

## Narrowing the Performance Gap

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Project Title	Narrowing the Performance Gap: Improving Basic Mathematics Skills of Indigenous Students
Project Team	Professor John Pegg, Associate Professor Lorraine Graham, Ms Jenny Thomas, Ms Noelene Raymond (SiMERR National Centre); Mr Jone Raseka, Ms Bridget Nezar, Ms Seini Maidaku (Mirriwinni Gardens Aboriginal Academy); Ms Jenny Brown, Ms Massiel Barros-Torning (Minimbah Primary School); Dr Mary Coupland (University of Technology, Sydney).
Period	2007
Funding Agency	Australian Schools Innovations in Science, Technology and Mathematics (ASISTM – Round 3)
Organisational Base	SiMERR National Centre

### Description

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Narrowing the Performance Gap: Improving Basic Mathematics Skills of Indigenous Students secured funding from the Federal Government in order to enhance teaching practice in two independent schools (Minimbah Primary School, Armidale and Mirriwinni Gardens Aboriginal Academy, via Kempsey) with the aim of improving the basic mathematics competencies of low-achieving Indigenous students. This project built upon an established long-term research-based intervention program (QuickSmart) with evidence of success in improving the academic performance of Indigenous students and focused it on supporting pedagogy in two Aboriginal schools. Teachers and teacher aides attended a series of professional learning workshops based around the implementation of the QuickSmart program. They worked with small groups of students in rich learning environments using appropriate technology and focused learning activities.

The project included: delivery of workshops for professional learning about the implementation of the QuickSmart Program; support of staff at the participating schools and work with the QuickSmart Coordinator at each school to implement the QuickSmart program with integrity; visits to each school to provide advice and share appropriate resources; and, gathering qualitative and quantitative data related to the QuickSmart program in the participating schools.

### Participants

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Administrators, teachers, teacher aides and a total of 39 students from: Minimbah Primary School, Armidale, NSW, and Mirriwinni Gardens Aboriginal Academy, via Kempsey, NSW.

### Findings

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Students at both Minimbah and Mirriwinni schools significantly improved their average scores on the Progressive Achievement Tests in Mathematics (PAT Maths ACER, 2005) following the intervention. The PAT Maths has Australian norms and is widely used in schools throughout the country. Participants also improved in terms of speed and accuracy as measured on the computerised Cognitive Aptitude Assessment System. These results indicate that students were able to tackle an increased number of higher-order mathematical questions after completing the QuickSmart intervention even though the focus of this intervention was on improving their basic mathematical skills and understandings.

### Outcomes

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#### Conference Presentation

- Pegg, J. & Graham, L. (2007). Narrowing the Gap: QuickSmart offering students a new chance to acquire basic academic skills. Keynote presentation at the International Conference of the National Centre of Science, Information and Communication Technology, and Mathematics for Rural and Regional Australia on addressing educational disadvantage. Armidale, NSW.
- Graham, L., Bellert, A., & Pegg, J. (2007). Supporting students in the middle school years with learning difficulties in Mathematics: Research into Practice. Paper presented at the Annual Conference of the Australian Association of Special Education, Sydney.

#### Reports

- Graham, L., Pegg, J. & Raymond, N. (2008). Narrowing the Performance Gap: Improving Basic Mathematics Skills of Indigenous Students. (Final ASISTM project report). Armidale, NSW: UNE, SiMERR - National Centre.

## Electronic

- Barros-Torning, M. (2007). QuickSmart at Minimbah Primary School. DVD Evaluation. (7 mins)
- Maidaku, S. & Nezar, B. (2007). QuickSmart at Mirriwinni Gardens Aboriginal Academy. DVD Evaluation. (16 mins)

## Impact

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In addition to the positive impact of this project on the academic performance of the participating students, QuickSmart instructors and classroom teachers increased their understandings of effective strategies for the teaching of basic numeracy. Positive publicity (in the form of both print and television media coverage) for Minimbah Primary School obtained through the QuickSmart program was an important feature of this project. Each school also produced a DVD of interviews with students as part of their evaluative process.

Due to the success of the program in 2007, Minimbah Primary School and the SiMERR National Centre have been successful in securing further DEEWR Federal funding to implement both the QuickSmart literacy and numeracy programs at Minimbah during 2008.

## Related documents

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