21st-century skills: Realising the potential of the Australian Curriculum

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ACER Research Conference 2019
They say a rising tide lifts all boats.

Create change. Be the rising tide that lifts all boats.

A rising tide lifts all boats.

...seen a tide rise like that before!

...enjoy the haves and make the have-nots work for you.

...we've been partners in adversity; let us also be partners in prosperity.

— John F. Kennedy —
General capabilities in the Australian Curriculum

• What?
• Why?
• How?
• Who’s doing what?
• Doing more? Differently?
General capabilities in the Australian Curriculum – what?

• In the Australian Curriculum, the general capabilities are addressed through the content of the learning areas
  o Content descriptions - where they are developed or applied in the learning areas
  o Elaborations - where they offer opportunities to add depth and richness to student learning
General capabilities in the Australian Curriculum – what?

- For each general capability:
  - an introduction that describes the nature and scope of the capability, its place in the learning areas and its evidence base (at the time of drafting)
  - organising elements and sub-elements that underpin a learning continuum
  - a learning continuum, across 5 levels

References


Parkens, D. 1995. The Intelligent Eye: learning to think by looking at art, Ditty Centre for the Arts, California.


General capabilities in the Australian Curriculum – why?

• significant role in realising the goals set out in the *Melbourne Declaration on Educational Goals for Young Australians* (MCEETYA 2008)

• describes individuals who can manage their own wellbeing, relate well to others, make informed decisions about their lives, become citizens who behave with ethical integrity, relate to and communicate across cultures, work for the common good and act with responsibility at local, regional and global levels
General capabilities – who’s doing what?

• … don’t actually know the full extent
  … a quick Google search
• Victoria – most system wide – a curriculum position through to assessment and reporting
• AISSA
• numerous schools …
• ACER
• Melbourne University
• Sydney University
• …
Support for the teaching / learning of the general capabilities

• Teachers and school leaders
  … feedback through the monitoring process
  … GONSKI

• Broader community – locally and internationally
Do more? Differently? … why?

• Students who started in school in 2011, the year after the Australian Curriculum was approved, are now in Year 8 …

• Torii and O’Connell (2017) … although progress is being made on embedding the capabilities young people will need into the curriculum … some sites of world-leading practice in Australia … more to be done to ensure all young people are adequately equipped for the future
As an aside … Sydney University …

<table>
<thead>
<tr>
<th>Components</th>
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<th>1</th>
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</thead>
<tbody>
<tr>
<td>Definition of problem or issue in context</td>
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<td>Describes the problem or issue</td>
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<td>Provides a basic definition of the problem or issue and shows that the problem or issue is situated in a context.</td>
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<td>Provides an informative definition of the problem or issue, shows that the problem or issue is situated in a context, shows understanding of the main features of that context and explains why these matter, defines key terms, identifies desirable features of possible solutions.</td>
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<td>Insightful and articulate. Analyses a context by consulting a suitably broad range of informational sources, identifies and appropriately frames a problem or issue within that context, gives a detailed and clear definition of the problem or issue, explains why this problem or issue matters, sets out criteria against which to measure possible solutions.</td>
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Doing more, differently

Strategies -

Willingham (2019) Recommends a four-step process to develop a program to teach critical thinking:

1. identify a list of critical thinking skills for each subject domain
2. identify subject matter content for each domain
3. plan the sequence in which knowledge and skills should be taught
4. plan which knowledge and skills should be revisited across years
What implementation strategies can we cite in Australia?

For general capabilities or other changes?

What attention do we pay to the design, application and evaluation of implementation strategies?

Table 2: Implementation phases of the EPIS framework

<table>
<thead>
<tr>
<th>Implementation Phase</th>
<th>Exploration</th>
<th>Preparation</th>
<th>Implementation</th>
<th>Sustainment</th>
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<tbody>
<tr>
<td>Outer Context</td>
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<td>Socio-political Context</td>
<td>Funding</td>
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<td>Socio-political context</td>
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<td>Client Advocacy</td>
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<td>Client Advocacy</td>
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<td>Public-academic collaboration</td>
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<td>Inter-organizational Networks</td>
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<td>Inter-organisational networks</td>
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<td>Inner Context</td>
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<td>Organisational characteristics</td>
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<td>Organisational characteristics</td>
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<td>Organisational characteristics</td>
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<td>Individual adopter characteristics</td>
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<td>Innovation-values fit Individual adopter characteristics</td>
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<td>Fidelity monitoring and support</td>
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<td>Leadership</td>
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<td>Leadership</td>
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<td>Staffing</td>
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Aarons, Hurlburt, & Horwitz (2011)
Doing more, differently …

• How do we share across states and territories; across school sectors?
As an aside – working with the Center for Curriculum Redesign (Charles Fadel)

“YOU NEVER CHANGE THINGS BY FIGHTING THE EXISTING REALITY. TO CHANGE SOMETHING, BUILD A NEW MODEL THAT MAKES THE EXISTING MODEL OBSOLETE.”

- BUCKMINSTER FULLER
As an aside – working with the Center for Curriculum Redesign

ACARA → CCR Crosswalk
As an aside – working with the Center for Curriculum Redesign

<table>
<thead>
<tr>
<th>Knowledge x Competencies EXPLICITLY</th>
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<tbody>
<tr>
<td><strong>Skills</strong></td>
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<tr>
<td>Creativity</td>
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<tr>
<td>Critical thinking</td>
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<td>Communication</td>
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<td>Collaboration</td>
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<td><strong>Character</strong></td>
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<td>Mindfulness</td>
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<td>Curiosity</td>
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<td>Courage</td>
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<td>Leadership</td>
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<td><strong>Meta-Learning</strong></td>
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<td>Growth</td>
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<td>Metacognition</td>
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</table>

Competencies are expressed through Knowledge domain

*Deliberately, comprehensively, systematically, demonstrably*
As an aside – working with the Center for Curriculum Redesign

Classroom Practices Database

<table>
<thead>
<tr>
<th>Subcomps</th>
<th>Examples from STOY</th>
<th>Team Lead Patterns</th>
<th>Researcher Patterns</th>
<th>Elements from Evidence</th>
<th>Sources</th>
</tr>
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<tbody>
<tr>
<td>Grid view</td>
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**Name**

Students are shown a mental math problem where they are asked to solve the problem without pencil and paper. Then the students share how they have solved the problem with the class. If the students had another way of solving the problem, they are given an opportunity to share their thinking. These number talks show the students the multiple possibilities of solving the exact same problem. ...

I give students equations with steps scrambled or proofs that have the steps scrambled and/or the rationale for each step scrambled as well. I want to see if they can formulate an argument using the reasoning of others. I want to see if they can assemble someone else’s reasoning into a cohesive whole.

Here is an example of how students used the scaffold of ‘draw it’ then ‘solve it’ then ‘explain how you solved it.’ Next, they shared their work with a partner and the partner gave them advice.

A sick patient’s temperature decreased by 2 degrees each our from 4am to 7am. By 7am, the patient’s temperature was 98 degrees. What was the ...
Doing more, differently …

• Evidence or some risk taking – which one comes first?
• SVA’s E4L provides a great model
• Elmore (1996) was (is) very clear …

The issue of getting to scale with good educational practice (in the US) requires nothing less than deliberately creating and reproducing alternatives to the existing flawed institutional arrangements and incentives structures.
What could lift all the boats?

• More explicit and structured engagement with what is actually in the Australian Curriculum; with agreement to provide feedback on it how could be improved, by teachers

• (Even) more support for the teaching of the general capabilities – resources for schools and teachers; for teaching and assessing; shared across systems and sectors; with a process and commitment to improve these based on feedback from teachers

• A strategic plan(s) for the exploration, preparation, implementation and sustainment of quality teaching (of the general capabilities)

• Structures and processes that promote, and expect, learning and dissemination of proven professional practices, new or improved
References