Dump those AI shortcuts, says the 'Mozart of maths'

TERENCE TAO

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Lauded as the "Mozart of maths", Australian-born genius Terence Tao has some advice for students.

In the age of AI, Professor Tao urges students to tap their own brainpower before turning to technology. "Sometimes these tools don't work, or they give you the wrong answer, and if you never have any ability to do these things by hand, you would not know what to do," he said from the University of California in Los Angeles, his base for the past two decades.

"I've got full blackboards in my office, and I'm not going to give them up. There's an easy way to do things, but sometimes the slow way is important too."

Professor Tao is concerned by the growing tendency and tolerance for students to cheat, especially since many universities relaxed standards during the Covid-19 pandemic.

"When you're doing everything online, it becomes a lot easier or more tempting to cheat," he said. "I think we now have more culture of students turning to cheating ... there's a temptation to take shortcuts or just easy classes."

Born in Adelaide in 1975, Professor Tao seemed destined to be a numbers man.

The child prodigy could count by the age of two, started high school at seven and graduated from Flinders University as a 16-year-old with a master's degree in mathematics, as well as a bachelor of science.

The Nobel Foundation does not award a Nobel Prize for maths but Professor Tao won the equivalent in 2006, the Fields Medal, the world's highest honour in mathematics, in recognition of his creative and technical brilliance as a "supreme problem solver".

His list of academic achievements spans three pages, but one has a practical application that saves lives every day. Professor Tao helped write an algorithm enabling MRIs to take lung scans in 10 seconds so patients no longer have to hold their breath for two minutes. He said he was honoured to be made a Companion of the Order of Australia (AC) for eminent service to the mathematical sciences, the global mathematics community and tertiary education and academia.

"I'm very grateful for the recognition, and humbled," he said. "It just really reinforces everything that Australia has done for me."

The maths maestro is tempted to return Down Under in response to US President Donald Trump's cuts to research funding, including his own. "To be honest, last year the situation in the US got quite bad for a while," he said. "There was a lot of funding uncertainty and political unpleasantness so I did seriously explore the possibility of coming back to Australia.

"In the end I did decide to stay, at least for now, because I have a lot of roots here and my wife is American.

"The world now is just a really unpredictable place, so who knows – I might end up back in Australia in the future."

Acclaimed as the world's greatest living mathematician, Professor Tao credits his success to a laid-back Australian childhood, understanding parents, a competitive nature and a public schooling system flexible enough in the 1980s to recognise and accommodate his gift.

"I was a noisy kid, and my parents would give me maths (books) to calm me down by doing some mental work."