1538.
- Pramling Samuelsson, I., & Kaga, Y. (2008). *The contribution of early childhood education to a sustainable society*. Paris, France: UNESCO.
- Pratt, R. (2010). Practical possibilities and pedagogical approaches for early childhood education for sustainability. In J. M. Davis (Ed.) *Young children and the environment. Early education for sustainability* (pp.104-153). Cambridge, England: Cambridge University Press.
- Prince, C. (2010). Sowing the seeds; education for sustainability within the early years curriculum. *European Early Childhood Education Research Journal*, 18 (3), 273-284.
- Ritchie, J. (2013a). Sustainability and children's inter-relationship with nature. In A. Grey & B. Clark (Eds.), *Transformative teaching practices in early childhood education* (pp. 107-116). Auckland, New Zealand: Pearson.
- Ritchie, J. (2013b). Sustainability and relationality within early childhood care and education settings in Aotearoa New Zealand. *International Journal of Early Childhood*, 45(3), 307-326.
- Tilbury, D., & Wortman, D. (2005). Whole school approaches to sustainability. *Geographical Education*, 18, 22-30.
- Williams, P. (2012). Educating for sustainability in New Zealand: Success through Enviroschools. In M. Robertson (Ed.), *Schooling for sustainable development* (pp. 33-48). London, England: Springer.
- Wilson-Hill, F. (2010). *Better understanding educational outcomes connected to the New Zealand Curriculum in Enviroschools*. Wellington, New Zealand: Enviroschools Foundation.
- Young, T. & Elliott, S. (2014). *Ways of thinking, acting and relating about sustainability*. Deakin West, ACT, Australia: Early Childhood Australia.

ABOUT THE AUTHOR(S)

AVRIL MAXWELL

Open Polytechnic

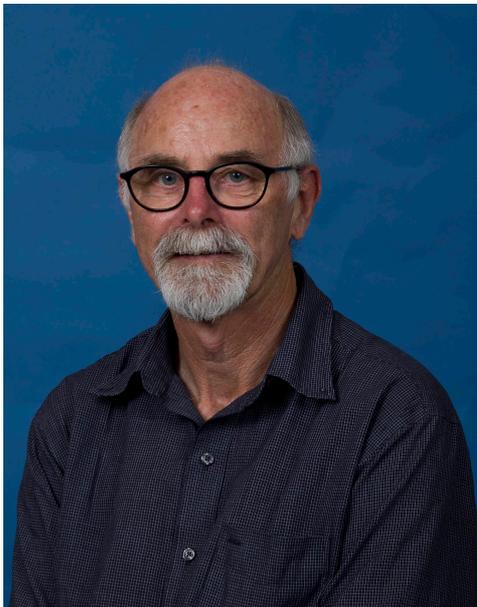


Avril Maxwell is a lecturer with the Open Polytechnic and has worked in teacher education for over twenty years in a variety of different roles. Avril is deeply committed to early childhood education and the societal change that may be effected through working with young children and their families.

Email: Avril.Maxwell@openpolytechnic.ac.nz

BRENT MAWSON

Open Polytechnic



Dr Brent Mawson is a lecturer in the Faculty of Education and Social Work, The University of Auckland. He has a wide background in education, having taught at all levels from Early Childhood Education to University. His research and publication focus has been in the early childhood areas of children's collaborative play and leadership and teacher-child experiences in nature-based programmes.

Email: b.mawson@auckland.ac.nz