

5 problems with research- informed practice

But why it's important anyway

Presented by:
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Deputy Chief Executive, Chartered College of Teaching
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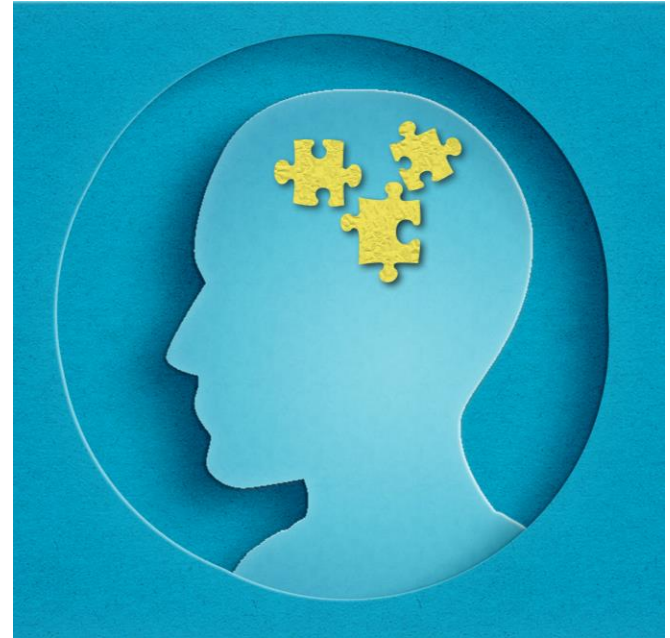
“Teachers and schools are at the heart of what we do.

We want to support the teaching profession to thrive in an optimal, research-informed way, providing the best possible education for children and young people.”

Professor Dame Alison Peacock

Your experiences...

What problems have you seen with the idea of being research-informed, or how it has been implemented in practice?



5 problems with research- informed practice that I've seen

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- ✓ It all depends on your ultimate goal



Dylan William

@dylanwilliam



Increased use of student-centered teaching methods is linked to increased student wellbeing but lower achievement, which in turn, link to increased adult life satisfaction, but lower earnings—the "achievement-wellbeing tradeoff", discussed by [@CfEdnEcon](#):
bit.ly/2Dlx2px

12:37 pm · 14 Nov 2018 from [Florida, USA](#) · [Twitter Web Client](#)

291 Retweets **505** Likes

Concepts of ‘effectiveness’ and ‘impact’

Teaching and Learning Toolkit
An accessible summary of the international evidence on teaching 5-16 year-olds

Filter Toolkit **Toolkit Strand -** **Cost -** **Evidence Strength -** **Impact (months) -**

Filter results by keywords

£ Cost

🔒 Evidence

+1 Months Impact

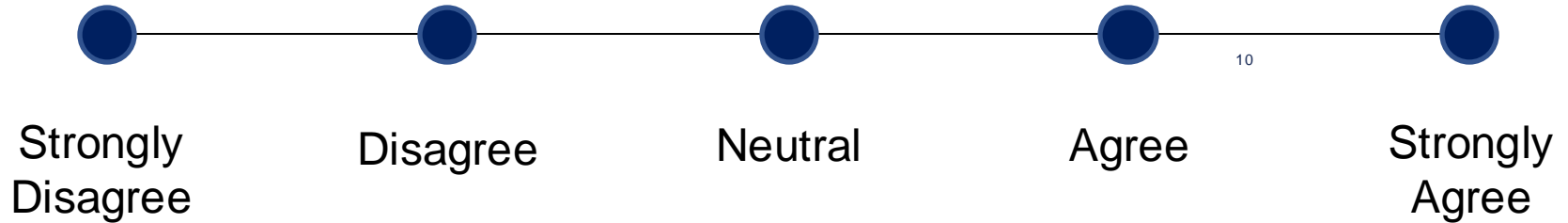
Download Toolkit

Toolkit Strand	Description	Cost	Evidence Strength	Impact (months)
Arts participation	Low impact for low cost, based on moderate evidence.	£ £ £ £ £	🔒 🔒 🔒 🔒 🔒	+2
Aspiration interventions	Very low or no impact for moderate cost, based on very limited evidence.	£ £ £ £ £	🔒 🔒 🔒 🔒 🔒	0
Behaviour interventions	Moderate impact for moderate cost, based on extensive evidence.	£ £ £ £ £	🔒 🔒 🔒 🔒 🔒	+3
Block scheduling	Very low or no impact for very low cost, based on limited evidence.	£ £ £ £ £	🔒 🔒 🔒 🔒 🔒	0

5 problems with research-informed practice that I've seen

- ✓ It all depends on your ultimate goal
- ✓ Finding relevant and robust research

You can find research to back up any opinion



Instant feedback is best!

“Immediate feedback helps to correct misconceptions in student learning as soon as the student makes a mistake. However, when students receive delayed or zero feedback, they might reinforce misconceptions by making the same mistake several times without being corrected (Kehrer, Kelly, and Heffernan, 2013).”

Delayed feedback is best!

“For many years, immediate feedback was considered the most beneficial for student learning. Yet more recent research argues the opposite – that delayed feedback is better” (Busch, 2024)

⋮

How much research?

7 Caesar's Towers' worth

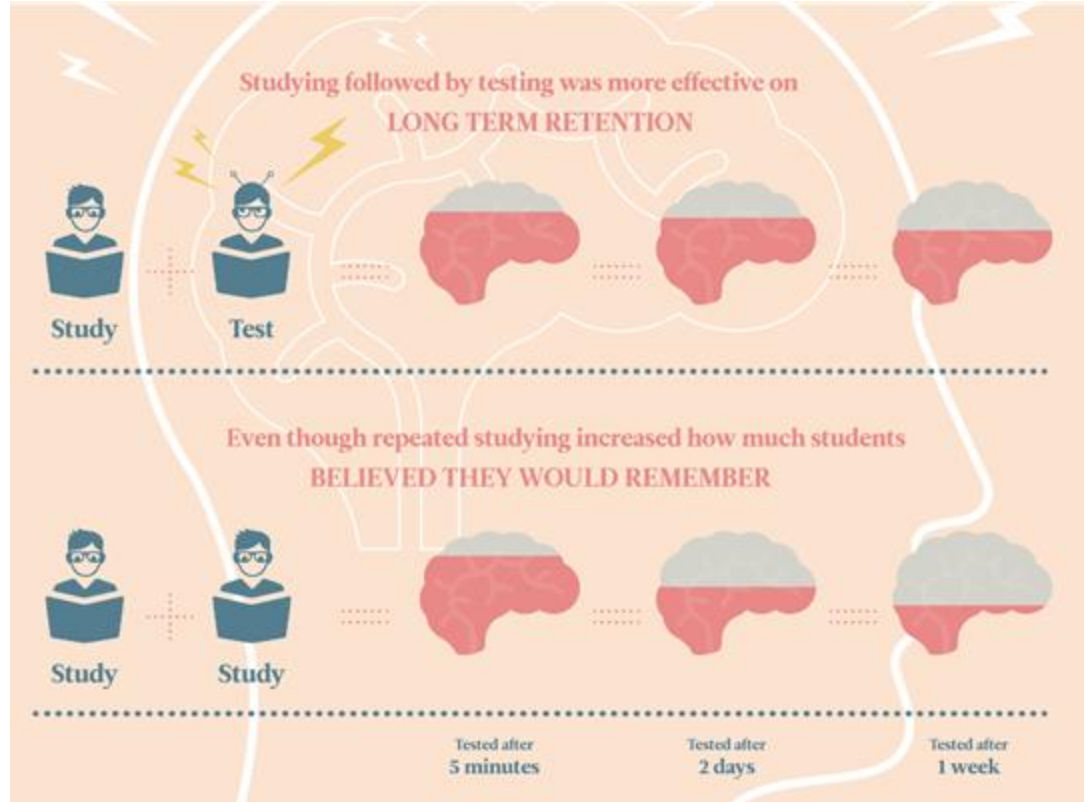


What even is research, anyway?



DfE Evidence Hierarchy	
Indicative strength	Type of evidence
	<ul style="list-style-type: none"> • Meta-analysis or systematic review - analysis and summary across many individual evaluations
	<ul style="list-style-type: none"> • Matched-comparison design or a randomised controlled trial – tests intervention against a comparison grp
	<ul style="list-style-type: none"> • Sound theory backed by a growing body of empirical research & may cite DfE policy / White paper
	<ul style="list-style-type: none"> • Independent research / evaluation – uses surveys, data analysis, monitoring, interviews, observations, focus groups, etc
	<ul style="list-style-type: none"> • Internal / in-house evaluation. Not independently evaluated • - inc. case studies, observation, interviews, MI
	<ul style="list-style-type: none"> • Expert opinion / advice from consultants, academics or sector grp
	<ul style="list-style-type: none"> • Media articles / anecdotal reports and interest groups

The problem with self-report



The problem with meta-analysis

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Research on feedback

Evidence and resources > Teaching and Learning Toolkit > Feedback

View in Cymraeg

Feedback

Very high impact for very low cost based on extensive evidence

Implementation cost ?

£ £ £ £ £

Evidence strength ?

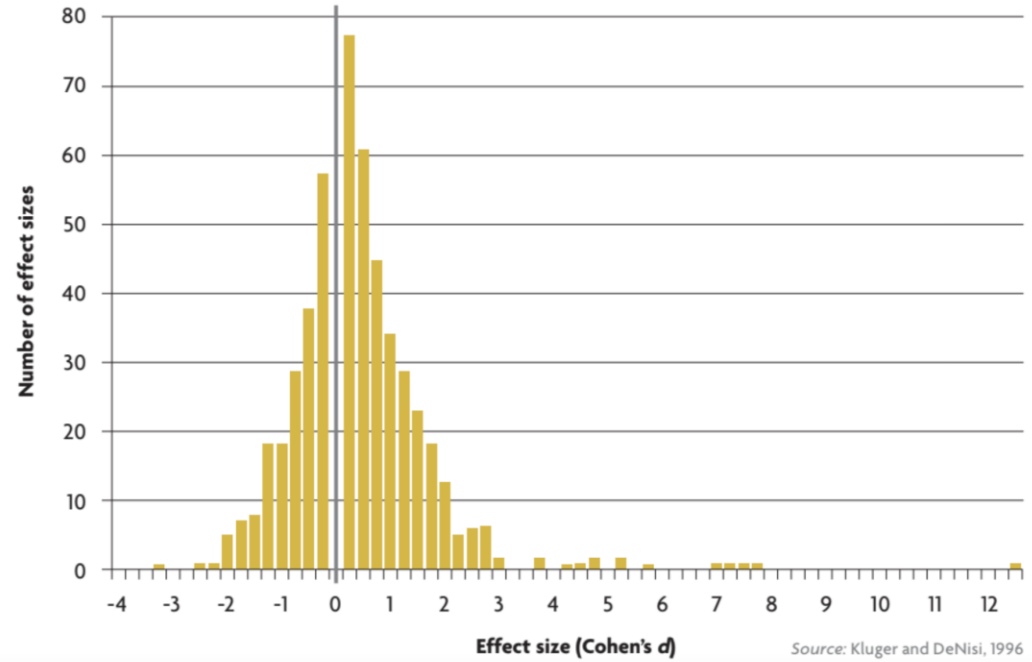
🔒 🔒 🔒 🔒 🔒

Impact (months) ?

+6 months

A meta-analysis of feedback studies

FIGURE 1:
FEEDBACK INTERVENTIONS: DISTRIBUTION OF EFFECT SIZES



5 problems with research-informed practice that I've seen

- ✓ It all depends on your ultimate goal
- ✓ Finding relevant and robust research
- ✓ Research evidence being used to limit teacher autonomy

A simple model of evidence-informed practice



Based on Scutt, 2018

A risk of lethal
mutation...

.....



*Top down
vs
bottom up*

Evidence use at the heart of government policy

References

High Expectations (Standard 1– Set high expectations)

[Further reading recommendations are indicated with an asterisk.]

Aronson, J. (Ed.) (2002) *Improving academic achievement: Impact of psychological factors on education*. New York: Academic Press.

Bandura, A. (1986) *Social foundations of thought and action: a social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Campbell Collaboration (2018) School-based interventions for reducing disciplinary school exclusion: A Systematic Review. Accessible from: <https://campbellcollaboration.org/library/reducing-school-exclusion-school-based-interventions.html>.

Chapman, R. L., Buckley, L., & Sheehan, M. (2013) School-Based Programs for Increasing Connectedness and Reducing Risk Behavior: A Systematic Review, 25(1), 95–114.

Chetty, R., Friedman, J. N., Rockoff, J. E. (2014) Measuring the Impacts of Teachers II: Teacher Value-Added and Student Outcomes in Adulthood. *American Economic Review*, 104(9), 2633–2679. <https://doi.org/10.1257/aer.104.9.2633>.

*Education Endowment Foundation (2018) Sutton Trust-Education Endowment Foundation Teaching and Learning Toolkit: Accessible from: <https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit> (retrieved 10 October 2018).

Hanushek, E. (1992) The Trade-off between Child Quantity and Quality. *Journal of Political Economy*, 100(4), 859–887.

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- ✓ Context matters for 'what works'

Why teaching will never be a research-based profession and why that's a Good Thing

Dylan Wiliam (@dylanwiliam)

Factors that might affect the impact of cogsci approaches (EEF, 2021)



Teachers, teaching

- Extent of teacher professional development and learning for the cognitive science technique
- Teacher general pedagogical and subject-specific knowledge and skills
- Level of teacher experience
- Teacher motivation and enthusiasm for the cognitive science technique
- Extent to which technique replaces or improves teacher's existing practice
- (Many of the pupil factors, right, also apply to teachers)

Pupil individual factors (potentially different for each student)

- Prior level of knowledge, in general and for the topic being learnt (and extent to which the teacher takes this into account)
- Working memory capacity
- Nutrition and hydration
- Alertness/activity level
- Mood and emotional state
- General and learning-specific motivation
- Personality and temperament
- Special educational needs, difficulties, or disabilities
- Learning behaviours and strategies
- Age and maturity

Classroom/social environment

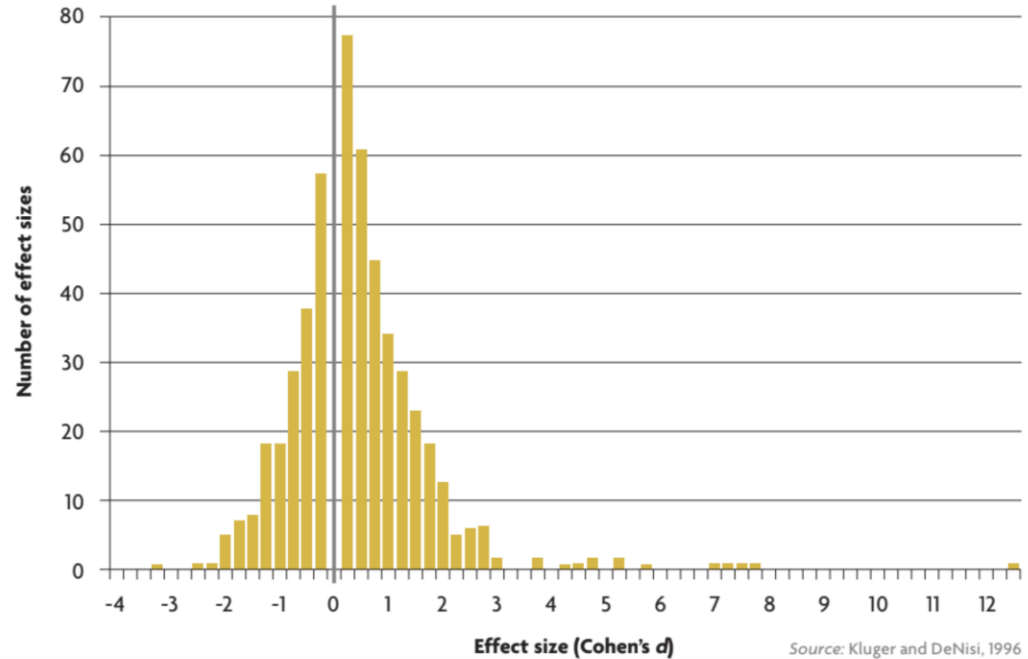
- Relations in the classroom (teacher-pupil, pupil-pupil)
- Culture of participation
- Emotional environment
- Disruption, noise, or distraction
- Decoration and information
- Access to learning resources

Activity, topic, and subject

- Subject or curriculum area (e.g., general differences in the nature of subject content and pedagogy)
 - Nature of specific learning content (e.g., complexity/element interactivity, novelty, connection with other learning)
 - Nature of specific learning activity (e.g., student-led, length, structure, resources)
-

Remember that
meta-analysis of
feedback studies?

FIGURE 1:
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5 problems with research-informed practice that I've seen

- ✓ It all depends on your ultimate goal
- ✓ Finding relevant and robust research
- ✓ Research evidence being used to limit teacher autonomy
- ✓ Context matters for 'what works'
- ✓ There are lots of other influencing factors

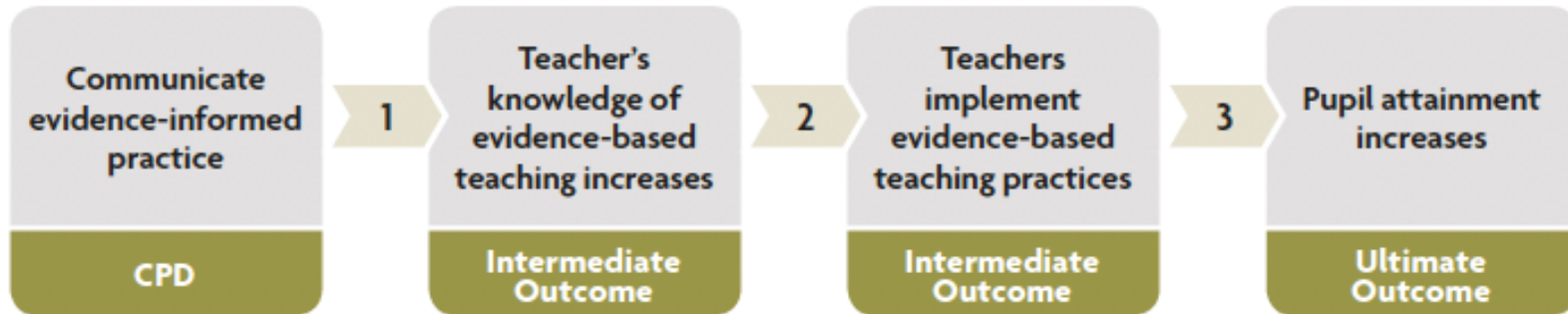
Teachers
and
leaders
are keen
to use
research

Teachers' engagement with research: what do we know? A research briefing

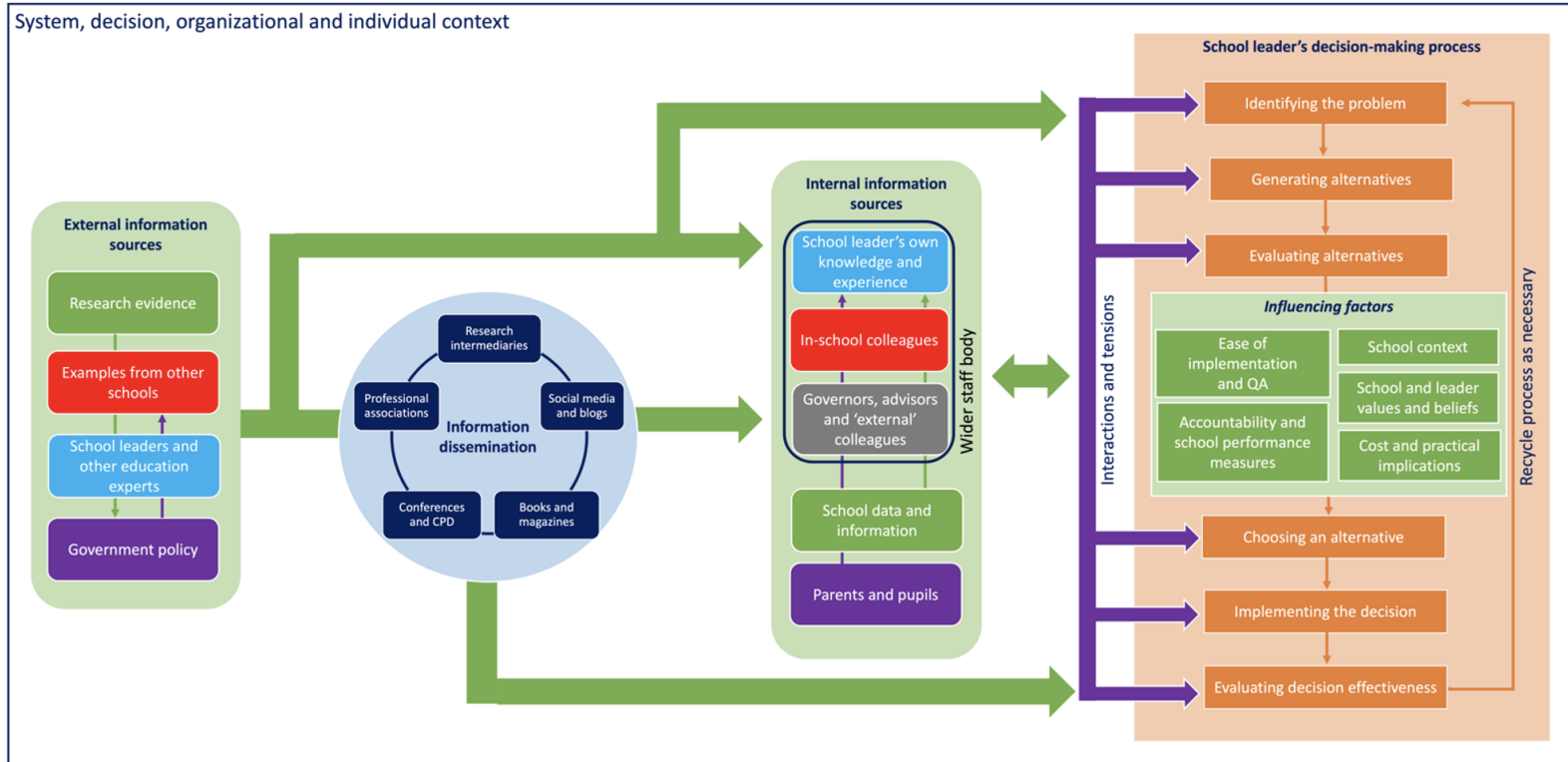
- research evidence still has only a small influence on teachers' decision-making relative to other sources
- teachers were most likely to draw on their own expertise, or that of their colleagues, when making decisions about teaching and learning or whole-school change.

Teachers were, on average, willing to engage with research evidence, and reported that their school climates were supportive of evidence use. However, it appears that this willingness, and those positive climates, were not yet consistently translating into evidence-informed decision-making across schools in England.

How we like to think developing evidence-informed practice works...



The reality...

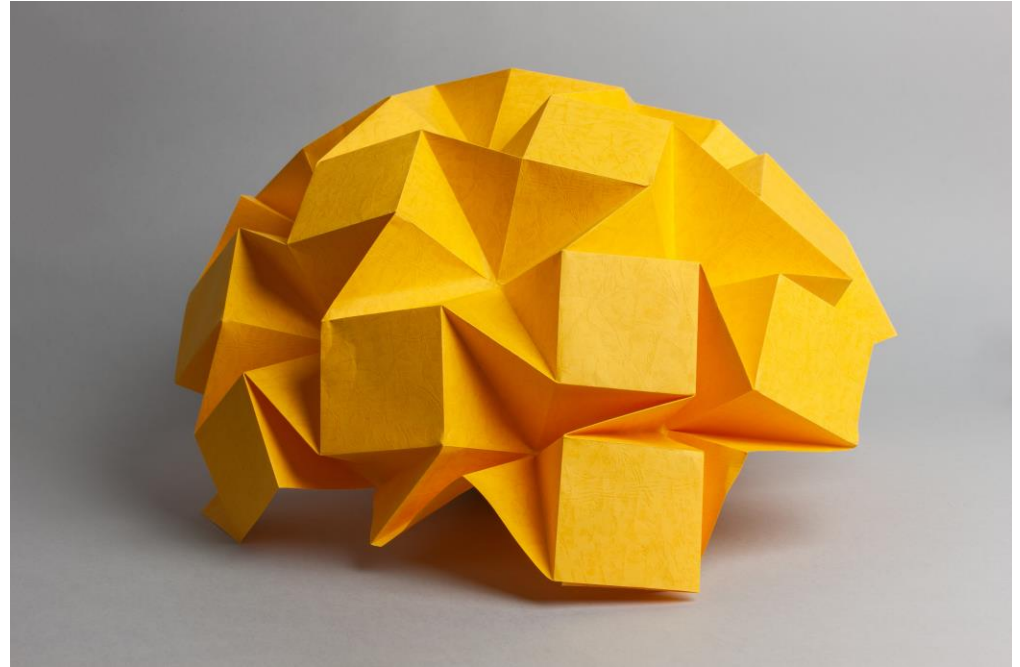


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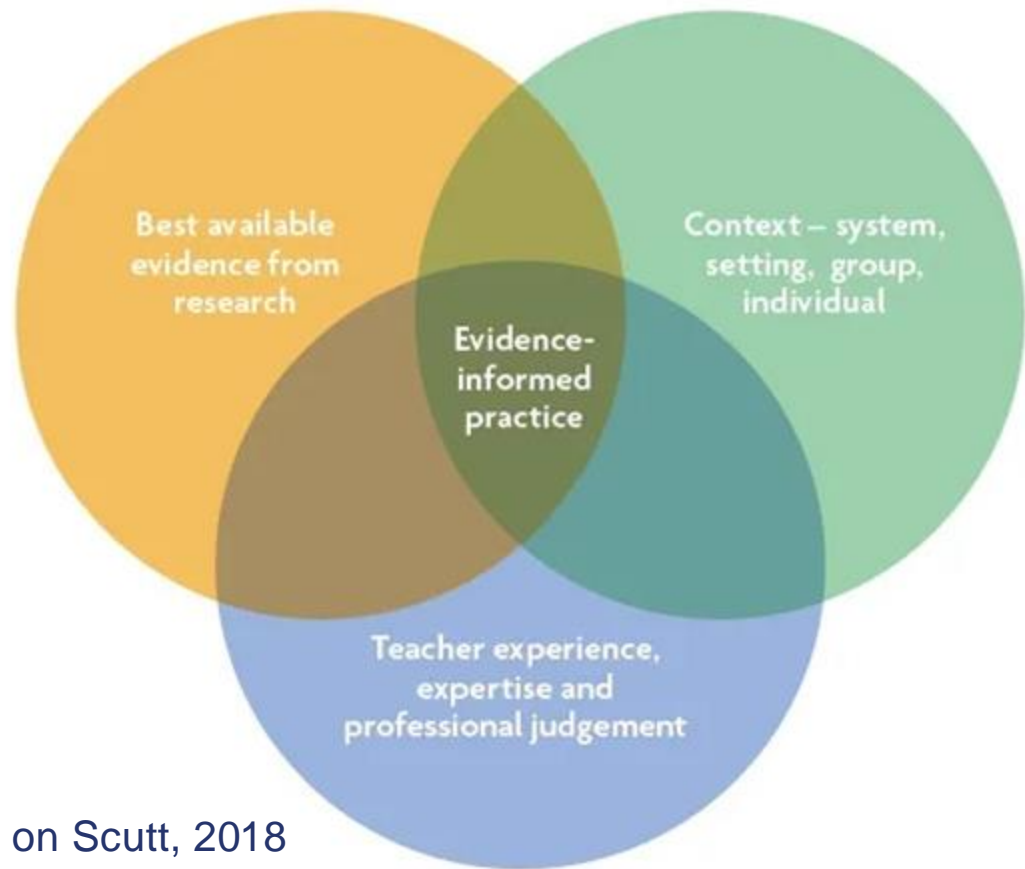
- ✓ It all depends on your ultimate goal
- ✓ Finding relevant and robust research
- ✓ Research evidence being used to limit teacher autonomy
- ✓ Context matters for 'what works'
- ✓ There are lots of other influencing factors

So, it's
complicated!

⋮



But it's worth
doing



Based on Scutt, 2018

5 benefits to research-informed practice that I've seen

- ✓ Improved practice and student outcomes
- ✓ Increased teacher job satisfaction and 'intellectual wellbeing'
- ✓ Greater quality and quantity of teacher collaboration
- ✓ Career pathways that focus on excellent classroom practice
- ✓ Reduction in requirements for unnecessary practices (eg data collection, learning styles...)