



## Nakara Primary School Network of Inquiry and Innovation Team

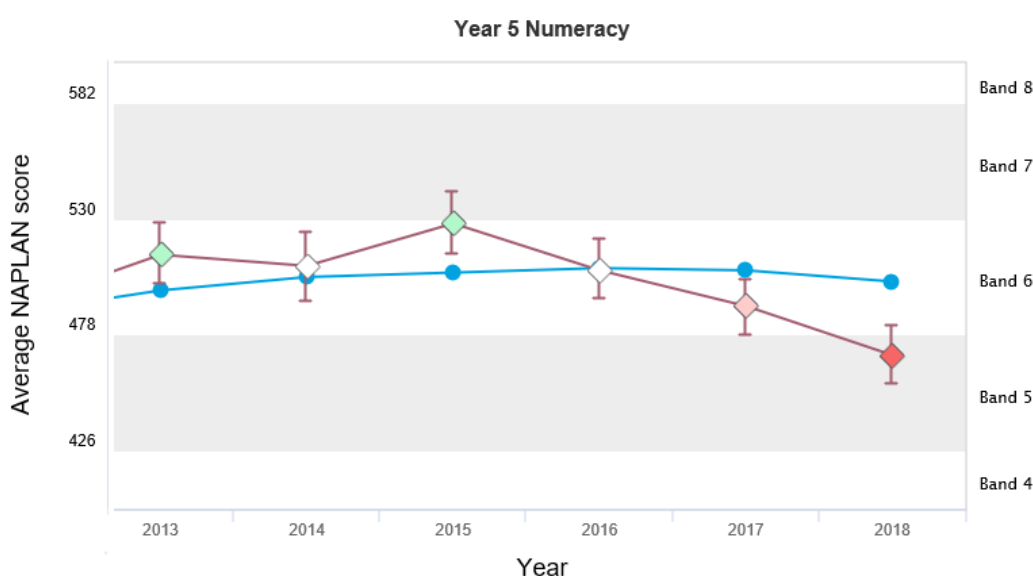
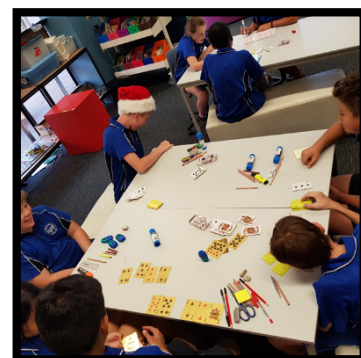
In June 2018, the Network of Inquiry and Innovation Northern Territory (NOII-NT) set out aspirational goals for network schools. On behalf of a district-wide improvement initiative, the Principal of Nakara Primary School, Britany Roestenburg, put together a voluntary team of teachers and school leaders to lead learning through inquiry at the school. The development group was tasked with installing a new framework for school reflection and improvement based on a model innovated in British Columbia, Canada by Judy Halbert and Linda Kaser; *The Spirals of Inquiry*. This was a timely initiative that coincided with a period of transition at Nakara Primary School, which had significant staff change, evolving student cohort, and the appointment of several new members to the leadership team over recent years. The opportunity to align individual school improvement with a proven international network of schools could galvanise the disparate elements of the school, if the right combination of inspiration and relevant application could be transferred.

### Their Challenge: An Initiative for School Improvement

The NOII-NT team at Nakara Primary School faced several challenges in initiating a reflective tool for school improvement. First, as a team of volunteers, they had varied experience and as it was new to everyone, a cohesive philosophy underpinning the team's approach to the Spirals of Inquiry professional development workshops was not clearly defined. However, the school could rely on its strong reputation in the community, its capable teaching staff, and the leadership's willingness to undertake the challenge of delivering results meaningful to the students and their families. The professional development workshop led by Judy Halbert and Linda Kaser was sufficiently purposeful and inspirational to convince the NOII team of the urgency of the work ahead.

### Our Story: Modelling Use of the Spirals of Inquiry Framework to Improve Student Outcomes

Charged with the task of improving student outcomes, and recognising the challenge of achieving staff engagement with a new initiative, the NOII team at Nakara Primary School decided on a multi-staged approach. The team would use the Spiral of Inquiry Framework and also model its use for other staff. By pure coincidence, the team comprised of at least one teacher from almost every year-level teaching team at the school, as well as several specialists and all curriculum leaders. It would be possible to achieve integration of the Spirals without seeming like a mandatory initiative, so long as the initiative targeted whole-school issues that related to staff perceptions of need, such as our declining numeracy scores. Following the *Spirals* framework led the team to an obvious starting point: student-centeredness.





## The Spiral Process: 2018-2019 Numeracy Focus

### ① Scan

Our initial scan examined readily available data from NAPLAN showing that our once high-performing school had over a five year period dropped substantially in achievement. However, the data itself did not actually tell us what was going on for our learners, it merely indicated the need for intervention in that area.

### ② Focus

In order to focus the scan into a more learner-centred inquiry, we endeavoured to query the students' ability to elaborate on their learning; adapting questions related to the seven principles of learning to form a survey from which the team could collect baseline data about students' perceptions about their experiences both in regards to their learning in Numeracy specifically while also including questions that would correlate to specific aspects of a student-centred approach. From a stratified random sample of students across the school we sought to gain insight of and context for the available data.

### ③ Developing a Hunch

The results of the survey were more confronting than our declining NAPLAN scores. It became evident that despite the overall professionalism we appreciated in our staff--which was celebrated by our parent community--we had in many ways failed as a school to keep students feeling emotionally and socially engaged in their learning. More than a content-lapse deficiency or a gap in our teaching curriculum, it occurred to the team that there might be some relationship between this deficiency in our pedagogical approach to numeracy that was inhibiting student achievement and growth. A whole-school approach to numeracy was necessary.

### ④ Learn

The survey showed that in certain classrooms, students were showing evidence of meta-cognitive strategies being explicitly taught. Though the team briefly discussed other known programmes (NZ Maths, Mathletics) the decision to use the results-proven TENS programme as the basis for our whole-school initiative was made because it was being used in those successful classrooms at NAKARA already. The process by which the team came to its conclusion did not address the elements of new learning that might be commonly understood as part of the professional learning journey. The professional learning stage of the NOII team journey could have benefited from a closer examination of Halbert and Kaser's written works. With the benefit of hindsight, we can look back at this phase and see that the team can improve in its approach next time.

### ⑤ Take Action

The team set out to model a new pedagogical approach to Numeracy teaching. Recognising that several members of staff were already using teaching strategies advocated through TENS; one was appointed to adapt the resources into something that would be easy to implement at the school. With the assistance of the leadership team a module of games, strategies, and learning progressions was developed to assist teachers in learning and utilising the strategies as part of their lessons. An outline of team outcomes was drafted, targeting the beginning of the 2019 school year for whole-school implementation and a reflection on progress due for the end of the semester. A brief Professional Development session was delivered to model the use of the resource module.

### ⑥ Check

Periodical checks were conducted, the summative check occurring after the first semester concluded. Several issues arose within the team over the course of these checkpoints, notably staff turnover including the lead TENS teacher, the NOII team leader, and the school Principal. Early responses from teaching staff was less receptive than desired, and team morale waned with the loss of the de facto team leaders. The team was worried that there would not be enough evidence to assess whether the initiative was improving student outcomes. Despite the early response, over time the school staff did largely implement the strategies.

## Was Spirals of Inquiry the right choice?

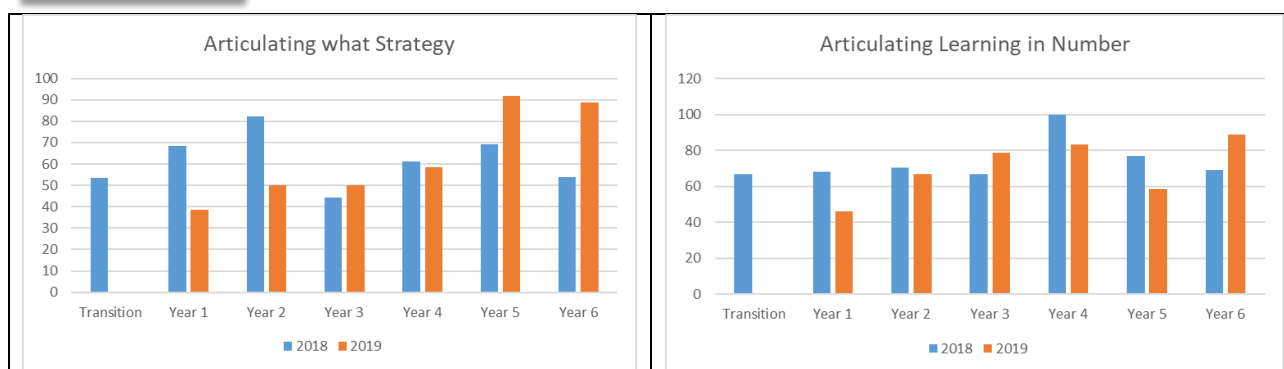
The immediate benefits of the Spirals of Inquiry process have been felt throughout the school, through improved procedures, whole-school approach, and collaboration between teaching teams. For the NOII team especially, these benefits also include the professional network benefits of working with inspiring leaders and teachers from around the region and internationally. In terms of using this inspiration as a catalyst for whole-school change, it was an unmitigated success. At Nakara Primary School, after only one semester of utilisation:



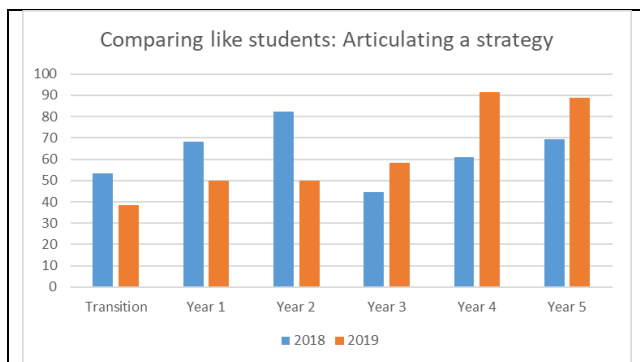
A massive **83%** of teachers were playing TEN games with their students.

A full **72%** of teachers were explicitly teaching TEN strategies, with an additional cohort of teachers who had tried it but required further coaching. A few were still unsure on how to incorporate it into their classrooms.

The benefit to our clients, the students of Nakara Primary School and the broader school community, is yet to fully evidence itself, though initial results are promising. Student ability to articulate their numeracy strategies has improved throughout the Upper Primary of Nakara Primary School:



Students were able to explain their learning goals for Numeracy and articulate their strategies due to the explicit teaching of TENS. There are areas of improvement evident from the responses shown, notably in the explicit teaching of strategies in Lower Primary, which correlates to the teacher responses (83% versus 72%) that games had been used but not necessarily the explicit lesson component of TENS.



With this success in Numeracy there was a correlated success in the Social-Emotional responses of students to survey questions such as “Can you name two adults at the school believe in your success in life?” although this was not explicitly targeted with action. The correlation might be attributed to student engagement with visible learning pedagogical approaches, noting that responses to “How do you know if you have been successful?” improved in several year levels using the learning progressions and celebrations of achievement, but this bears further consideration. This was evident in certain 2019 classrooms where the NOII team modelled TENS.

## Result – Outcomes and Benefits

In terms of the outcome of the Departmental Network and Nakara Primary School Improvement goals, the professional development opportunity of the Spirals of Inquiry Network and learning from recognised world educational leaders Judy Halbert and Linda Kaser was a great success for the NOII team. Their guidance and perspective assisted the NOII team in implementing whole-school change through the Spirals Framework. Recognising our procedural mistakes thus far, especially in the New Learning phase, and considering the evidence provided after the first semester of implementation, we are prepared to continue using the

Spiral Framework to reflect upon our progress, identify areas for improvement within the current inquiry into Numeracy achievement, and broaden the scope of the inquiry process to assist in further whole-school improvement.