


**UNIVERSITY OF CANBERRA**

**Celebrating success:**  
Numeracy in remote Indigenous contexts



What makes for successful numeracy education in remote Indigenous contexts: An ethnographic case study approach

Stories on remote indigenous mathematics successes compiled by Professor Robyn Jorgensen

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## One Teacher School: Teaching Mathematics from Prep to Year 6

*Wanalirri Catholic School*

Wanalirri Catholic School is located on Gibb River Station in Western Australia some 470kms from Derby, which is about halfway along the Gibb River Road. The station is owned by the Ngallagunda people and is a working cattle station. The community serves about 50 or more people. Gibb River Station is located off the main Gibb River Road and offers minimal services to passing tourists.

After negotiations with the Bishop of Broome, representatives of the Sisters of Our Lady of the Missions, and members of the Ngallagunda community, Wanalirri school was opened in 1991. The school serves members of the Ngallagunda community where it is based. The school is very small with around 12-15 students in attendance.

The values of the Sisters of Our Lady of the Missions and their foundress Euphrasia Barbier flow throughout the school. The school has been variously led by Sisters (RNDM) or by teaching partners over the period of its operation. Set in a lovely bush setting abutting the Gibb River station and within the community, the two classroom building was opened in 1993, with the 3 bedroom home for the teachers being opened in 1995 and extra accommodation for support staff built by the Catholic Education Office in 2003. The school is well-resourced and has been able to provide a quality learning environment for the students. Wanalirri Remote Catholic School currently has a full-time teacher and a 0.5 teacher. The 0.5 teacher takes responsibility for the

## Use of Digital Tools

A key strategy was the use of digital learning tools. The school has adopted one program that has a strong emphasis on staged learning activities, with an emphasis on the language of mathematics. That is, the instructions are spoken to the students, and the language (in this case, of space and shape) were constantly revised for the students. This was seen to be important for the students since their home language is different from that of Standard Australian English. The program is levelled so the teacher can target the activities for the individual students, and at the content that is being taught. The students engaged with the computer activities. This was incorporated at the end of the lesson so that as students completed their set tasks, they could consolidate their learning on the concepts and processes that had been a feature of the lesson. The activities reinforced their learning. The better activities also had spoken language so that the students could hear the mathematical terms.

## Benefits for Learning and Learners

### No Time Should be Wasted

One of the drivers behind the approach adopted at the school is that there should be no time wasted in lessons. Students are not exposed to busy work, but are expected to engage in learning mathematics. The teacher carefully plans the lessons so as to have a range of activities that suit the needs of the students. Often the activities are similar in design but, for example, the numbers with which the students are working maybe different in terms of place value or operations. The teacher is adamant that there should not be any busy work in the classroom as learning time and engagement was essential for progressing the students.



### Independent Learners

The teacher needs to work with students on their different tasks, so a high level of independence has been fostered among the students. All students remain on task for the duration of the lesson. The teacher has developed a culture within the class that disposes the learners to work independently.

### Individual Learning Plans

Each student is assessed using various assessment tools, but most notably is that which focuses on growth points. From this knowledge, lessons and activities are targeted for individual students. Questions in the whole lesson are targeted for specific students, depending on where they are in the learning continuum. The teacher needs to have a strong understanding of each students' needs and strengths.

The teacher draws on a range of resources to build learning experiences suitable for moving students to new growth points. The activities are structured carefully to build understandings.

### Peer Tutoring

Depending on the lesson and the activities, there are times (and opportunities) for the older (or more advanced) students to help their peers through peer tutoring.



## Model for Quality Learning

### Implications for Mathematics

There is great diversity in a whole school classroom so teachers need to have targeted mathematics teaching/learning activities for students.

### Focused Strategies

- Identify students' learning needs and develop activities to consolidate and extend learners.
- Include resources developed from the local experiences of the students to support engagement and recognition of the home worlds.
- Target questions to the levels of the students.

It has been very pleasing to hear that community members are accessing our Wanalirri website and weekly newsletters to find out more about the school. We are really pleased for people to know about and share the great work that goes on here. You'll find even more good news at <http://www.canberra.edu.au/research/faculty-research-centres/stem-education-research-centre/research-projects/remote-numeracy>