

TEACHING MATTERS

SCIENCE OF LEARNING
NATIONAL SUMMIT

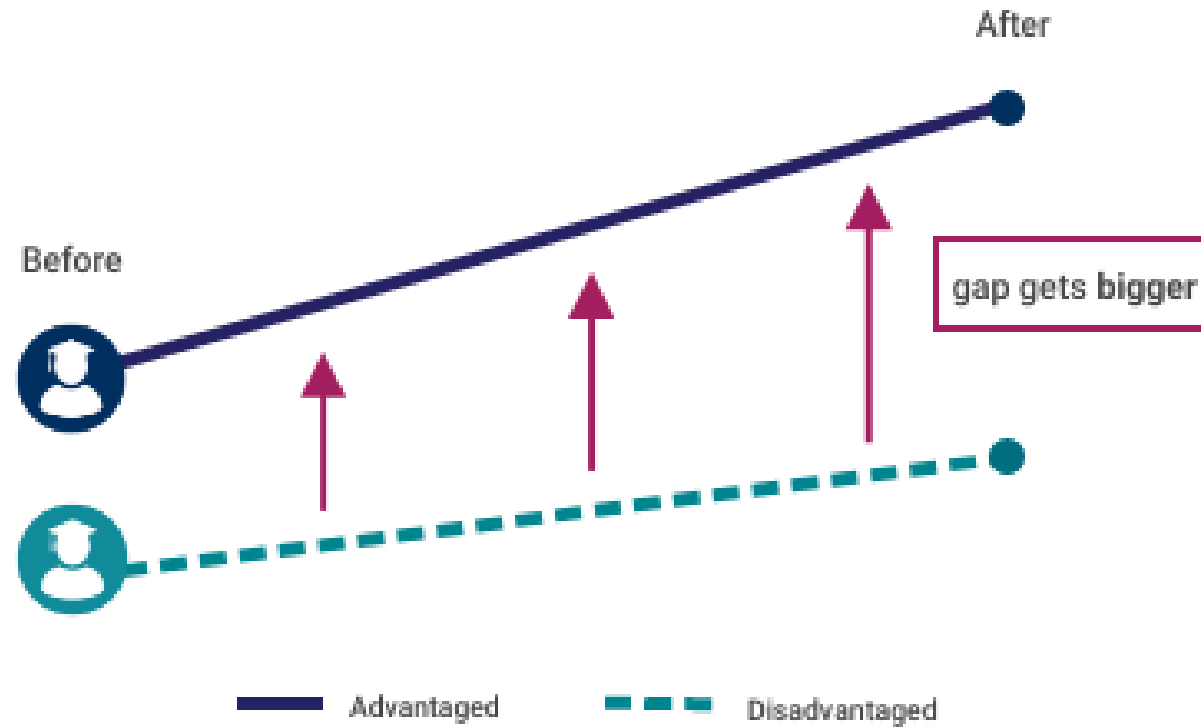
Science of Learning movement across the nation

Dr Jenny Donovan, Chief Executive Officer, AERO

Acknowledgement of Country

The Australian Education Research Organisation (AERO) acknowledges the Traditional Owners and Custodians of Country throughout Australia and their continuing connection to land, waters and community. We pay our respects to them and their cultures, and Elders past and present.

The Matthew effect



**AERO is
Australia's new
independent education
evidence body,
established and funded
by Commonwealth,
state and territory
governments.**



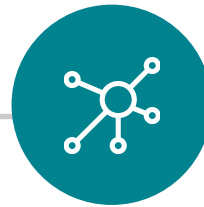
Our vision

AERO's vision is for excellence and equity in educational outcomes for all children and young people through effective use of evidence

In support of this vision, we:



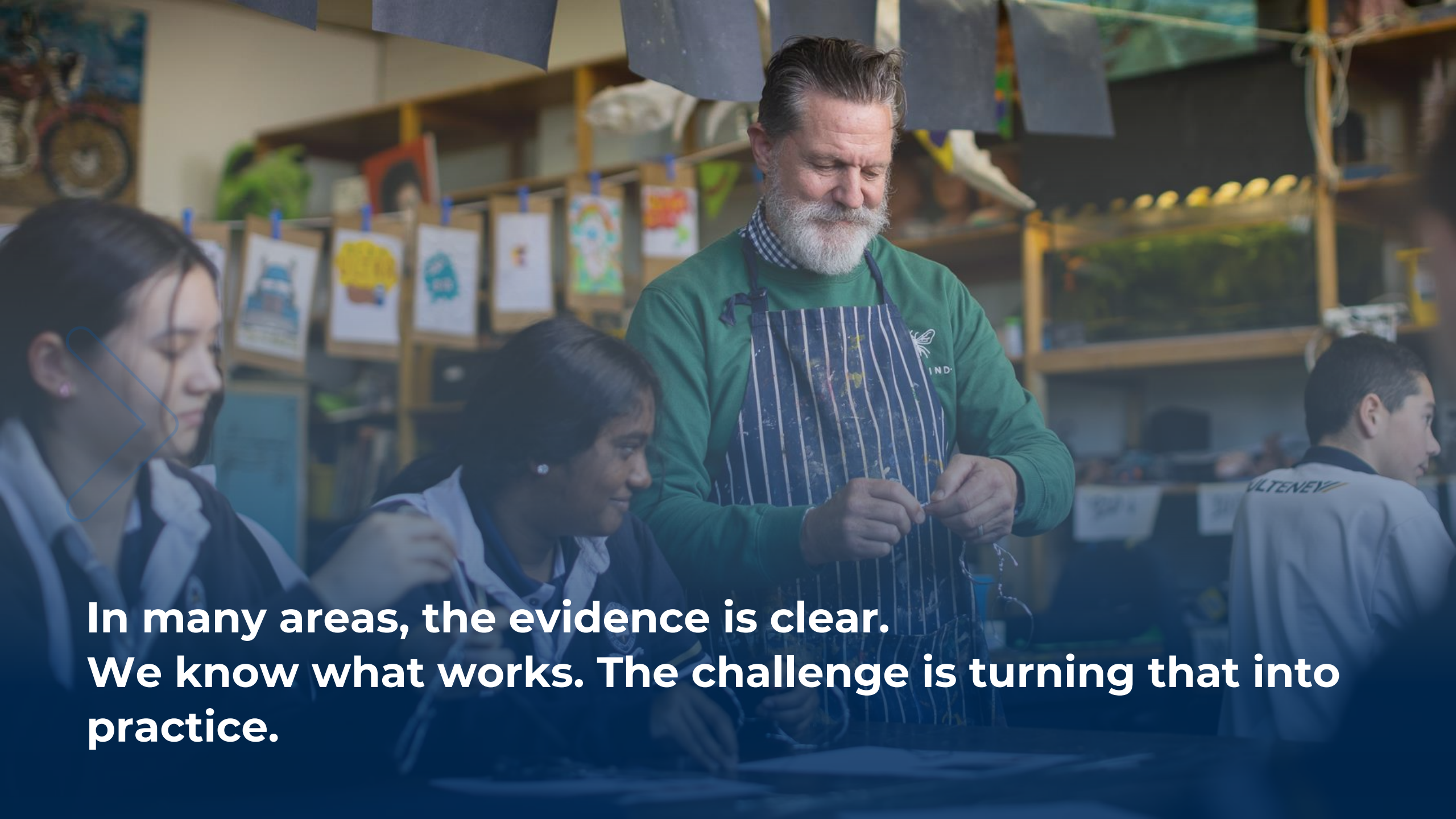
generate high-quality evidence



present high-quality evidence that is **relevant** and **accessible**



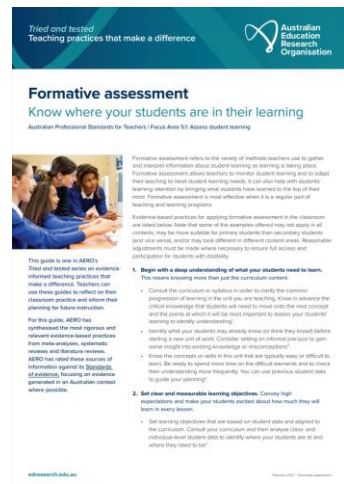
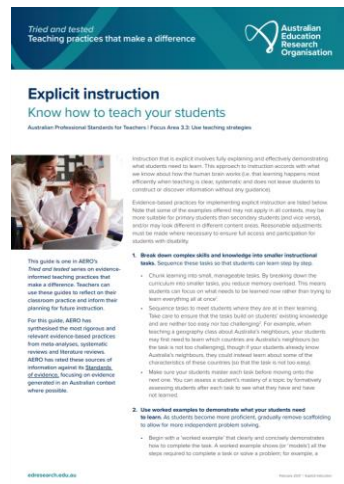
encourage **adoption** and effective **implementation** of evidence in practice and policy.



**In many areas, the evidence is clear.
We know what works. The challenge is turning that into
practice.**

Our Tried and Tested guides

These guides describe the most effective and efficient teaching practices



Schools

Our teaching resources

We've produced case studies, video examples of practice, and rubrics and surveys to help teachers and school leaders observe, reflect, and improve practice.

Quality criteria ↑	Anticipates critical points within the learning progression when formatively assessing student learning is most important	Identifies likely challenges and common misconceptions	Tailors learning objectives from the curriculum for groups of students based on what groups already know and are able to do	Tailors success criteria and stretch goals for groups of students based on what groups already know and are able to do	Refers to learning objectives and success criteria throughout the lesson, particularly when achieved	Tailors teaching plans for groups of students based on evidence of student learning	Uses multiple forms of evidence on student learning to make inferences about the impact of different teaching strategies on student learning	Supports students to transfer what they've learned from feedback to future tasks	Models strategies for learning from feedback
	Plans unit based on learning progression	Tailors learning objectives from the curriculum for the whole class based on what students already know and are able to do	Sets clear success criteria and stretch goals for the whole class	Develops student understanding of learning objectives and success criteria	Sets tasks that assess only the target knowledge and skills	Adjusts whole class teaching plans based on evidence of student learning	Monitors student progress on the learning progression using evidence of student learning	Takes feedback to review feedback previously given	Provides targeted, individualised feedback that explains how to reach next steps in learning
	Consults the curriculum to identify the common learning progression for the target knowledge and skills	Identifies prerequisite knowledge and skills from the curriculum	Sets learning objectives from the curriculum for the whole class	Sets clear success criteria for the whole class	Shares learning objectives and success criteria for students	Writes students through all required steps for completing the task using scaffolded examples	Explains knowledge and skills involved in completing the task	Presents some worked examples with removed steps	Provides opportunities for independent practice
	I am yet to include any of these behaviours in my formative assessment practice	I am yet to include any of these behaviours in my formative assessment practice	I am yet to include any of these behaviours in my formative assessment practice	I am yet to include any of these behaviours in my formative assessment practice	I am yet to include any of these behaviours in my formative assessment practice	I am yet to include any of these behaviours in my formative assessment practice	I am yet to include any of these behaviours in my formative assessment practice	I am yet to include any of these behaviours in my formative assessment practice	I am yet to include any of these behaviours in my formative assessment practice
Indicator	Identifies learning progressions from the curriculum	Identifies how knowledge and skills build	Sets learning objectives	Sets success criteria	Communicates learning objectives and success criteria	Sets tasks to collect evidence of student learning	Interprets evidence of student learning to inform decision-making	Monitors student learning	Provides timely feedback that is individualised where possible
Capability	1 Identifies what students need to learn	2 Sets clear and measurable learning objectives and success criteria	3 Regularly checks for student understanding	4 Provides timely feedback that is individualised where possible					

Formative assessment rubric

Read the capability and the related criteria. For each capability, identify which criterion best describes your current practice.

Case study

Australian Education Research Organisation

Supporting linguistically diverse families through English classes

The following case study has been created by School Plus, with the support of Darling Heights State School, as an example of engaging with families to support student learning in primary school.

Summary

I am engaged in a project to improve student outcomes. During English classes, I have implemented a literacy support program to help foster family engagement in their child's school community. This program has been successful in not only helping parents support their children's literacy development, but also in developing their own confidence and cultural knowledge. This has enabled parents to communicate more effectively with classroom teachers, engage in school life and, ultimately, support their children's learning.

Australian Professional Standards for Teachers

Family engagement for learning is related to Professional Standard 2.1 and Professional Standard 7.3 from the Australian Professional Standards for Teachers.

Australian Professional Standards for Principals

I am engaged in learning to relate to Professional Standard 1.1, engaging and working with the community in the Australian Professional Standards for Principals.

Overview

Our school community continues to grow as numbers of families increase in the surrounding neighbourhood of our schooling site. We have a huge increase in the proportion of families with a language background other than English registered at the school and the number of stay-at-home parents of primary school age children continues to increase. This rise in English language and cultural capital is making between the children of stay-at-home parents and children with working or studying parents. Many parents suffer the negative feelings of increased isolation without the engagement that confidence in English that an Australian education brings. Our school offers a number of ways to engage, however, parents' confidence and ability to engage and maintain meaningful contact with their children's learning is significantly limited.

Case study

Australian Education Research Organisation

Engaging with families at Canning Vale Prekindy

The following case study has been created by the Canning Vale Prekindy team to demonstrate how they engage with families and the benefits of this interaction for children's education outcomes.

Summary

Our service found that engaging with families, early on and consistently in a variety of ways had a positive impact on the quality of relationships that lead to long lasting partnerships and ongoing community connections. We now have a community of families that have stayed with us well after their children transferred to school. They send our new families, engage with and connect on our program, often for all the month, and even ask us when our next one will be! Once a CVPR family - Always a CVPR family.

Early Years Learning Framework - Principle 2: Partnerships

Partnerships are based on the foundation of understanding each other's expectations and attitudes and build on the strengths of each other's knowledge.

National Quality Standard - Quality Area 6

This quality area recognises joining other things that collaborative partnerships with families contribute to building a strong, inclusive community within the service.

Overview

Canning Vale Prekindy, located in Western Australia, is a community based prekindergarten for 3 year olds to attend in the year prior to attending kindergarten. We are both independent and not-for-profit and our culture is open to all children. We began in 2008 as an initiative of families with young children who lived in the local area, who were looking for a seasonal program for their 3 year olds. Children are enrolled in a group that attends once or twice a week for 10 weeks each week on set days. The prekindy is managed by a committee of parents, staff and community members.

“But that would never work here..”

Context matters, but not as much as some think for core evidence-based practices



Formative assessment



Explicit instruction

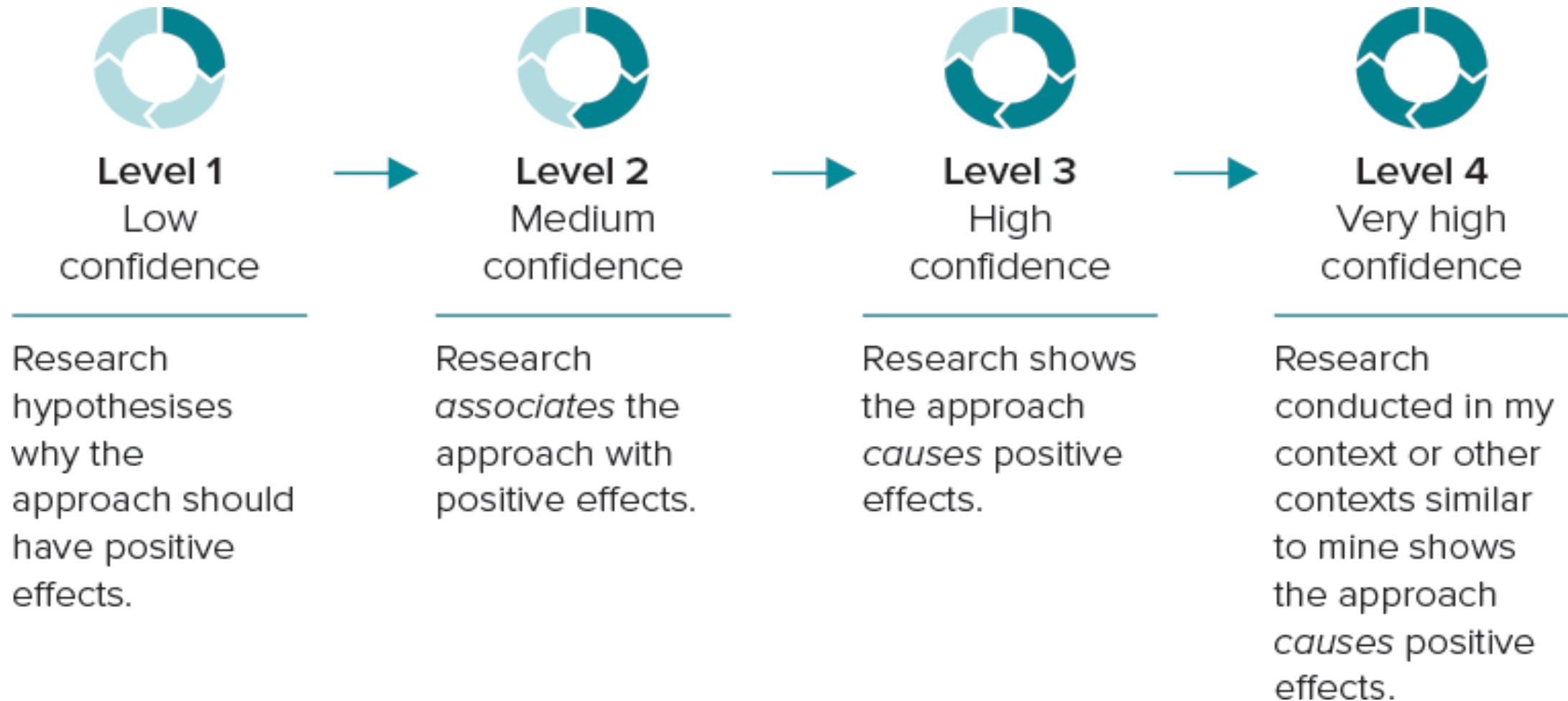


Mastery learning



Are we using evidence
in Australia?

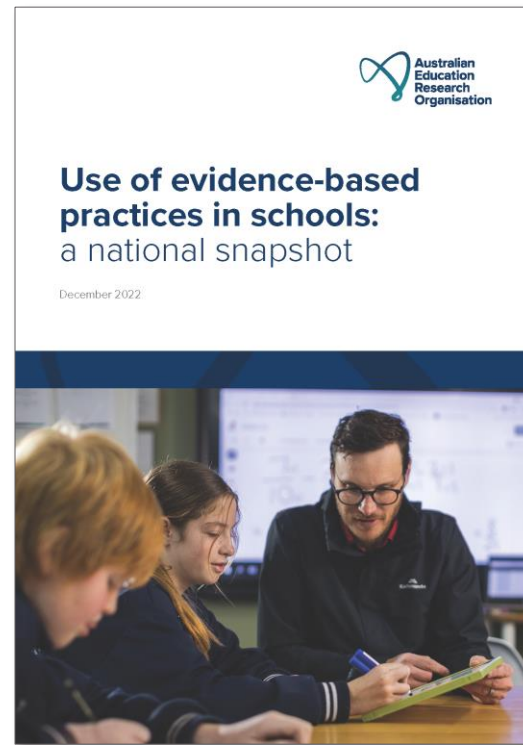
Standards of evidence



Turn and Talk



Evidence use in schools: a national snapshot



Data sources



Rapid literature review



AERO evidence use survey



Australian data from international education surveys: PISA, PIRLS, TIMSS, TALIS



Interviews with teachers and leaders



Research evidence



Teacher-generated evidence



Evidence-based practices

- Explicit instruction
- Formative assessment
- Mastery learning
- Focused classrooms/classroom management

What we know about using research evidence

Educators and teachers don't regularly use research evidence, even when they believe it is useful



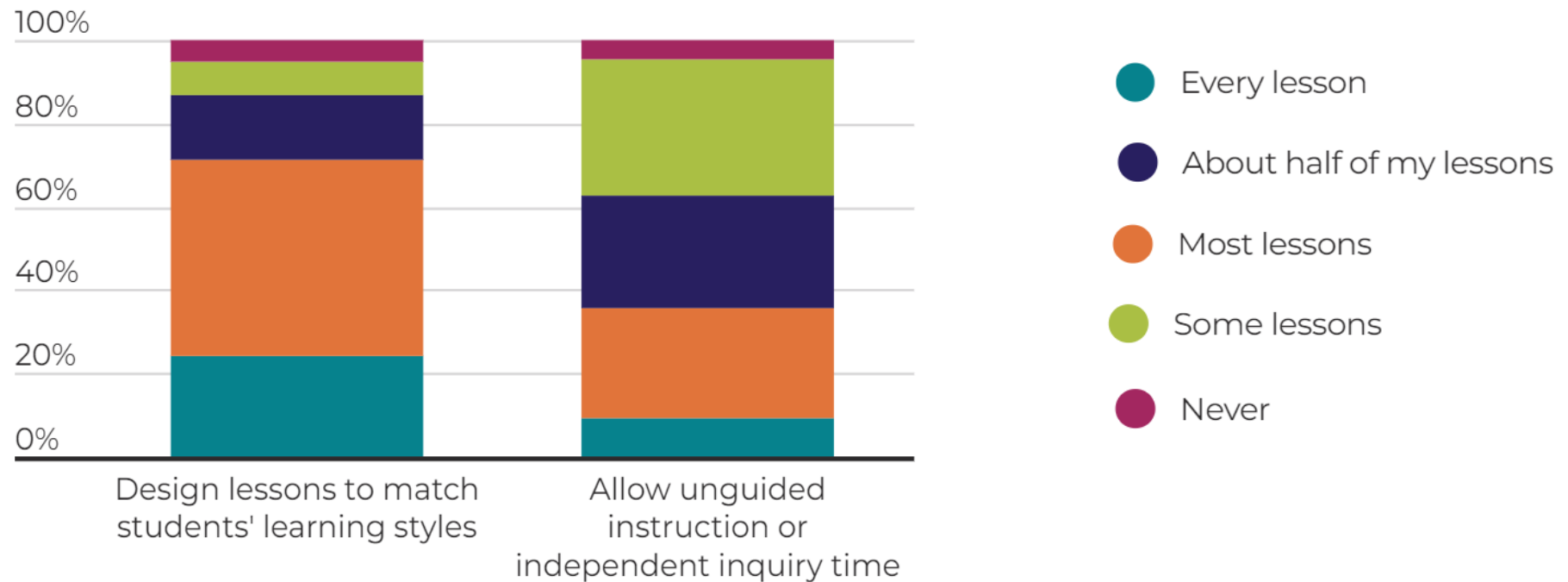
Most (83%) of the school respondents who believe student data is useful for evaluating a teaching practice **also regularly use** data to evaluate their practice.



By contrast, just over half (54%) of the school respondents who believe recommendations from academic research are a useful source of evidence **also regularly use** recommendations from academic research to trial or refine their practice.

Teaching practices not supported by evidence

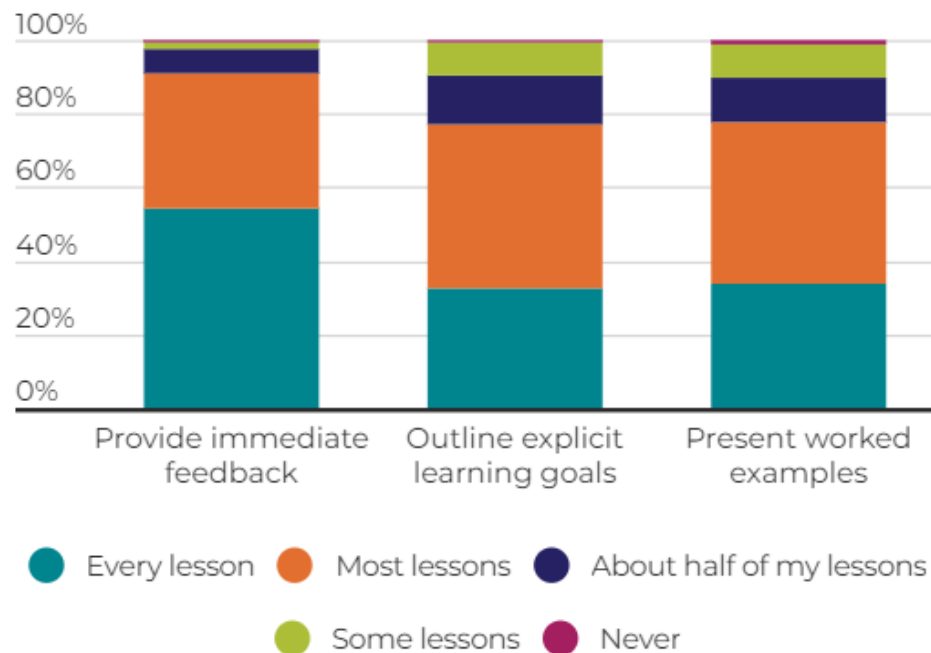
Graph 4: Teachers self-report on how often they use other strategies



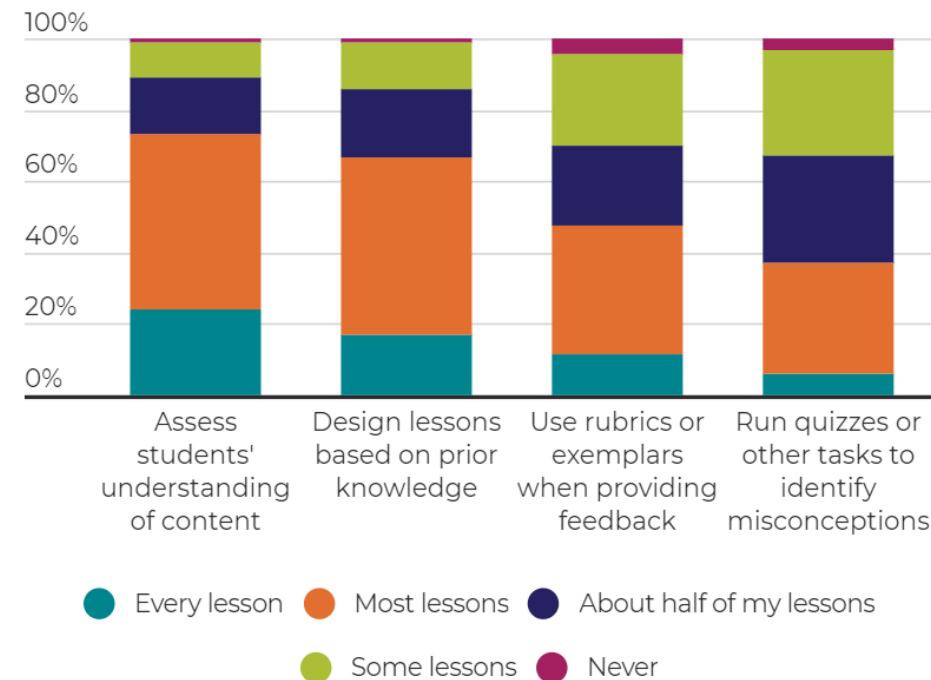
What we know about using evidence-based practice

Evidence-based practices can be broken down into smaller parts, or strategies

Graph 1: Teachers self-report on how often they use explicit instructional strategies



Graph 2: Teachers self-report on how often they use formative assessment strategies





No student learning will improve if research and evidence sit unused on a website.

All parts working together



Streamlined approach





For more evidence-based research
and practical resources

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eepurl.com/hj4N2r

Questions



**We're always looking for people to test
resources and provide feedback!**

Get in touch: **info@edresearch.edu.au**



Thank you

