



*Weaving our Worlds –  
a strengths+evidence programme  
for Māori student success in health  
science*

UNIVERSITY  
of  
OTAGO



Te Whare Wānanga o Ōtāgo

NEW ZEALAND

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# *He Mihi*

- Ako Aotearoa
- Ministry of Health
- Division of Health Sciences
- Te Huka Matauraka



*125 Māori Health Science students –  
Introductory goal setting session*

# Weaving our Worlds

- Background
  - Māori Health Workforce Development Unit
  - Health Science First Year / Te Whakapuāwai
- Programme
- Evaluation
- Imbedding change
- Outcomes to date



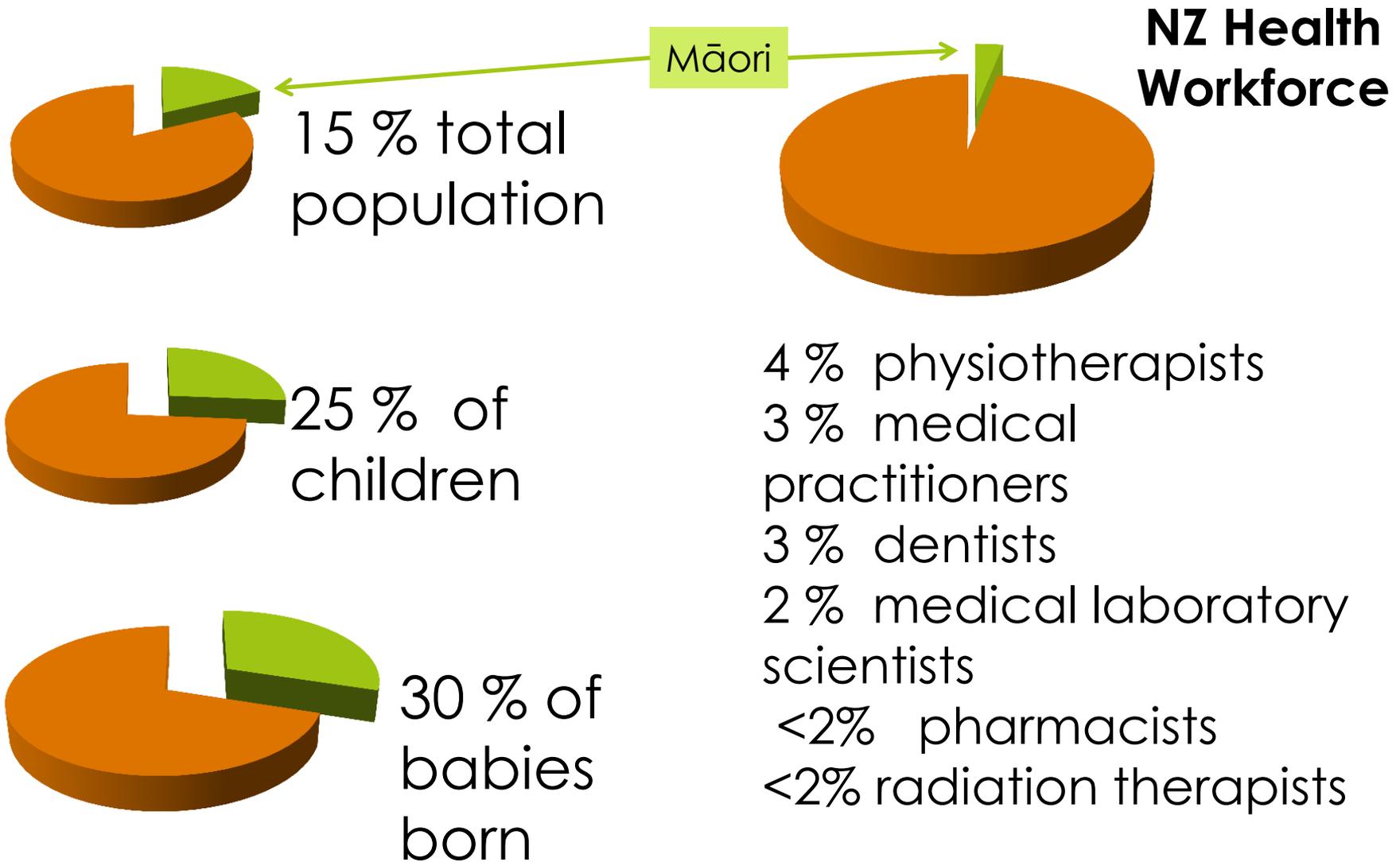
*Māori Medical Students 2011*

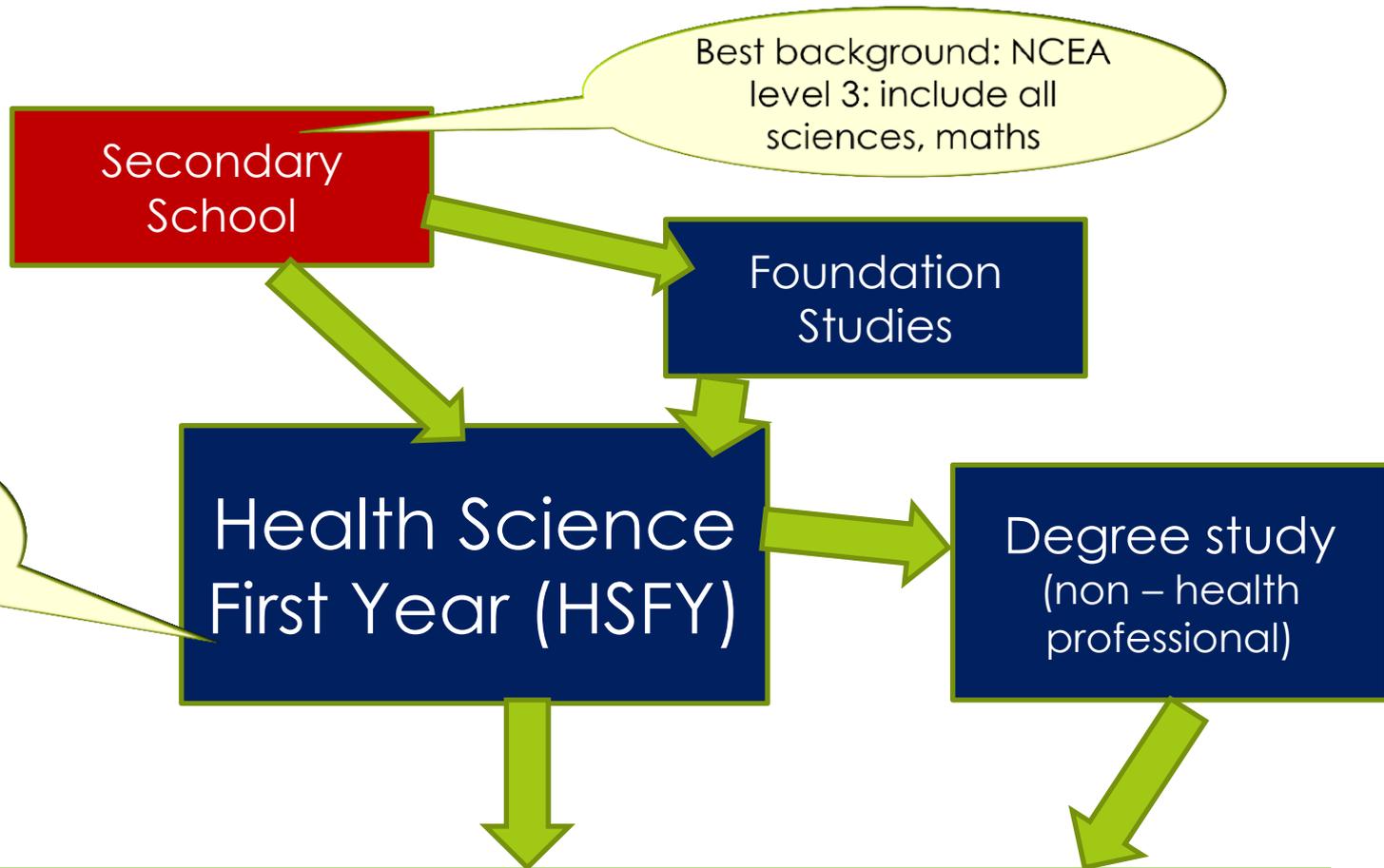
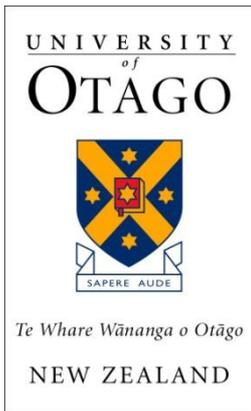
# Māori Health Workforce Development Unit (MHWDU)

- Established 2010
- Māori tertiary learners – excellence in achievement, meeting aspirations
- Building the Māori health and health science workforce
- Research / Evaluation
- Identifying and sharing effective / best practice



# Population Context





## **DIVISION OF HEALTH SCIENCES**

Medicine, Dentistry, Pharmacy, Physiotherapy,  
Medical Laboratory Science  
Oral Health, Dental Technology,  
Medical Radiation Therapy, Health Science



## **VISION (10 YEAR GOAL: 2010 TO 2020)**

- At least one in five (20%) of students across the Division of Health Sciences are Māori**
- Māori academic achievement is at least as good as the total health science student population**

**20 %**

Inspiration /  
Aspiration



Recruitment /  
Transition



Retention / Achievement

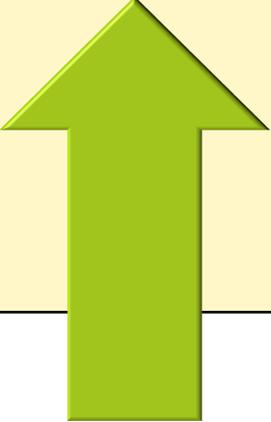


Graduation



# Māori Health Workforce Development Unit

## Programmes

1. Te Ara Hauora	2. Tū Kahika	3. Te Whakapuāwai	4. Tū Tauria Hauora
<p><i>Pre- Tertiary / Secondary</i></p> <p>Science Engagement,  Health Science Outreach</p> <p>Science Wānanga / Hands on Science Scholarships</p> <p>Runaka relationships</p>	<p><i>Foundation</i></p> <p>Culturally responsive transition programme – Foundation Studies</p>	<p><i>First Year</i></p> <p>Health Science First Year Māori Student Support and Achievement</p> 	<p><i>Retention / Completion</i></p> <p>Health Science / Health Professional Degree Programme Māori Student Support</p>

Science Wānanga  
Waikawa / Picton



## Te Ara Hauora

**Outreach and  
Recruitment:**

**Engagement  
Inspiration  
Information  
Relationships**

Programmes for secondary school students (working with Division of Sciences):

- **Years 9-11 students** – Science engagement, inspiration re health careers, University exposure
- **Years 12 and 13** – Science engagement, subject, career choice, University experience

# Tū Kahika implemented 2010

- Foundation Year Health Sciences preparation & support programme for Māori students
- Māori led & implemented
- Providing wrap-around support, academic, residential, financial, pastoral & cultural



*100% retention, completion and progression of TK students into Health Sciences First Year (HSFY) 2011*

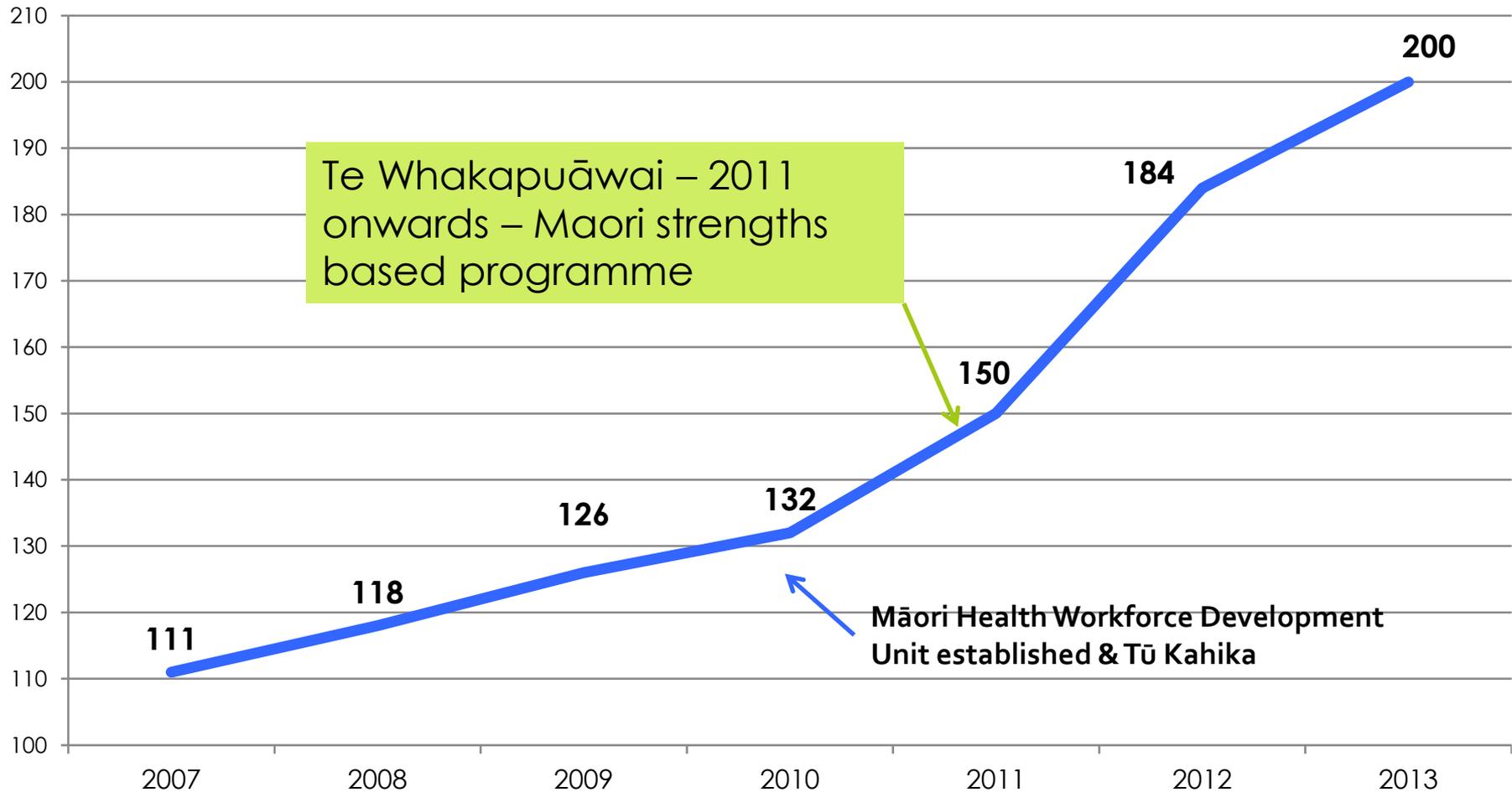
# Health Science First Year pre-2011

- Pre 2011 HSFY outcomes
  - High attrition of Maori students in HSFY
  - Less than 50% making it to 2<sup>nd</sup> semester
  - Only 1 in 4 going into health professional programmes
  - Most poor outcomes among educationally disadvantaged students (e.g. Low decile, science gap, first in family to tertiary, rural, non-college resident)
- 2011-2013 Te Whakapuāwai developed and delivered

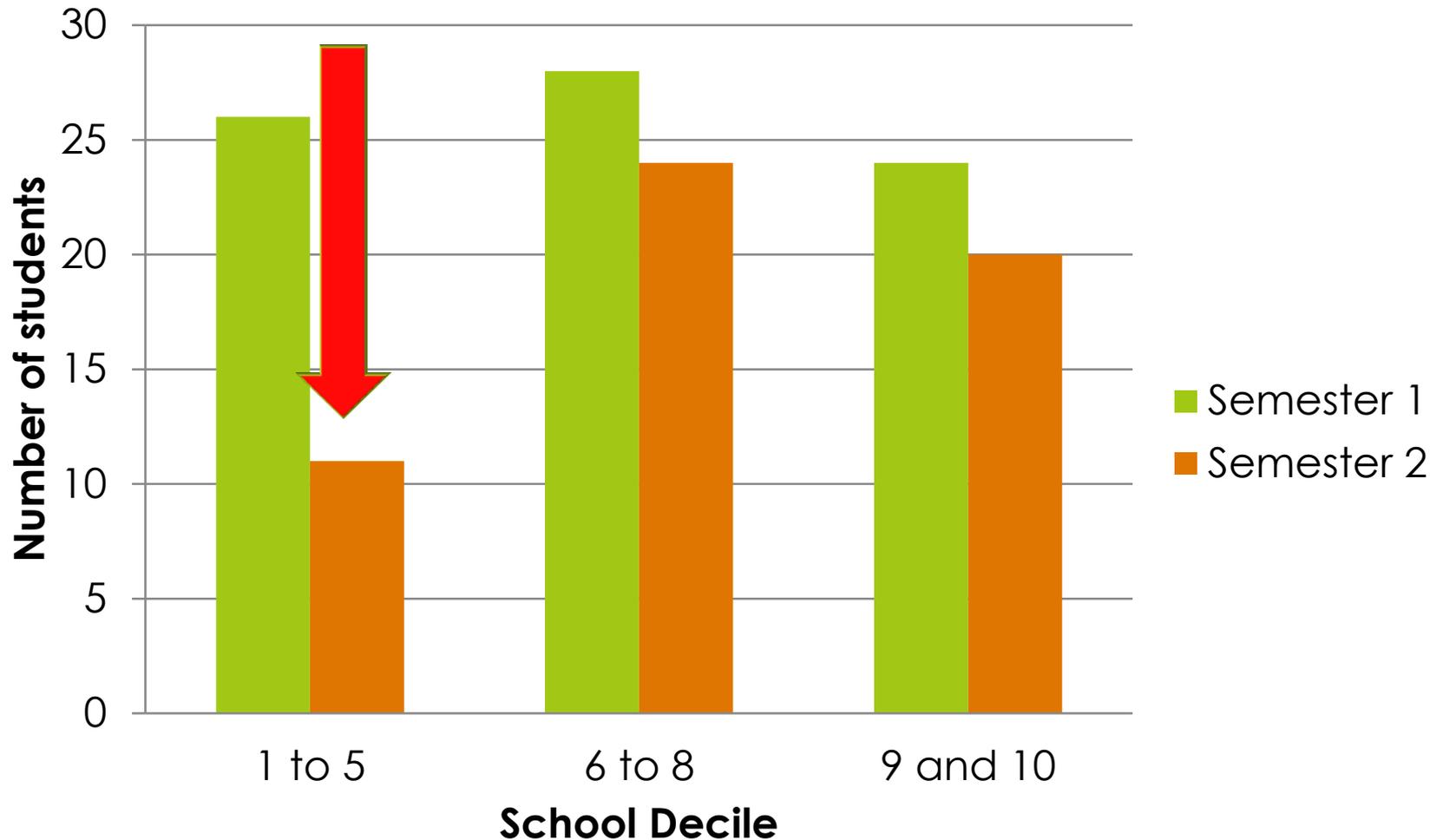
# Te Whakapuāwai 2011-2013

- ▣ **Strengths based** - whole student approach
- ▣ **Māori centred** - providing manaaki & fostering whanaungatanga
- ▣ **Knowing each student** - responding to group and individual needs
- ▣ **Early contact** and assistance with transition into HSFY & Uni
- ▣ **Academic support** - tailored and timely and information
- ▣ **Course and career advice**
- ▣ **Database** – development and maintenance
- ▣ **Student progress** -outcomes monitoring

# Total # of Māori in Health Professional Programmes at Otago



## HSFY Maori students (in first year from secondary school) by decile and semester 2013



# Weaving our Worlds

## AIMs

- To refine, implement and evaluate **the impact of an enhanced strengths-plus-evidence-based support programme** on the retention and academic progression of Health Science First Year (HSFY) Māori learners from diverse backgrounds.
- **To document strategies** to accelerate learning development, improve academic results and contribute to a sense of belonging for Māori learners.
- **To imbed change based on findings** in order to achieve positive and equitable outcomes for Māori outcomes



*Engaging with runaka /  
community*

# Te Whakapuāwai 2014 'Strengths + Evidence' based programme

***Weaves Māori pedagogies, educational theory & evidence of effective practice to accelerate student learning development & academic success***

## Strengths

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- ▣ Māori pedagogies & practice
- ▣ Learning to date e.g. Tū Kahika
- ▣ Strengths-based anti-deficit & non-remedial approach

## Evidence

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- ▣ Peer Assisted Study Skill Development
- ▣ Mindset Theory (Fixed vs Growth)
- ▣ Goal Theory (Mastery)
- ▣ Self Regulated Learning
- ▣ Metacognition- 'thinking about thinking'
- ▣ Motivation & Self efficacy

# Te Whakapuāwai 2014 +

***PROGRAMME DESIGN: Specific equity focused programme targeted to improve academic outcomes for all learners***

## ▣ **Full Cohort Support**

- ▣ Transition, Induction Motivation, Whanaungatanga, Hauora, Tutorials, Degree & Career Planning

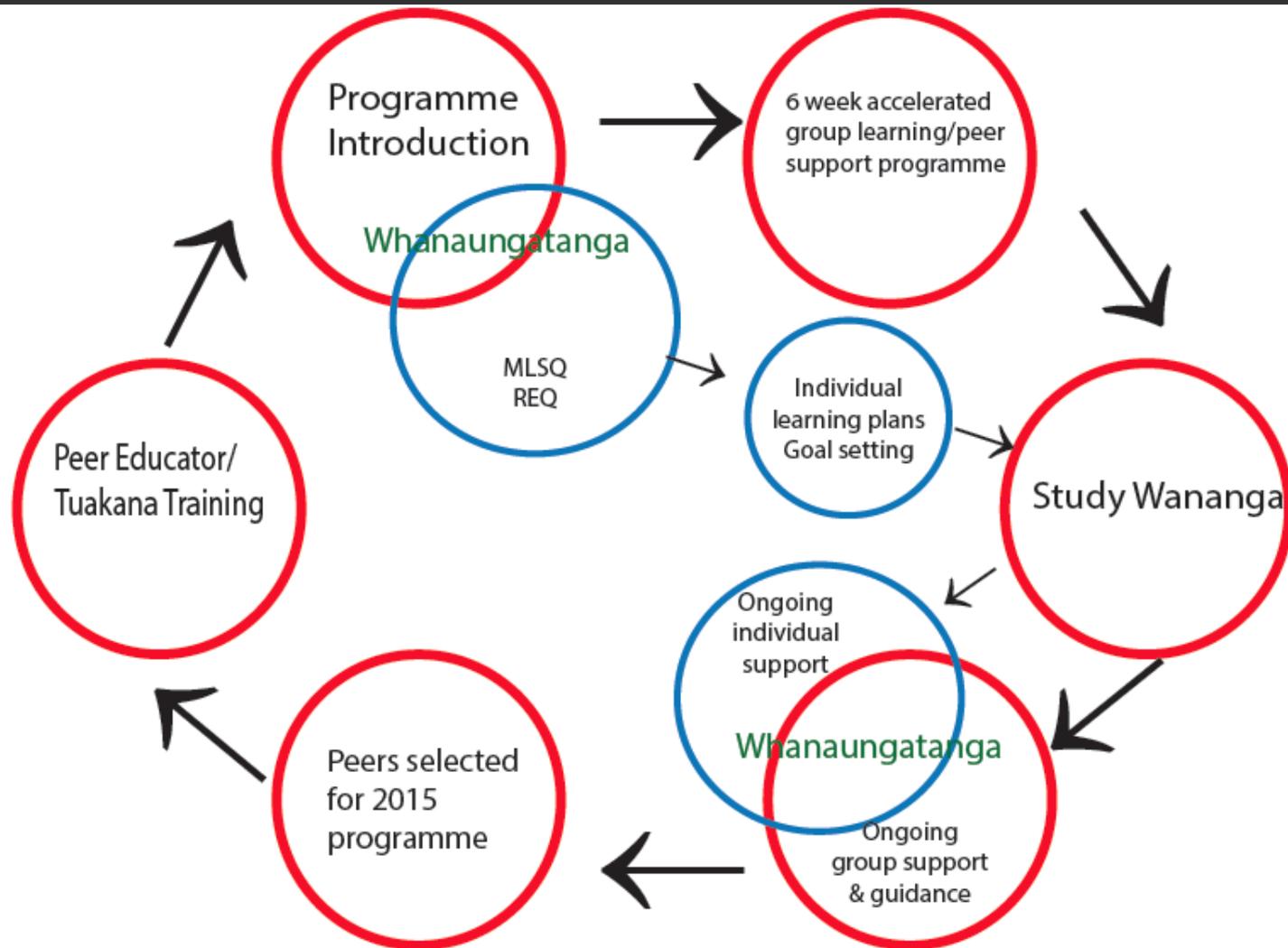
## ▣ **Group Support 12:1 ratio**

- ▣ Weekly accelerated learning development sessions (x6)
- ▣ Tuakana (Peer) facilitated
- ▣ Cognitive strategies focus (Metacognitive Development)
- ▣ Skills (not content) Focus

## ▣ **Individual Support 1:1 ratio**

- ▣ Goal setting, Individual learning plans (ILP)
- ▣ Study skills & motivation measurement
- ▣ Tailored time & resource management planning
- ▣ Pastoral support
- ▣ Course advising

# Te Whakapuāwai 2014 +



# Measuring Outcomes / Impact – did this make a difference and in what way?

## Questions

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- In what ways are outcomes for Māori students in HSFY impacted upon by this programme?
- In what ways are outcomes for students with educational disadvantage impacted upon by this programme?
- Does this differ from previous time periods?

## Data / Analyses

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- Comparing academic outcomes Māori students HSFY between time periods:
  - 2008-2010 (pre Te Whakapuāwai)
  - 2011-2013 (first 3 years of Te Whakapuāwai)
  - 2014 / 2015 – following phase 1, phase 2 Weaving our worlds
- Student / whānau / stakeholder perspectives

# Evaluation

## Quantitative

- ▣ Student demographic / educational backgrounds
- ▣ Academic outcomes 1<sup>st</sup> and 2<sup>nd</sup> semester (each paper, overall)
- ▣ Level of participation in programmes
- ▣ Entry into health professional programmes / other tertiary study

Metacognitive measurement tools:

- ▣ MSLQ

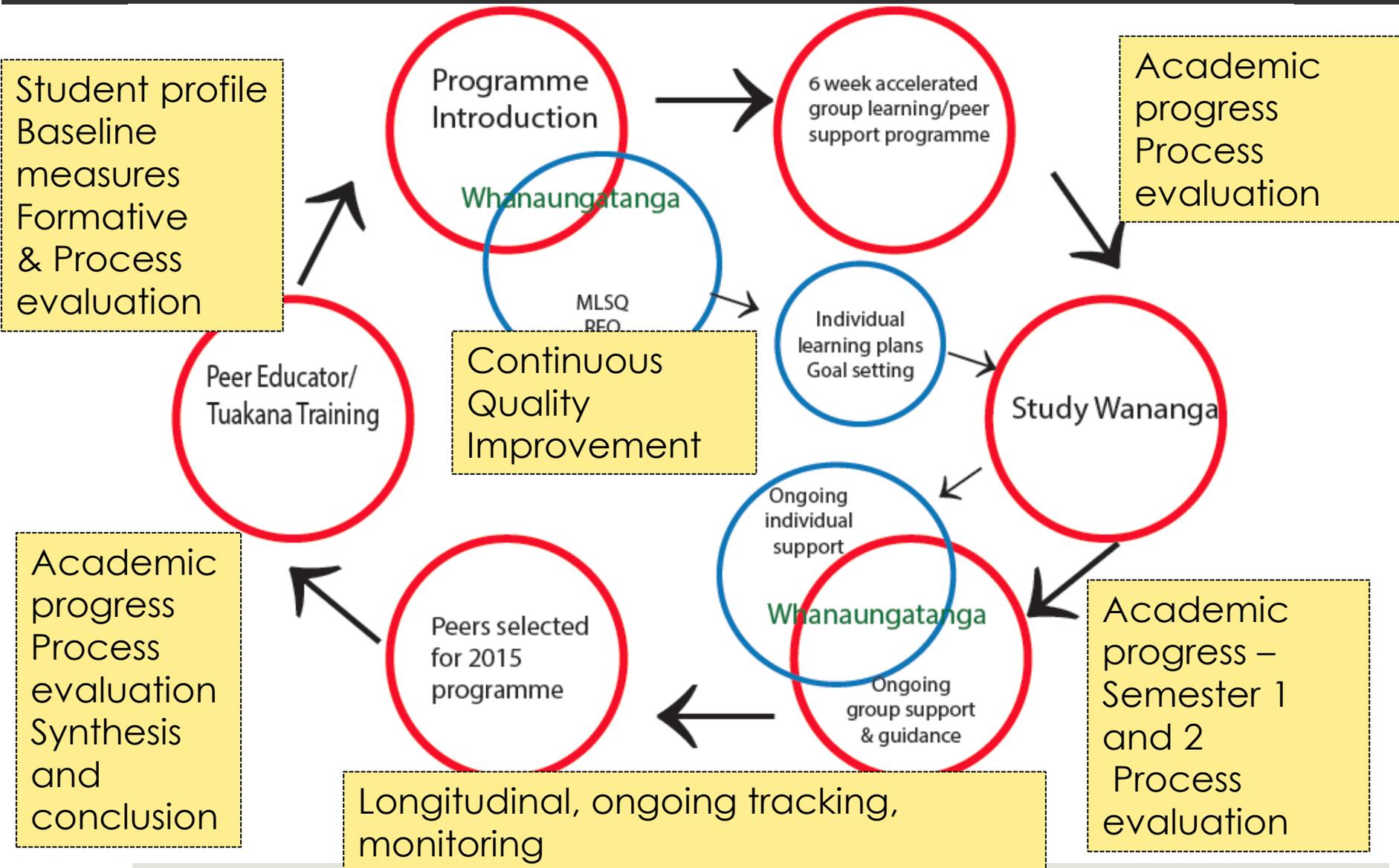
## Qualitative

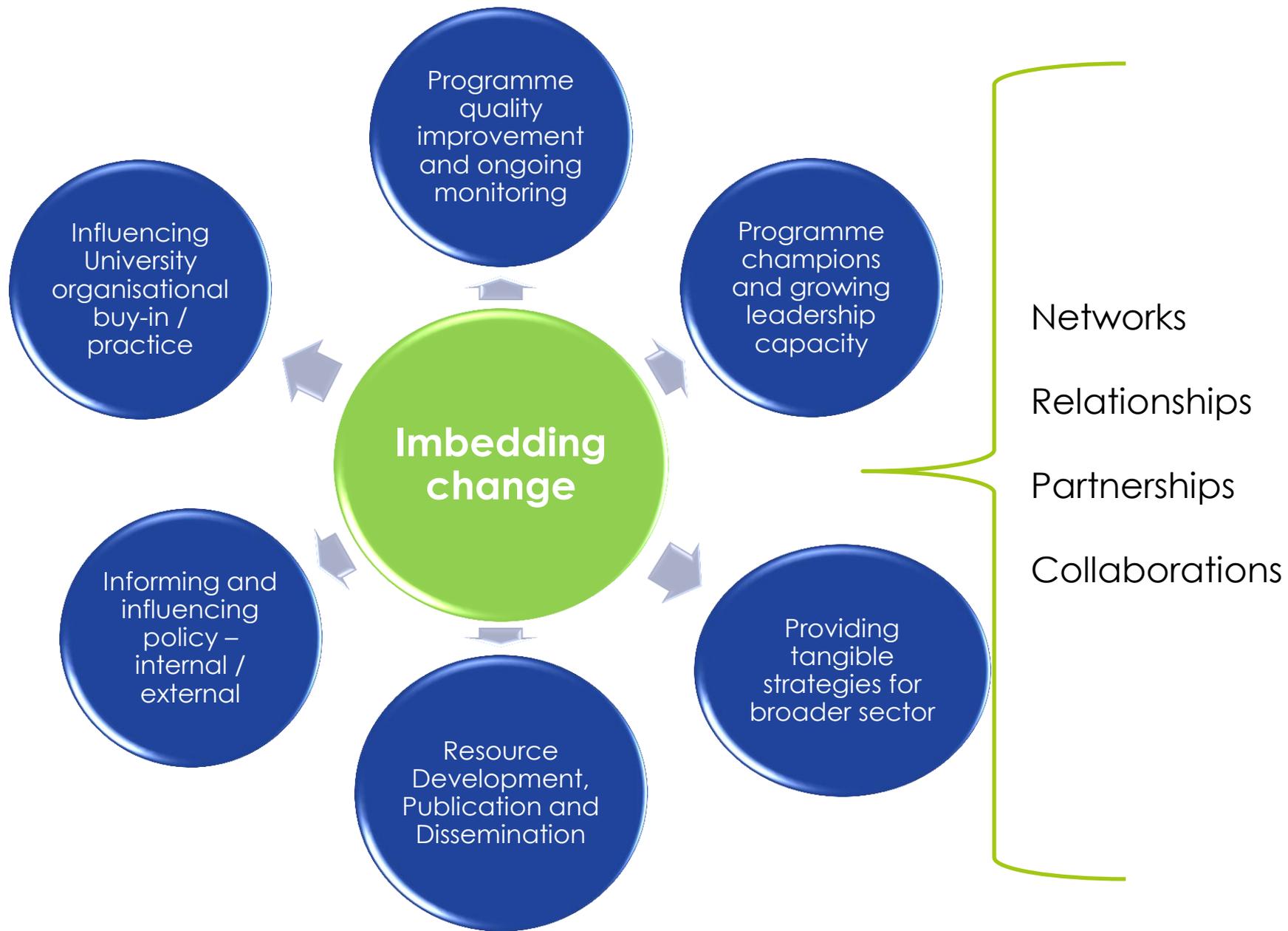
- ▣ Interviews / Focus groups
  - ▣ Students (HSFY)
  - ▣ Whānau
  - ▣ Staff
  - ▣ Peer tutors
  - ▣ Other stakeholders

**DATA**

2008 to  
2015 +

# Evaluation: Te Whakapuāwai 2014 +



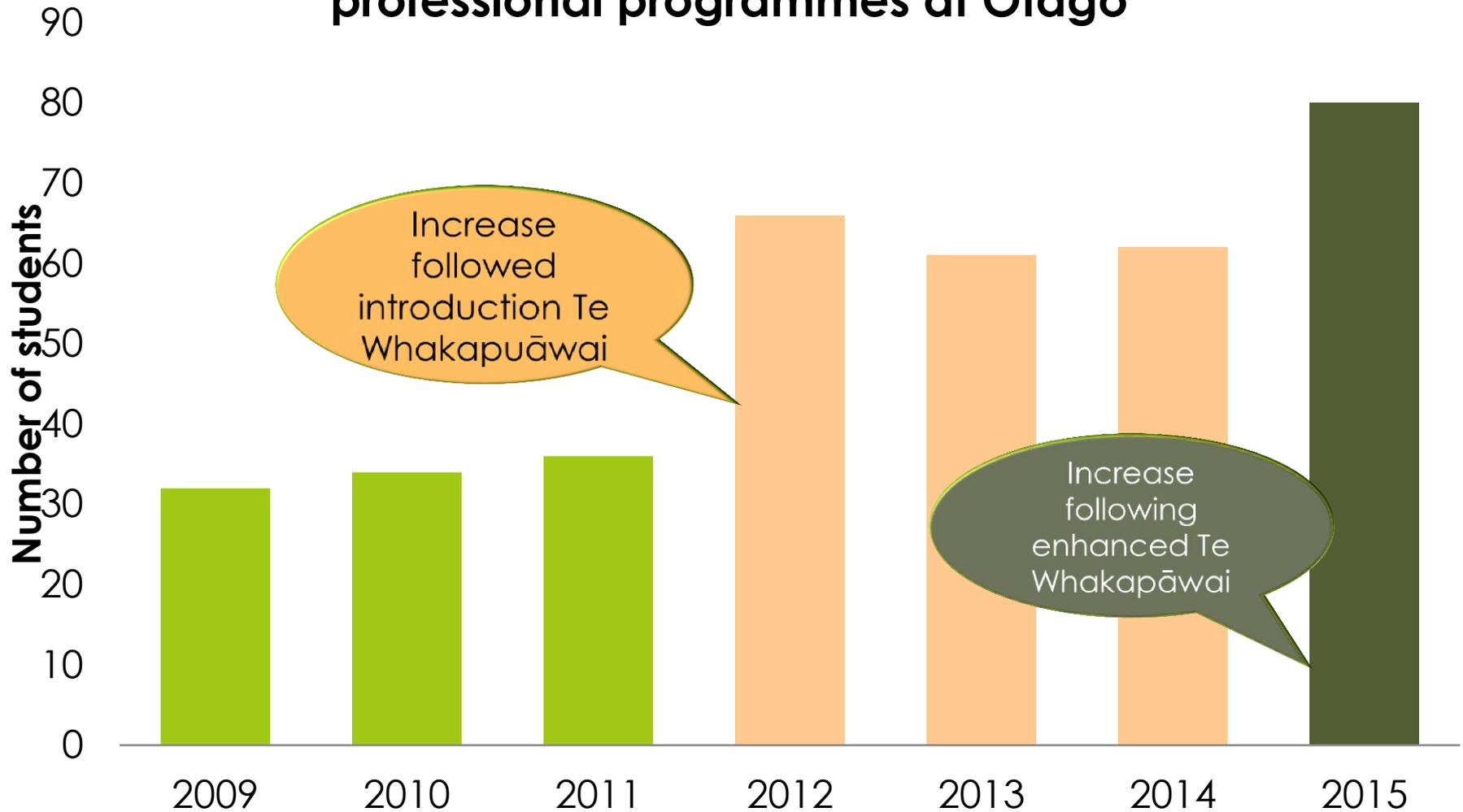


# Weaving our Worlds – a future vision

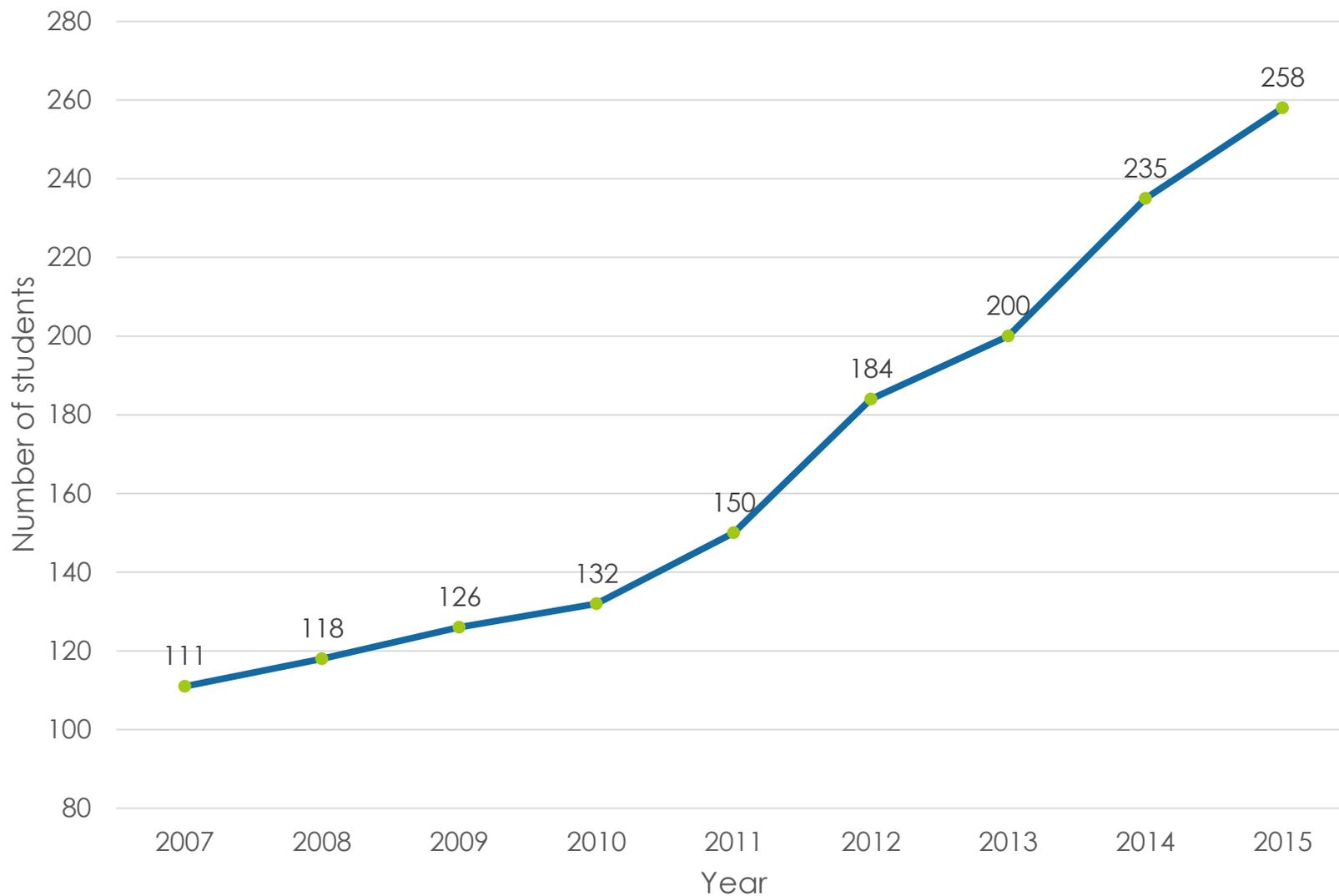
*Weaving our Worlds will lead to:*

- ❖ More Māori learners achieving at same level if not better than other students*
- ❖ Ongoing, demonstrable positive outcomes for educationally disadvantaged students*
- ❖ Māori world views and practices being imbedded as part of best practice for tertiary learners*
- ❖ Increased knowledge, skills and strategies to achieve equity among tertiary learners*
- ❖ A comprehensive database for longitudinal monitoring informing direction and activity (strategy)*
- ❖ Realising the MHWDU vision for 20% of students being Māori*

# Number of Maori students entering health professional programmes at Otago



## Number of Māori students across all health professional programmes by year



# Summary

- Weaving our worlds – a work in progress
- First phase – a positive impact
- Continuous quality improvement in a reflective, learning environment, equity lens
- Culturally responsive, high expectations, evidence-based
- Student and whānau strengths – our greatest assets!
- Outcomes for education, health, science and whānau