THE DESIGN THINKING SCHOOL IS A PLACE WHERE STUDENTS ARE PROBLEM FINDERS, WHERE THEY SOLVE REAL PROBLEMS THAT ARE RELEVANT TO THEM. IT’S A CREATIVE PLACE WHERE RESPONSIBILITY FOR MAKING LEARNING CHOICES START AND END WITH THE STUDENT.

Ewan McIntosh, CEO
www.notosh.com

AFTER FIVE YEARS of working amongst technology startups and creative industries, I spotted a similarity in the processes of the most successful firms with whom I worked, a process that is also visible in some of the learning environments we most admire.

The five-stage design thinking process provides a useful set of tools for co-designing a curriculum with students, parents, colleagues and even the wider community.

Why try this framework?

1. It provides a useful structure for the learner to know where they are in the learning journey without needing told.
2. It provides choice for the learner in what they’re going to learn, and how - the student needs to work out what knowledge and understanding they’re lacking in order to achieve what they want to achieve.
3. It places the responsibility for finding a compelling area to learn and an interesting approach to learning it firmly in the hands of the learner.
4. It always presents the whole game of learning, the big picture, even if students have to learn some ‘expert elements’ along the way, they see where they slot in to a bigger, more epic problem they are trying to solve.
5. It provides ample opportunity for formative assessment, quite naturally, and at the instigation of the student rather than the constant reminding of the teacher.
6. Design thinking turns learning into “just in time” learning, where its relevance and meaningful context make recollection and application second nature in other domains (such as summative assessments and examinations).

My group, NoTosh, is now offering a programme on design thinking to schools and education leadership teams around the world.

Simply a revelation. [Our facilitator] is highly intelligent, he has a great sense of humour, and his knowledge and wisdom have the capacity to transform the very way that we deliver on education. I cannot recommend him highly enough to anyone who is serious about creating powerful learning experiences.

Brisbane Catholic Education Department, Queensland, Australia
DESIGN THINKING
WHAT IS IT?

Design Thinking in schools is about developing young people as problem finders as well as problem solvers, and about making ideas concrete through a prototyping and refining process that harnesses peer-to-peer and self-assessment. While it works best in a project-based curriculum, it also provides relevance where it has been lacking in more traditional subject-based curricula.

It’s five phases encourage learners to undertake much of the hard work of learning that traditionally teachers have done:

**Immersion** encourages a wide and deep observation around an ‘epic’ theme, offered by the teacher. This theme is broad enough to allow for tangential thinking, specific enough to allow the teacher to second-guess what kinds of curricular areas might be encountered. The immersion phase also develops the skill of empathy amongst students, as they try to better understand the problems they have chosen – problems that are often beyond the scope of their own environment – through the eyes of those who experience them day by day.

**Synthesis** is where the problem(s) we want to solve come to light the clearest, as students group their findings in order to bring out themes. The process also involves the physical space of school as the place where ideas are socialised for the first time, often with people from outside the class, or even outside the school, through a project corner.

**Ideation** marks a change in pace. Provided the immersion and empathy process has been wide and deep, there is plenty of fodder to feed ideas.

This is also the stage in the process where we move from divergent thinking to convergent solutions-based thinking - and it’s normally where the traditional process of learning and teaching has tended to begin. Through design thinking, this part of the process - “here’s a problem, now solve it” - is totally owned by wholly engaged students.

Design thinking, by its highly personalised nature means that the teacher can offer fairly generalist structures for developing ideas and still be assured of a highly individualised experience for each learner.

The final two elements - prototyping and refining - offer a chance to transform abstract thinking into tangible working models of a solution: physical models or a blueprint of a solution in all its detail.

Prototyping is a great way of quickly showing the people you involved in the immersion and empathy stage that you’ve done something with their hard effort. It’s also a great way to test ideas.

In the classroom, it’s one of the principal places formative, peer-to-peer and self-assessment is illustrated in totally concrete (or post-it, or papier mache) terms.
**ACTION, NOT JUST WORDS**

We provide keynotes and seminars that give a brief overview of design thinking's potential for change in the schooling system, and how technology can assist this change. However, The Design Thinking School is a programme made for schools and districts who want to see systemic change in the way children learn. A four-month season with us works out better value than most “day rate” consultants, and our longer term relationship with each group makes the impact deeper and wider felt. You get Ewan and/or me working with you to make sure that positive action stems from each intervention.

*We break the status quo, not the bank.*

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**THE DESIGN THINKING SCHOOL PROCESS**

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<thead>
<tr>
<th>ELEMENTS</th>
<th>SOME</th>
<th>MORE</th>
<th>MOST</th>
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<tbody>
<tr>
<td>Day 1 Masterclass on the design thinking process, with a practical outcome based around a school or staff development change programme</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Walk through design thinking as it has been applied to curricular projects and their planning</td>
<td>×</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Day 2 Masterclass on developing curricular applications of design thinking</td>
<td>×</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Technology exploratory to develop immersive learning and prototyping potential (games-based learning, social media, handling search better etc.)</td>
<td>✓ overview only</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td><em>See next page for Technology Masterclasses</em></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4 months of online summary of workshops, coaching and on-tap support to help educators develop ideas in real time, in their classrooms</td>
<td>×</td>
<td>✓</td>
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</tr>
<tr>
<td>Day 3 Masterclass, after month four of the process, as a follow-up peer-to-peer learning event. Show and tell of developments in group, ‘surgery’ approach to improving existing practice, and next steps suggestions for stretching practice.</td>
<td>×</td>
<td>×</td>
<td>✓</td>
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<tr>
<td>Assessment for Learning / Formative Assessment refresher or introduction, and workshop on developing Assessment for Learning resources to aid design thinking in classroom projects.</td>
<td>×</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>All travel and accommodation included in package rate.</td>
<td>×</td>
<td>✓</td>
<td>✓</td>
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These last two days have fast-tracked my staff about five years. This is the best value professional development we’ve had.

Dean Clark | Director, Learning and Innovation
Mark Oliphant College, South Australia

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PRACTICAL TECHNOLOGY WORKSHOPS

The design thinking process is greatly enhanced by technology that allows more authentic immersion, the ability to reach out to genuine collaborators, a chance to test ideas and build electronic, 3D or physical prototypes at little or no cost to the learner.

We don't start with technology. It helps an existing process happen to a higher quality, with more authenticity. These masterclass suggestions can be given preference before any design thinking workshop, but on the day itself participants’ interests may drive activity onto different areas.

PRACTICAL TECHNOLOGY WORKSHOPS / BREAKOUT SESSIONS

<table>
<thead>
<tr>
<th>AREA</th>
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<tbody>
<tr>
<td>Games-based learning: explore the differences between educational and commercial off-the-shelf video games, and how you can harness these as engaging contexts for better creative writing and speaking.</td>
<td>✓</td>
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</tr>
<tr>
<td>Game-making: for those wanting to explore many elements of the curriculum through one medium, planning, writing and developing a video game from scratch is one of the most rewarding activities for prototyping ideas.</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Augmented reality and location-based learning: experiences in the ether: see how cultural organisations have used augmented reality and location-based services to increase their engagement of the public and prototype ideas for exploring curricular content within a design project.</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Social bookmarking and social research: discover how to harness the collective intelligence of educators, designers and experts in every domain through socially connected resources and bookmarks across the web.</td>
<td>✓</td>
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<tr>
<td>Digital photography: learn how to take great photographs from a smartphone, digital pocket camera or SLR - a way to enrichen the immersion process.</td>
<td>✓</td>
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<tr>
<td>Digital film-making: explore how to plan, shoot and edit compelling film, as part of your immersion process, on mobile phones or on dedicated video recording equipment.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Podcasting for Pros: learn how to record high quality audio on your computer or mobile phone, to make the immersion experience more effective.</td>
<td>✓</td>
<td>✓</td>
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NoTosh brought a wide knowledge of education and technology, clearly articulated thinking and enthusiasm to our project. The process has been refreshing, rewarding, challenging and cheering; we are thinking differently, with a renewed sense of purpose and positive results.

Robyn Marsack | Director, Scottish Poetry Library