

Teaching Innovation Fellowship

Questions 4 Thinking (Q4T) to foster teacher growth and exploration

Overview

Caulfield Grammar School is an independent school in the South-Eastern suburbs. The challenge that I saw at CGS was that whole school professional learning for staff appeared to lack the ability to genuinely encourage **positive teacher reflection** and **embed** relevant quality pedagogy into the classroom.

The shift I envisioned required teachers to be **actively** and ably **supported** to investigate a problem of their own choosing. Importantly, the partner that the teacher was working with was there as a trusted equal, as a non-judgemental sounding board and to provide suggestions and guidance where appropriate. The partner was able to support the teacher using **evidence-informed** or **context-based practices** to facilitate development in their chosen area of practice. This project draws on the work of Guskey and Stoll, suggesting that quality professional learning requires **time, space and support**.

Key learnings

1. Teachers require tailored professional learning to keep them engaged, accountable and empowered.
2. Embedding evidence / context-informed pedagogy into the classroom requires time, support and stewardship. This element of our profession should not be 'hoped for.'
3. The vast majority of teachers want to get better and also have an awareness of their opportunities for improvement. There is a market out there for tailored and bespoke PD opportunities.
4. The Q4T program was initially intended to be a pedagogy piece – it turned out that it was a people/culture piece.
5. Without a safe and non-judgemental relationship with a staff member, they are unlikely to be vulnerable and open to feedback, and are unlikely to make progress (much like students – why don't we apply the same idea in this context?)

Findings and outcomes

The Q4T program encourages teachers to apply for an opt-in opportunity to work one-on-one with a partner whose role is to work with them on a chosen area of practice. Selected staff meet with the partner to agree on the area/s of focus, and then the partner arranges to observe the teacher. Detailed notes are taken on the staff members class to be discussed afterwards, with an eye to suggesting opportunities for techniques/activities/pedagogy that may assist the teacher in developing practice. Socratic questioning is always used in the discussion process, and follow up observations allow the partner to assess the impact of the new techniques, in addition to suggesting further opportunities for the teacher.

Highlights in the process include:

- > Teachers feeling empowered in developing their practice
- > Teachers feeling their time is respected and is used to benefit their practice
- > Teachers receive non-judgemental help and guidance to embed, rather than try, quality practices
- > The Q4T program respects teacher ability and meets teacher at their point of need (teacher participants ranged from first year teachers to teachers in their 18th year)
- > Applicants increased over the course of three semesters from 7 applicants to 11 applicants
- > Feedback from staff suggested Q4T benefitted teacher practice

Lingering questions include:

- > How can we scale this program without compromising the essence that made it effective in the first place (time, space and individual support)?
- > What are the key soft skills required by teacher partners to ensure the right partner relationship can be developed to assist teacher practice?

Feedback from the Q4T surveys done at the mid-point and end point of the program:

*Simply the time to 'pause' and 'reflect'. Gus and the program gives you that **time**! Further to this, Gus has allowed for a supportive **non-judgmental space** that enables everyone to feel trusted and confident to share their own experiences. Gus' passion for teaching & learning practice is infectious and makes me excited to get back into the classroom and try new things after every conversation!*

*I would love for this to be a **whole year** opportunity.*

*"I was able to make a meaningful **shift** to my teaching approach that has **benefited** me and my students."*

*"Level of feedback provided, clear, **actionable**. Gus is an expert practitioner and is listening so attentively to what you are doing and based on his years of experience will tell you exactly what steps you could take to **help** you. I really want to stress that this level of attention to detail is **VERY** different to 'lazy' feedback that just lists pedagogical approaches without really leaning into your style as an **individual** - what Gus does is different, stands out and has higher **impact**."*

*"Helped me realise that big **change** in the classroom can result from small changes in planning and approach, and doesn't have to be a slog to **implement**."*

*"As a new grad, this has set up my teaching career in the best way possible. I have learned things in a few months in this program, that may have taken me years without the **support**. Thanks Gus!"*

*"The opportunity to have **time** to discuss good practice with colleagues who I do not work in a faculty with. Having Gus as a mentor was amazing, Gus was truly **invested** in my success and wanting me to get **value** out of the program. He went above and beyond to think about my key questions, research and review the strategies we **implemented**."*

Other survey question responses:

- > 'I feel that Q4T was of benefit to me professionally' - Average – 4/4
- > 'I feel I have made progress in relation to the area of practice I was interested in' - Average – 3.86/4
- > My partner, Gus, made me feel comfortable when observing and discussing my practice' – Average – 4/4
- > Average – 4

Q4T teacher survey data collected 2023/2024

Overview

The aim of the Bio-Studio project focused on an identified challenge of students being unaware of the footprint and environmental impacts, and the resource wastage of the work produced in both Art and Science classrooms. Students used an inquiry approach through a collaboration of 'Art and Science' to explore the history of plastic and current bioplastic production and sustainability issues. Students worked together to investigate the question of how our learning impacts the local and global environment now and in the future. Through the production of bioplastics and its potential use of advocacy for the environment, the students demonstrated the different ways this sustainable, reusable material can be used creatively before being melted back down to be reused again the following year. The bioplastics created will be passed on to other staff for use in their curriculum areas, such as Chemistry, environmental science, geography, product design and visual arts.

Key learnings

- > Over the course of the Teaching Innovation Fellowship, we have experienced much growth in our capacity in middle leadership. Evidence for Learning provided us with the capacity to understand and think strategically about the implementation of projects in school settings.
- > Students learn best through curiosity and real-world problems. Through the collaboration of art and science we assisted the students to make connections that exist in our world.
- > Collaboration that is visible in the community gains greater trust, acceptance, and momentum.

Findings and outcomes

The Bio-Studio project's long term goal was to see the model used to inform a new middle school elective curriculum in STEAM in 2024. It was planned that components of the project would be explored in more depth and spread over a year 9 class and a year 10. Due to unforeseen reasons, there were no changes that could occur in 2024 to middle school. However, this year parts of the project components are being used in year 8 and year 9 STEM (STEAM) classes. The iteration of the project is producing even more outcomes as it evolves with some exciting extensions on what had been achieved in the Bio-Studio project.

Student surveys were collected prior to, during and after the Bio-Studio project. The data prior to the delivery stage reflected the gap in students' knowledge and understanding of sustainability, and the roles that both Art and Science can have in addressing the issue. Post project data demonstrated positive increases in numbers, but it was the qualitative that reflected the greatest impact- greater engagement, feeling more connected at school and the students wanting to be involved further.

The TIF has further inspired us to collaborate in other ways and we have a multitude of ideas that we are discussing.



Students dishes made from bio-plastics and dyed using natural pigments

Overview

Research and implement an evidence based whole school approach to teaching reading at Orchard Park Primary School. We are a new school with a priority focus on numeracy, leading to consistent high quality practice in this area, but with inconsistencies in our approach to teaching reading. We posed the questions:

- > How can evidence and research inform our approach?
- > What parts of our practice do we keep, change, enhance, stop?
- > How do we strike a balance of support and challenge with staff?

We aimed to research, learn and trial an approach throughout 2023 with the aim of implementing a consistent whole school documented approach in 2024.

Key learnings

Firstly, we established the *Why* with all stakeholders. To build consistent understanding, clarity and buy in all staff need to understand why they are undertaking the project and how it relates to our school context. Many projects jump into the *What* and *How* - people need to understand *Why* first in order to fully embrace the project.

Secondly, we needed to pace out the learning. We gave people time, space and support to follow up professional learning including planning support and coaching opportunities. We didn't rush, understanding that true change in practice and implementation takes time.

Finally, Don't wait to be ready! We cannot rush, but just as important you cannot wait for everyone to be ready, you need to identify a first step that everyone can feel challenged yet experience quick success! This will enable you to take bigger steps further into the project.

Findings and outcomes

School outcomes

- > Staff have a consistent understanding of research and evidence of high quality approaches to reading.
- > Staff demonstrated improved understanding and confidence of planning and teaching English approaches.
- > Fluency is a key component of every classes' literacy learning.
- > Oral Reading Fluency is assessed, analysed and used to inform practice in all classrooms.
- > Student Oral Reading Fluency data indicates steady improvement.
- > Clear planning and assessment documentation.
- > Collaborative planning practices - Utilisation of team planner and plan, teach and reflect on reading lessons collaboratively.
- > Consistent classroom practices in literacy - all classes utilising Core Literacy and English lessons with clear consistency between classrooms and year levels.
- > Students beginning to articulate elements of Core Literacy and English.
- > A review of assessment practices - staff wanting clarity consistency and purposeful assessments for reading.

My findings:

- > By beginning with the research and involving all staff in the process it was established as our project rather than mine. This created excitement and a desire for all staff to invest time and energy into the implementation.
- > The innovation mindsets enabled me to reflect with multiple perspectives and considerations - adjusting the pacing and project as necessary.
- > Innovation and change is not just about forming new habits - it is as much about giving people the permission to stop doing something as it is about what we need to start doing.

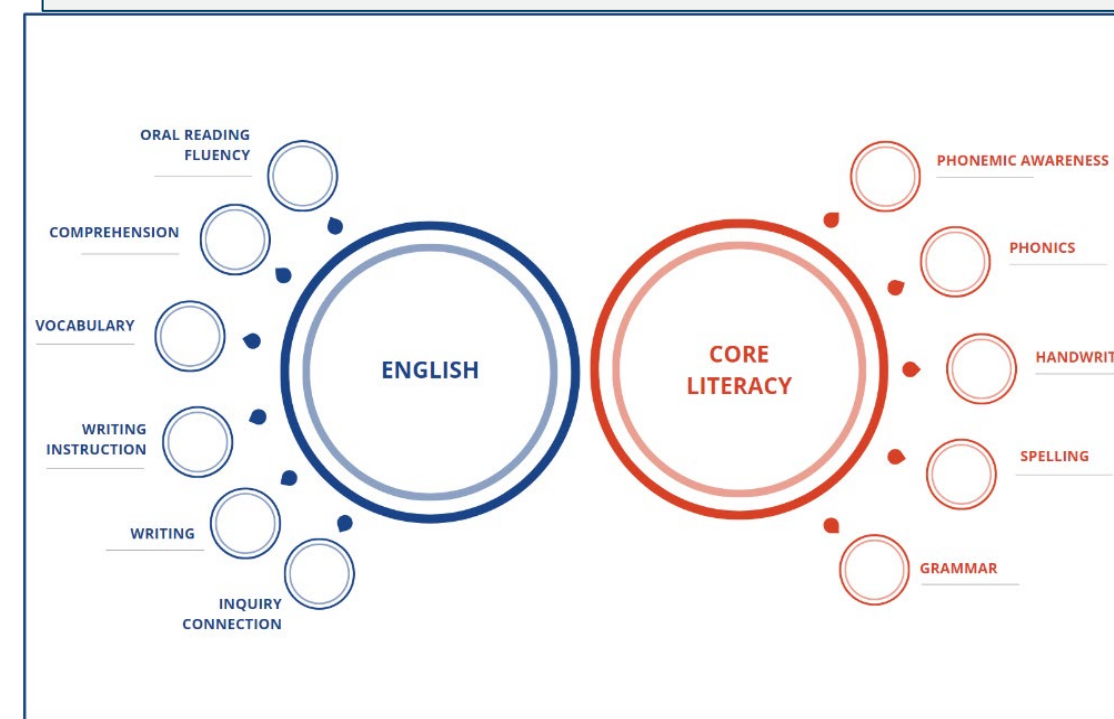
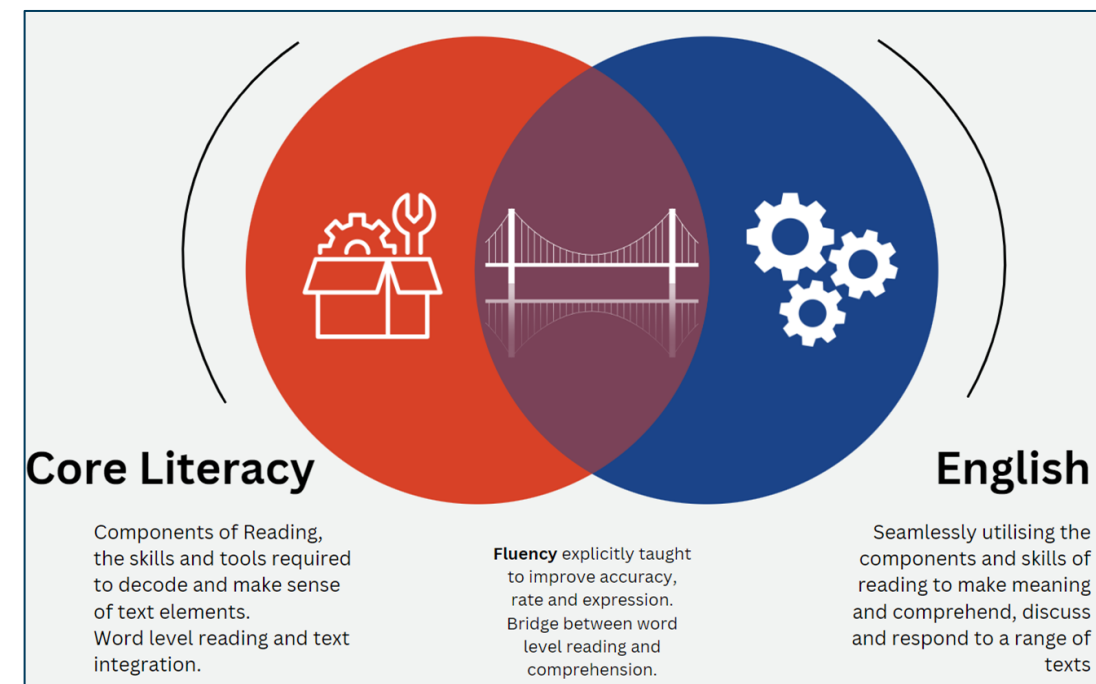


Figure 1: Outlines the 2 components of Literacy - Core Literacy and English and how they build from one to the next, with Fluency a major bridge between the two.

Figure 2: This TIF project aimed at developing English teaching and learning approaches, with focus on Oral Reading Fluency and Comprehension.

Overview

- > Improving Learning Outcomes for Students with Additional Needs (SWANs).
- > Avila College, Mount Waverley
- > Gonski's 2018 report priority was to deliver at least one year's growth in learning for every student every year, regardless of circumstances. The goal of my project was to work towards this by improving the quality of adjusted tasks for SWANs. This was to be done in two main area:
 - > Increasing teacher capacity and confidence in adjusting tasks
 - > Giving SWANs increased advocacy and agency in their learning.


Key learnings

- What I have learned about leading change in an educational context has far outweighed what I gained from completing my project.
- > Working with my advisor Heather, I learned the value of knowing who you are leading. Recognising what motivates the people you work with and the different ways in which they work ensures that you are able to use effective protocols to engage them and optimise the team's performance.
 - > I learned a lot about how to make leading change successful, in particular the importance of embedding and sustaining projects. I learned about the project lifecycle and the importance of planning and monitoring.
 - > This project also reiterated to me how important the idea of "regardless of circumstance" from my initial idea was gave me some insight as to the best ways to assist teachers work towards this idea.

Findings and outcomes

- > I used a number of strategies during my project, including:
 - > Whole staff professional learning
 - > Construction of a data wall
 - > Small workshop groups (sprint cycle) of teachers
 - > Interviewing students
- > The most successful part of my project was workshoping tasks with small groups of teachers, unpacking learning profiles, determining the learning outcomes for the task, looking at potential ways a task can be adjusted, deciding the best way to adjust a task for specific students. The work of the initial group has early indications of improved teacher capacity and confidence, as well as improved student learning, engagement and enjoyment, and success is evident with the formation of new teams this year.
- > The other successful (but less complete) part of my project was collecting data from the students (SWANs). Using a TV show format (You Can't Ask That) I collected a lot of information from SWANs about how they learn. The purpose of this was to give agency to SWANs, to allow them to have some self-determination about their learning.

Moving forward, my goal is to find effective ways to communicate what the students are telling me with their teachers and to build momentum with the sprint groups.




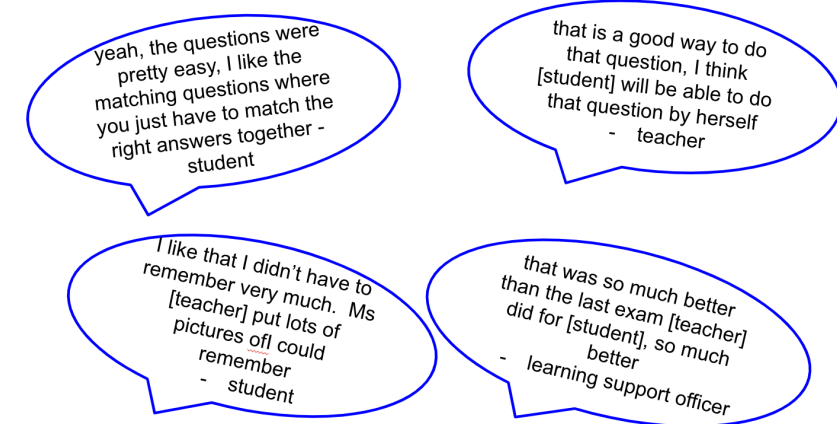
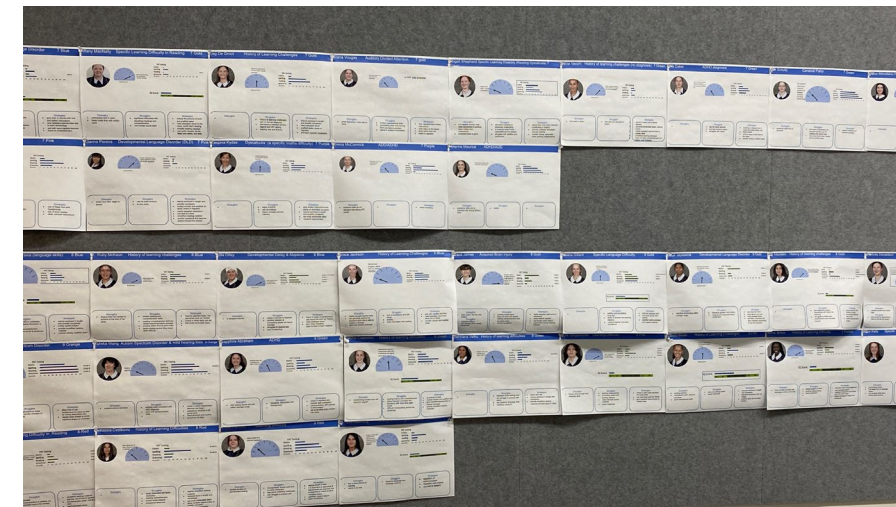
Unpacking Diagnostic Testing
Thursday 8 June | Staff PL Session

Learning Intentions
To better understand data on Student Learning Profiles

To use student profiles to adjust tasks for individual students

Student Profile
Annie Aardvark (181818)
Year Level: 8, Homeroom: 08 Silver,
House: MacKillop
Homeroom Teachers: Ms Jones





1. Whole school professional learning helped to improve teacher capacity – slides from second PL session.
2. Data wall helped visualise information about SWANs – key focus was on data presented at school PL
3. Anecdotal evidence suggests small groups of teachers adjusting tasks increases capacity and confidence of teachers.

Overview

Suzanne Cory High School is a selective entry school (9-12) located in the western suburbs of Melbourne. From a range of data (VCE achievement, entry data, GAT, Learning Specialist projects and Attitudes to School Survey) from both students and teachers, we found the following areas needed to be addressed with a new teaching and learning model:

- > Setting the right challenge level for highly able and gifted learners.
- > Creating an environment where staff are brought into the change and are actively involved in the process of creating a positive learning environment.
- > Student accountability through metacognitive strategies.

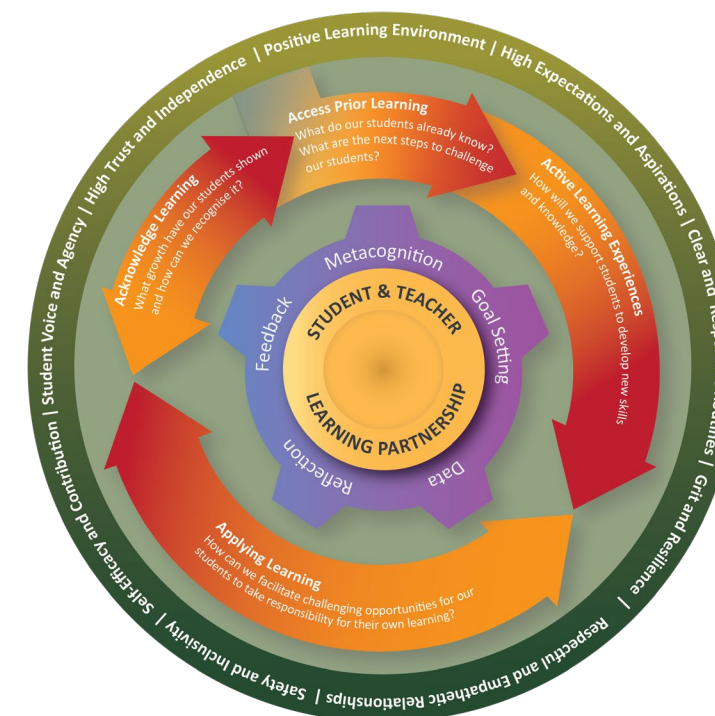
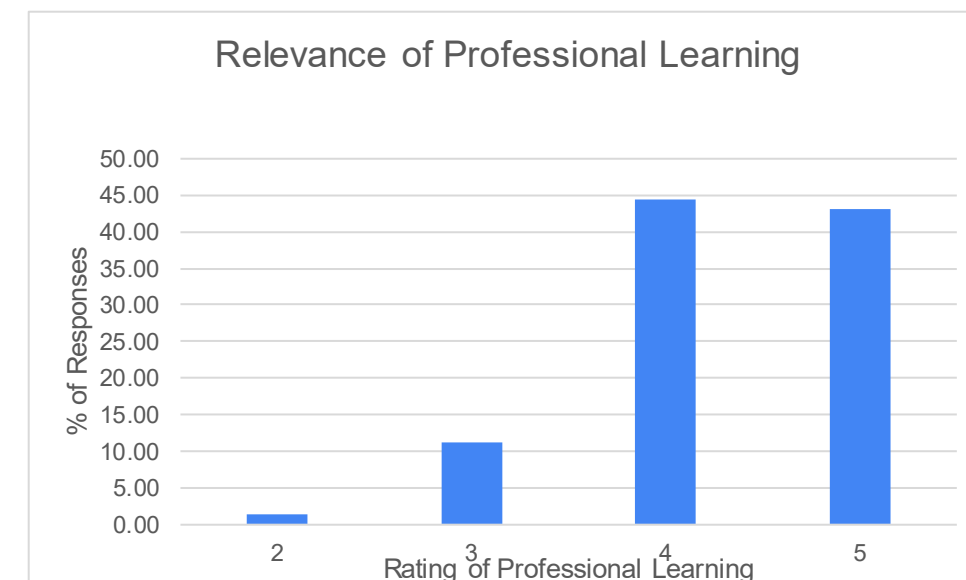
Key learnings

Creating a new whole school model for teaching and learning that will stick and be embedded in the fabric of everyone's teaching practice is a daunting task. Throughout this process these were the key learnings and reflections:

- > Including staff in the process and listening to their voice to create trust and courage to innovate.
- > Setting goals that are both easy to achieve and larger aspirational goals during the consultation process.
- > The importance of holding our ideas lightly and being flexible and open to change.
- > The value of student voice in shaping school change.
- > Knowing when to bring in an expert to help shape our final product.

Findings and outcomes

- > **Research gaps identified:** Research on gifted and high-ability students mainly focused on passion and self-interest, which we used when developing a differentiated curriculum for them.
- > **Deep dive into learning processes:** We synthesised a range of methods to come up with the model which involved academic research on highly able students, brain research, student input and collaboration with other selective entry schools to develop a deeper understanding of student learning behaviours.
- > **Shifting focus to learning itself:** Insights revealed that gifted students often excel in "playing the school game" to achieve high grades rather than engaging deeply with learning.
- > **The Model:** Research on gifted and high-ability students traditionally focused on passion and self-interest, missing deeper learning patterns.
- > **Development of a new educational model:** The model underwent 15-20 iterations, emphasising the right focus, language and design through continual drafting and staff feedback.
- > **Engagement and enthusiasm through consultation:** The iterative process underscored the importance of involving and exciting staff about the new model.
- > **Positive implementation outcomes:** The rollout, based on our professional learning with Evidence for Learning, has shown encouraging staff reception and engagement.
- > **Ongoing Questions and Challenges:**
 - > How can we design assessments that measure growth in response to challenges?
 - > How can we ensure that staff meaningfully adopt and critically reflect on the new teaching model?



Professional Learning Implementation Rating and Suzanne Cory High School's Pedagogical Model.

Overview

Through analysis of data and consideration of our shared observations, we identified that many upper primary students at Cornish College lacked the ability and confidence to interpret and attempt to solve mathematical worded problems. In considering the needs of two very different cohorts of students, our Year 5 and Year 6 fellowship teams identified two different contributing factors and designed responses they felt would best address this problem and make a positive impact in student learning. Each team's response was developed collaboratively while considering current educational research and our unique educational context.

Year 5 Fellowship Team- Improved Student Comprehension of Mathematical Language
Year 6 Fellowship Team- Developing Student Metacognition in Mathematical Problem Solving

Key learnings

Firstly, implementation is an iterative process that needs ongoing transition between the explore, plan and deliver phases. It took time and further learning in both fellowship teams to best understand if our “active ingredients” were addressing the heart of the problem or a symptom of it. Both continued to plan and explore throughout delivery. Secondly, we learned that the development of classroom systems and structures that considered and managed cognitive load for students interacting with mathematical language were more impactful for students and took less time to develop than changes in pedagogical approach and practice. Finally, we learned that metacognition was a missing component of our initial implementation planning which considered problem solving strategies in isolation rather than as part of an intentional planned, monitored and evaluated process. This allowed for more student autonomy in selecting and evaluating strategies of choice.

Findings and outcomes

Student frequency and duration of independent attempts on mathematical worded problems increased for both fellowship inquiry teams. Students demonstrated increased awareness and confidence in utilizing classroom scaffolds for both metacognition and the acquisition of mathematical language. This was likely further assisted through a shared focus on mathematical mindset, influenced by the work of Jo Boaler, which incorporated the concepts of mathematical grit and productive struggle into lesson introductions and reflections. An unexpected benefit of our focus on developing a metacognitive scaffold to assist students in solving mathematical worded problems was the transferability of our framework to other curriculum areas. As students became familiar with the metacognitive process and resources, they were used in other curriculum areas effectively as a thinking routine to monitor and evaluate progress with noticeable impacts on student work quality and improvement.

One of the key implementation challenges faced by our teams was the iterative nature of the work itself. As our implementation plans evolved and grew in response to our new learning and experiences, we discovered aspects of our data collection or initial implementation planning that were no longer relevant to our new understandings. Structuring shared time to continue to plan and explore collaboratively was difficult when considering both wider school priorities and replacement teacher availability.

To sustain momentum from our implementation journeys and further embed our new understandings, we transitioned as teams into the development of a broader whole primary school numeracy implementation plan starting in 2024 to guide school wide numeracy practice over a greater length of time. Metacognition and the acquisition of mathematical language are two active ingredients that sit alongside several other key elements of effective mathematics teaching that were identified through critical examination of current research and compared to our current educational practice.

Planning - Prior Knowledge

What do I already know about this topic?

Evaluating

My strategies did/did not help me to accomplish my goal because...

My next steps for learning are...

Planning - First Steps

Things I need are...

Monitoring

How am I using additional resources?

Strategies I will try first include...

To what extent are my strategies working?

What goal am I trying to accomplish?

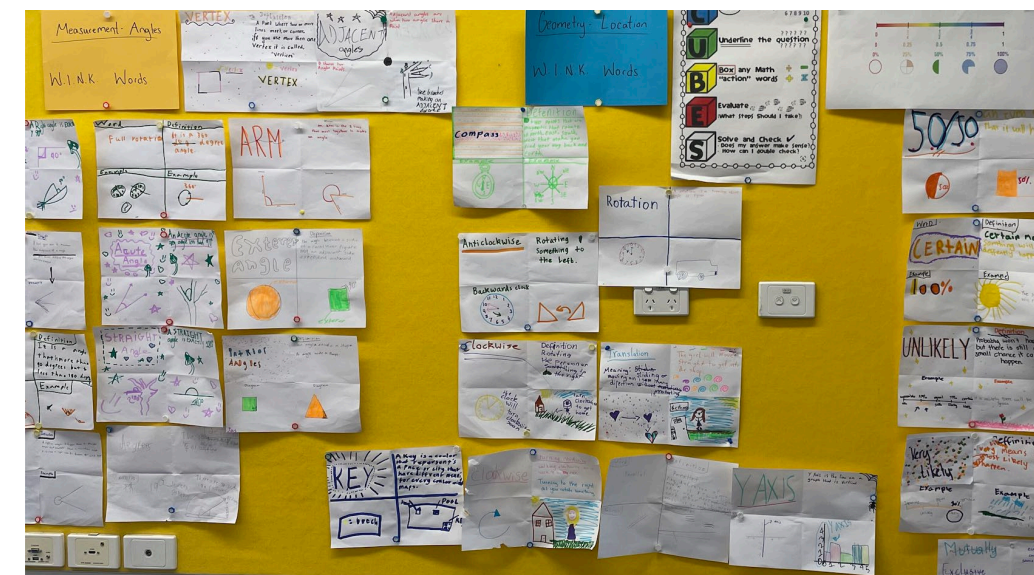


Image 1- Metacognitive scaffold used to support student thinking and recording when considering best approaches to mathematical worded problems.

Image 2- Student generated mathematical language wall completed prior to learning concepts to remove cognitive load of key Tier 3 concept language.

Teaching Innovation Fellowship

Improving reading results by improving teacher confidence

Overview

Our leadership team identified that students were not demonstrating strong comprehension skills in reading and were not able to go into depth when asked questions about texts on their Fountas and Pinnell assessments. Furthermore, teacher planning did not reflect the identified gaps and areas of need of student learning, and simply followed term planners instead. This indicated teachers may not have been confident using data to inform their teaching. We had the following questions:

- > How can we improve teacher confidence in using data to inform their teaching?
- > What professional learning do we need?
- > How can we improve teacher collaboration?

We decided to use a PD day, curriculum day and PLC to facilitate new learning and collaboration.

Key learnings

- > Firstly, we collected teacher survey data which confirmed that teachers were not feeling confident in analysing their data and using it to inform their teaching of reading. We also did mini survey check ins along the way to gauge if confidence was improving.
- > Secondly, we organised a whole school PD day to help with data analysis and effective use of mentor texts for teaching reading. This PD ignited excitement in staff to make changes to improve their practice. We followed this up with work in PLCs to improve data collection and analysis, as well as using formative assessment and other evidence sources along the way. We then used a curriculum day and team learning days to further develop teaching understanding around data collection and analysis to inform planning.
- > Finally, upon realising that the teaching of reading using mentor texts had been less successful in the junior years, staff were open to learning to change the way they approached teaching reading in Foundation to Year 2. As a school, we are now investigating new approaches to using decodable texts and the Science of Reading approach in the junior years.

Findings and outcomes

The project evolved over the course of the 12 months and early indicators pointed to success in the senior school, with an improvement in teacher confidence and planning; including responses to data and high quality mentor texts being used across teams. The use of PLCs also allowed for ongoing professional learning to support the growth in confidence of teachers. PLCs were also used to expand knowledge of formative assessment and other evidence collection techniques which are continuing to be used this year.

Along the way, a few challenges were faced, such as:

Self-doubt: This was at times a barrier to the project progressing, and Justine, one of the TIF mentors, was so wonderful at giving perspective and support during the moments of self-doubt.

School review process: This meant that the project time was to be protected and staff were to be supported to ensure there was alignment to the review.

Turnover of staff: half of our teachers are new to the school this year and missed the bulk of the work.

So far, the initial results are very positive. The senior school improved their use of data and mentor texts to teach reading. The junior school results, whilst not as positive, have led to this year's focus becoming about improving practice in teaching reading in Foundation to Year 2. Staff are excited to begin this journey together and collaboration is extremely strong.

The two lingering questions our team will continue to work on are:

- > When PLCs move away from reading, how will we sustain the work?
- > How do we effectively change the teaching practice in Foundation to Year 2?

Figure 1:

TERM 4 2023			Target Level J			
Level	F/NF	%	W	B	A	E/WH
H	NF	97%	2	1		
N	NF	95%	2	2	2	
F	NF	94%	3	2		
I	NF	96%	1	1		
I	NF	94%	3	1		
B	NF	<95%	3	3		
L	NF	97%	2	2	1	
I	NF	98%	1	2		I
I	NF	95%	0	2		H
D	NF	92%	2	2		
M	NF	95%	2	1	2	
I	NF	96%	2	1		
I	NF	100	2	1		
H	NF	92%	2	2		
H	NF	<95%	2	2		
C	NF	<95%	2	1		H
I	NF	94%	2	2		
D	NF	<95%	1	2		H
H	NF	95%	1	2		
I	NF	94%	2	2		
H	NF	95%	1	1		
H	NF	<95%	3	3		
N	NF	100%	3	1	1	
B	NF	<95%	2	1		H
F	NF	98%	1	2		
C	NF	<95%	1	2		H

22 students	8 students	9 students find it difficult to infer, connect and predict about texts (36%)	2 students find it challenging to talk about authors craft (50%)
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Figure 2:

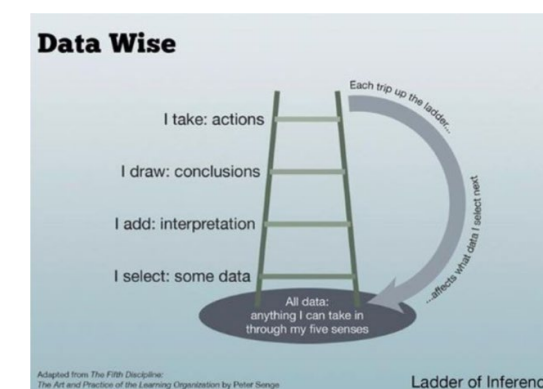


Figure 1 – the pivotal data which caused us to change our reading approach for Foundation to Year 2.

Figure 2 – the new protocol used in PLC to analyse and use data.



Overview

G'day! My name is Geoff Brown and I am the Head of Languages at Cobram Anglican Grammar School (CAGS). My TIF project has two aims. **Firstly**, to develop and raise the Asia/Pasifika Capabilities at CAGS. The **second** was investigate taking a wider view of developing ways to support the delivery of Chinese in regional and rural Victorian schools.

Our school is an independent P-12 school located in North Eastern Victoria. At CAGS I teach Chinese (Mandarin) from years 1 to VCE. 13% of our students (approximately 51) speak a language other than English at home, which is significant when compared to other schools in Cobram and neighbouring Barooga.

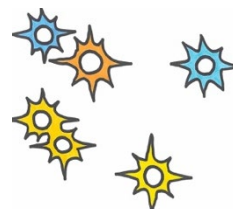
Key learnings

As part of the first aim, a Whole School curriculum audit on Asia/Pacific capabilities was conducted. This enjoyed much staff participation. Once staff started reflecting, many realized that much of what they currently taught reflected Asia / Pasifika capabilities already. There are many great opportunities to collaborate Asia/Pasifika elements across the school curriculum with fellow staff. This included modelled lessons featuring the 5E's Instructional Model.

There is a great need for networking for Languages teachers across rural and regional Victoria. A Google forms survey indicated that Chinese languages teachers in a regional setting wish more networking with colleagues from other schools.

Findings and outcomes

- > With consultation from the language assistant at CAGS, a bi-lingual reader in Chinese and English was developed for students in grades 1 and 2. This coincided with a unit Space which I was developing for grade 1 and 2 students in their language classes. A teacher's resource book was also developed via the BookWright/Blurb publishing program.
- > Unfortunately, due to the CRT shortage, I was not able to commit to completing as much of the active ingredients as I would have liked to. This element was out of my control. I optimized the time I had, including modelling lessons during my non-teaching periods.
- > The modelled Literacy and Numeracy lessons for grades 5 and 6 was also most successful and feedback from students and staff was very constructive.
- > The resource materials developed over the course of my project included a cross-curricula unit of work on Space for grades 1 and 2 students, complimented by a teacher's resource book and bilingual book for students. The teacher's resource book contains a series of flash cards, cross-curricula links to Science and Visual Arts, Chinese language curriculum outcomes, interactional tasks for students and extension activities for advanced learners, or students in middle and upper primary.

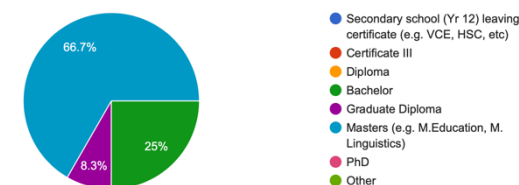


These resources can be found here;

<https://www.blurb.com/b/11970630-tai-kong-let-s-explore-space>

<https://www.blurb.com/b/11970598-t-i-k-ng-teachers-activity-book>

What is your highest level of education obtained (either in Australia or Overseas)?
12 responses

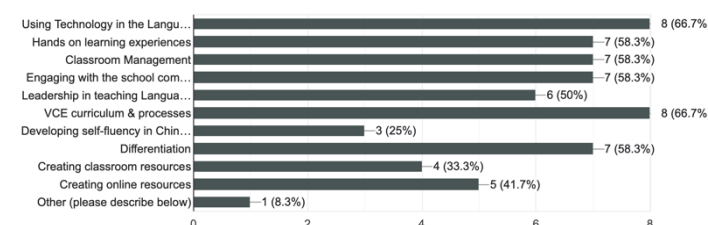


我叫明本。 我是蓝色。
Wǒ jiào Míng Běn. Wǒ shì lán sè.



我有四个眼睛。
Wǒ yǒu sì gè yǎnjīng.

Professional Development Needs - If it was available, which of the following professional development would you be interested in? (tick all that apply)
12 responses



The cover and a page from the Cross-Curricular resource developed.
Part of the Chinese Language teachers survey results.

Overview

The question that I have sought to answer through my work on the innovation project had been:
How do you balance allowing students to struggle in the classroom vs. providing them with the support required?

I had been targeting students in Grade 3/4 to develop their problem solving and reasoning skills in numeracy.

I had set out to adopt an inquiry based, problem solving approach across the school when teaching numeracy and develop the capabilities of the teachers to allow students to be more active in exploring their learning.

Key learnings

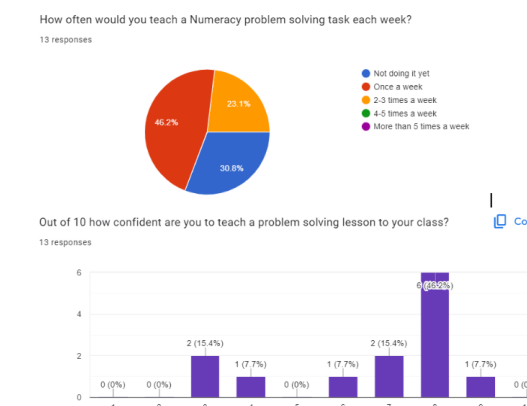
The greatest takeaway I have from the TIF is how I can influence others to lead whole school change. I have always been a hard worker and have depended on myself to make good work happen. However, as a school leader and a leader of change, you really need to develop champions across the school to influence in a positive way to make meaningful and lasting impact. The strategic selection of such champions is required, along with fostering those that are interested and enthusiastic about the impact they can make to influence those around them. The 'Diffusion of Innovation Theory' was a great tool for developing this strategy. The 'Managing Complex Change Matrix' was also a meaningful document that helped me to reflect on my project's impact throughout the process. This became a checklist to evaluate throughout different points of my innovation project and I would steer my energy to the component that I felt was lacking along the way. I began with ensuring that I had appropriate resources for staff to easily buy into a hands-on approach to learning.

Findings and outcomes

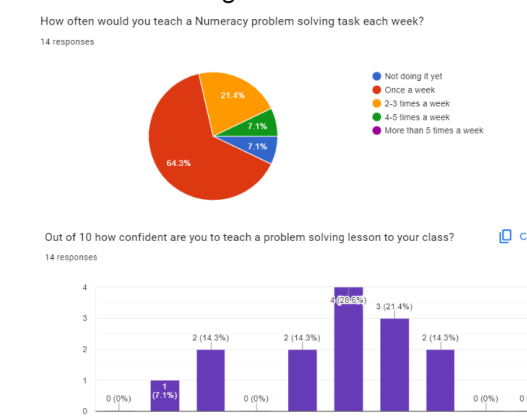
I continued to gather evidence from teachers about their own perception of their confidence levels when teaching problem solving lessons. I used three sets of data (see artefact), one at the beginning of the first professional learning curriculum day, again at the midpoint of the year and finally towards the end of Term 1 2024. It was interesting to see the spread of data during the first data set, suggesting that teachers did not grasp the idea of teaching problem solving. The second set of data showed more teachers giving themselves lower scores and zero teachers marking themselves 9 or 10 out of 10. The final set of data showed zero teachers scoring themselves lower than a 5 out of 10. From this data, it was evident that teachers had a better understanding of what was expected during these sessions, and we are now seeing better confidence and understanding as a whole staff.

The biggest sign of improvement came from students' ability to share their thinking. With their increased confidence in showing different ways they solved problems, students were more confident to share their thinking. A challenge was that the high level of EAL at our school which meant that myself, or the classroom teacher, had to scribe what the students were saying as their writing skills limited their ability to share their thinking. Each week I marked students using the rubrics mentioned and tracked these in a document that showed progress over time.

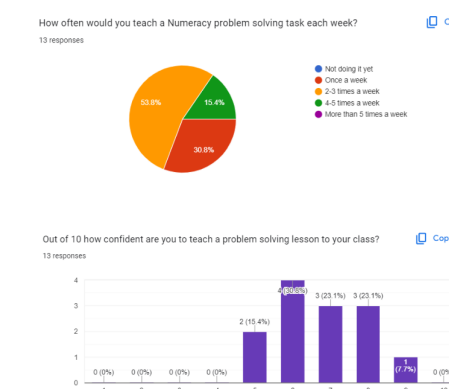
Problem Solving Feedback 08/08/23



Problem Solving Feedback 08/11/23



Problem Solving Feedback 06/03/24



Feedback from teachers at different intervals over the project.

How does problem-based learning extend students' collaborative and teamwork skills in the Year 6 Science classroom?

Overview

Al-Taqwa College consists of 2,220 students across the junior, middle, and senior schools, with most students coming from diverse minority groups spanning East Africa, the Middle East, and South Asia. Approximately 250 of these students are from Year 6, marking the transition from primary to the middle years at our school. We found that the Year 6 Science students were disengaged from the outside world, and they lacked connections and understanding of external issues. We then posed the following questions:

- > How do we create connections with real-world issues in the classroom?
- > How do we get students to come up with strategies to solve real-world problems?

We came up with the problem-based collaborative learning approach across the Year 6 Science cohort.

Key learnings

Firstly, it is important to understand why students are disconnected from real-world external issues that affect them on a daily basis. In Science, our students generally tend to study to the test, and their aim is to produce the best academic results without fully understanding the reason behind learning Science in the first place.

As a result, our teachers need to have the ability to modify their teaching styles with an emphasis on problem-based learning so that students can form better connections with the outside world. At our school, we found the need to address food waste and sustainability issues, particularly on the fact that each student discards an average of 3kg of food waste every year, resulting in a total of 6,600 kg of food waste being dumped into landfills. Therefore, the project aimed to empower our teachers and students to become change makers in our community. Our teachers then created a framework on collaborative problem-based learning for the implementation of the project.

Findings and outcomes

We have recorded 100% teacher attendance in each collaborative discussion on the project, as well as comprehensive teacher discussion and participation in the meeting sessions. Additionally, these Year 6 Science teachers have shown growth in their thinking and teaching strategies for the problem-based cooperative learning project through the pre- and post-survey data, as well as through the learning reflections. The teachers have also actively used literature review to create the framework for the project, ensuring that evidence-informed literature was used to inform their project. Overall, we found that teachers' buy-in and active participation from the start to the end of the project ensured immersive success in the project.

On the other hand, our students also demonstrated significant participation and buy-in. While we initially struggled with the implementation of the project across two Year 6 Science classes, the teachers' commitment, and willingness to adjust the project to our project's framework led to a change in students' attitudes and acceptance of the project. The pre- and post-project survey data from students have shown a significant increase in participation from 86% to close to 100%, as well as in their understanding and ability to make changes to their project according to their needs to create a solution to the issues that they are investigating.

Our classroom observations, as well as verbal discussions with the students, also demonstrated significant buy-in. There was a notable change in the direction of the project when, in the middle of the six-week project implementation period, the Year 6 student leaders had organised whole-school campaigns and led school assemblies across the junior and middle year levels to promote awareness on food sustainability. Students from other year levels brought food waste from home and local areas in the Melbourne West region to support the project.

Student-led problem-based learning project



Image 1



Image 2



Image 3



Image 4



Image 5



Image 6

Image 1 shows students' involvement in the worm farm project; Image 2 shows students monitoring their plants' growth in the greenhouses; Images 3 and 4 show the whole-school implementation of the food waste composting project; Images 5 and 6 show the student-led assemblies to create awareness on food sustainability

Overview

As a school, St Monica's College, Epping, set forth to develop STEM literacy, preparing students for the 21st century workforce. Our Year 7 Digital Technologies team *investigated* if a transdisciplinary STEM subject can teach core STEM curriculums of digital technologies, science, and mathematics; whilst also developing student understanding in essential STEM competencies of collaboration, problem solving, critical thinking, computational thinking, and empathy (combined as 'STEM capacity'). We used principles outlined by Corrigan (2020) to develop the course structure and applied Design Thinking and Explicit Instruction as pedagogical approaches to structuring and delivering learning. An in-situ teacher professional learning program was developed to empower teachers to have the capacity and confidence to delivery transdisciplinary concepts in this novel approach.

Key learnings

Both critical and creative thinking, and computational thinking are underdeveloped skills in students as they commence secondary schooling. Design Thinking is an effective model for contextualising and applying STEM learning. Intentional course design allows for STEM capacity to be developed whilst also meeting core curriculum outcomes. The link between STEM learning and real-world application needs to be made clearer more frequently to students. Student choice in assistive technology topics was a beneficial way to increase and sustain engagement. Timely, targeted, in-situ professional learning results in teachers who have the capacity and confidence to use effective STEM pedagogies to deliver positive learning outcomes.

Findings and outcomes

The intent of this innovative project was to increase student STEM capacities whilst teaching core curriculums (primarily digital technologies), as well as increase teacher capacity and confidence in applying STEM pedagogies. In their capstone project, students investigated and empathised with a problem which technology could assist with or solve. Students undertook a series of ideation and prototyping activities, utilising critical thinking tools throughout the project. A highlight was the diversity of the topics investigated by students, particularly those who selected mental health challenges or neurodivergence, and how technology could make a positive influence in these areas. Students were challenged to apply mathematical and scientific concepts to their projects, as well as effectively communicate their outcomes. Relevant concepts were explicitly explained and modelled to students at key threshold moments which aligned with the Design Thinking phases. Upon conclusion of the project, students increased their STEM capacity by 32%, with exceptional growth in decomposition and modelling and simulation (Figure 2, right). Two thirds of the cohort were 'at' or 'above standard' for the Digital Technologies curriculum and the Critical and Creative Thinking curriculum. Engaging with learning tasks which developed empathy and context for learning was significant in enabling student agency. Students did not link their learning to real-world contexts after the course, finding STEM less relevant to real-life than prior to commencement of the course. The professional learning program had high acceptability and fidelity, with at least 75% of the teachers identifying upon completion they had the capacity and confidence to teach a STEM course. Transference of professional practice expertise broadens capacity for all emerging STEM teachers; this is achieved through structured in situ professional development or mentorships from expert STEM teachers. STEM curriculum and pedagogies are a dynamic sphere within education; collaboration between content knowledge experts from all domains is essential to ensure comprehensive covering of content knowledge and skills. A transdisciplinary STEM course enables the facilitation of multiple content knowledge areas to be covered effectively and has a positive impact on student learning outcomes.

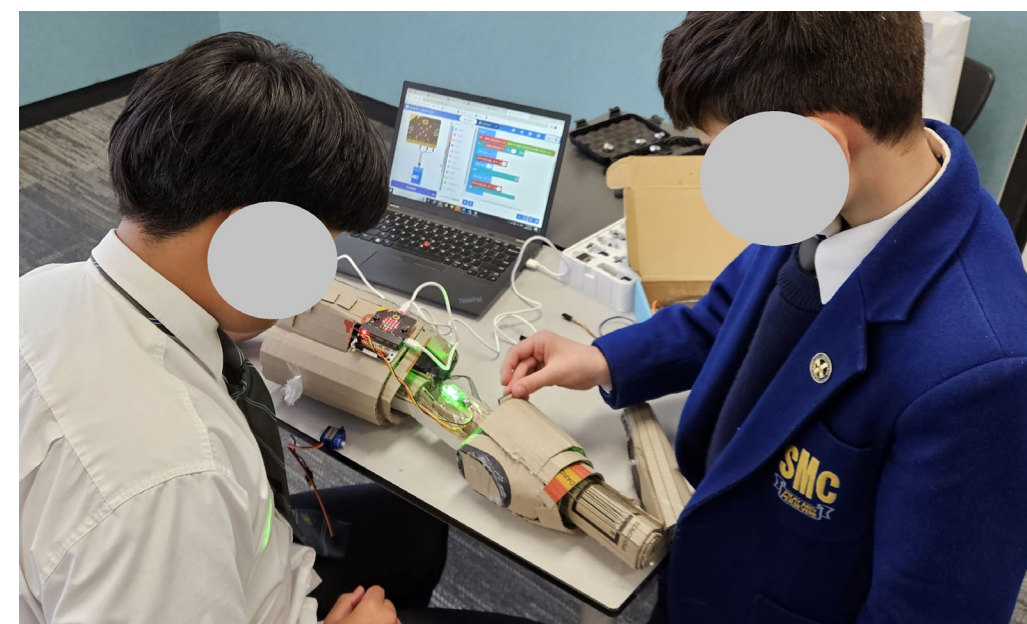


Figure 1. Student 'Robotic Arm' developed during the Assistive Technology unit

Performance and Improvement from Pretest and Posttest by Category

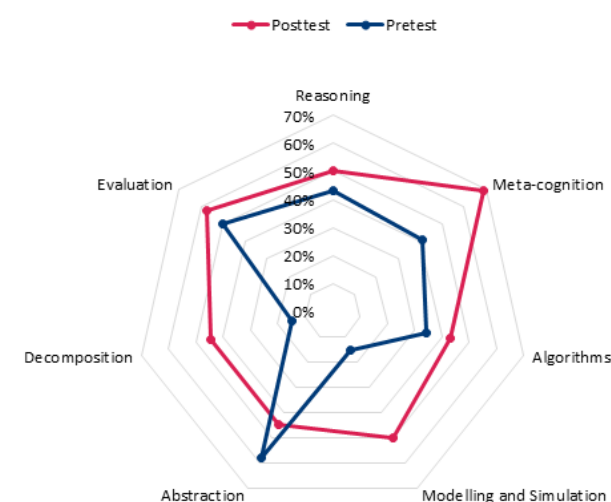


Figure 2. Performance of DigiSTEM students in STEM Capacity from pre-test and post-test

Figure 1. A robot arm prototype developed by students to improve limb mobility and maintain life-like movement.
Figure 2. Performance and improvement of 'STEM Capacity' skills between pre-test and post-test. Post-test results demonstrate progression across all categories except abstraction.

Overview

NAPLAN data over the past two consecutive years highlighted our students were consistently performing below state mean in writing. We expected to have higher than state average results, due to knowing the cohort we had and our index of community socio-educational advantage value being higher than the state average (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2022). Surveys and interviews were conducted with teachers and students to further develop an 'audit' of writing practice across the school, with students' perception of writing bringing to light a significant variation of practice across year levels. Although students were engaging in elements of 'writing' that were happening on a daily basis, we were not involving our students in explicit, scaffolded writing experiences using a principled approach to the teaching of writing. A challenge for our rural, catholic, school community was the lack of provision of professional development, which is critical to the improvement of teacher practice within the classroom. Through the implementation of this project, we examined teacher growth and development within the context of writing instruction. Specifically, this qualitative project/inquiry highlighted the professional support needed for teachers to make meaningful, instructional decisions during the implementation of a consistent whole school approach. Through writing, our students developed a way to express their ideas. Our whole school approach provided manageable amounts of direct, explicit instruction that meet the developmental needs of our students, along with a great deal of support, targeted feedback, and an audience for the student's writing. Importantly, students were given plenty of writing time with targeted feedback and explicit instruction.

Key learnings

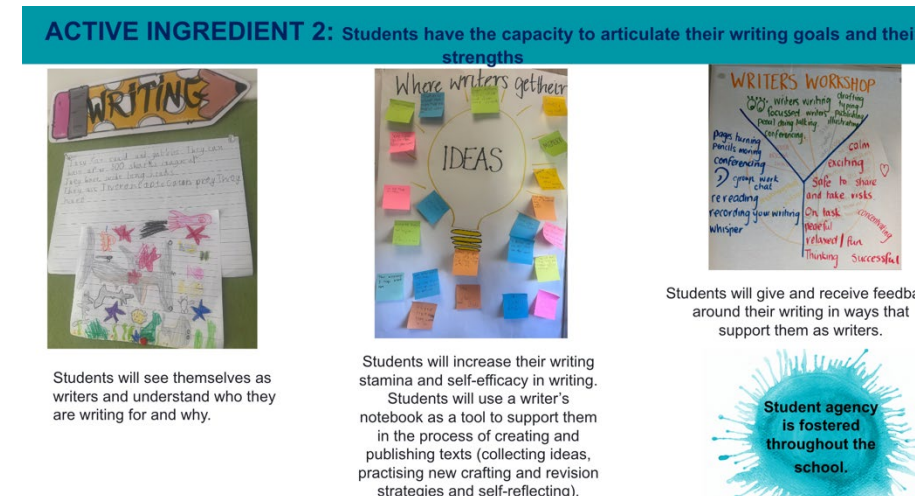
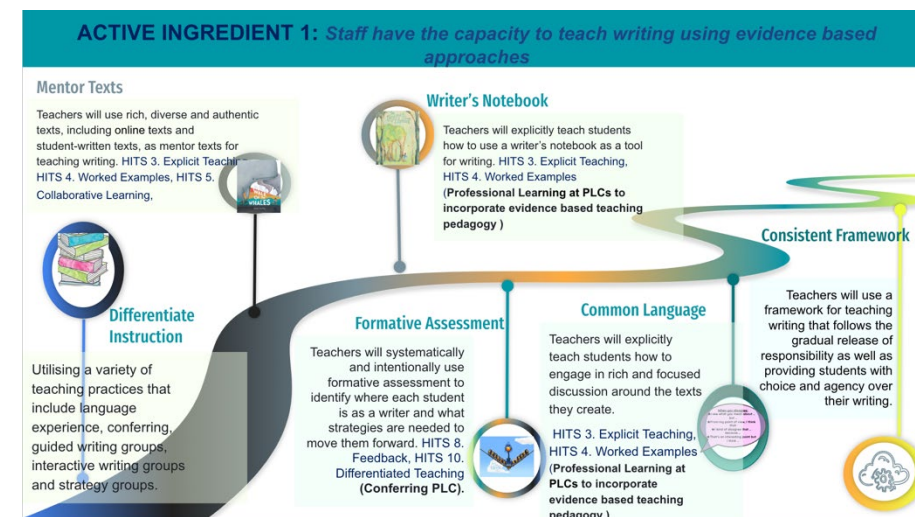
- > **Reinforce initial training with follow-on support within the school:** It was important to revisit content presented multiple times and provide opportunities for clarification, experimentation, and reflection to ensure teacher clarity. Revisiting what we have learnt before moving forward is crucial for a consistent approach.
- > **Time for teacher reflection is powerful:** Time is not wasted reflecting and discussing concepts covered. This is a time when teachers can ask questions, clarify content and build confidence amongst peers.
- > **Continually acknowledge, support and reward good implementation practices:** Celebrating our growth as staff as well as student success promoted – consistency, confidence, collaboration, trust and bias towards action. Finding small ways to keep momentum going is key to the momentum we have built.

Findings and outcomes

What We Observed in the Implementation Process?	
IMPLEMENTATION OUTCOMES	EVIDENCE OF DATA GATHERED
FIDELITY Staff use language consistent of the approach	- Anchor charts, student language, staff input in meetings and curriculum day, Feedback from External Literacy Consultant.
Staff implement the approach as timetabled 9-11am daily.	- Learning walk observation, planning documentation P-6.
Approach is evident in unit planning, curriculum planning and classroom resources.	- New consistency of planning documentation across P-6. Classroom anchor chart observations. Updated Scope and Sequence discussed and implemented in 2023/2024.
ACCEPTABILITY Staff are developing confidence in our new approach and have confidence planning and implementing new learning.	- Staff Interviews - Learning Walks - Feedback from end of year Performance Review Meetings.
Leadership support is evident and can be called upon for collaboration.	- End of Year Performance Review Meetings - staff survey feedback

What We Observed in the Implementation Process?	
STUDENT ENGAGEMENT AND AGENCY	EVIDENCE OF DATA GATHERED:
Teachers foster motivation through creation of opportunities for students to see themselves as successful writers.	- Students can talk about the writing process and how they work through it.
Teachers support students to establish authentic purposes for writing.	- Students have choice daily in the writing lesson
Students celebrate their writing in different ways.	- Students participate in whole school writing celebrations as well as the classroom Author's Chair.
Teacher Capabilities Teachers differentiate instruction and are looking for further conferencing, strategy groups and shared, modelled and interactive writing professional learning.	- Teachers talk with confidence about writing - Teachers are writers and share their writing often with students
Teachers use and model how to use a writer's notebook	- Teachers and students can talk about how they generate ideas and the use of a notebook for crafting a piece of writing.
Teachers use rich and authentic literature for teaching writing.	- Teachers use a range of mentor texts to teach writing - including their own writing, diverse literature and student writing..

NAPLAN data over the past two consecutive years highlighted our students were consistently performing below state mean in writing. We expected to have higher than state average results, due to knowing the cohort we had and our index of community socio-educational advantage value being higher than the state average (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2022). Surveys and interviews were conducted with teachers and students to further develop an 'audit' of writing practice across the school, with students' perception of writing bringing to light a significant variation of practice across year levels. Although students were engaging in elements of 'writing' that were happening on a daily basis, we were not involving our students in explicit, scaffolded writing experiences using a principled approach to the teaching of writing. A challenge for our rural, catholic, school community was the lack of provision of professional development, which is critical to the improvement of teacher practice within the classroom. Through the implementation of this project, we examined teacher growth and development within the context of writing instruction. Specifically, this qualitative project/inquiry highlighted the professional support needed for teachers to make meaningful, instructional decisions during the implementation of a consistent whole school approach. Through writing, our students developed a way to express their ideas. Our whole school approach provided manageable amounts of direct, explicit instruction that meet the developmental needs of our students, along with a great deal of support, targeted feedback, and an audience for the student's writing. Importantly, students were given plenty of writing time with targeted feedback and explicit instruction.



Professional Learning took place over six months in creative ways. For example, 20-minute learning sprints took place in staff meetings which ensured momentum, accountability and clarification was supported. On learning walks, students were observed becoming more engaged in the writing process; being able to articulate their writing focus and purpose more clearly. Common language across the school ensured teachers and students were working together to improve practice.

Overview

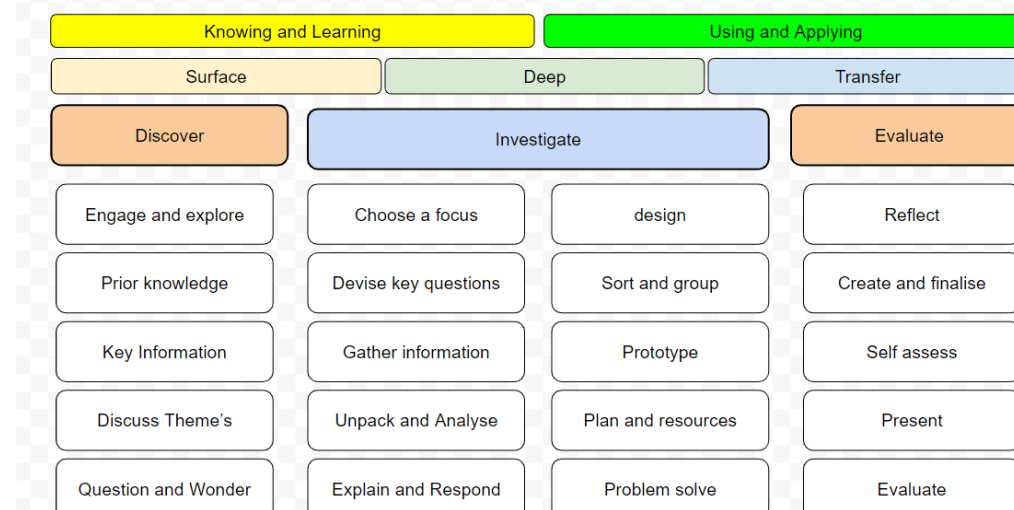
At HHPS we explored a process of developing a HHPS Student Inquiry model to review our Challenge Based Learning Program. Our school knew that CBL was not hitting the mark with the coverage of the curriculum areas it was meant to cover and the purpose of the review was to develop a more authentic and viable curriculum through CBL. Developing the Inquiry Model (Learning Process) allows use not only to engage in the topic but teaches and provides a scaffold for students to understand how to guide their learning in a meaningful and intrinsic way (developing student agency). My project went through the process of developing a team of teachers and leaders. We engaged in PL, explored the current research, completed professional readings, gathered voices, trialled with and on students, developed a model and had 2 trials in year 5 and 6. We are now currently in the process of whole school roll out of the Inquiry model.

Key learnings

- > **(1) Understanding the use of a Learning Process to support student agency:** Students and teachers need to understand what a process of learning is and how to use it for students to be engaged and drive their learning (Student Agency) in a program like CBL. Our inquiry model is based on the SOLO Taxonomy, visible and relevant research that targets student agency. We designed it to look like our Instructional Models as our students are used to this.
- > **(2) Clarity of the Vision through the implementation project:** School wide implementation is a hard and sometimes ambiguous process. The initial plan and design of the process changes constantly. Active ingredients and activities change and adapt along the way, which is why it is key to have a clear vision. Discussing and evolving the implementation vision with all project stake holders ensures the clarity of the vision throughout the project.
- > **(3) Scaling up and Airtime:** Our project started with just trialling with the Year 5 and 6 cohort. I had always planned to scale across the whole school in the sustainability phase of the implementation plan. I had a plan for how we would implement wider, but my plan didn't consider that schools are busy and there are a lot of other priorities that need to happen. My learning is to plan not just my project but to identify all the things that are happening and coming up.

Findings and outcomes

Throughout the development of the Inquiry Model and trials it was obvious that students had more of a voice and were starting to use the terminology. Plans for their end in mind and understanding of the topic was clearly deeper than previously in CBL. Feedback from students was very positive and they felt that they had a better understanding of how to guide themselves through the process. Our HHPS Inquiry Model is clear and allows for Student Voice and Agency. Having developed a team with sustainability in mind allowed for spreading the interest, learning and expertise across the school when implementing school wide. With consultation with my Principal, we agreed to develop a team that had representation from the Junior, Middle and Senior school, a range of time in education, experience with student agency and an interest in the project. For these reasons, we used a voluntary expression of interest for the team. We ran a shortlisting process to ensure the interest was there. Now, in the new year, our team is spread across the school ensuring that our thinking is staying true to our vision and supporting the teams' planning of inquiry. Having two trials that ran concurrently, allowed us to observe, gather voice and refine our model. The first trial allowed us to receive student feedback and to refine the process. We made it more student friendly and added elements considering our language and steps of the inquiry process. After tweaking and refining based on the feedback we have a more substantial and effective process of learning within our model.



HHPS Inquiry Model



The top model is a visual that shows what our school was doing during CBL lessons, when in the process they are doing it across the school and previous years of doing CBL. The bottom image is our final HHPS Inquiry Process which we are now implementing school wide.

Overview

As a team, we identified that our year seven and nine students were not demonstrating the growth and skills required in writing through our data investigations. We posed the following questions:

- > How can we inspire students to overcome challenges, discomfort, and self-perception as non-writers?
- > How can we help students see the power of making mistakes in writing as normal?
- > How can we reshape the narrative writing process to improve and engage students in writing?

We decided to trial character-driven narrative writing and differentiation, starting with the research "The Impact of COVID-19 on Teaching in Australia - A Literature Synthesis."

Key learnings

Firstly, it was key for us to recognise post-pandemic why our students, from a range of learning levels, were not engaging in the writing process and not perceiving themselves as writers. For our secondary school students, we found that they considered the traditional linear narrative story mapping to be disengaging and lacking in structure and depth to support them as writers. Secondly, we considered carefully how we would track learning goals and student growth. We used a live digital formative assessment IEP tool to track short and long-term goals that were created and shared between the student, teacher, and parent. All were aligned to the curriculum, scaffolded, and differentiated, with check-in cycles to allow for reflection of skill development. Lastly, choosing an AI to underpin and support the approach PADLET was chosen as is DET-approved and versatile teaching tool that can enhance student engagement, critical thinking, comprehension, collaboration, and assessment.

Findings and outcomes

Student feedback revealed that writing character-driven narratives gave them a strong sense of ownership over their work. This process helped them view themselves as writers leading to increased motivation and engagement. Students noted even small changes in a character's physical appearance or actions could significantly impact their interactions and reactions within the narrative world and in the visual representation of their writing. Having short- and long-term live digital IEP goals provided teachers with built-in reflective learning time and practice. This allowed them to discuss and adjust learning for students' varying needs.

The unexpected highlight of character-driven narratives was that they provided students with a unique opportunity to practice dialogue, description, and action. This approach is often more engaging and accessible than focusing on concepts like punctuation and dialogue through the setting. Students improved their writing by using descriptive language, vivid imagery, and figurative language to make their narratives engaging. This process revealed that students often revise and refine their work to align with their vision. They underwent multiple drafts and revisions to improve clarity, structure, and emotional impact. Choosing the right words and sentences was crucial for the AI to convey their personal vision effectively. This small-scale trial will be rolled out in the school later in 2024.

Character-driven Narratives

Student	Teacher	Parent	Learning Goals	Outcomes
Student 1	Teacher 1	Parent 1	Goal 1: Improve writing skills	Outcome 1: Student 1 improved writing skills
Student 2	Teacher 2	Parent 2	Goal 2: Improve reading skills	Outcome 2: Student 2 improved reading skills
Student 3	Teacher 3	Parent 3	Goal 3: Improve math skills	Outcome 3: Student 3 improved math skills

Figure 1: An example of the live digital IEP that is collaboratively shared through office 365 and actively reflected upon in built in cycles.

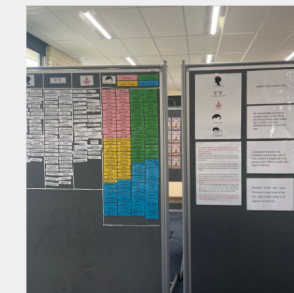


Figure 2: An example of hands on materials and mentor text

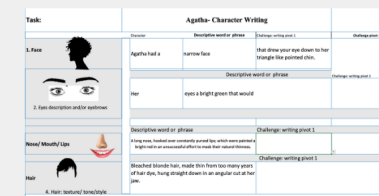


Figure 3: An example of scaffolding through digital dropdown stems

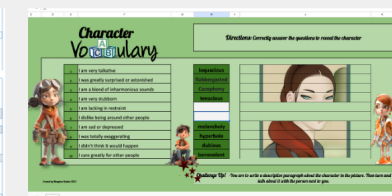


Figure 3: An example of building student vocabulary. The student must write the correct word for the character to appear.

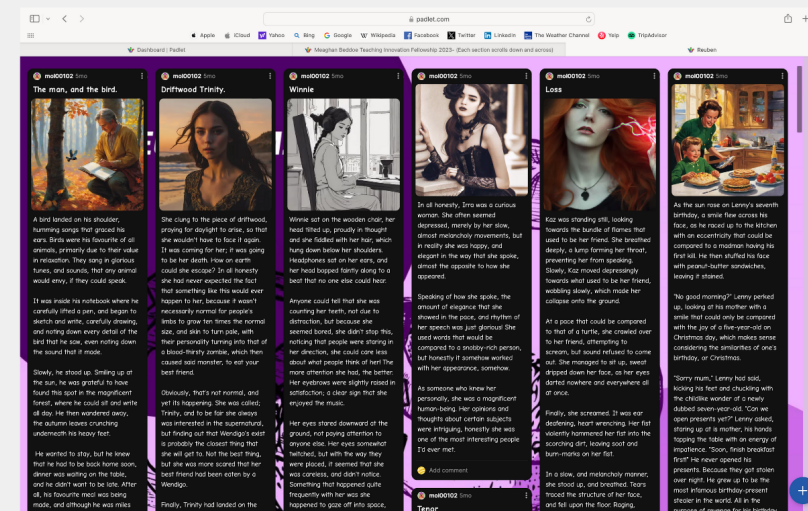


Figure 5: An example of a year 7's student work from the innovation project

Creating documents that scaffolded our students' success was key. This was achieved by looking at what our data was telling us and creating authentic evidence-informed resources that suited our context. (Some examples are shown above)

How can we create positive mindsets and encourage student agency in mathematical learning while achieving student growth in mathematical outcomes?

Overview

In our small regional school at Allansford and District Primary in the Southwest, we have a strong community of learners with 178 students within an engaged and positive community of parents and teachers. Our school's critical challenge was to build teacher confidence and capability to ensure we were instructing a math curriculum that encouraged student agency and positive dispositions to improve student growth in math. Our fellowship team of Grade 3/ 4 staff, lead by our math learning specialist explored, researched and investigated the use of mathematical language and dispositions focusing on 'through the task - not at the task' and to subsequently engage and to promote student agency. This was also done via our new instructional model of 'Anticipate, Launch, Explore and Summarise.' This model is about engaging with the learners in the form of productive struggle and their personal maths learning journey. We explored this through our extended research, launching from Jo Boaler's Mathematical Mindsets and Peter Liljedahl's Building Thinking Classrooms. We then applied an extension to involve our wider community of parents to assist in our students mindset of maths.

Key learnings

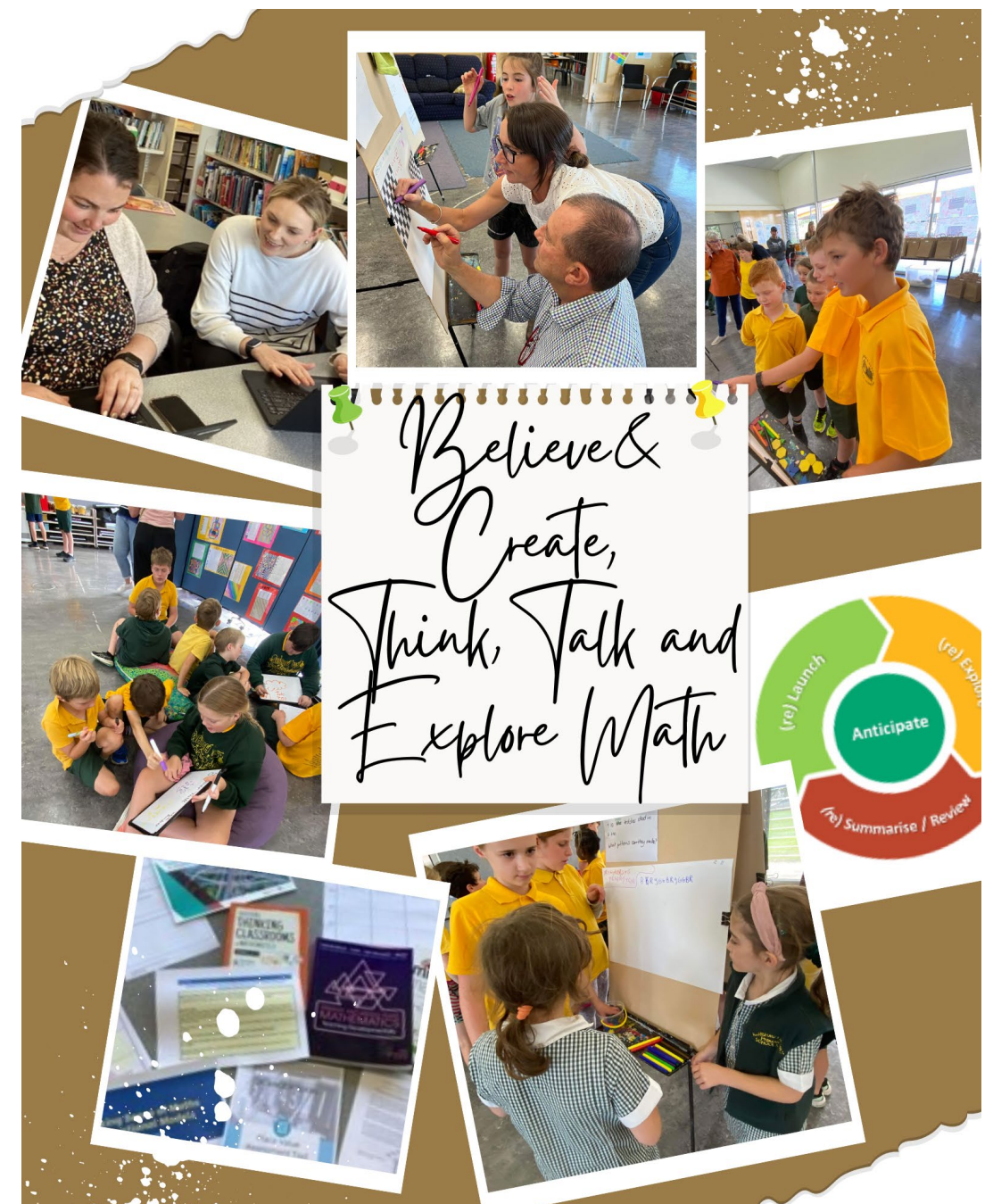
- (1) The use of Jo Boaler's Mathematical Mindsets was a wonderful place to start and build from- we used this in our 20 Days of Maths at the beginning of the year to create a basis for students to build on. This included a range of resources including 'YouCubed' and 'Mindset Mathematics- Visualising and Investigating Big Ideas.' The school-wide consistent language used builds the foundation for further maths thinking and problem-solving.
- (2) The exploration, research and implementation of an instructional model that allowed for the use of student agency and the use of pedagogies such as vertical thinking boards (Peter Liljedahl), number talks and game-based learning (Minas/Russo) was vital to our project. Our use of the anticipate, launch, explore and summarise model (Peter Sullivan) also promoted this.
- (3) How do we achieve student agency into maths and truly empower our students? Create a student process such as student action learning team to give true student feedback that builds the picture of student agency.

Findings and outcomes

Our journey began with our students being compliant but not excited during maths and this was evident in our data limitations to their growth in mathematical outcomes.

Our team began with problem-solving but saw the need to develop positive mindsets. To allow this thinking approach to flow, we created a cycle of professional development that included professional reading for our three (3) teachers who worked with the 3/4 and 5/6 students. This was then shared with all staff at PLC meetings. We then used collaborative planning, using our new learnings with students, and then gained their feedback to improve the effectiveness of our impact. We included parents in the cycle via our Dojo videos of student number talks, game sessions and maths sharing. We could see the parent approach and attitude to mathematics had an effect on student disposition. We then conducted a family maths night to share the maths pedagogy with families- this was conducted by the Year 3-6 students.

The main challenge was to gain student agency in assessment to gain a true understanding, so this an area we explored through the Academy course 'Rethinking Assessment' which we continued to develop worth Year 3-6 students to embed in outreaching and learning. The highlight of our project was definitely the uptake and empowerment we saw in students and the positive connections parents made to their child's mathematical learning. Our impact has been that now mathematical mindsets, language and collaboration is a part of what we do at Allansford & District Primary School. Our learning has and will continue to shape our PLC processes and has positively impacted staff to be actively seeking learning observations in mathematics.



A community of mathematics developing our maths mindsets, pedagogy and thinking.

Overview

As a Design Technology Curriculum leader, my team and I identified challenges we faced in progressing students in ideation skills. We decided to focus on Food Studies at Years 9 & 10 and improve the team's understanding of Critical and Creative Thinking skills. Our team consists of staff mostly teaching outside their methods, with varying expertise and gaps in their content knowledge of our curriculum area. The challenges identified were:

1. Teachers' ability to break down ideation skills
2. Students using the first idea they think of
3. Students' confidence in justifying design decisions

Key references- The Vic Curriculum Critical and Creative thinking descriptors and Framework for the Assessment of Creative Thinking in Pisa 2021

Key learnings

A selected group of six teachers from different Technology subjects. Our goals:

1. Teachers are clear about what ideation skill progression looks like
2. Students are able to generate synthesised innovative design options that reflect research
3. Students are able to verbalise design solutions through quality annotations

After our initial meetings and discussions around ideation and looking at approaches, techniques, research, data and our school's context, we decided that creating an ideation tool boardgame would be an engaging innovation, could foster play-based learning, engage motivations, cater for differentiation, students' fear of making mistakes and reduce students' procrastination when it came to making design decisions. Being student lead, it would free teachers up to collect evidence of learning, focus on quality over quantity and the process of design thinking over the result. We wanted to separate the making (what students want to eat or have the skill to make) from the freedom of being innovative and exploring potential possibilities.

Findings and outcomes

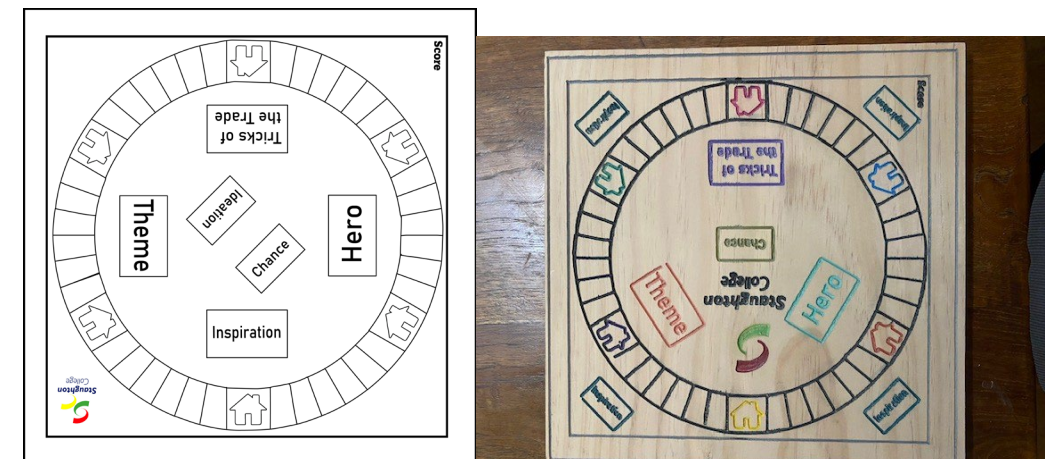
We were too ambitious! Creating a boardgame is far more involved than we first thought. The mechanics, purpose, skill development, ethical considerations, teacher's autonomy and teaching style etc. took time and much discussion.

Celebrations:

- > Staff that are generally unmotivated and have gaps in their content knowledge have come together for professional development and have collaborated with much robust discussion, better understanding of ideation skill progression and enthusiasm through a series of professional development days.
- > During our PLT- I have seen improvement in identification of Zone of Proximal Development groupings and target teaching strategies around ideation of those involved, building the capacity of those who were not, through student evidence and justification of assessment decisions.
- > Rubrics around ideation and design briefs have been written using evidence with a much better understanding of each level of learning and identifying the strands/skills of ideation.
- > The principals at the school have given us some more autonomy and freedom to make decisions on how we teach.
- > Teachers' confidence has improved.

Obstacles:

- > Teacher shortages have resulted in a lack of time to work on the project, therefore we have not completed the game prototype and need to continue to develop the game once the Fellowship has ended to introduce to students, make adjustments and trial to collect data for impact evaluation. We will also make other subject prototypes.



1. Our group discussing, researching and recording the mechanics and purpose of the ideation game.
2. Plan and prototype of the board game.

Overview

The effect of literacy on people's lives is profound. It is argued that those with higher literacy, as measured by reading level, generally have had access to better education, so, when we at The Hamilton and Alexandra College (an ELC3 – Year 12 independent school in Victoria's Western Districts) noticed that over the last 10 years, our median VCE study score had significantly decreased from 34 to 31, and our NAPLAN growth performance was flat-lining, we knew it was time for change. After considering the questions 'Do all staff see themselves as teachers of literacy?' and 'Are students aware of the importance of literacy?' as well as 'Can students transfer literacy skills across disciplines?' we decided to investigate a school wide inter-disciplinary literacy framework, with a focus on language acquisition, transference, and use.

Key learnings

The first key learning we discovered is that without collective efficacy, that is the shared belief amongst staff that they can positively impact student outcomes, then long-lasting, meaningful change will not occur. Professor John Hattie's work on collective efficacy was crucial here. The first step in whole school change is to ensure the environment for change to take hold is cultivated prior to launching.

The second key learning is that acknowledging and activating the extensive subject expertise within our teaching body not only promoted collective efficacy, but it provided the opportunity for collaborative practice where staff further developed their view of themselves as literacy AND subject area teachers. The final key learning was that students really do see the value of literacy skills, particularly in making meaning, analysing and evaluating. Their most fervent wish, however, is that they can see the relevance of these skills and that they are relatable to not only now but in leading richer and fuller future lives.

Findings and outcomes

Staff feedback showed that a more collaborative approach to the teaching of literacy was wanted and needed. Whilst they considered it their responsibility to facilitate literacy instruction, they reported feeling isolated and unsure of their skills which led to them virtually eliminating literacy instruction from their practice. This viewpoint was supported by student surveys that overwhelmingly reported that they rarely received literacy instruction outside of the English classroom. These findings changed the focus of the project from developing a bank of instructional videos and templates as a staff resource to developing a whole school literacy plan (of which the development of resources was one part) and up-skilling a key team who could in turn, up-skill colleagues within their departments in a shared instructional model, focusing on both discipline and inter-disciplinary literacy.

The inclusion of student voice in the data collection phase was a significant step forward from previous data collection practices in the school. As the fellowship was focused on improving student outcomes, including student perspective was crucial in helping staff to see the urgency in creating change. Dr John Kotter's 8 step process for leading change was instrumental in developing the change process. An unexpected highlight was the willingness, receptiveness and eagerness staff showed to work with student voice and respond to its message. This gave the working party optimism that collective efficacy could be developed in the near future amongst staff. Another highlight was staff members' willingness to reflect on their practice. This disposition was advantageous when introducing staff to small collaborative tasks.

This fellowship is very much still a work in progress. The next steps are for a larger working party to undertake professional learning on leading a whole school inter-disciplinary literacy approach (through the Academy) and to further develop policies that will apply school wide. From there, a shared practice framework will be developed.

Student Survey

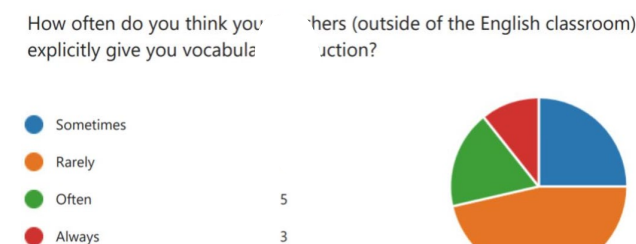


Figure 1 Student opinion on breadth of literacy instruction.

On a scale of 1 to 10, how important do you think building a strong vocabulary is for your overall academic success and future opportunities?



Figure 2 Student opinion on importance of literacy instruction.

I see myself as a teacher of literacy across the curriculum and integrate literacy instruction into my subject.

[More Details](#) [Insights](#)

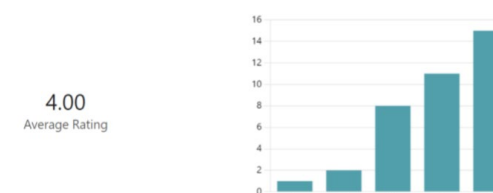


Figure 3 Staff opinion on themselves as teachers of literacy.

I actively collaborate with other teachers to reinforce literacy skills across subjects.

[More Details](#) [Insights](#)

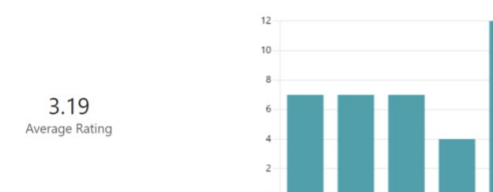


Figure 4 Staff assessment on collaborative practices, direct impactors on collective efficacy.

Surveying both staff and students about their views on literacy instruction and its practice was key for understanding how to best approach its immersion within our school context.

Overview

The CineCulture program, coordinated by Obayda Kannouj, targeted students from various backgrounds at Al-Taqwa College in Grades 6 to 10, addressing the disconnection they felt from their familial and cultural identities. Concerned parents observed their children isolating from tradition -- embracing more individualised identities. Through inquiry, experiential learning, and leadership development, the program tackled common cultural themes, promoting community engagement and self-expression via group-based filmmaking to present their findings in an artistic manner. This collaborative effort involves students and their family members, school staff, external facilitators, and community members. It aligned with research by Gregg Alexander's (2013) article on the effectiveness of service learning, experiential education, and active learning in fostering social responsibility and meaningful learning experiences.

Key learnings

1. Instead of information sessions, involve parents from the beginning to be part of the positive changes in their child. The parents' appreciation peaked when they saw the interest and curiosity their child had about their culture and family.
2. Collaborate with internal and external providers to tailor workshops to meet the student needs at various project stages. Providers were eager to offer unique, suitable content and challenge themselves professionally in the process. Involve staff members with relevant skills and experiences, as many are keen to contribute. I found that opening conversations with those around me invited me to learn more about staff and determine ways they could support students in the program.
3. Embrace flexibility in participant selection, prioritising enthusiasm and commitment over timing. Initially a few committed students opted out of the program. Some of our most engaged students joined later, attracted by peer recommendations.

Findings and outcomes

The program effectively integrated various elements such as creative storytelling, filmmaking, inquiry-based learning, interviewing skills, community building, teamwork, and leadership development. As a result, the films created became powerful tools for community engagement, sparking essential dialogues and building connections among students, families, staff, and the wider community.

Students' active roles in interviewing community members for their inquiry projects not only provided them with profound insights into explored themes but also developed their communication and leadership skills. This engagement nurtured deeper bonds, curiosity, and a stronger sense of agency in their education and personal growth, reinforcing their belief in their abilities.

Presenting their work at the ACMI cinema room increased the sense of accomplishment and pride among the students.

Feedback gathered through surveys, testimonials, and speeches during the presentation night highlighted that students developed stronger familial bonds, gained empathy for migrant experiences, and deepened their appreciation for their heritage through language acquisition.

Teachers observed enhancements in students' confidence, self-esteem, and communication skills, reshaping perceptions of media arts as a valuable tool for personal development and education.



A Window into Bosnian Culture
Short film

A heartfelt story of immigration, culture and identity, seen through the eyes of a young Bosnian girl.



Yeyusera Guzo - Yusra's Story
Documentary

A teenage girl embarks on a journey to understand the importance of her native language and connecting with her family and identity.



Reviving Roots
Mockumentary

When Adhil has no choice but to travel to Sri Lanka to see his family, he must embark on a journey to reconnect with his culture - and judgmental distant relatives.



Beyond Words
Short film

A contrasting yet similar view of two boys who try to bridge the gap in language when speaking to their elders.



The Piece Left Behind
Documentary

This documentary chronicles several immigrants and sheds light on the effects of migration on different generations -- discovering the struggles faced when preserving their culture and identity.



Pathway to Peace
Documentary

Mr Kevin reflects on his cultural identity and faith.



SCAN TO WATCH FILMS
tinyurl.com/atc-ccfilms

The students' group films, titles and synopses and a QR code to access the short videos

Teaching Innovation Fellowship

Developing a framework of Scientific Reading Capabilities

Overview

The goal of our Innovation Project at Keilor Downs College was for two Learning Specialists, who are English Teachers, to lead the development of a Framework of Scientific Reading Capabilities, based on school-specific quantitative, qualitative and stories-based artefacts and data and current research about teaching reading. We worked closely with four Science Literacy Leaders from the Science KLA to develop a shared understanding of Scientific reading skills. Though this process we sought to educate as many Science teachers in our school as possible about teaching reading in Science, to support them to feel capable and willing to try new strategies and approaches. We are using the Science Reading Capabilities Framework as an anchor to guide Science staff to interpret which under-developed capabilities are limiting students in their learning in Science and adjust their teaching accordingly.

Key learnings

- > The process is the point! It is easy to only focus on the end result in an improvement project, but anything worth doing takes time and clear processes involving many people, and that process is how you can have the biggest possible impact.
- > The balance between keeping momentum in an area of focus and staff improvement and managing cognitive load is nuanced and ongoing. The narrative of collective efficacy we build is perpetual and requires many different types of fuel. It is important to explain to staff how initiatives have impacted practice so they can see the progress journey.
- > When you are working with a diverse group of people, the 'subject' you are inquiring into, while important, will always come second to the interpersonal and professional skills which can be developed during such a process.

Findings and outcomes

Student artefacts and voice has immense power to spark motivation. Tapping into the expertise of Science teachers, and contextualizing what reading skills look like in their classes, builds their confidence and capability to improve their teaching of the reading skills required in Science.

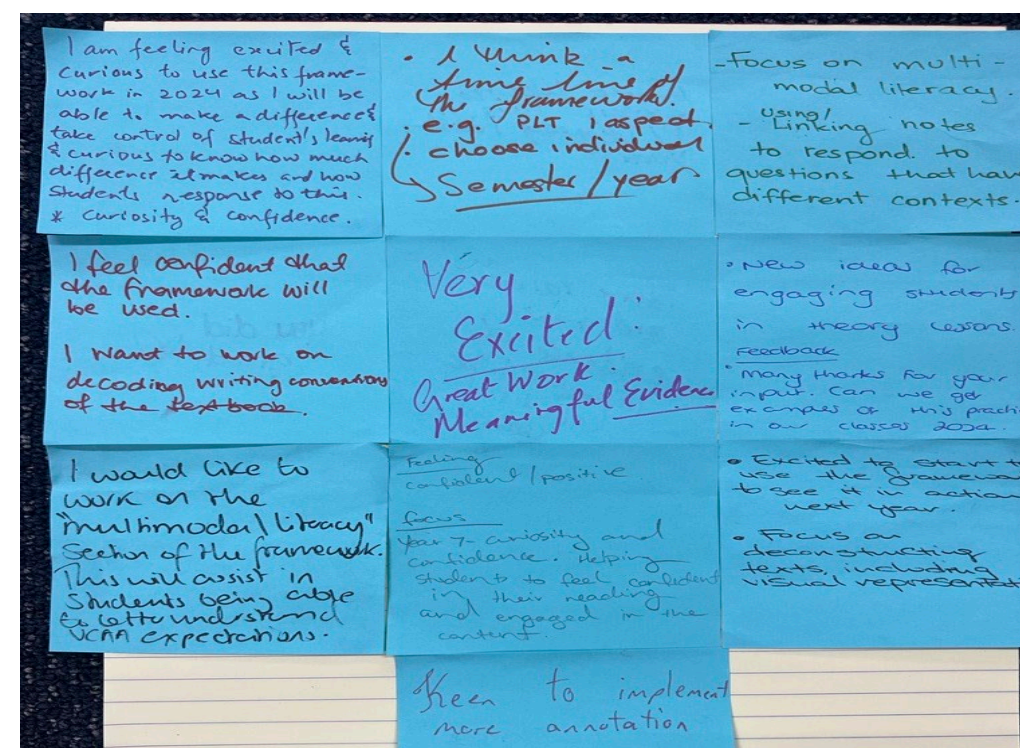
The presentation of the completed Framework of Scientific Reading Capabilities with our Science department at their end of year KLA planning day was a success as they felt they had all been a part of its creation. Attached to the Framework was a list of suggested strategies which they could use to develop their students' reading skills, with each pillar of the framework having a page of strategies. Despite it being week 11 of a long term at the end of the year, all Science staff who were present engaged meaningfully with the session. Their facial expressions, body language and comments to each other indicated that they could see the relevance and value of the Framework.

The Science teachers' ideas and interpretations of the Framework shared during their first discussion about it indicated that all Science teachers present were open to experimenting with the suggested strategies, guided by the framework, and saw how reading skills fit into the long-term process of strengthening the broader skills of Science students at our school. There was a clear shift in language from most of the Science teachers. Discussions witnessed at the beginning of the year were predominantly self-focused with language such as "My students" and "I do this". This shifted to a more collaborative perspective where some of the Science Literacy Leaders modelled inclusive and collaborative language in discussions and presentations, such as "Our Science students" and "Our learning goals". This saw more Science teachers also beginning to talk this way.



Scientific Reading Capabilities Framework - Keilor Downs College 2023

Curiosity and confidence	Text types in Science	Adaptable vocabulary skills	Scientific research skills	Multimodal literacy
Make connections to their own life and prior knowledge	Apply and adapt reading skills from other subject areas to unfamiliar text genres in Science	Understand that words can have multiple meanings in different contexts	Find relevant sources online and in written texts	Notice different types of visuals
Make connections to real-life Science in reports, articles, posters, case-studies, infographics, social media	Decode the writing conventions of their Science textbook (i.e. table on contents, distinct syntax, technical language, headings, instructions)	Understand the function of prefixes and suffixes in Science – recognise familiar morphemes	Evaluate the credibility and relevance of sources	Deconstruct images to interpret meaning including captions, arrows, lines, colours and orders
Make connections between the information in videos and the concepts they read about in Science	Interpret the intended purpose of texts i.e. procedural, reports, explanations and arguments	Level 1: literal comprehension - recognize and transfer the meaning of taught words when reading in Science	Use sources and analyse evidence or data to draw a conclusion	Transition between text and visuals while reading to connect meaning in images to written text and intext references
Generate scientific questions before, when and after reading to deepen understanding	Know how to engage with and learn from different text genres in Science	Level 2: make knowledge-based inferences when reading in Science	Notetaking: Summarising and paraphrasing key information from texts	Identifying patterns, trends, anomalies, and outliers to interpret graphs
Know how to locate Scientific texts which interest them	Evaluate the effectiveness of a text to communicate scientific concepts and findings	Level 3: build vocabulary and understanding by making connections to other texts	Generate inquiry questions to guide own research	Critique diagrams and models



The framework.

Feedback from the Science staff after the meeting at the end of 2023 when they were presented with the framework. I was surprised and delighted by how positive it was.

1. Build teacher capacity in STEM education to scaffold EAL learners' oral language skills.
2. Improve EAL student achievement in STEM subjects.

- > I discovered that many teachers prioritised time and energy for Literacy and Maths, and STEM was of a secondary importance. To mitigate this challenge, I took advantage of the interdisciplinary nature of STEM. I worked with the Literacy leaders and specialists to integrate the learning of STEM within these subjects, enabling teachers to have more time to teach the content in a meaningful way.
- > Human Empathy was an innovation mindset I used when collaborating with teachers who were time-poor. They needed to feel that I respected their time. When I listened with the purpose of understanding, I was able to see that in some cases, teachers were overwhelmed by new technology that frequently needed to be used when teaching STEM. With this insight I was able to support teachers by providing proper training and logistical support, thereby enabling the project to progress successfully.

1. The STEM Program Overview was implemented across all year levels, P – 6, in 2023.
2. Teacher acceptability and engagement with STEM at CTK has improved.
3. The teaching framework involving the explicit teaching of scientific language, alongside STEM pedagogical methods, has shown to improve student speaking and listening skills.
4. Digital Technology education has been implemented in a systematic manner across the school.
5. Acceptability from Leadership for STEM with a focus on language building has been adopted as a whole school focus in 2024 after the school review.

The professional learning, and networking that I have participated in as part of the Teaching Excellence Program and Teaching Innovation Fellowship have developed my leadership skills. I am a leader who understands the importance of human relationships, active listening, and the value in having a predisposition towards action. I have learnt that a large part of leadership is to deal with contentious work relationships, and to have my goals in the forefront of my mind (as opposed to defending my ego) when communicating with others. I have learnt that it is these people who are most likely to champion the objective once convinced of its merit. I understand the value of data collection and using it to inform future decisions for the good of the students, and the school community, and that this is an effective way to embed change.

Figure 1 shows perception data about how teachers' confidence improved after the project was implemented. Figure 2 shows the Oral Assessment rubric that was one of key assessment used to determine the oral language skills of sample students before and after project implementation. This sample rubric shows how a student's skills improved.

Overview

Mount Rowan Secondary College has the highest intake of Aboriginal and or Torres Strait Islander students in the Ballarat region. Historically, our Koorie students were absent 1.5 days each week which equates to missing a whole Term of school each year. Staff responses from our Community Understanding and Safety Training revealed many teachers are not explicitly aware of how to embed Koorie perspectives. Our project explored 'How might we use responsive pedagogies to develop a Koorie Inclusion program which champions Indigenous perspectives to improve Koorie learner attendance?'. The Marrung Education Plan suggests schools build cultural inclusion and teacher confidence to connect with communities to implement a shared approach.

Key learnings

- > Giving Koorie students voice, choice and agency and finding out what they need in order to engage is key to establishing a program of cultural club sessions. Students can share their own Ways of Learning which assists teachers to foster positive learning environments.
- > Collaborating with Department of Education and Training Koorie Division and visiting feeder schools establishes connections with local Koorie Mentors, Traditional Owners and Elders who can offer consultancy and facilitate cultural sessions and yarnings.
- > Establishing governance structure such as a Marrung Steering Committee allows staff and Leadership to monitor feedback and attendance and utilise Marrung Education Plan Inclusive Practices united school-wide.
- > Respecting not all Aboriginal and or Torres Strait Islander students wish to be identified so optional offerings as well as ensuring student and staff allies are also invited helps to foster unity.
- > Creating a governance structure such as a Marrung Steering Committee enables staff and Leadership to monitor student and staff feedback and student attendance.

Findings and outcomes

Our students identified 'friendships' and 'connections' as barriers to their learning and hands-on tasks most appealing. Our school created a Marrung Committee for staff to collaborate and monitor feedback and attendance. Students created their own Koorie Club including a dedicated space with their artworks and artefacts; wrote and filmed Acknowledgement of Country displayed in every classroom and assembly; created building signage; a mural and Native sensory garden and collaborated on a cultural PE uniform. Students devised 'MRSC Koorie Ways of Learning' which all staff were supported to embed through professional learning and yarning with our Koorie Education Support Officer.

Analysis of quantitative data show that Koorie student attendance improved throughout the project. Qualitative feedback data suggest the Koorie Club has a positive impact on student wellbeing by creating a positive climate for learning. It triggered a school-wide trial of student-centred clubs in 2024 to address attendance and engagement. Attendance and Policy Data interpretation suggests this project triggered refinement of whole-school attendance policy and priorities. Interpretation of teacher surveys suggest positive impact on teacher confidence in applying Koorie Ways of Learning and specifically in capability of "yarning circles" strategy. Staff and students have expressed strong interest in the Koorie Club sessions being facilitated at lunch times and club times to allow more allies to participate.

Artefacts



Mok-borriyn 𐀀𐀁𐀂

Turt-barram 𐀀𐀁𐀂
Ngarrimili 𐀀𐀁𐀂

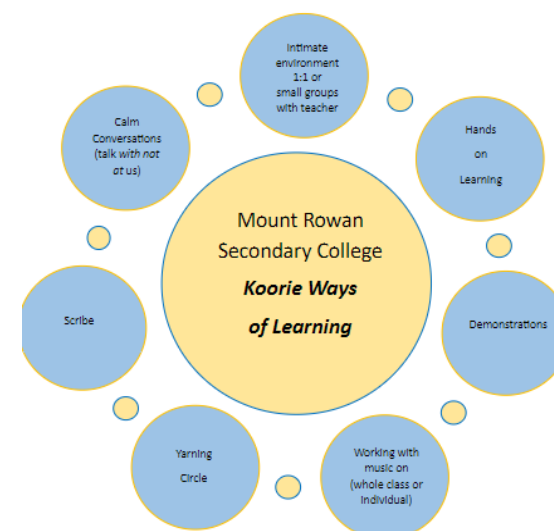


Chart 3. Use of MRSC Koorie Ways of Learning

Are you currently using any of MRSC Koorie Ways of Learning in your classroom?

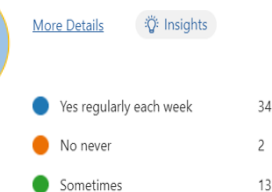


Chart 4 – 2023 Term 1 versus 2024 Koorie Attendance Data (comparison)

SUMMARY			
	ClassPerc	AcctdPerc	SchlPercentage
2024Term	72.16	91.55	81.24
2023Term	59.89	90.73	77.38

Note: Baseline data (from 2022) indicated that Koorie students were absent 1.5 days each week or 70% attendance.
2023 Term 1 attendance data 77% actual or 91% accounted days
2024 Term 1 attendance data is 81% actual or 92% accounted days
The class percentages data for both years are lower which means that students are in school but are attending fewer classes.

Figure 1: Koorie Club Mural & Building signage "to be proud" chosen for Koorie Club
Figure 2: Koorie Ways of Learning & Staff use of these approaches in classroom
Figure 3: Data indicates Koorie attendance has improved throughout the project

Overview

St. Bernard's is a large regional Catholic primary school in Wangaratta catering for 364 students from Foundation to Grade 6.

A review of NAPLAN and PAT ACER outcomes indicated that students were achieving low to medium growth across all areas in Mathematics.

The key question I posed as a Mathematics leader was: How can we as a school provide opportunities for students to access multiple exposures to maths topics throughout the year?

Starting with the Grade 3/4 teachers (5 classrooms, 6 teachers) we decided to trial the use of lesson starters during the first 5-15 minutes of every mathematics lesson. These lesson starters would provide opportunities for students to access past and future learning. We used the Department of Education's work on multiple exposures in the HITS (High Impact Teaching Strategies) and created agreed norms, a planning template and lesson starter resources.

Key learnings

> Go slow and deep and be flexible.

As a leader I was clear on the project's goal and my role. Being flexible as a leader and letting changes to the original project occur allowed the innovation to evolve organically and be successful.

> Provide resources to help 'Make Change Easy for staff'.

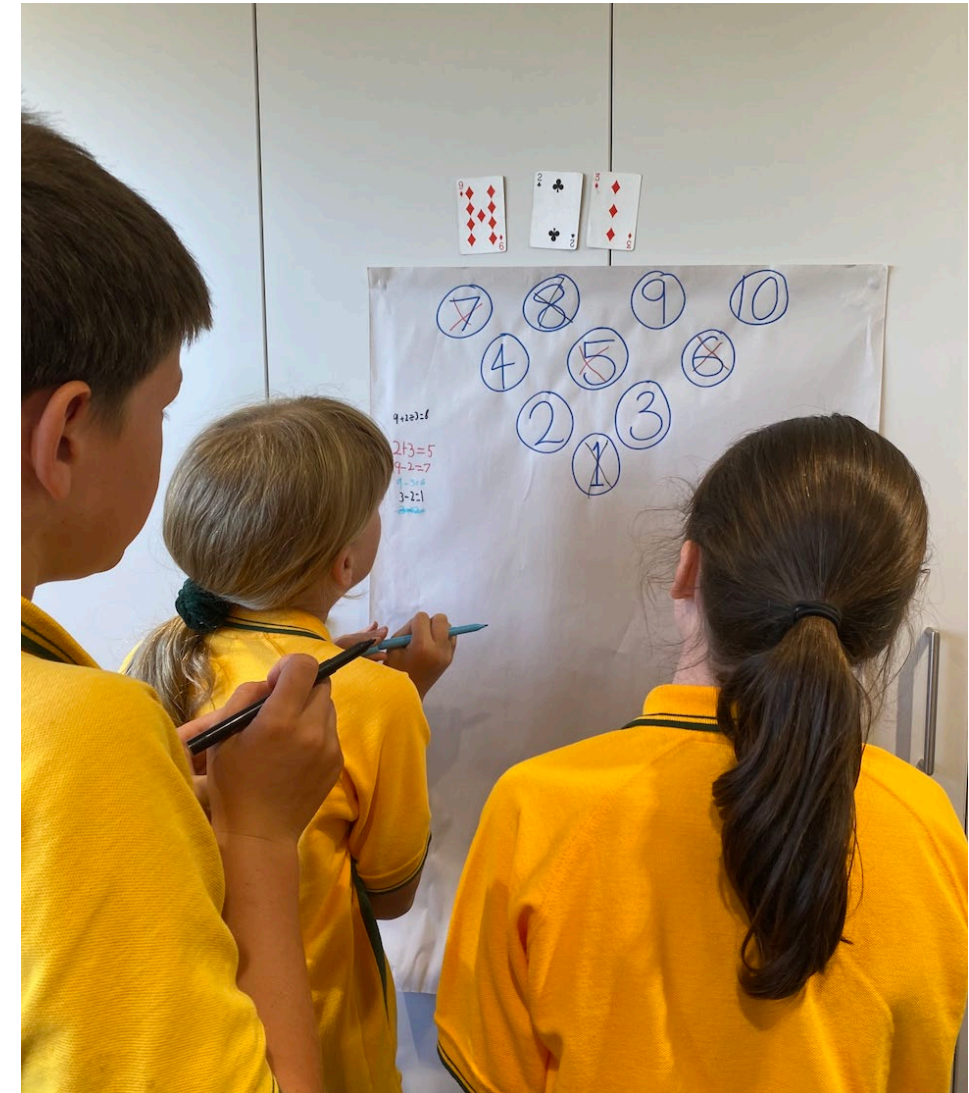
Simon Breakspear's advice was so valuable and allowed for early buy in and success in the project. As a leader I developed collaborative lesson starter resource banks for teachers to use, edit and add to.

> Questioning prompts and techniques lead to greater discussions.

As a whole school, teachers embarked on professional learning to promote, develop and engage students in deeper discussions.

Findings and outcomes

- > The engagement and excitement from both teachers and students have meant that mathematics lessons are eagerly awaited and well planned. Leaders have seen an increase in student engagement and conversation around mathematics.
- > Conversation and use of student data has increased throughout the project as teachers are providing lesson starters and learning what students need.
- > Student feedback showed that they were engaged and enjoyed lesson starters.
- > Teacher feedback indicates that staff are confident in the delivery of lesson starters and continue to observe growth and engagement in students in mathematics.
- > Parent feedback indicates that students have gone home talking more positively about mathematics and sharing their learning.



Students playing 'Strike'.

To enhance students' language awareness and further develop my leadership capabilities through the implementation of the Chinese Garden (Bilingual School Signages) project.

Overview

To develop language awareness and my leadership capabilities, I initiated the Chinese Garden project at McKinnon Primary School, catering to 870 students from Foundation to Year 6. Over 38% speak languages like Chinese, Hindi, and Vietnamese. While English serves as the primary language of instruction, Chinese is integrated into the curriculum through specialist sessions, limited to 40 minutes per week. To enhance language learning, I proposed the Chinese Garden project. It's an immersive space integrating language skills and cultural understanding. Drawing from research, it emphasizes language input/output and intercultural competence. Applying ecological theory, I engaged colleagues and parents. The garden fosters multiculturalism, identity, and belonging. It's a holistic approach addressing language challenges while promoting diversity and language learning.

Key learnings

- > In essence, effective language learning in schools necessitates immersive environments, input/output practice, metalinguistic awareness, and intercultural competence. Organizing professional learning sessions for homeroom teachers on language integration multilingualism are crucial steps for enhancing metalinguistic awareness.
- > The Chinese Garden proposal provides a cultural immersion setting that enhances language skills and cultural understanding. Aligning with ecological theory and leveraging the Chinese Garden as an educational tool offers avenues to influence language learning, cultural awareness, and overall student development.
- > Recognizing parental engagement as a controllable factor and involving parents in the fellowship project becomes imperative, given its significant impact on students' language learning attitudes and experiences, thereby bolstering the success of the Chinese language program.

Findings and outcomes

Parents: Emphasizing their role in promoting language equality, reducing embarrassment, and making Chinese learning meaningful. Parents also noted its positive influence on the community's ideological aspects, fostering respect for all languages and highlighting the school's commitment to language education.

Students: Indicated overall positive perceptions of bilingual signage. While some students expressed concerns about speaking their home languages at school due to potential discouragement from teachers or fear of bullying from peers, the majority felt proud and happy about the emphasis on languages in the school environment.

Teachers: After the whole school PL, teachers have demonstrated an increasing awareness of the importance of languages in students' education. The next step is to equip them with practical techniques to understand plurilingual pedagogies and implement translanguaging for learning and teaching in multilingual classrooms. I believe addressing the unpleasant experiences that students shared is crucial, as it can be very hurtful. Therefore, I am committed to further developing multilingual mindsets in our primary school.

Leadership Capabilities: Launching new initiatives proved invaluable. Articulating the initiative's rationale is essential for garnering staff buy-in, followed by inclusive consultation to ensure all stakeholders feel heard and respected. As a leader, shifting between different perspectives—being on the "balcony" to gain broader insights and on the "dance floor" to offer support—is crucial during implementation. Recognizing and appreciating the efforts of early adopters not only fosters a supportive environment but also provides learning opportunities for others, ultimately enhancing their confidence in implementing new approaches. This project enhanced my leadership skills, transferrable to any school-wide initiative, fostering newfound confidence in embracing formal leadership roles in the near future.



Figure 1



Figure 2

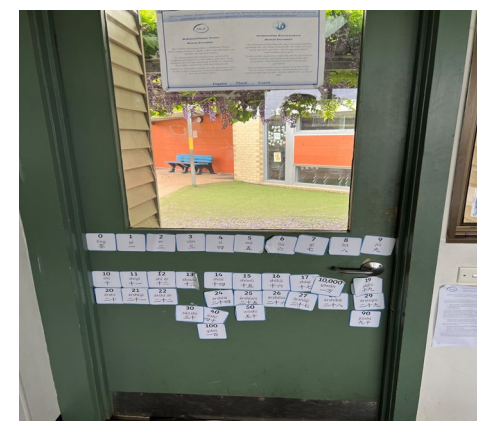


Figure 3



Figure 4



Figure 5



Figure 6

Figure 1 Language Staff PL **Figure 2** Chinese Garden Design

Figure 3 Integrating Languages in the homeroom **Figure 4** Parent Focus Group Evaluation Survey

Figure 5 Bilingual School Signage **Figure 6** Student Survey on School Bilingual Signage

"The Chinese Garden (bilingual school signage) isn't just decoration; it's an essential element of our curriculum. Quietly but profoundly, the Chinese Garden (bilingual school signage) conveys to students their identity and shapes their perspective of the world, fostering a deeper understanding of themselves and their place in a diverse global community."