

The Pacific Science for Health Literacy Project Facilitating DOHaD knowledge translation within a school setting

Celeste Barrett-Watson¹, Delaney Yaqona², Karen Tairea, Upokoina Herrmann⁴, Mark H Vickers⁵, Jacquie L Bay⁵

¹Tereora College, Rarotonga, Cook Islands; ²Nukutere College, Rarotonga, Cook Islands; ³Te Marae-Ora-Ministry of Health, Cook Islands; ⁴Ministry of Education, Cook Islands; ⁵Liggins Institute, University of Auckland, New Zealand



Previously, we presented *quantitative evidence* demonstrating that school-based learning programmes that explored DOHaD research led to positive changes in nutritional knowledge, attitudes, and behaviours in Rarotongan teenagers, n=249.¹

We present here *qualitative evidence* revealing the perspectives of participating teachers (n=9) and students (n=48) regarding the *value of examination of DOHaD evidence in a school-setting*, and the ongoing impact of this process on community and adolescent-driven food-related policy development.

Background

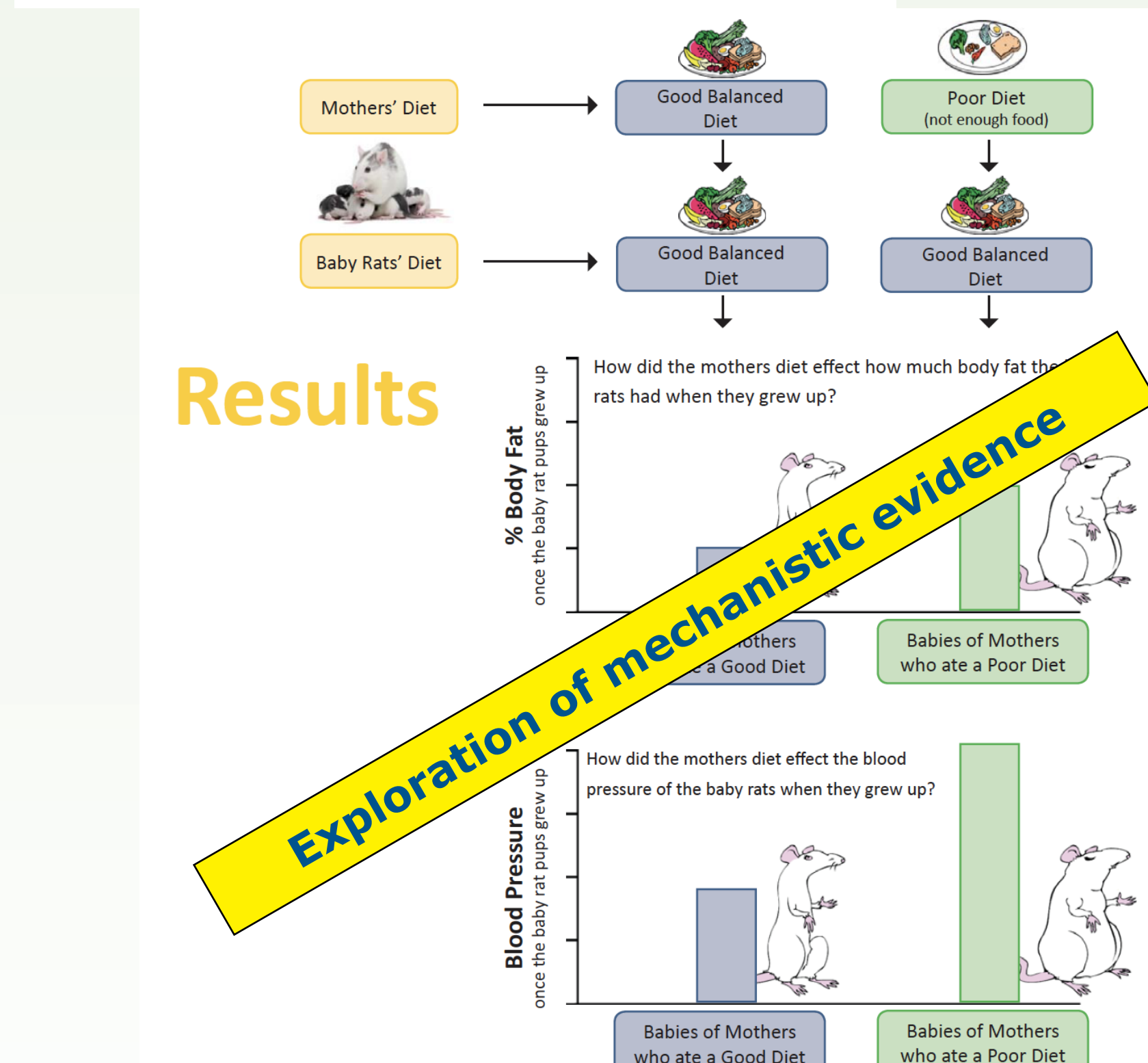
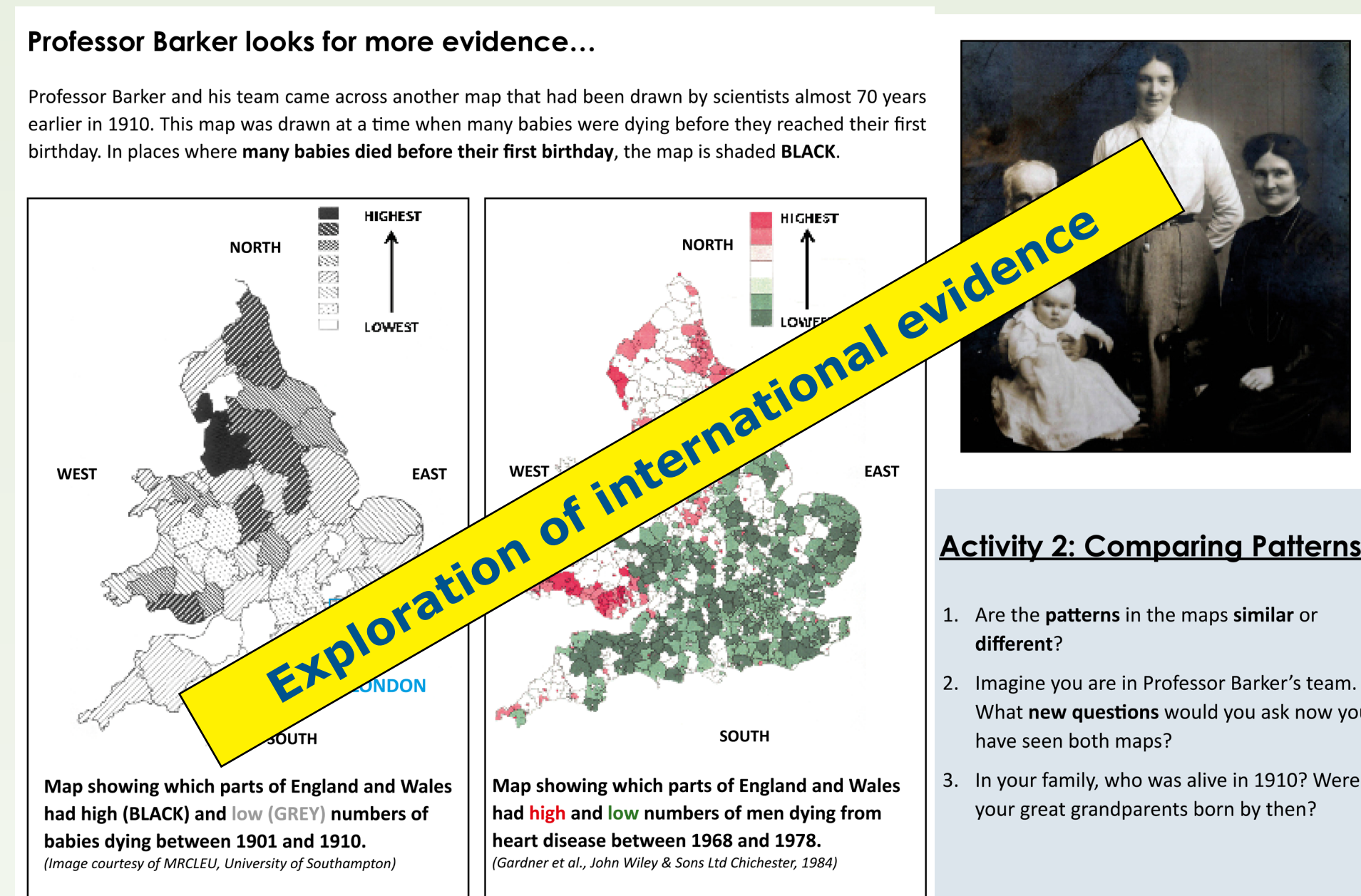
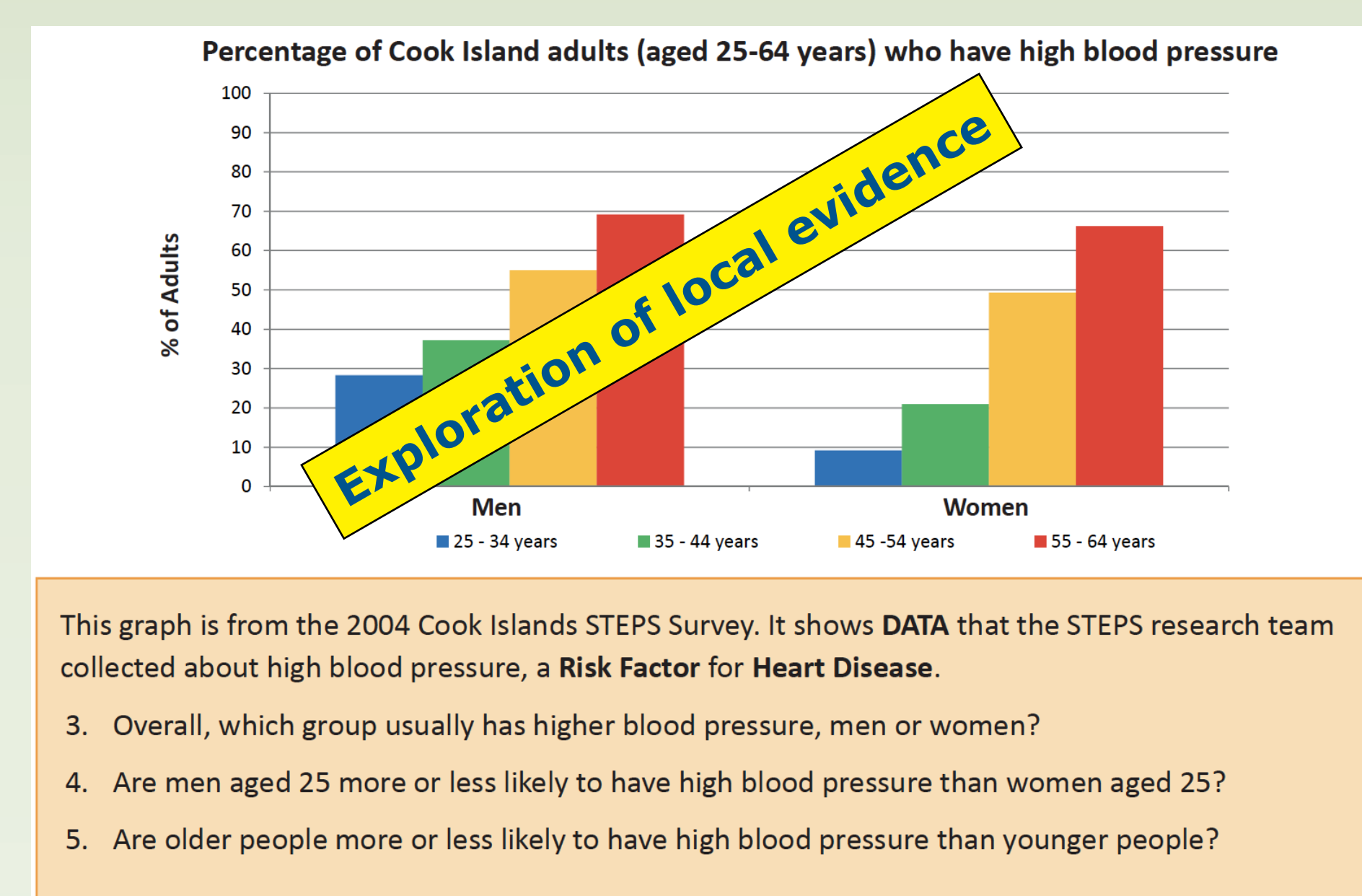
- Adolescence is a period of psychosocial & cognitive development during which behaviour patterns that influence life-long health are established.²
- WHO recommends that school-based interventions to support NCD risk reduction in adolescents & their future offspring **must link to the core mission of schools & integrate into mainstream curricula**.³
- Learning experiences that **critically analyse relevant societal issues** are a core part of modern education enabling teenagers to develop as engaged citizens.

Context

- The Cook Islands (CI) is a Small Island Developing State in Oceania, **population 15,000**.
- The study was conducted on the island of Rarotonga, where 75% of the population live.
- Significant nutritional transitions have occurred over the past 200 years in the Cook Islands. **Adult overweight/obesity is 91%/72%**.
- 29% of adults have raised blood glucose**

Knowledge Translation Tools

Examples from resources for 13-year olds⁴



Process

2012 - 2013

- Teachers and DOHaD scientists engaged in **dialogue**
- A **Shared vision** was established
- Teachers developed understanding of DOHaD
- Intervention concept **co-constructed (Fig 1)**
- A grant application was **written together**

2014 - 2015

- Resources developed to enable exploration of **local health evidence, traditional knowledge, DOHaD evidence**.^{4, 5}
- Individually matched pre-intervention, 3-, and 12-month post-intervention data was analysed, n=246
- Focus group evidence from teachers (n=9), & students (n=48), 6- & 12-months post-intervention was analysed

2016 - 2017

- Evidence of positive impacts was established
- Schools elect to continue the programme**
- Students propose** that they would like evidence about their metabolic health status; teachers support this
- Metabolic health checks implemented; learning resources assist students to understand the data
- Tereora College community engages in **discussions** regarding **fizzy drink consumption** evidence and impacts
- The school **conducts a second survey** regarding fizzy-drink consumption and engages in more dialogue

2018

- Tereora College implements a 'Fizz-Free' policy reflecting the evidence-based dialogue from the previous two years.

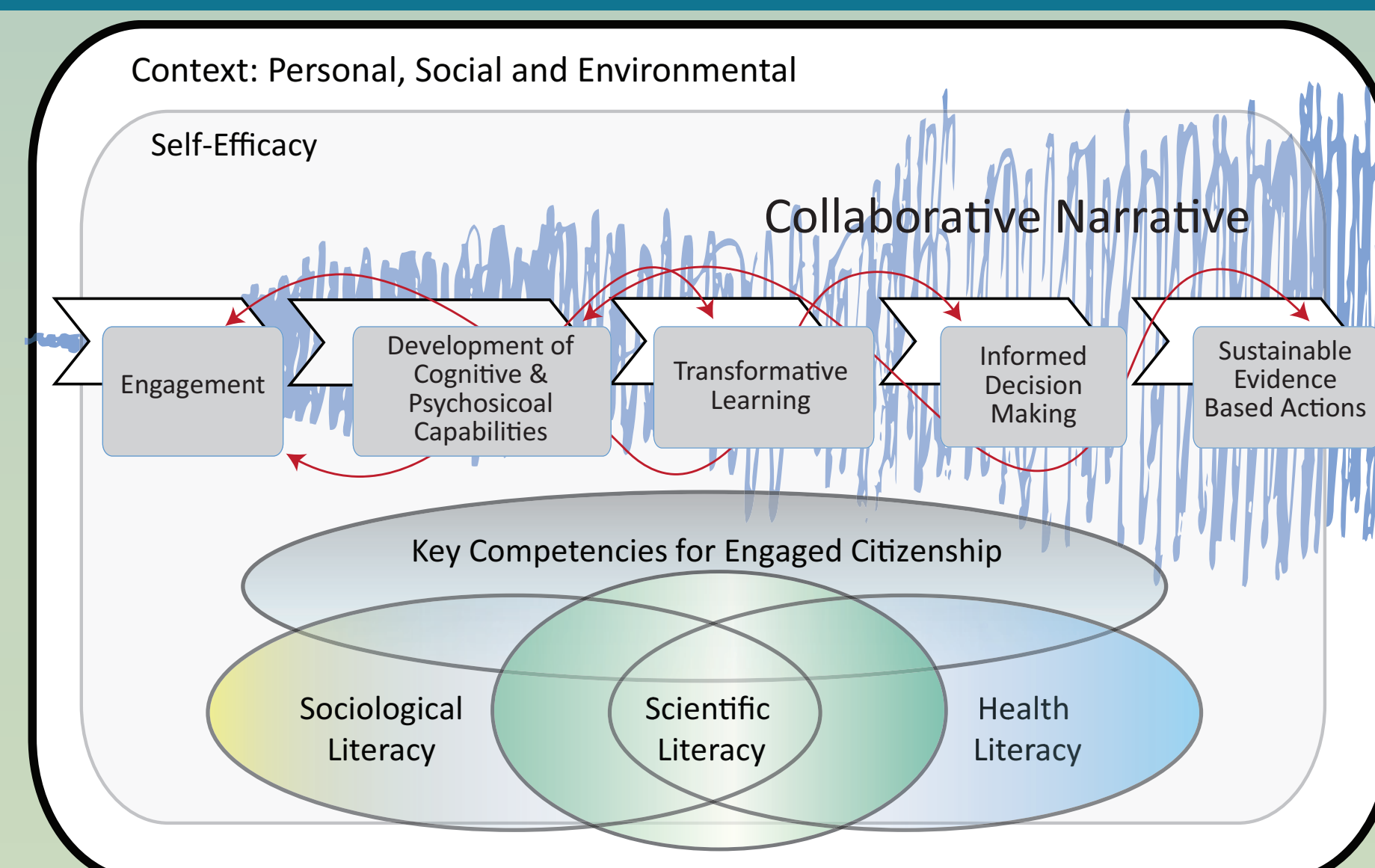


Figure 1: Collaborative narrative enables exploration of evidence; linked to the science, social science & health curricula in each school

Tereora College bans soft drink sales

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Tereora College, the country's leading secondary school, has decided to ban the sale of soft drinks at the school tuck shop (canteen), from the start of this academic year.

What value do teachers see in exploration of DOHaD evidence?

Teachers reported that examination and critical analysis of research evidence in classrooms encouraged students to:

- explore personal and other perspectives regarding NCD risk
- develop understanding of associations between early-life environmental exposures and later-life NCD risk
- reflect on the meaning of the evidence from social and cultural perspectives
- develop core capabilities associated with research; act on their learning

"The context is relevant because of the high levels of NCDs. But, people are not aware. Raising awareness through education across all subject areas is meeting community needs"

Senior Social Sciences Teacher

What did teenagers take from exploration of DOHaD evidence?

Adolescents reported engaging peers and families in discussions about the evidence. This contributed to:

- significant reduction in junk food consumption, sustained to 12-months post-intervention (previously reported)¹
- health-promoting actions by teenagers that in some cases impacted families
- communication of DOHaD evidence into the family
- the development of a community-driven "fizz-free" policy in one of the three schools

"I have started cutting down on meat and I am eating the right food at the right time, and we changed some of the eating rules in our house..... Before we used to have Nutella chocolate and now we've changed it to Vegemite. My mum, she was amazed, she was shocked..... Now everything in the house is starting to get changed, eating healthy and doing exercise."

Student (Aged 13 years)

"When I talked to my mum about it she thought that when babies come out real big they are good. But it is actually not good to have really big babies. But people think that is cute."

Student (Aged 15 years)

"Obesity can come from eating too much & not enough physical activity... but it is also about your family - the way they eat now & the way they ate when your mum was pregnant with you. If mums cannot get a good diet then, the baby could be at higher risk for diabetes or heart disease when it is older"

Student (Aged 15 years)

Conclusions

Collaborations between teachers and scientists that facilitate learning in schools whereby adolescents examine DOHaD evidence and debate its meaning for their communities offers an important avenue for community-based DOHaD knowledge translation.

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