St Kieran’s Moe, National Partnerships Numeracy Reflection

By Kristy Walsh

National Partnerships Numeracy has been a remarkable journey both for myself and for the two other teachers involved. It has opened up not only our creative energies, but the professional discussions, sharing, mentoring and observational experiences have been empowering, informative and team building. I could not have imagined that at the beginning of this journey we would achieve the far reaching and positive outcomes that we have all experienced. The National Partnerships Numeracy was a very valuable and challenging journey and I am thankful for the opportunity we received in taking part.

Attending the Success in Numeracy professional development days this year has reignited my passion for teaching numeracy in the classroom. It has brought about renewed enthusiasm, eagerness and much needed confidence in my ability to effectively teach numeracy. I am in a shared teaching role with Kerry, and she too, is enthusiastic and eager to try new things in the classroom. She has shown interest in and has been very supportive of new activities and approaches I have wanted to incorporate into our classroom.

One of the significant areas we have focused on is the use of mathematical tools in problem solving. Enabling children to be assertive in their learning and empower themselves with supportive tools that help them to problem solve, has been a significant area of focus in our classroom this year.

I have witnessed children become excited about mathematics, when this was an area in which they had previously lacked confidence and drive. The changing attitudes and newly found interest and enthusiasm towards mathematics have been significant. At the beginning of the year, there were children in the classroom who didn’t believe that they were capable of thinking mathematically. They approached mathematics with a negative attitude and expectation that they would fail. This changed when I introduced some of the many strategies and approaches to teaching mathematics that I had seen at the Success in Numeracy professional development days.

I felt empowered with the information and ideas I was able to take from the Success in Numeracy days. I was always aware that children learn in different ways and that learning needs can vary considerably from one child to the next. I was able to build upon this by looking at the language I was using in mathematics, and most importantly, its effectiveness in children’s learning.

A “second set of eyes” was discussed during one of the numeracy days we attended and, as this wasn’t possible at the particular time, I asked a classroom visitor to video me teaching a numeracy session. I then watched the video and took notes as I would have if I had been watching another teacher. This was extremely insightful and gave me many ideas in terms of where I could have taken a different approach in my use of language and questioning.
techniques during the lesson. It opened my eyes to other strategies that could have been used in order to promote further discussion and further extend children’s understanding.

Children in our classroom now refer to themselves as Mathematicians. They know that they are capable of thinking mathematically and that we all have strategies and tools that help us to solve problems. Children know that it is ok to use a different strategy or tool to what others are using. In fact, this has been embraced by all children in my classroom. They celebrate their individuality and their ability to solve problems in a way that they understand and are capable of. They understand that there is more than one way to approach problems, and some ways are more efficient than others. It has been wonderful to see children reflect on their own learning and explore alternative approaches if something has not worked as efficiently as they had hoped. Observing children thinking mathematically has been a real eye opener. Watching children explore various strategies, use tools to solve problems, explore alternative strategies, explain their thinking to others and engage in discussion with others has been extremely interesting and informative to Kerry and I as teachers.

As a team, Lisa, Teresa and I have presented at two staff meetings, where we have shared and discussed the information and knowledge we have gained. These presentations promoted discussion amongst the staff as a whole and all staff were interested and willing to incorporate so changes into their own classrooms. It was so wonderful to see the changes in attitude and willingness to try new things. A wonderful example of the positive influence of this approach was the genuine interest shown by a staff member who was hesitant to incorporate change into their classroom at first. They asked questions and inquired about resources that could be used within their classroom. It was a clear sign that the positive and renewed enthusiasm towards teaching mathematics was spreading throughout the school. Informal discussions and sharing of resources now occur on a regular basis within the school. Suggestions have also been made by staff members for further action to be taken within the school to help us to achieve further success in mathematics. Together as a staff, we have celebrated our achievements, reflected on teaching and learning and brainstormed possible pathways for numeracy in our school. I believe the discussions, shared resources and ideas have enabled staff to reignite their passion for numeracy, particularly by recognising the positive examples they use in their own classrooms and being able to share these ideas with their colleagues.

Parents became excited when seeing video footage of their child thinking mathematically. At a parent teacher interview, a parent who believed her child was incapable of succeeding in mathematics and that they were better at literacy, was brought to tears upon seeing her child standing in front of the class modelling the strategy and tools he used to solve a word problem in mathematics. She was absolutely thrilled and her opinion of her son’s mathematical ability changed. I know of other staff members who have shared photos of children’s learning experiences with parents, and this has always been met with great appreciation.
I have found the Success in Numeracy professional development days to be invaluable to my teaching, as well as to our school as a whole. So many positive changes have been made since attending these days, and I am confident that they will remain within our school and further enhance the success we have already witnessed in the area of numeracy this year.

When writing our Action Plan consideration was given to a need we recognized in our students current mathematical learning. We knew as a result of our participation in the ‘Success in Numeracy’ PD our teaching of maths was going to change. We wondered how it would impact on our own personal teaching of maths and how it may influence our whole schools approach to the teaching of maths?!

We gave significant attention to Mike Askew’s presentation. As we thought the model he presented was very relevant in that it addressed key aspects of our action plan, such as, individual learning needs, question techniques and flexible mathematical thinking. We were excited by this clear and practical information. We decided this information along with new information picked up over the numeracy days could reinforce and deepen our current mathematical teaching practices.

We believed the model Mike presented; Context, Models, Actions and Symbols would be an effective gauge to measure either individually or as a whole school how effectively we are incorporating the four proficiencies, fluency, problem solving, reasoning and understanding into our teaching of maths; while still addressing our action plan. This model sparked an interest because it helped us in a practical way break open our action plan. We ultimately hoped it would support teachers and ourselves in deepening our student’s mathematical experience and knowledge.

Each of us attending the Numeracy P.D applied some of this model and other insights gained into our classroom teaching. ‘Another set of Eyes’ proved itself a helpful technique helping us reflect, clarify and ultimately improve our teaching of mathematics especially in relation to our action plan; positively stimulating mathematical conversation and collegial support. We could use Mike’s model to help reflect on our teaching at a personal level while still being able to share and invite others to share at a broader school level. We confidently presented and discussed this model with our whole school staff. Knowing that this model also reminds and encourages teachers of the good job they are already doing while encouraging them in light of our action plan to rethink how we teach maths.

We were able to draw on questioning information gained from another of the numeracy days and incorporate this information nicely into Mike’s model. Mathematical problem solving in the form of a story was part of the context Mike demonstrated to us. We took this particular example back to staff and explored the notion of problem solving in maths. It generated a lot of discussion around the notion of effective questioning in our classrooms. Do our questions effectively prompt and probe student thinking? We showed staff examples of probing questions. We discussed questions which could help teachers find out
what their students already know. Asking are our questions meeting our student needs and
developing them? What strategies do students have in place or are developing? We also
discussed questions which could scaffold student understanding and develop flexible
thinking abilities. Teachers were keen to share their current questioning techniques and
explore new ideas or approaches presented to them.

Feedback from teachers and discussion generated at our school numeracy meetings
indicated to us that we did challenge and support our teacher’s current mathematical
teaching principles and practices.