



MAKE IT COUNT

theme 4

Supporting
best teaching
of mathematics
for Aboriginal
learners

Research

It is self-evident that research in the area of mathematics education for Aboriginal and Torres Strait Islander students is important. Most research projects are short term and are funded through the Australian Government's Closing the Gap, Smarter Schools National Partnerships or Australian Research Council initiatives. Many are about testing 'good, mainstream mathematics' with Aboriginal and Torres Strait Islander learners and adapting these to suit local contexts.

A lot of the current research is focussed on primary education and is state or locally based, with a leaning towards more remote locations. There is a reasonably heavy emphasis on research associated with students not reaching agreed benchmarks in mathematics.

An over-arching issue for schools is the 'evidence-based' emphasis in contemporary education. In the field of Aboriginal and Torres Strait Islander students' learning of mathematics, there is currently a relatively small body of research that can inform practice, which means that schools and even systems can struggle to identify practices and approaches that have a sufficient evidence base. There are also issues around the dissemination of research findings for widespread effectiveness. Coherent, purposeful sharing of research and research findings is currently limited, resulting in a lack of impact nationally.

A further issue is the tendency to stereotype Aboriginal and Torres Strait Islander students' learning of mathematics, arising from inappropriate generalisations of other findings.

The AAMT, through the *Make it Count* project, identified the need for the establishment of an inclusive research network that welcomes and promotes dialogue between members from Aboriginal and Torres Strait Islander education and from mathematics education.

Governments, researchers and professional organisations need to collaborate to develop a research agenda with priorities (short, medium and long term). Some general considerations for this research agenda are:

...the establishment of an inclusive research network that welcomes and promotes dialogue between members from Aboriginal and Torres Strait Islander education and from mathematics education.

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- Identifying, developing and defining effective (valid and reliable) data tools;
- Relationships that impact on teaching and learning;
- The role of language in mathematics, including how to develop effective pedagogy to build a bridge between specialised mathematical language and dialects of Aboriginal and Torres Strait Islander English, and Aboriginal and Torres Strait Islander languages;
- The role of questioning in the mathematics classroom;
- Critical evaluation of current mathematics programs that are being used or developed in schools; and
- Drawing on Aboriginal and Torres Strait Islander pedagogies and exploring the implications for mathematics.

There is still a lot of work to be done in this area and huge scope for research. The key will be to get existing and future research efforts operating in some sort of coordinated way, with Australia-wide sharing of information and informed discussion about the implications of research findings.

Questions for discussion at a school level about research

1. Are we participating in communities of practice with that are focussed specifically on improving pedagogy? Do our data tools and collection strategies truly and fairly measure the mathematics learning outcomes of Aboriginal learners in our school/s?
2. Are we accessing people and resources to support our research so we are building a strong evidence base to inform what we teach and how we teach?
3. Are we critically evaluating our current mathematics programs?



Contact

Caty Morris
National Manager
Indigenous Programs
m: 0432 277 654
e: cmorris@aamt.edu.au