SEAMEO CENTRES POLICY RESEARCH NETWORK (CPRN) SUMMIT 2025

Building Bridges to a Sustainable Future: Inclusive Collaboration and Innovation in Education, Science, and Culture

Innovative teaching that ensures quality education for all learners: the importance of metacognition and learning strategies

Tony McAleavy
Education Development Trust

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SEAMEO VOCTECH
Regional Centre, Brunei Darussalam

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EDT: Education Development Trust

- Formerly known as CFBT Education Trust
- Support education reform worldwide
- Working in Brunei Darussalam in the field of English language teaching for over 40 years
- Partner to the ministry of education in England in the national professional development of teachers
- Provide accreditation of private school quality in ASEAN countries via the International Schools Quality Mark
- Review private school quality on behalf of government in Dubai and other regions of the UAE
- Specialist provider of careers support to schools in London
- Assisting Gates Foundation on school reform in literacy and numeracy

Reform is difficult but step change improvements are possible

- London schools were the worst performing in England in 2000 and in 2025 are the best performing as measured by test scores, inspection grades, university destinations and disadvantaged students achieve particularly good results
- Dubai schools' performance as measured by TIMSS (Trends in International Mathematics and Science Study) has improved dramatically. Average Grade 8 math scores were 483 in 2007 and 561 in 2023.
- Despite the massive disruption of Covid, the 2022 PISA Cohort in Brunei Darussalam performed much better than the 2018 Cohort across all three tested subjects. The improvement in reading scores 2018-2022 was the highest in the world.

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Instructional reform should start with the global evidence about 'what works'

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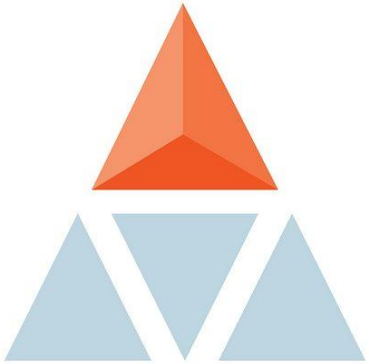
The EEF teaching and learning initiative: Synthesizing the best global evidence

Education Endowment Foundation

Established in London in 2011 the EEF seeks to evaluate the effectiveness, cost, and strength of evidence for various pedagogical approaches. EEF headline findings are published online via the Teaching and Learning Toolkit and promising approaches are explained through supporting guidance reports.

Top tips for accelerating learning based on the global evidence



Education Endowment Foundation

- Effective teacher feedback
- Enriching spoken language in the classroom
- Teaching metacognitive and self-regulation skills

Guidance based on the analysis of 355 rigorous global research studies

Education Endowment Foundation

Metacognition and self-regulation

Very high impact for very low cost based on extensive evidence

Implementation cost ?

£ £ £ £ £

Evidence strength ?

Impact (months) ?

+8 months

PISA 2022 (Volume V)
Learning Strategies and Attitudes for Life

OECD

PISA 2022 reporting based on student surveys suggest that many students worldwide need more help relating to proficiency in metacognitive learning strategies.

% of students who proactively seek support from the teacher when they do not understand the topic

UK comparator 49%

OECD average 47%

ASEAN Countries	%
Country 1	39%
Country 2	39%
Country 3	46%
Country 4	42%
Country 5	55%
Country 6	30%
Country 7	40%

% of students who regularly link new material with previous learning

UK comparator 45%

OECD average 46%

ASEAN Countries	%
Country 1	36%
Country 2	33%
Country 3	42%
Country 4	36%
Country 5	49%
Country 6	32%
Country 7	60%

In partnership with the Ministry of Education for England we provide a national programme of support for new teachers that explicitly focuses on metacognitive practices

Early Career Professional Development

EDT

Supporting early career teachers through the **Early Career Framework**

Our training for new teachers in England was developed in partnership with researchers at the EEF.

The intention was to equip busy teachers with the evidence-based knowledge and skills. There is a significant emphasis on metacognition and learning strategies

Embed metacognitive methods within subject teaching and not freestanding ‘study skills’ lessons

Create learning sequences that begin with the explicit activation of prior knowledge.

During whole class exposition teachers should model and demonstrate their own metacognitive thinking to students.

edt

Education Endowment Foundation

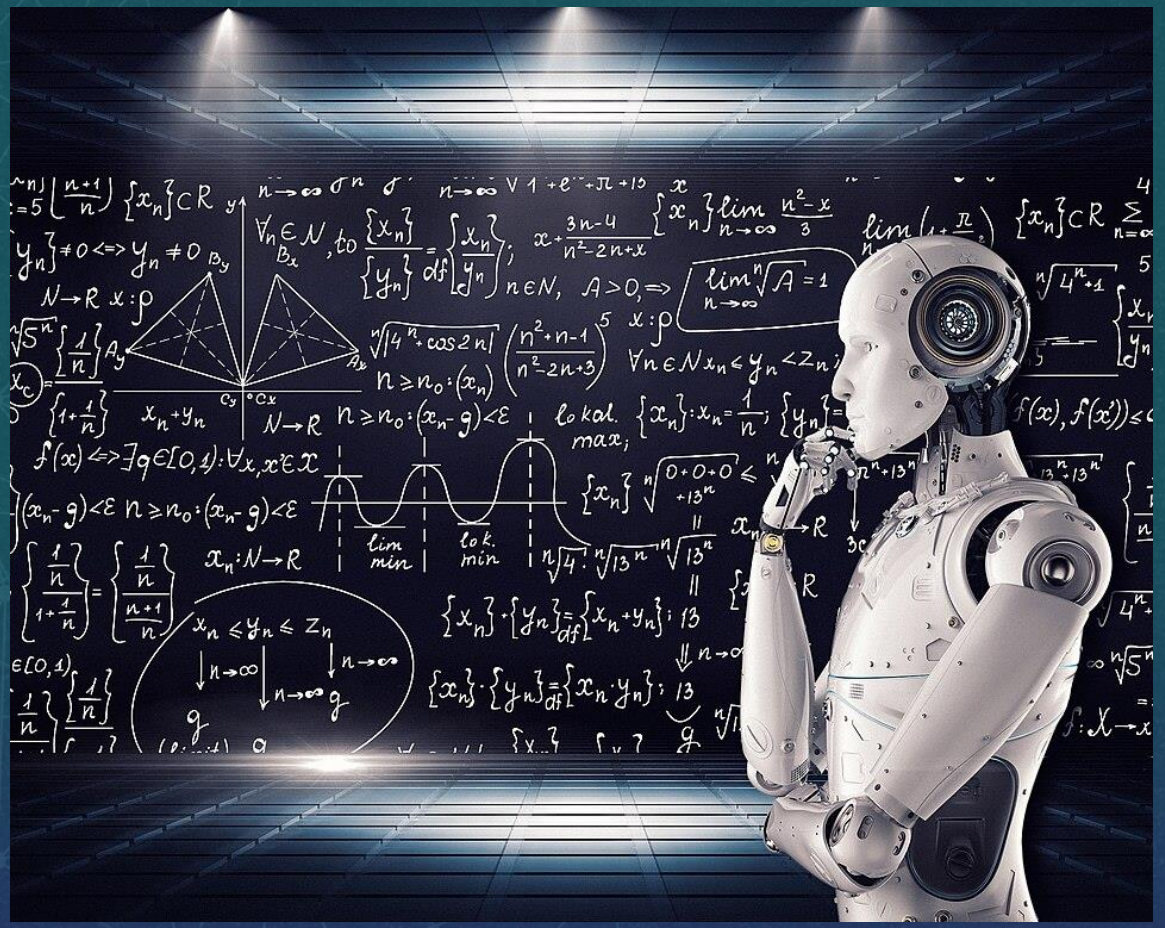
Provide opportunities for independent practice with initial scaffolding and support that is gradually withdrawn as student gains proficiency.

Classroom dialogue- both teacher to student and student to student- should be used to develop knowledge and understanding of metacognitive strategies

Evaluation by Ofsted 2025

The quality of professional development and training is Outstanding.

Early Career Teachers are expertly supported and empowered through this programme. As a result, they are exceptionally well prepared to teach. They are highly regarded by their school leaders as excellent classroom practitioners, with a deep understanding of relevant research to inform their teaching.



The relevance of research into pedagogy of metacognition to the challenge and opportunity of AI-assisted learning

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Proven insights about ‘what works’ in encouraging metacognition can be applied to the new world of AI-assisted learning

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Embed AI literacy within subject teaching. Don't rely on generic 'study skills' guidance about the use of AI.

Promote the human agency of students and the power of prior knowledge when interacting with AI:

"What do I already know about this topic and what more do I need to find out before I ask for AI help" "Does my prior knowledge conflict with the AI response and is it possible that AI is hallucinating?" "Does my prior knowledge suggest that AI might be recycling some questionable information from the internet?"

Use teacher modelling and demonstration to exemplify effective engagement with AI:

"Based on what I know about the topic I don't trust this information so watch me because I am going to check what evidence AI is using to support these claims?" "I am not happy with this AI response. Let me show you how to rephrase the question to maybe get a clearer answer from AI."

Enhancing student metacognition accelerates learning in core subjects and both maximizes the benefits and minimizes the risks of AI-assisted learning. We have access to a substantial and robust evidence base about how to teach metacognitive learning strategies. There is therefore an urgent need to ensure that teachers have access to this expertise.

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Thank you!

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