



MAKE IT
COUNT

theme 2

Supporting
best teaching
of mathematics
for Aboriginal
learners

Leadership for School Change

It is well documented that leadership is a key factor in school change. However, despite the recognition that leadership of mathematics at the school level is important and the development of some strategies, there is no national program specific to leadership in mathematics education for Aboriginal students. Nonetheless, some teachers, principals and schools are working successfully at the intersection of Aboriginal education and mathematics education.

Some characteristics of their approaches are:

- Vision and drive of the principal around the changes needed in the school;
- A culture of high expectations – of Aboriginal students, and of their teachers;
- Investment in Aboriginal Education Assistants as mathematics educators and as leaders in the school and the community;
- Establishing, maintaining and supporting purposeful relationships between those involved in the education of each child through a shared vision and commitment;
- Planning and practice that is informed by the collection and analysis of data. School leaders must develop the capacity to analyse and interpret data, and use these interpretations to inform decision-making;
- The challenges of the ‘achievement gap’ in mathematics for Aboriginal students are so profound as to warrant special attention to generating, gathering and analysing data on Aboriginal student outcomes in the subject;
- A culture of expectation that pedagogy is constantly evolving, with teachers continually monitoring, refining and reflecting on their work in the classroom. This is a recognition of an understanding that there is no single universal answer to the question of how to teach mathematics to Aboriginal students;
- A program of practical support for quality teaching such as provision of resources (including curriculum and assessment resources) and teachers supporting and mentoring one another;
- An emphasis on the proficiencies in the implementation of the Australian Curriculum: Mathematics;
- Confronting and examining the assumption of some teachers that, ‘Some kids can’t learn maths’ or, indeed, that ‘Aboriginal and Torres Strait Islander kids can’t learn as well as other students’. Most times this requires

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courageous conversations between principal and teacher, or teacher and teacher – conversations about deep personal issues such as deficit assumptions and beliefs about students, the community etc.

- Implementing strategies around absenteeism/transience/lack of retention, because these factors create particular problems of continuity in learning mathematics;
- Increasing teachers' levels of pedagogical and mathematics content knowledge.
- Engaging outsiders through, for example, practitioner-researcher partnerships.
- Mentoring and supporting new staff, including principals and leaders, with the consistent message, 'This is what we do in mathematics and why we do it in this school'.
- Supporting Aboriginal Education Assistants to do their work in mathematics, community and school leadership.
- Establishing professional learning communities that offer a powerful mechanism when they are well-constructed and supported, collaborative and inquiry-based, simultaneously challenging and safe for those involved. Time and funding are essential for leaders, teachers and Aboriginal Education Assistants to participate in these communities. These communities offer a space for addressing many of the issues outlined above.

Questions for discussion

1. How well do the relationships at a professional level in my school and between my teachers and their Aboriginal students, Aboriginal education assistants, and families support Aboriginal students in their learning of mathematics? Am I taking a lead role in a 'pedagogy of relationship' that informs and supports best teaching of mathematics for Aboriginal learners?
2. What am I doing to ensure that mathematics pedagogy is constantly evolving and being evaluated in ways that informs how and what mathematics is taught?
3. Are all of those teaching mathematics doing so in ways that inspire students? If not, what are the barriers? How can I inspire my teachers to be passionate about the teaching of mathematics given how important this is in the development of positive attitudes and dispositions towards mathematics?
4. How can I develop leadership capacity in teachers and Aboriginal educators who are working at the intersection of Aboriginal education and mathematics education?
5. Am I an advocate who can influence others outside my school, in particular, other leaders? How can I work with them? How can our school work with relevant people in industry and business who have strategies to train and employ Aboriginal school leavers?

Contact

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