POLICY PAPER

How AI Is Quietly Eroding *Our Cognitive Sovereignty*

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September 2026

SUMMARY

Recent research reveals a measurable pattern: the more people delegate cognitive tasks to AI, the less their brains engage, the weaker their recall, and the more confident they feel despite declining competence. This paper examines the evidence on cognitive offloading and AI-induced deskilling, draws on precedents from GPS navigation and medical AI, and sets out concrete recommendations for Ministries of Education, employers, and individuals.

A confession to start with

Many of us are now using AI to create content without being deeply involved in the content creation itself. We identify an interesting subject or an important question, and then we prompt AI to draft the post, the article, the report, the song or video, without the author having true authorship. The thinking has been outsourced. The struggle of the creator has been skipped. The product exists, but the learning that emerges in the creative process never happened.

I have committed this cognitive sin. I have missed the mark of what it means to be the author of something.

But I also believe that AI tools can and should be part of our toolkit for making our work better. The question is not whether to use them. The question is how, and in what order.

This article has been drafted with AI assistance. I formulated the first draft idea myself. I used AI for the research process to identify relevant papers and asked the AI to teach me the research before writing a single word, so that I would personally learn what the studies actually show. I read the material. I formed my own positions. Then I used AI to help me structure and refine what I already wrote.

I believe that is the right use. I hope this article helps you find yours.

I should be honest about one more thing: even writing this article the way I did, I do not feel I have learned as much as I would have if I had researched and written it entirely by myself. Re-reading it has shown me that even a more responsible use of AI still affects the learning process and what we retain from it. The gap between producing something and truly owning it is wider than I expected.

What is actually happening to us

There is a term in the research literature that deserves to become part of everyday conversation: **cognitive debt.**

RESEARCH: MIT MEDIA LAB, 2025

"Your Brain on ChatGPT" divided 54 participants into three groups — ChatGPT users, search engine users, and those relying solely on their own thinking — with brain activity monitored via EEG. ChatGPT users showed the weakest overall neural connectivity and consistently underperformed at neural, linguistic, and behavioural levels. When asked to quote from essays they had written minutes earlier, the ChatGPT group could not. They had produced the text. They had not processed it.

> *Those who delegate a task to AI are taking out a loan: the output is immediately available, whilst the costs — unbuilt competence, unpractised frustration tolerance — are deferred.*

This is not about intelligence. It is about engagement. The brain is not broken. It simply did not participate and therefore did not learn, neither content nor perseverance.

This is not new. We have been here before.

The GPS is the clearest precedent. Studies show that habitual GPS use is associated with measurable decline in spatial memory. London taxi drivers who navigate without GPS develop measurably larger hippocampal volume than those who use automated routing.

The same pattern has been documented in medicine. A multicentre study of colonoscopists found that adenoma detection rates in non-AI-assisted procedures declined significantly after months of routine AI-assisted work. Experienced clinicians, not students, became less capable at tasks they had performed for years.

> *AI assistance does not make you stupid. It makes you impatient.*

This has a major implication for AI safety. Human-in-the-loop is the default safety feature prescribed by AI policy and governance frameworks worldwide. But when humans have outsourced the cognitive work to AI, the final decision becomes a formality. Someone approves what they did not truly evaluate.

The paradox: more confident, less competent

The AI-using students in the MIT study reported feeling more confident about their work, even as their brain activity, recall, and linguistic performance were weaker than those who had written unaided.

RESEARCH: 666-PARTICIPANT STUDY ON AI AND CRITICAL THINKING

A broader study found a significant negative correlation between frequent AI tool use and critical thinking abilities. Younger participants exhibited higher dependence on AI tools and lower critical thinking scores. A separate randomised controlled trial involving over 1,200 participants found that people who rely on AI from the beginning perform worse when tools are removed — not because they lost capability, but because they had become impatient and stopped trying for as long.

> *We are producing a generation, and a workforce, that feels capable while becoming less so. The performance is there in the output. The competence is not there in the person.*

Why children are the urgent case

Everything above applies to adults. For children, the stakes are higher, because the habits formed now will shape cognitive development for a lifetime.

A National Institutes of Health study found that children with more than seven hours a day of screen time experienced thinning of the brain's cortex, the area responsible for critical thinking and reasoning. According to a 2025 survey by Common Sense Media, 72 percent of teenagers have used AI companions at least once. A third use them for emotional support, romantic interaction, and friendship.

> *A success achieved without resistance does not build self-efficacy. Only arduous learning is lasting learning. Effort is not a loss of momentum — effort is learning.*

What Ministries of Education must do

Schools and universities that ban AI across the board are missing the point, just as much as those that integrate it across the board. It all comes down to order.

1. **Establish sequence as policy, not just guidance.**
   AI-assisted work is permitted after demonstrated independent effort. Students write the first draft, form the first argument, attempt the first solution. Then AI tools may be used to challenge, extend, or refine.
2. **Redesign assessment to reward the process.**
   If all assessment is output-based, AI provides a shortcut with no cognitive cost. Assessment must include oral defence of written work, staged submissions, and reflective components. You cannot outsource your way through an oral examination.
3. **Train teachers before students.**
   Teachers need to understand cognitive offloading and cognitive debt before they can make intelligent decisions about AI in their classrooms. A technology policy without teacher understanding is a policy that will not survive the classroom.
4. **Make AI literacy a core subject about the mind, not just the tool.**
   AI literacy in this context is about understanding what happens to your cognition when you use AI tools habitually. This belongs in the curriculum from early secondary school.
5. **Protect the spaces of productive struggle explicitly.**
   Identify the activities whose value lies entirely in the process. Protect these spaces not as a punishment but as a deliberate choice, and explain the reasoning to students.

What employers must do

1. **Distinguish relief from deprivation.**
   Administrative tasks and routine drafting are legitimate AI territories. Strategic thinking, ethical decision-making, and novel problem-solving require protected cognitive space.
2. **Create AI-free thinking environments.**
   Regular strategy sessions conducted without AI tools — not as a nostalgic gesture, but as deliberate cognitive exercise. You do not stop walking because you have a car.

3. **Build reflection into workflows.**
   After any significant AI-assisted task: what did I actually contribute here? What would I have concluded if I had started alone?

4. **Value demonstrated independent judgment in performance.**
   The capacity to think through a novel problem without AI needs to be tested and valued explicitly, or it will atrophy exactly as the research predicts.

What you can do, starting today

> *There are tasks whose value lies in the result, and tasks whose value lies in the process. AI in the first area is a relief. AI in the second area is a deprivation.*

1. **Make the initial effort yourself.**
   Before opening any AI tool, spend meaningful time with the problem. Write a first paragraph. This is not wasted time. This is where the learning happens.

2. **Use AI as a thinking partner, not a replacement.**
   Once you have your own position, use AI to challenge it. Ask it to argue the opposite. Ask it to find weaknesses in your reasoning.

3. **Decide consciously what to outsource.**
   Formatting. Scheduling. Summarising documents you have already read. The thinking that forms your professional judgment is not on that list.

4. **Read what AI produces for you, actively.**
   The ownership test is simple: could you explain this to someone without looking at the document?

5. **For children in your life: protect the struggle.**
   Let them be frustrated. Let them sit with the hard problem. The difficulty is not the problem. The difficulty is the point.

The deeper argument

This article is ultimately about sovereignty — specifically cognitive sovereignty, the right and the capacity to be the author of your own thinking.

We talk a great deal about AI governance at the level of governments and institutions. We talk about data sovereignty, infrastructure sovereignty, algorithmic accountability. These matter enormously.

But sovereignty begins in the mind. It begins with whether individual people, and the children growing into adults, are developing as authors or as consumers. Whether they are practising the effortful, sometimes uncomfortable, always irreplaceable work of forming their own thoughts, or whether they are increasingly receiving pre-formed outputs from systems they did not build, do not understand, and cannot meaningfully question.

The research is early. The scale of the change is not. Hundreds of millions of people are already making this transition in how they relate to their own cognition, often without noticing it, often believing they are becoming more capable at the very moment they are becoming more dependent.

The answer is not to retreat from AI. It is to use it with the same intentionality you would apply to any powerful tool: understanding what it does to you, not just what it does for you.

AI should make your work better. Not instead of you. Because of you.