

For CPD leads, school leaders and teachers choosing training

CPD AND PROFESSIONAL LEARNING

What makes CPD actually work?

A large, EEF-funded meta-analysis of 104 international randomised trials on how teacher training is designed.

Across 104 randomised trials, CPD that built insight, set a goal, taught a technique AND helped teachers embed it in practice showed three times the average effect of CPD missing one of those four, though that headline gap comes from just nine studies and is not yet statistically secure.



WHAT HAPPENED

More design features, bigger gains, up to a point

Researchers combined a systematic review and meta-analysis of 104 randomised controlled trials of teacher CPD, searching English-language studies from OECD countries published since 2002. Across the whole sample, the average effect on learners' standardised test scores was small ($d = 0.05$), matching what earlier reviews have found. But programmes that built in more of 14 specific, evidence-based design features, things like goal-setting, modelling, feedback and rehearsal, tended to show bigger gains.

Imbalanced CPD, misses at least one of the four (95 trials)



Balanced CPD, covers all four (9 trials)



Average effect size (Cohen's d) on learners' standardised test scores, meta-analysis of 104 randomised trials. "Balanced" programmes include at least one design feature from each of Insight, Goals, Techniques and Practice; "imbalanced" programmes miss at least one category. Sims et al. (2022 working paper / 2025 journal publication), Results section. With only 9 balanced-design trials, this gap is not statistically significant at conventional levels ($p = .22$).

The four things effective CPD builds in

1

Insight
New understanding of how teaching and learning work, built by managing cognitive load and revisiting material over time.

2

Goals
A concrete goal to change one part of practice, often backed by evidence from a credible source and reinforced with praise.

3

Techniques
The technique itself shown, supported and rehearsed, through instruction, modelling, feedback and practice runs.

4

Practice
A plan to make the change stick in real lessons: action planning, repeated practice in context, prompts and self-monitoring.

Across your CPD sessions and formats

This is what a meta-analysis of 104 training programmes found in general, not a test of any single CPD session. What follows are sensible ways a school or department could check its own CPD against the four design features: worth trying, not separately proven for your context.

CPD format	How to check it covers all four
Whole-staff INSET day	Easy to cover Insight (a keynote) and Goals (a shared aim), but often skips Techniques and Practice; build in a modelling demonstration and a rehearsal slot, not just a one-off delivery.
Subject-team CPD session	A natural home for Techniques (demonstrate the strategy) and Practice (plan when to try it this half-term); pair it with a short piece of Insight first so teachers know why it works.
One-to-one instructional coaching	Usually strong on Techniques (modelling, feedback) and Practice (rehearsal, prompts); check that Insight and Goals are made explicit early on, not just assumed.
Early-career (ECT) mentoring	Often structured to include most of the four already; use the checklist to audit whether all four are made explicit, rather than left implicit in conversation.
Self-directed or online CPD	The easiest format to miss Practice and embedding; add your own action-planning step and a date to revisit it, since the platform cannot do that for you.

If your CPD is short on one of the four

Short on Insight
Add five minutes explaining why the technique works, not just what to do.

Short on Goals
Ask each teacher to commit, in writing, to one specific change to their practice.

Short on Techniques
Show the technique being used, live or on video, before asking anyone to try it.

Short on Practice
Build in a slot to rehearse it, plus a prompt to use it in a real lesson within the week.

Start with one: across the 104 studies, the single most common mechanism was instruction (telling and showing teachers what to do), and the least common was prompts and cues — the nudges that keep a technique going once training ends. Prompts and cues sit inside Practice. If your CPD already demonstrates the technique well, that follow-through is the part worth checking next — our recommendation, not a ranking the study reports.

A rigorous review, with a headline finding that needs more evidence

Developing

This rates the evidence's firmness, not our endorsement of the approach. A pre-registered systematic review and meta-analysis of 104 randomised trials is about as rigorous as classroom-CPD research gets, but the study's most actionable claim rests on a small subsample.

- The "balanced CPD works three times better" comparison rests on only nine balanced-design trials against ninety-five imbalanced ones; the gap (0.15 vs 0.05) is not statistically significant at conventional levels ($p = .22$), because the confidence interval for balanced designs is wide.
- The link between more design features and bigger effects weakens, and loses statistical significance, when the analysis is limited to studies that pre-registered their design in advance ($p = .32$), the more conservative test.
- Two of the authors double-coded 46 of the papers and agreed on 82% of judgements at mechanism level, so some features may be mis-coded or simply under-reported in the original write-ups.

What that means for you: treat "cover all four purposes" as a sensible design checklist backed by a rigorous review, not as a guaranteed formula. The finding that balanced CPD roughly triples the effect is real in this data but isn't yet statistically secure on its own terms.

TRY IT THIS WEEK

Your first small step

THIS WEEK

Pick one CPD session you're running or attending soon, and check it against the four-part test: does it build understanding (Insight), set a concrete goal (Goals), show and rehearse the technique (Techniques), and include a plan to use it in a real lesson (Practice)? If one is missing, add the smallest version of it you can.

Try it and watch: notice whether teachers can describe an actual change to their next lesson by the end of the session, not just new things they've learned. That's your own evidence, not ours.

Go deeper

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