- Thought and thinking / Artificial Intelligence (AI)

COGNITIVE OFFLOADING:

Is your child outsourcing their thinking to AI? Here's what to do about it

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If your child reaches for generative AI before they've even attempted to work through a problem, they may be engaging in what education experts call "cognitive offloading". This practise could be undermining their ability to think for themselves in the long term.



A growing body of evidence suggests that while AI tools can be enormously useful, the ease with which children access them is producing an unintended consequence: a generation increasingly reluctant, and perhaps less able, to sit with confusion, reason through difficulty, or arrive at their own conclusions.

Cognitive offloading refers to the practice of delegating mental tasks, such as problem-solving, analysis, and reasoning, to an external tool rather than working through them independently.

It's not new.

Writing things down, using calculators, and consulting reference books are all forms of offloading. The concern with AI, however, is its scale and immediacy.

A 2025 educational review warned that when large language models shift from supporting learning to replacing it, children risk developing a habit of relying on AI rather than developing independent thinking. The findings prompted UK-based Bright Heart Education to analyse a large set of first-hand accounts from educators to identify the most consistent classroom concerns.

The patterns that emerged from the Bright Heart Education analysis paint a consistent picture across subjects and age groups.

The most frequently reported behaviour is students outsourcing the very first step of problem-solving. Rather than attempting an initial analysis, children immediately turn to an AI tool. One teaching assistant cited students encountering a coding error (something as straightforward as "variable not found") and going straight to ChatGPT rather than pausing to consider the problem themselves.

Educators also report a noticeably lower tolerance for confusion.

In one account, a teaching assistant asked a student to talk through their debugging logic during office hours. The student "burst into tears" when asked to explain their reasoning — an

indication, experts say, of how atrophied the skill of working through uncertainty has become for some students.

Perhaps most concerning is the use of AI as an unquestioned authority. In high-stakes academic settings, educators describe students treating AI-generated responses as definitive facts. One teaching assistant recounted medical students using a popular generative AI tool during histology: “So this is cancer?

ChatGPT says…”

“We’re seeing a shift in where thinking happens. When children hand logic and reasoning to AI, they get less practice with the skills that make learning stick,” said Dr Ryan Stevenson, Co-founder and director of Bright Heart Education.

Dr Stevenson is careful to distinguish between outright bans on AI tools and teaching children to use them responsibly. The goal, he says, is to keep the brain responsible for organising and judging, with AI functioning as a resource rather than a replacement for thought.

The good news is that parents don’t need to confiscate devices or wage war on technology to push back against this trend. According to Bright Heart Education, small, consistent habits can meaningfully strengthen the cognitive skills most at risk.

Even five to ten minutes of handwriting per day can make a difference, particularly for children who rush, skim, or rely heavily on typing. This could be journaling, copying a short poem, or practising cursive. “Handwriting slows thinking just enough for children to organise ideas and self-check,” Dr Stevenson notes, adding that research links handwriting to stronger learning-related brain engagement than typing.

Music requires sustained attention, repetition, and the willingness to get things wrong before getting them right — precisely the qualities being eroded by instant AI answers.

A 2025 systematic review found that music training in preschool children aged three to six was associated with improvements in executive functions, including inhibitory control, working memory, and cognitive flexibility.

Even lightweight engagement helps: 10 to 15 minutes of practice three to five times per week, supplemented by occasional “active listening” sessions where children are asked to identify instruments, notice changes, and articulate the mood of a piece.

The core of what experts call “cognitive debt” — the erosion of reasoning capacity through AI overuse — is losing the practice of generating explanations, weighing evidence, and revising conclusions.

Deduction-based stories and games force exactly those mental moves.

“Detective thinking trains children to sit with uncertainty, test ideas, and revise. Those are the exact mental moves that disappear when answers arrive before the thinking begins,” Dr Stevenson said.