

# Australian teachers let down by flawed critical thinking capability: instructional coach



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Australian teachers have been led astray by a prominent general capability in the national curriculum, which is based on the misguided premise that critical thinking can be taught as an abstract skill, a former teacher turned instructional coach has said.



When teachers try to teach critical thinking as a standalone skill that can be transferred across learning domains, they run into real trouble in the classroom, Dobson says.

Students don't "do critical thinking" [James Dobson](#) says, rather they think critically about *something*, be it history, science, literature, mathematics or social issues.

And the quality of that thinking depends heavily on the depth of their background knowledge in that domain, he adds.

When teachers try to teach critical thinking as a standalone skill that can be transferred across learning domains, they run into real trouble in the classroom, Dobson says.

"You start doing activities for the sake of trying to develop something that can't be developed in isolation.

"So, you start spending instructional time on an activity that actually sounds like it will build critical thinking – but then we quickly realise that often actually our students don't have the knowledge to really apply that."

More often, attempts to teach students how to think critically actually worsen learning gaps within the class, he adds, with those children with patchier background knowledge at a distinct disadvantage.

When it is detached from subject knowledge, critical thinking becomes vague, tricky to assess, and hard to enact in practice, the educator says.

Our national curriculum has got it wrong, he adds.

“Most of my teaching career, the Australian Curriculum has been around and has promoted this idea of critical thinking [as a transferable skill] that we can apply across subjects in different contexts.

“But that’s not how critical thinking works. For example, a chess grandmaster can play chess and see a huge number of moves in advance.

“But you put them in a different situation in a different context, and they don’t have the same knowledge level to think critically in that.”

In short, critical thinking is only possible when we have a knowledge base to draw upon – and one within a specific field, Dobson suggests.

“And it always depends on how much we know about that domain.”



**Critical and creative thinking (CCT) was introduced as a General Capability in the Australian Curriculum in 2010, heralded as a call for more explicit teaching of these two skills.**

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Earlier this year a team of scientists from around the world, including Flinders University microbiologist [Dr Jake Robinson](#), called for a radical refocus of school curricula from F-12 to include more critical thinking skills to empower students to ‘think outside the box’.

*EducationHQ* [reported on the news](#), noting Robinson’s view that there was an urgent need to rapidly roll out effective education programs which had critical thinking teaching solidly embedded.

“Critical thinking, and especially the cultivation of the habit of asking ‘why’ and requiring plausible justification for policies or actions, is a shield against bias, prejudice, propaganda, misinformation and the incessant pressures of social media,” Robinson said.

Dobson was surprised by the views and assumptions canvassed in the article.

“[There was] the assumption that critical thinking hasn’t been something that’s tried to be taught,” he explains.

“And I think sometimes this happens when you get people outside their domain of expertise talking about other domains of expertise – [in this case it] was a scientist talking about education.”

Of course the idea of teaching critical thinking in the classroom is an appealing one, Dobson says.

Unfortunately it just doesn’t stack up in practice, he adds.

“We want our students to be critical thinkers ... but it’s the end piece, and we don’t get to the end piece without a lot of work going before it.”

While mastering a skill is done via lots of practice, Dobson says, critical thinking is more the cumulation of lots of skills.

A well sequenced, knowledge-rich curriculum is key to building a rich knowledge base for all students, Dobson says.

“[We need to be] thinking carefully about what knowledge we’re teaching, and that’s not just an individual teacher teaching one subject in one year, but over the years that we have students in our schools, how are we building knowledge throughout the years?”

Taking the example of History, Dobson shares how schools he’s worked with have carefully sequenced the learning from the early years up.

“...in Grade 1 we might start off looking at something like the history of Mesopotamia or Ancient Egypt, and then we can build on that in Grade 2 with Ancient Greek civilisations.

“And then in Grade 3 we might be looking at Roman civilisations, and then in Grade 4 it might be Islamic empires.”

Grade 5 then builds on this by looking at Chinese dynasties, before a text like *Where the Mountain Meets the Moon* is introduced which allows students to practice and apply the knowledge that they’ve learned, Dobson concludes.

“And then we can match it to Australian history and see how Australian civilisation has emerged over the last 60,000 years, and what similarities and differences there are.

“[Here] we’ve got something to compare it to, rather than assuming that kids might have some of these [knowledge bases]...”

Back in 2022, UNSW Sydney’s Emeritus Professor John Sweller [told EducationHQ](#) that despite the hastening agenda to teach students how to think critically and creatively, there’s no evidence of any instructional strategy that can do so.

According to the influential educational psychologist, it’s only domain-specific knowledge stored in long-term memory plus our innate ability that allows these capabilities to flourish.

“At the end of the day, if you can think critically (or creatively) about something, it’s because you have a lot of knowledge about it,” he said at the time.

“If you try to teach it, all it does is take away time from teaching what really matters, and [what] really assists critical and creative thinking, and that’s knowledge.”

Sweller is best known for formulating cognitive load theory, which is one of the most highly cited theories in educational psychology.

Dobson would like to see some changes made to the National Curriculum.

“What I would love to see is a much more defined curriculum where the knowledge that we actually expect in each year level is laid out much clearer.

“Often we hear that the curriculum is overloaded. What I think happens though is when we look at the curriculum in F-2, there’s not a lot of content in it.

“But then you look at the Grade 3 curriculum and there’s all this assumed knowledge that teachers are expected to build on, but because it hasn’t been

well sequenced in the years beforehand, it becomes a big assumption and not all our students have that knowledge.”

A similarly big jump happens again at Grade 5 and again at Grade 6, Dobson says.

“There’s assumed knowledge, and curriculum hasn’t spelt out when that prior knowledge needed to be taught.”