

# **Becoming green? The durable impact of environmental education experiences on young New Zealanders**

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# Overview

- The background to this project
- Our research questions
- Current literature on this topic
- Our research design
- Our findings
- Some conclusions and implications

# Acknowledgements

- Researchers Chris Eames, Miles Barker, Carol Scarff and Marianne Robertson
- Teachers Michelle White and Linda Watson
- Students and their parents

# Project background

- A need to understand the durable impact of school-based EE
  - for policy reasons
  - for curriculum reasons
  - for pedagogical reasons
  - for research reasons



# Research aims

- What, if any, environmental experiences do school students perceive in retrospect as having been significant in their lives?
- How, if at all, have these experiences contributed to students' current thinking and perceptions of their acting as sustainable citizens?



# Literature aspects

- Significant life experiences
  - Evidence that key experiences in the environment in childhood can promote pro-environmental behaviour (PEB)
  - Also contradictory findings – environmental experiences not leading to PEB, and PEB not linked to env experiences
- Ecological literacy
  - An ability to think and act ecologically – an awareness of the interrelatedness of life, and knowledge of Earth's physical systems
- Environmental identity
  - Understanding your relationship to the environment – involves affective and cognitive dimensions

# Literature aspects (cont.)

- Transformative learning
  - Educational processes that question assumptions and provide opportunities to work for change
  - Empowers learners by reducing the power difference between teachers and learners
- Action competence
  - The ability to act for the environment
  - Involves critical reflection on experiences and democratic participation in action
- Values
  - What is important to young people, and their visions for the future

# Researching the question

- Interviews with 11 current secondary and tertiary students (aged 14 to 21) who, on graduating from enviroschools at age 10-11, had been judged by their teachers to have been strongly engaged in environmental learning.
- A focus on their perceptions of their environmental experiences both in school and out, and their current thinking about the environment
- Questions framed around the students': experiences, ecological literacy, action competence and transformative learning, values and environmental identity
- Separate interviews with the students' parents to triangulate the students' views

# Findings

- Students' environmental experiences
- Impact of these experiences and students' current environmental thinking



# Significant life experiences

- Most students (8/11) reported that their primary school environmental experiences had been significant in their lives so far
- Most students (8/11) had had a range of experiences in the environment with family

# Significant life experiences

**For most of these students, their primary school environmental experiences were influential:**

I think they were definitely fun; like ... and also they were ... sort of influential, I suppose, because they got you thinking about what you wanted the environment to be like because there was a lot about environmental awareness and stuff (Hayley, 14)

**Many parents saw the primary school environmental experiences to be fundamentally important for their child:**

I think they've been really formative. I think her whole understanding of the environment has been heavily influenced by her primary school, there's no question about that (Hayley's parent)

# Significant life experiences

**There were mutually reinforcing effects of home influences and school influences.**

- Emily (14) has an environmentally-active family. Despite this, Emily paid tribute to her primary school teacher:

She really got me into the whole environment and she made me love it all, and she made me realise that, kind of, we need our environment and we've got to look after it

- She also indicated the value of feeling like she could make a difference in an environmental project:

It felt like we could make a change, like that's how they kind of made it so it was more student run – it wasn't like 'we're going to do this and this and this', it was like, 'what would you guys like to do in this project?'

# Significant life experiences (con't)

- Brooke's family has given her outdoor experiences and rate themselves as environmentally-aware
- Brooke (14) credited both her family and primary school as influences:

They would probably have equal kind of influences on how I treat the environment now. Like, the school stuff kind of teaches me about it, but seeing the effects of it when I'm out and about [with my family] compels me to take action about it.

# Impact of experiences, and current thinking

- Development of action competence
- Development of environmental identity

# Development of action competence

## Requires experiences, particularly action experiences

- Most students (9/11) reported having had action experiences at primary school
  - In one school, 6/6 had been involved in restorative native planting and designing an eco-classroom
  - In the other school, 3/5 had been involved in gardening
- Most students (9/11) reported having had action experiences with family
  - 5 students participated in activities such as recycling at home
  - 4 students had been active in things like native planting and protest marches

# Development of action competence

## Requires a willingness and ability to act for the environment

- Susan's parents were adamant that environmental experiences at primary school had influenced their now 14 year old daughter to act in more sustainable ways. They noted:

At one time she didn't waste water; that was one of the things that came out at school. I was cleaning my teeth one time and the tap was running, and she said 'Dad, you're wasting water.'

# Development of action competence

## Requires critical reflection

- Some students spoke about the conflict that they felt between their actions and their current thinking, as Brooke (14) said:

I take long showers, I have deep baths, I leave the lights on and ... yeah. I'm not very energy- or water-wise, but I probably should be .... After high school I want to do a bit of travelling except the thing is the planes and the fuel and stuff. And I don't really think about that when I'm travelling, so I get really excited about travelling, but then afterwards I feel guilty.

- Craig (14) was able to critically reflect on his experience in the eco-classroom project:

Well, actually I dislike the fact that we're advertising it as "New Zealand's first eco-classroom designed by children" because it's kind of a half-truth.

# Development of action competence

## Requires confidence to act

- All students reported taking actions at home, but were less confident about taking public action
- Two exceptions were Kerry (14), whose parents said:

She came to the protest with us when we marched in Auckland and she was very adamant that she come because she knew about it and she wanted to come as opposed to just following us.

- And Hayley (14), who chose to speak about environmental issues at intermediate school:

It was really different coming from primary school to my next school, I actually did my school speech about why they should be an enviroschool. Yeah, because it's just so weird, coming from a school that, like, recycles and stuff, to going to one that doesn't do anything like that.

# Development of environmental identity

## So did these students think they were becoming green?

- 3 students felt they were environmentalists or environment protectors, as Robert (14) said:

I would be happy to be called an environmentalist, even a 'greenie', it wouldn't really bother me

- 5 students saw themselves as environmentally friendly
- 3 students were unsure of their position, as Brooke (14) said:

When I'm in the environment, I'm an environmentally friendly person, but when I'm at home, no

# Development of environmental identity

**These students often appeared to be struggling to rationalise an eco-centric view of the world with an ego-centric view, that is, there appeared to be a tension between their relationship with the environment and their relationship with self and peers.**

- As Emily (14) said:

As I've gotten older, other things have become important as well, like, boys and clothes and, you know, that kind of thing

- And Hayley's parents commented:

It's not quite 'been there, done that', I don't mean that in the way that that sounds, but she's more interested in doing sport now and many other things

# Development of environmental identity

**These students' thinking suggested a continuing environmental consciousness even in the near absence of visible classroom environmental programmes, for example:**

There's not been many opportunities at the last two schools. Like, at [intermediate] there was nothing. They didn't do anything environmental. And I guess that kind of affected me (Emily, 14).

There's nothing I see at school [now at high school] that motivates me to do anything because we're not shown the effects of what not taking care of the environment can do (Brooke, 14).

# Development of environmental identity

- All students felt that any show of green-ness on their part would not be criticised by their peers
- Only two students felt their interest in the environment had any effect on their peers
- Students' ranking of their interest in the environment was similar to the ranking that their parents gave

# Summary

## **Students' environmental experiences**

- For most of these students, their primary school experiences and their home and family life (especially out-of-doors exploits) were both strong influences.
- The mutually reinforcing effects of home influences and school influences were often of fundamental importance.

# Summary

## Impact and current thinking

- Environmental learning led to effective development of awareness and concern for environmental issues for most students
- Evidence of development of some aspects of action competence, which may indicate a durability of learning
- Loss of overt commitment shown at primary school to environmental actions attributed to:
  - lack of environmental opportunities in later schools
  - focus on a complex curriculum and assessment in high school
  - development of other peer-mediated priorities through teenage years
  - acknowledgement of environmental identity complicated by other concerns – typical of teenagers?

# Summary

## Durability of impacts

- Some evidence that highly participative environmental experiences, either in primary school or out, have had a long-term impact
- Impact seems most evident now in knowledge and awareness but not necessarily in behaviour
- Commitment to environmental action gained at primary school remains but struggles to persist when, as teenagers:
  - other peer priorities can diminish overt commitment,
  - fewer opportunities and support are provided for further environmental action and assessment drives learning at secondary school

# Questions and Comments

