TEACHERS AND AEWs USING THE AICS NUMERACY STRATEGY AT YIYILI ABORIGINAL COMMUNITY SCHOOL

Yiyili School is a remote independent Aboriginal community school 600km east of Broome, WA. Yiyili Community is home to approximately 150 Gooniyandi people. Yiyili School has an average enrolment of 50 students each year, in years K-10. Most of the teaching staff at Yiyili School are young interstate graduates, with little to no experience working in an Aboriginal community setting. Yiyili School has a strong relationship between students, parents, teachers, Aboriginal Education Workers (AEWs) and the school governing board. The school recognises relationships between all members of the school community as a crucial ingredient in achieving success in the classroom. A key feature of maintaining these integral relationships is to have AEWs present in all classrooms.

Previous to the AICS Numeracy Strategy implementation, teachers and AEWs at Yiyili School were working hard to prioritise numeracy in the school curriculum. Measures were taken to ensure the timetabled ninety minutes per day for numeracy learning were not interrupted, and teachers were receiving regular professional learning to extend their skills in delivering effective numeracy lessons. With this high level of dedication and time spent focusing on attaining higher levels of student achievement in numeracy, assessment data reflected some progress across the school, however almost all students were still achieving significantly below the age appropriate level in maths.

The school community were posed with a number of challenges that needed addressing if they were to see an increase in student performance in numeracy. A common thread between most students was the lack of consolidation of foundational concepts in numeration. This could be due to a number of factors, however it was recognised that a key contribution to this problem was student consistency in attendance. There are a large population of transient students throughout the Kimberley, so although a student may be attending school regularly, they could attend a number of schools during the year. This not only hinders the success of students, it also makes it difficult for schools to maintain a student progress record for transient students. This leads to transient students falling between the cracks, or teachers spending valuable learning time to reassess what another school may have already attained. Data sharing across the Kimberley schools would minimise time spent assessing transient students, allowing teachers to maximise the limited time transient students attend their classes. The third key consideration for moving forward with a numeracy action plan was to reduce the time AEWs were spending re-engaging students and assisting in managing student behaviour. AEWs at Yiyili School are committed to seeing their students achieve age-appropriate standards in numeracy and ready to extend themselves in the field of education to increase their effectiveness in the classroom.

In 2010, the AICS Numeracy Strategy, although still under development, was implemented in all AIC schools across Western Australia. The strategy was designed specifically for the Aboriginal independent community schools of WA,
lead by Kaye Treacy and informed by a group of teaching professionals with experience working in remote WA schools. Teacher induction for the strategy involved a two-day professional development session, followed by quarterly school visits from AICS numeracy consultants for the duration of two years. During these visits, the numeracy consultants spent time in classrooms working alongside teachers and AEWs to grasp an idea of the individual classroom cultures and dynamics across the schools.

The core structure of the AICS Numeracy Strategy is the Assess-Plan-Teach Cycle. This structure is prevalent throughout the strategy and a key foundation for good pedagogy.

The assessment component of the strategy is thorough and precise. The strategy is designed for students in years K-12, with a scope and sequence catering to these years for each strand. Attached to the scope and sequence are diagnostic tasks for all components of each strand. In addition to this comprehensive assessment model, the resource also includes a student data tracking tool. Teachers log into the online portal to update student data each time assessment tasks are completed. This helps teachers maintain a clear record of student progress over time and allows transient student data to be shared across the independent community schools.

The planning model is user-friendly and goal specific. The scope and sequence is linked directly to the Australian Curriculum and gives teachers a ‘bigger picture’ view of what they should plan for in numeracy lessons. There are two supporting documents alongside the scope and sequence, the most practical of the two being the Activity Book, an extensive resource with various purposeful lesson ideas, games and activities for each level of ability throughout the scope and sequence. The second document is the Maths Book. This resource gives teachers insight to the maths behind the concepts, a key feature being the critical building blocks that help teachers to identify fundamental skills and understandings students must grasp in order to make sense of maths concepts and progress in their learning. The AEWs found this part of the resource really helpful as it allowed them to develop a deeper understanding of the mathematics within the activities they were working on with students.

When using the AICS Numeracy Strategy, teachers retain full creative license over how they deliver lessons and in what capacity they decide to use the strategy resources. Each activity comes with suggested questions to provoke higher order thinking and a list of maths language to be explicitly taught alongside the concept. The strategy is uniquely structured, yet flexible, supporting teachers in remote Kimberley schools to develop purposeful numeracy learning sequences. The strategy is now fully functional as an online portal.

Yiyili School adopted the strategy across the whole school, and invited AEWs to have full access to the resource. Not only were teachers feeling in-control and more comfortable teaching numeracy, AEWs extended their interested in moving towards more of a teaching role within the classrooms. Teachers began planning with AEWs, using their valuable language knowledge and code-switching skills to enhance explicit maths language learning. Over the duration of two years, AEWs
and teachers worked shoulder to shoulder using the strategy to assess, plan and teach together, sharing the power of teaching in numeracy lessons.

All students at Yiyili School speak languages other than English in their homes. Standard Australian English is an additional language, usually only spoken at school. A key feature of numeracy lessons at Yiyili School is a code-switching component at the beginning of numeracy lessons. AEWs and teachers work together to design short succinct language lessons to draw students’ attention to the different ways we can express ideas and understandings in various languages used at home and school. This can be presented in a variety of ways, however teachers found that students responded really positively to a storytelling approach. The following is an example script taken from a numeracy lesson in years 1/2. The teacher is speaking Standard Australian English and the AEW is speaking Kriol:

Teacher: On the weekend, Miss Delaine and I went fishing and I caught a really big barramundi. It was bigger than Miss Delaine’s Barramundi.

AEW: No, Miss Tili! I bin gajim prapa bigiswan bulga den yu. Yu bin gajim only lilwan bulga, det lilbala, en I bin gajim prapa bigiswan.

Teacher: Do you think your barramundi was bigger than my barramundi?

AEW: Yeah! My bulga him be prapa bigiswan.

Following the story, the teacher and AEW draw students’ attention to the two languages used and the different words used to describe the same idea. Together the teachers and students create a parallel visual display of the maths language with space to add more as the lesson sequence continues.
This method of storytelling and code switching engages students and prepares them for the language they will eventually have control over to express ideas and understandings in maths. In addition to language learning, AEWs are working with teachers to assess and plan for whole class and small group lessons.

The strategy has been a success across the whole school. Teachers are more confident in planning and delivering quality, efficient and purposeful numeracy lessons shoulder to shoulder with AEWs, an invaluable resource in the school. Sharing the power of teaching between teachers and AEWs has contributed to considerable developments in numeracy pedagogy, and in particular, increased student engagement and improvement across the school. With a relatively high turnover of staff, this strategy assists the transition between teachers and also eliminates many of the complications in tracking transient students across schools. Most importantly, the strategy has been a key ingredient for enhanced student achievement in numeracy.

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