Building an Australian evidence base for education – Lessons from the Thinking Maths Trial

Global Evidence & Implementation Summit
24 October 2018
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EVIDENCE FOR LEARNING

Government of South Australia
Department for Education

ACER

Acknowledgement of Country

I would like to **acknowledge** the Wurundjeri people of the Kulin nation who are the traditional custodians of the land on which we meet, and pay my respects to elders past, present and emerging.

EVIDENCE FOR LEARNING

We help educators increase learning by improving the evidence on what works and why.

Our vision is an Australia where evidence-informed approaches help all children, regardless of background, make the best possible progress.

evidenceforlearning.org.au

Social Ventures Australia
Funding • Investment • Advice

Education Endowment Foundation

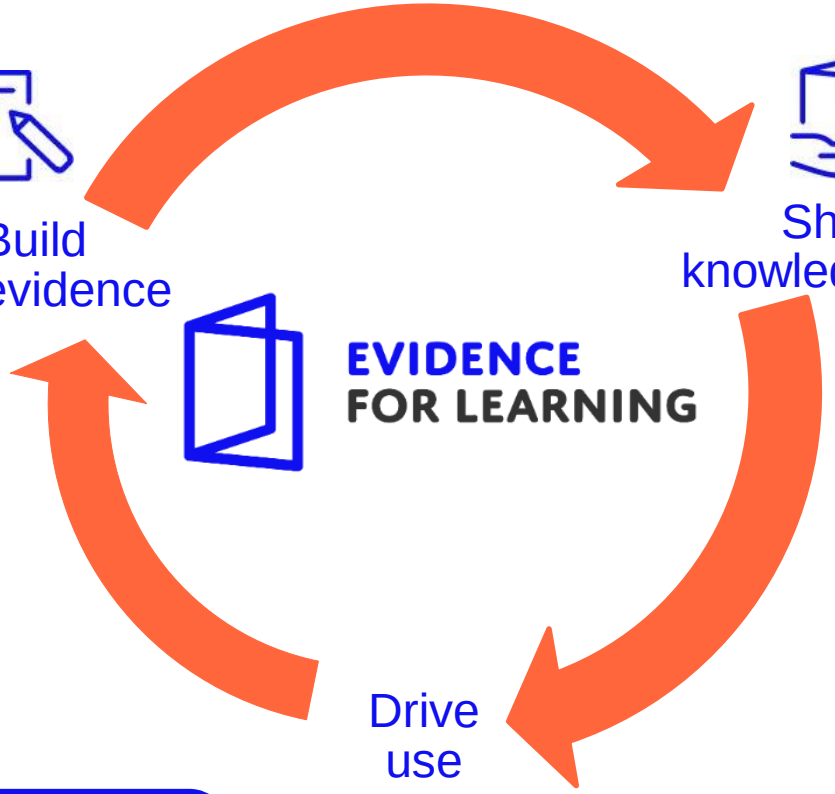
CommonwealthBank

Learning Impact Fund

Trials Unit (RCT)
Philanthropy + Govt $ on school programs
(4 underway)

Teaching & Learning Toolkit
Global evidence summaries and practice guides from international partners

Tailored evidence Toolkits (18)



Supporting school networks
(68 events to date)

Local **Practice Guides** on key topics

Better school decisions informed by evidence

We are an **Evidence Intermediary**; we play a brokering role between research and practice

We specialise in **translating evidence** and then **help implementing** it in real world settings.

Learning Impact Fund

Generate a robust evidence base for education in Australia:

4
Projects

200
Schools involved

7,690
Students involved

410
Teachers involved

Evidence for Learning supporters

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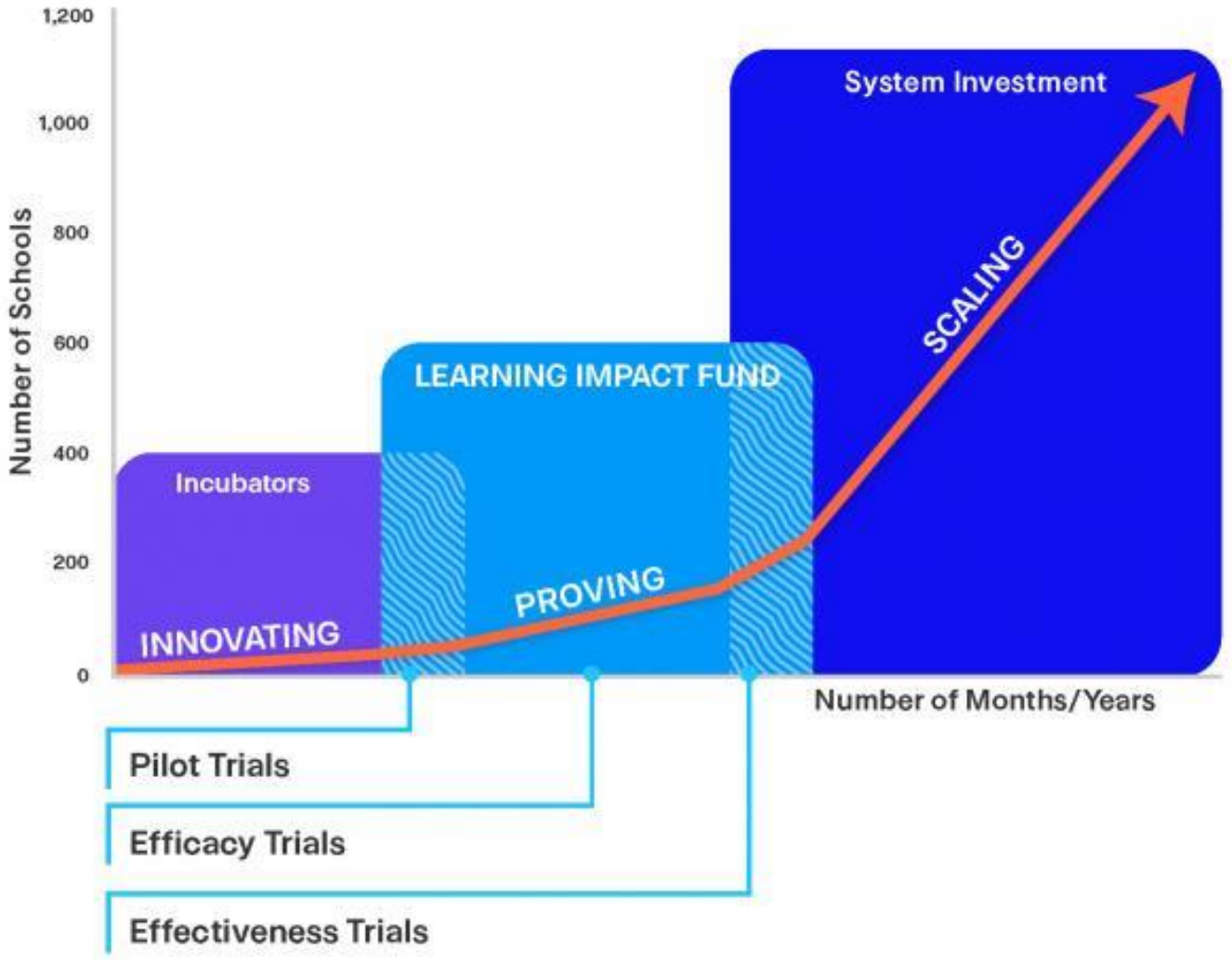
Scaling the best practices in schools

- **Independence:** Pairing programs with an independent evaluator
- **High-quality research:** Mix-method RCTs, independently reviewed
- **'Practitioner-friendly' outputs**: Research evidence translated into key messages for practice



Evidence for Learning Communications

‘Practitioner-friendly’ **evidence** for use by educators always showing:

Average months’ worth of learning progress

Cost to implement

Security of evidence

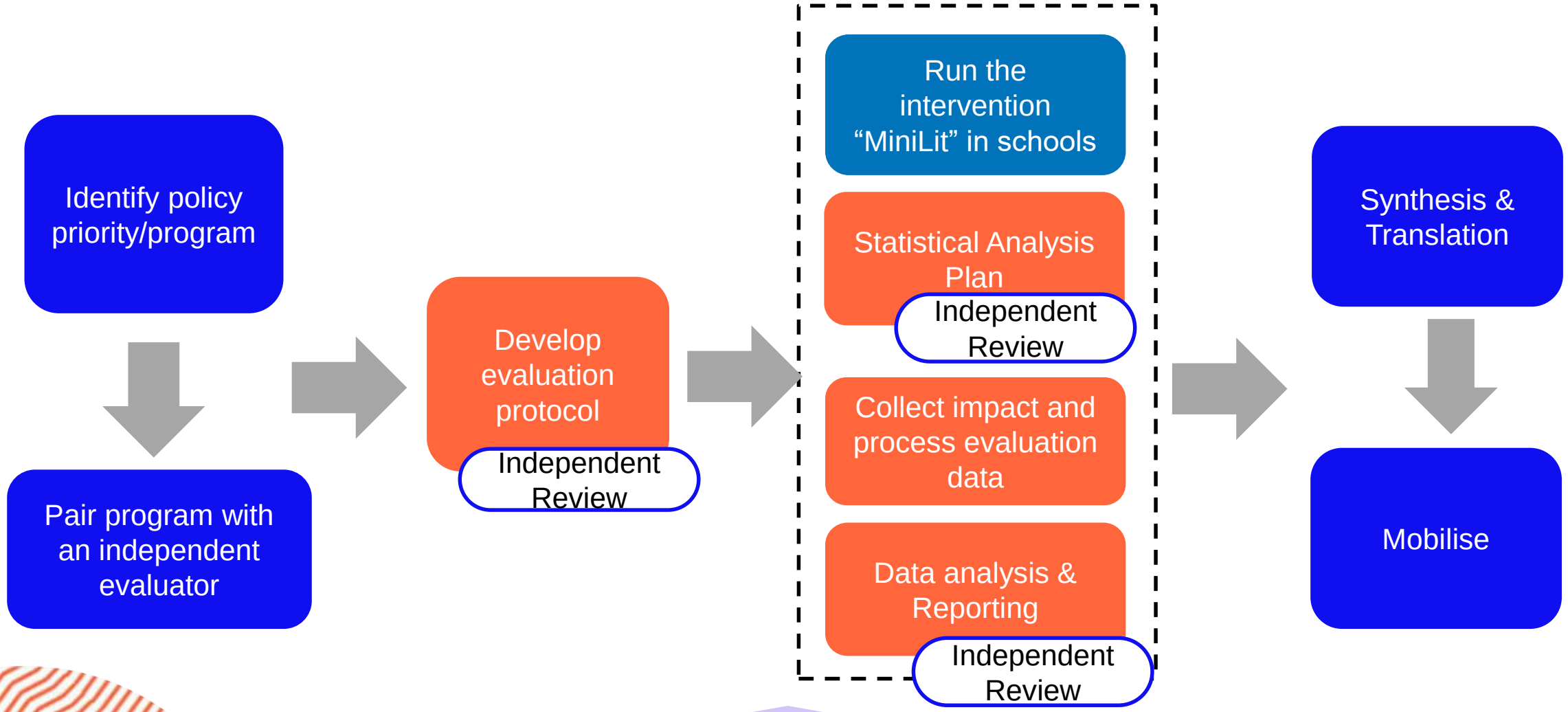
What is the Thinking Maths evaluation

- Independent evaluation of program efficacy
- Testing a professional learning program to develop Years 6-9 maths teachers' pedagogical content knowledge to support students' maths learning.
- Randomised controlled trial (RCT): 158 government schools (Primary and Secondary); 318 teachers, 7068 students
- Intervention over three terms, February – October 2018
- Interest in impact of Thinking Maths on maths teaching and student achievement, and understanding features of implementation

Key Learnings

- Program and evaluation design are equally important
- Methodology matters
- Transparency and independence can be crucial
- Synthesising, translating and mobilising evidence into meaningful ways
- Importance of brokering building trust and collaboration

Our key steps



What we found

Did the Thinking Maths program enable middle-school students to improve their mathematics achievement above typical learning growth?

Intervention vs control	Effect size [95% CI]	Estimated months progress*	E4L security rating+	Number of students	P value	E4L cost rating
All students	0.05 [0.00 – 0.10]	+1	🔒🔒🔒🔒🔓	7068 students in 158 schools	0.38	$$$$$
Primary Years 5-7	0.14 [0.08 – 0.19]	+2	N/A	5013 students in 119 schools	0.05	$$$$$
Secondary Years 8-10	-0.16 [-0.25 – -0.07]	-2	N/A	2055 students in 56 schools	0.05	$$$$$
School Card holders	0.11 [-0.04 – 0.27]	+1	N/A	666 students in 118 schools	0.21	$$$$$

Key Takeaways

- We are all ‘custodians’ of good evidence
- Independence can be crucial and need clear roles and boundaries, with engagement
- Evidence-building takes time
- A trust exercise – A ‘receptive’ program and policy environment is fundamental as all partners are taking a leap of faith

Our Projects

Generating evidence: We fund independent, rigorous evaluations of high-potential programs to test their impact in improving the learning outcomes of children in Australia. The Learning Impact Fund aims to generate new evidence o
le

MiniLit

Active

Small-group reading intervention for struggling Year 1 students.

Developer
Multilit

Type of trial
Efficacy

Project progress

QuickSmart Numeracy

Active

Small-group student tutoring intervention to increase fluency and automaticity in maths.

Developer
SiMERR National Research Centre at the University of New England

Type of trial
Effectiveness

Project progress

Resilient Families

Active

School-based social-emotional learning program involving parental engagement.

Developer
Deakin University

Type of trial
Developmental

Project progress

Thinking Maths

Completed

Teacher professional learning for middle school maths teachers (Years 6-9).

Developer
South Australian Department for Education

Type of trial
Efficacy

Cost
$$$$$

Security

Months' impact
+1

Results released September 2018

E4L

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Helping great practice
become common practice

EVIDENCE
FOR LEARNING