"Problems That Matter is structured but flexible. Teachers can tailor it to the students in front of them, this is one of the key features that makes it inclusive. When given the opportunity every single student has ideas and opinions to share."

Karen, STEAM Leading Teacher, Footscray High School

Problems That Matter

The **Problems That Matter**[1] initiative responds to the challenge of creating 21st century problem solvers by establishing a learning framework for teachers, students and schools to inhabit. Problems That Matter empowers students to investigate and solve **complex local community problems** by utilising human-centred design methodologies and prepares students for active citizenship.

The Outcomes

Problems That Matter creates a learning environment that allows:

- **students** to be active researchers and develop the knowledge and skills of problem-based learning. Students gain an understanding of social citizenship and how they can thrive in the workforce.
- **teachers** to impart a method of learning that builds autonomy, confidence and capability using student centred approaches, project-based inquiry and formative assessment.
- **schools** to embrace a method for combining educational demands for curriculum certainty and sound pedagogical philosophy, that in turn meets society's expectations of engaged citizens that are prepared for a 21st century world.
- **community** to contribute opportunities for students to become stakeholders in local problems and provide insights into acts of local citizenship and future employment roles.

[1] Student Investigating 'Problems That Matter' In Their Communities: Taylor, Brennan, Zipin Connect 242 - April 2020. Connect. 2020 (242) https://research.acer.edu.au/connect/vol2020/iss242/2

Global Evidence

The 2030 Learning Compass goals identified by the OECD state that students must be supported in developing the skills of '*anticipating, acting and reflecting*' on problems and issues that are of relevance to them. Problems That Matter creates the environment for the development of such skills and supports students to practise deep learning while providing explicit links to curriculum frameworks and opportunities for greater connectedness between students and their communities.

The Framework

Problems That Matter is a learning framework that students and teachers inhabit. Fundamental to Problems That Matter is the concept of Human-Centred Design, the process of Design Thinking and the capabilities in the Victorian Curriculum.

Human-Centred Design Approach

Problems That Matter works with schools to provide a place-based response to learning. This starts with the school community identifying important problems and making explicit connection between these issues, the design process and the Victorian Curriculum.

Using the resources from the Human-Centred Design Playbook developed by the Victorian Government in 2020, students and teachers are provided with a wide variety of strategies to '*define real life problems and find their solutions*'.

Design Thinking Method

Design Thinking is a Human-Centred approach that can be applied to problem solving in a range of contexts. Problems That Matters uses Design Thinking (Diagram 1) to take students and teachers through the process of identifying and defining a real-life problem, then designing, prototyping and testing a range of solutions.

Design Thinking Process

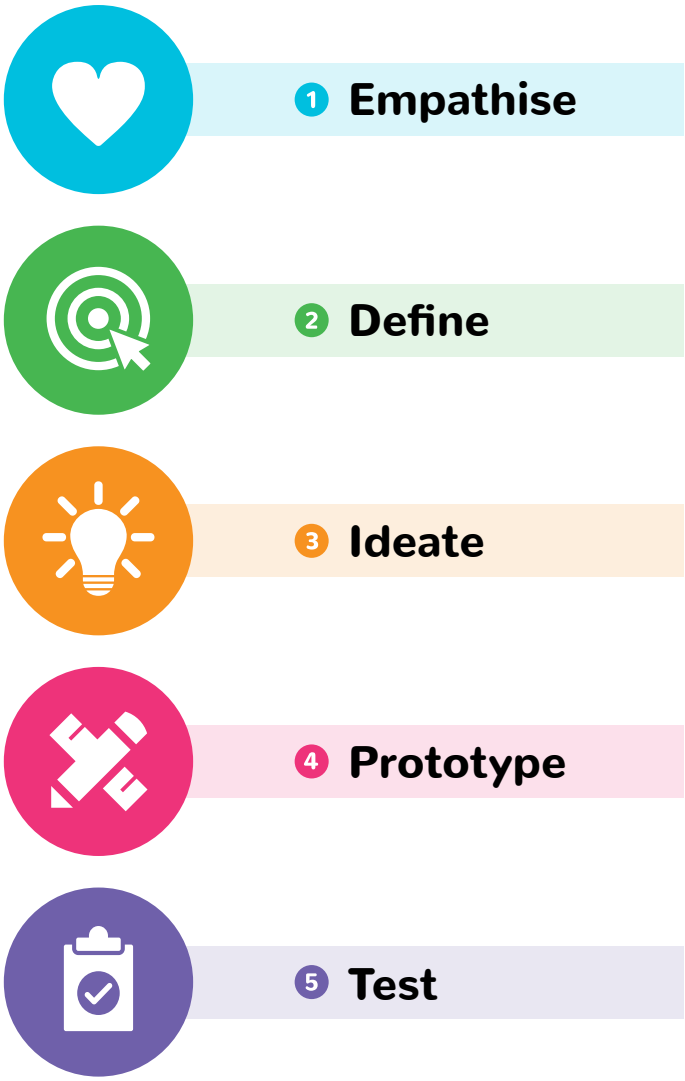

Diagram 1: (*Design Thinking Stanford University*)

Aligning with the Victorian Curriculum

The Problems That Matter framework makes explicit connections between the Human-Centred Design approach and the Victorian Curriculum via the General Capabilities. Acting as researchers, students engage in learning activities that demand higher order thinking processes combined with collaborative actions. The projects that are developed demonstrate the application of discipline-based knowledge and interdisciplinary learning.

Teachers work in professional learning communities alongside mmvllen staff to differentiate the program within the individual school environment. Using the FISO cycle of plan, act and reflect throughout, teachers gather the artefacts of student's learning and explicitly link those artefacts to the Victorian Curriculum Standards, ensuring consistent and defendable decisions about student's progress.

Delivering Problems That Matter

Problems That Matter is a flexible program that can be implemented with students across primary and secondary schools by creating accessible entry points to complex problems for all students. By employing a co-design approach between the school, community and mmvllen, the unique context of each school is acknowledged. When a cohort of students and teachers engage with the program, they co-design the structure that is most appropriate for the local context and utilise Design Thinking as the shared method for implementation.

School staff develop the capacity to implement Problems That Matter with the support of professional development activities provided by mmvllen staff in relation to implementation of Design Thinking and designing problem-based curriculum.

Stages of implementation

1 Empathise:
Understanding the Problems That Matter

- Students and teachers immerse themselves in issues of local importance
- Students and teachers engage with local industry and community leaders around identified Problems That Matter (e.g. community reference panel)
- Teachers develop explicit connections between the local issues and the Victorian Curriculum

2 Define:
Defining the Problems That Matter

- Student action groups are formed around issues of common interest for students
- Students gather data related to the problems identified in the Empathising phase
- Students develop a clear description of the problem and the reason for addressing it

3 Ideate:
Responding to the Problems That Matter

- Students develop and design a range of possible solutions to their problems
- Students investigate previous approaches to the problems and look for risks and opportunities
- Students narrow their solution ideas to find a feasible approach

4 Prototype:
Acting on the Problems That Matter

- Students develop a project plan related to their Problem That Matters
- Students use a range of modalities and mediums to design prototypes of their solutions
- Students engage in peer feedback to refine their prototypes
- Students engage with mentors from industry to enhance their prototypes

5 Test:
Presenting solutions to the Problems That Matter

- Students pitch their design projects to the community reference panel
- Students receive feedback from community, industry and teachers
- Students make explicit links to broader applications of their projects

Links to Curriculum and Professional Learning

- Teachers and mmvllen staff practise the Design Thinking process
- Teachers link artefacts of students learning to the Victorian Curriculum standards
- Teachers and mmvllen staff work together in a PLT and engage in Action Research while co-designing and implementing Problems That Matter

"This type of program allows students to shine - practicing a range of skills that they don't always get a chance to show in a classroom - qualities such as team skills, optimism, persistence and adaptability."

Jak, Leading Teacher Sustainability, Footscray High School

A case study

Context

The Footscray Learning Precinct in Melbourne's inner west brings together education providers from early learning, through primary and secondary schooling to post compulsory education. In 2019 with the intention of creating a through-line that linked this diverse range of educational stakeholders, a project embracing the Problems That Matter framework was trialled with 180 students across two primary and two secondary schools.

Method

Groups of students from across the four schools used the Problems That Matter framework with the input of community reference panels, to identify key themes of community well-being and environmental sustainability. Using the Design Thinking process, students worked collaboratively to define projects of local importance beneath the broad themes identified and designed creative practical solutions to the Problems That Matter. Community and industry leaders were the audience at the end of these semester-long projects and provided students with and authentic audience and feedback.

Outcomes

After completing Problems That Matter in 2019 students and teachers at Footscray High School (FHS) reported a range of learning outcomes. Students said that had greater ability to make more connections between subjects had greater insight into their own learning process and increased understanding of the expertise of their teachers.

Teachers spoke of the increase in their student's intrinsic motivation and the growth mindsets that they applied when faced with challenging curriculum.

Subsequent to the successful trial, FHS have adapted the Problems That Matter framework within the subject 'Community STEAM' undertaken by all year 7 and 8 students. Community STEAM embeds the Design Thinking process for solving local problems that matter and employs community reference panels and co-design as a core feature of the subject. This problem based learning approach to curriculum is now being replicated in the schools year 9 community inquiry program.

During 2020, at the height of the first wave of the Covid pandemic, the foundation year 7 students at Footscray High School used the Problems That Matter framework to address the following problem: How can we bring our community together despite being separated by lockdown? Students used Design Thinking to design and prototype a small artwork to represent their personal experiences of starting high school. When lockdown was over, students painted their designs onto ceramic tiles which were installed together as a single united artwork.

Local Evidence

Students, teachers and academics involved in the Footscray Learning Precinct Problems That Matter project presented the findings of their learning journey at the International Conference on Student Voice in December 2019. The summary of this presentation can be found in an **article** published by Taylor, Zipin and Brennan. The findings of this research support educational priorities both globally and locally that highlight the importance of critical, creative and collaborative approaches to complex problems as being foundational skills for young people for navigating a 21st century society.

Get Involved

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