

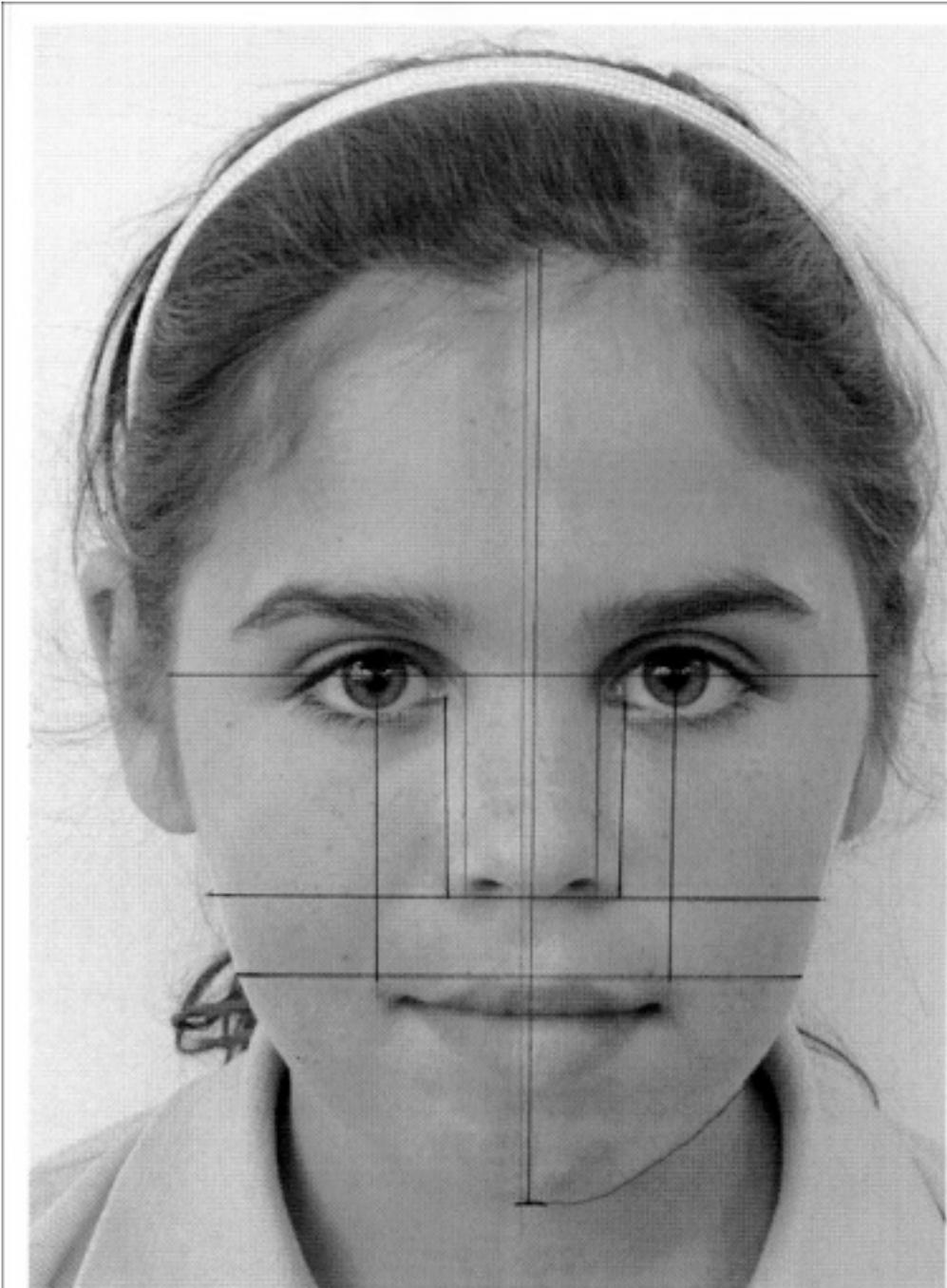


# Improving mathematics outcomes of Aboriginal & Torres Strait learners

AAMT Symposium  
July–August 2013

Australian Association of Mathematics Teachers Inc





# Imagine

Imagine if Aboriginal students in Australia had the same mathematics outcomes as non-Aboriginal students.

Australia would be a different place.

Much of the present teaching of mathematics, particularly in the primary years, has Aboriginal students doing mathematics that is not related to their world and their everyday experiences.

As a result, by the time many Aboriginal students have reached the latter years of primary school, they have been alienated from mathematics.

Matthews, Perry & Howard, 2003



# BLUEPRINT

Supporting best teaching of mathematics for  
Indigenous learners

- A call for action
- National Strategy



# About AAMT

- 40,000 teachers of mathematics
- AAMT (and its eight state and territory Affiliates) exists to support the teaching of maths
- How we got here
  - Melbourne Declaration
  - Aboriginal and Torres Strait Islander Education Action Plan 2010-2014
  - Ministers' recommitment (April, 2013)



# Aboriginal and Torres Strait Islander Education Action Plan 2010-2014

## Literacy and numeracy



### Outcomes

- Aboriginal and Torres Strait Islander students are meeting basic literacy and numeracy standards and overall levels of literacy and numeracy achievement are improving.



### Targets

- Halve the gap in reading, writing and numeracy achievement between Aboriginal and Torres Strait Islander students and non-Indigenous students by 2018.
- Increased Aboriginal and Torres Strait Islander student participation rates in the National Assessment Program - Literacy and Numeracy (NAPLAN).



### Performance indicators

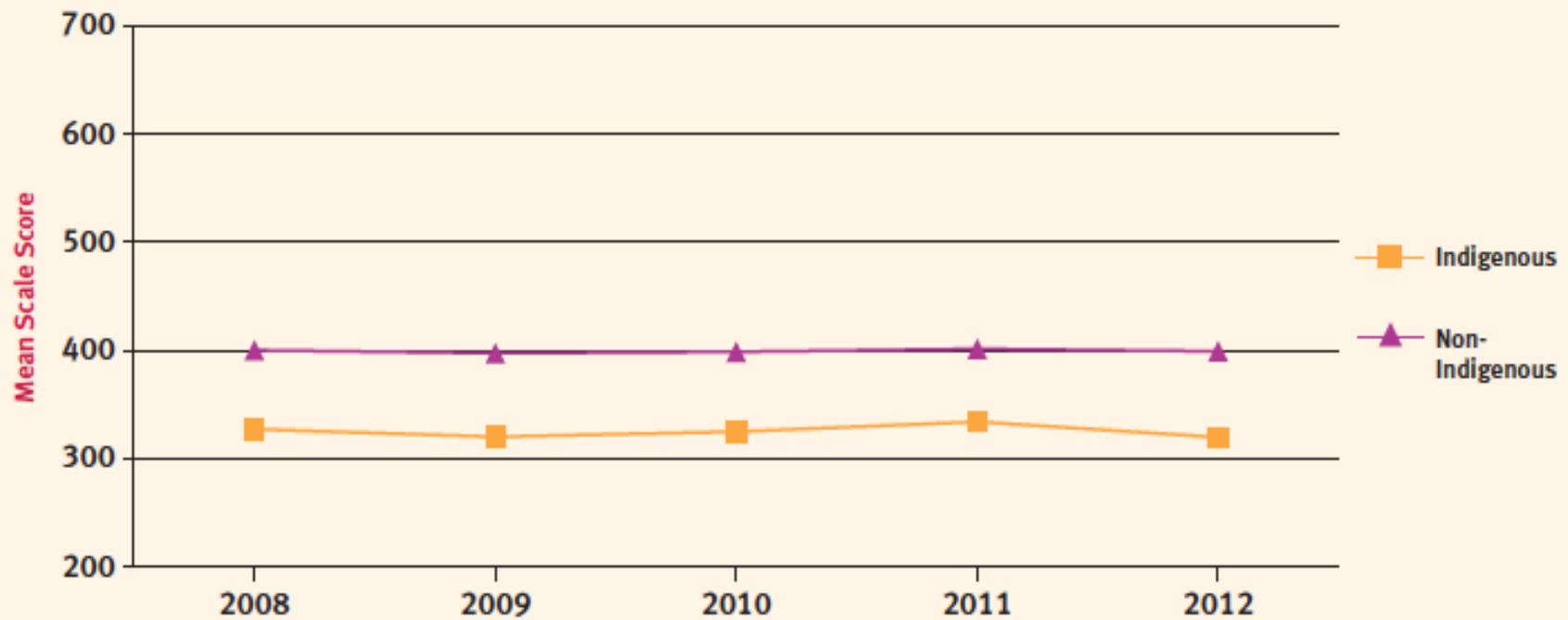
- Proportion of Aboriginal and Torres Strait Islander students at or above the national minimum standard in reading, writing and numeracy in Years 3, 5, 7 and 9 in NAPLAN testing.
- Participation rates of Aboriginal and Torres Strait Islander students in NAPLAN.

Are we making progress?

Can we do more?

# NAPLAN

Figure TS.N6: Achievement of Year 3 Students in Numeracy by Indigenous status, Australia, 2008–2012.





# Numeracy, mathematics and Indigenous learners

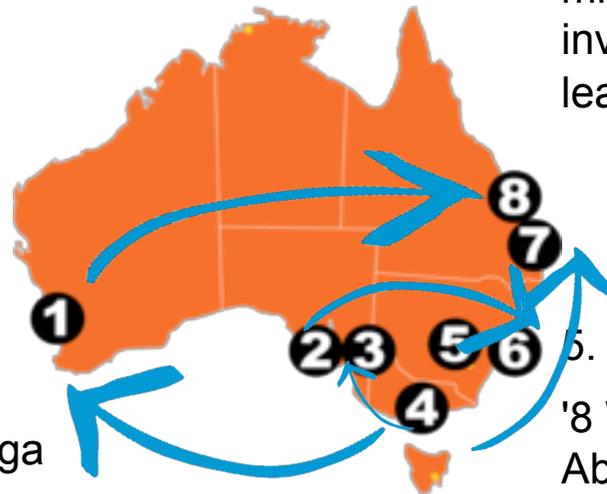


1. Swan  
language of  
mathematics,  
Aboriginal  
educators &  
maths, teacher  
mentors

2. Noarlunga  
explicit and  
scaffolded  
pedagogy

3. Alberton  
Resilience;  
mathematisation &  
contextualisation

4. Healesville  
cultural  
competency,  
'front loading'  
students



8. Gladstone  
middle years  
investigative  
learning

7. Nerang  
middle managers  
in mathematics

5. Orange  
'8 Ways of  
Aboriginal  
learning'

6. Dharug  
early years  
cultural identity  
through  
mathematics;  
meta-language

# Cluster Findings

## and associated resources



AITSL, 2011

# Cluster Findings and associated resources



## Standard 1



**Know Indigenous learners and know how they learn: Be aware, be connected, be sensitive**

1.3 Know what is significant in the daily, lived reality of learners so mathematics learning can be culturally relevant and connected as well as academically rigorous.



# Monday Maths Mob

What does it look like:

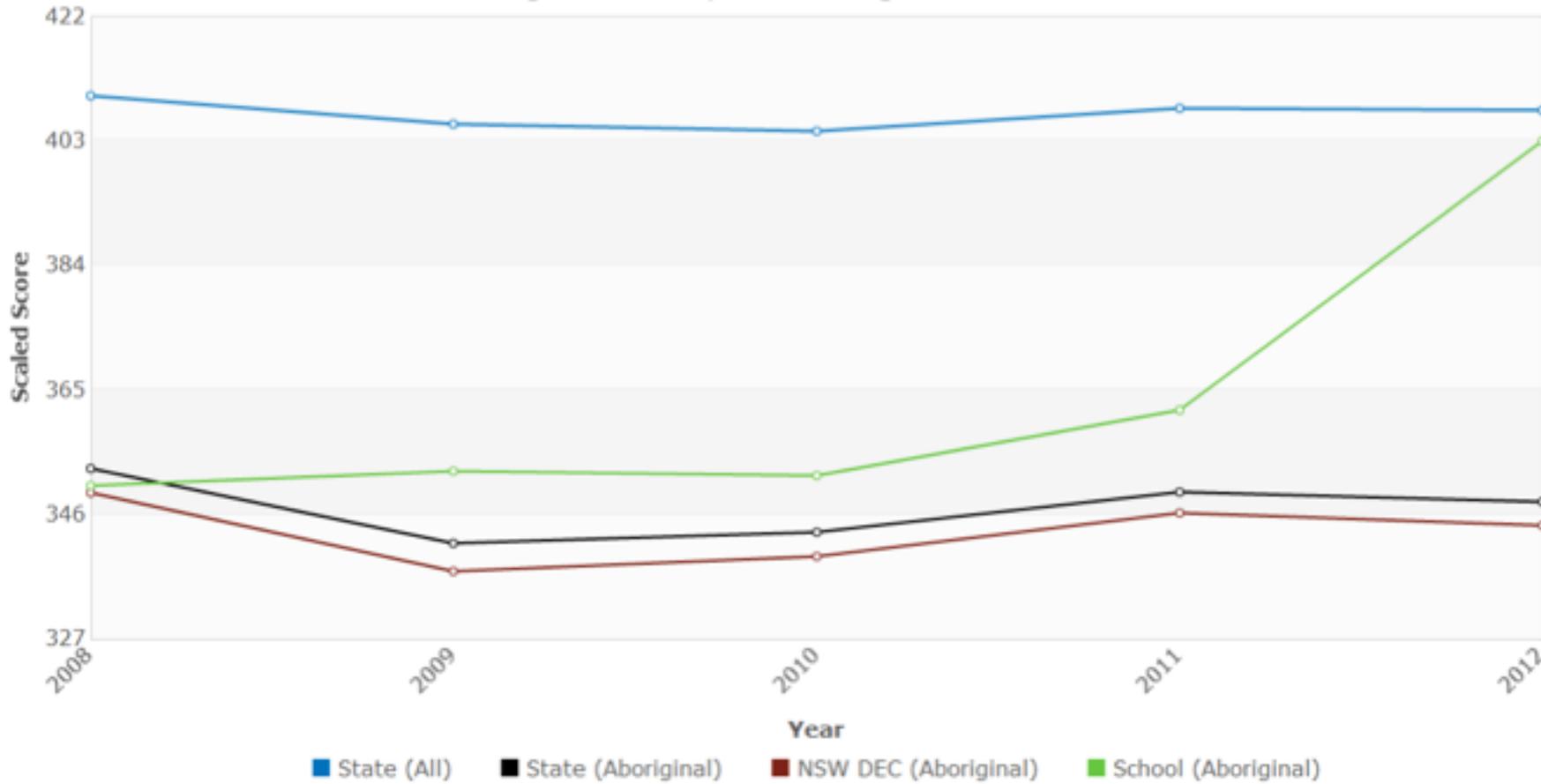
- ★ Maths Mob runs each Monday from 2:00pm – 3:00pm
- ★ In Semester 1 - Aboriginal and Torres Strait Islander Kindergarten students come together in the library
- ★ In Semester 2 - all Kindergarten children take part in Maths Mob in their own classroom
- ★ Parents and Carers are invited to come along
- ★ Stage 3 buddy classes take turns rotation to join in





# NAPLAN Data 2012

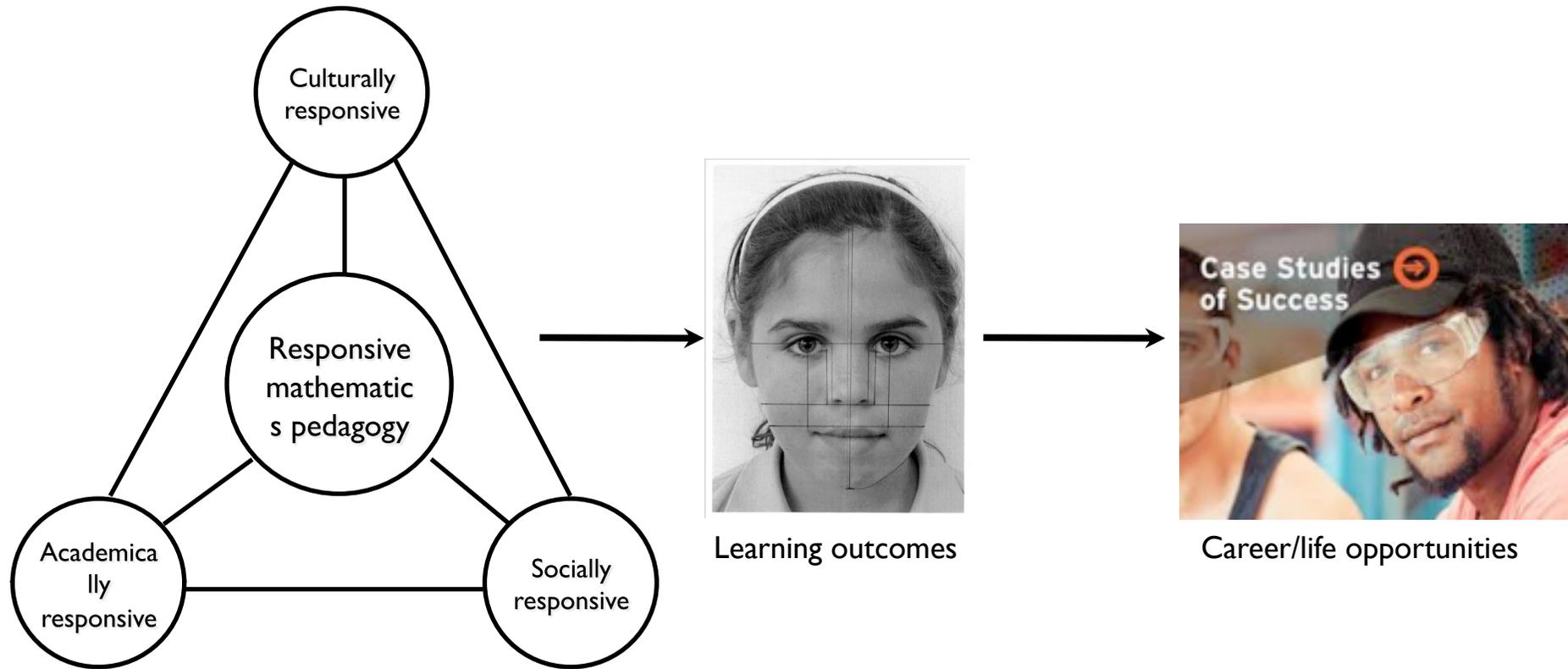
Trend for NAPLAN 2012 Year 3 Aboriginal in Number, Patterns & Algebra



# 6 things we know from Make it count

1. cross-sectoral collaborations work
2. learning communities
  - connected nationally, systemically and locally
  - practitioner-researcher partnerships
  - Focussed learning
  - grass roots upwards
  - PL in mathematics content knowledge, pedagogy and cultural responsiveness
  - critical friends
3. Aboriginal educators key
4. parent and family engagement and creating communities
5. leaders who are prepared to have a go
6. National approaches can work and work well.

# Better teaching of maths



How do we get there?

# AAMT Special Interest Conference



numeracy,  
mathematics &  
learners NATIONAL CONFERENCE  
Adelaide, 14-16 October 2012



## Conference details

Summary

Draft program

Discussion Paper

Contact us

## Post-conference

Keynotes & Presentations

Photo gallery

## My Registration

Confirmation

My Agenda

## Numeracy, mathematics and Indigenous learners national conference

### Conference summary

This Conference Summary consists of:

1. A summary of the Theme Group Discussions
2. The Conference Proceedings with abstracts, presentations and papers from the Showcase of Practice
3. The Conference Evaluation from the online survey completed by participants.

Download [Conference Summary](#)

### About this conference

The *Numeracy, mathematics and Aboriginal and Torres Strait Islander Learners Conference* will bring together respected workers in the field to discuss the key issues, opportunities and challenges in improving the educational outcomes for Aboriginal and Torres Strait Islander students in numeracy and mathematics. The program begins at 2pm on Sunday 14 October and concludes at 4pm Tuesday 16 October 2012.

The conference aims to:

- Build a national picture of what is happening for Indigenous learners in mathematics and numeracy education
- Showcase the work of practitioners, Indigenous education assistants, researchers and school leaders
- Enable national sharing of current achievements and directions
- Use the invited input and all discussion as the basis for preparing a research-informed, practice-driven framework of advice and directions
- Further build networks.



# Coordinated & Connected National Network

- Strategic plan
- Research agenda
- partnerships

# Your thoughts

1. What would be the purpose of such an approach?
2. Who would need to commit to it?
3. What would be the key elements/foci of a strategic plan?
4. Any risks?

# The Network

- Next Steps
- Symposiums in each state & territory
- Initial meeting of the Network
  - Planning group established
- Launch of Network in November
- National conference?
- ...