



Stop Pretending You Know How to Teach AI

Colleges are racing to make students ‘fluent.’ One problem: No one knows what that means.

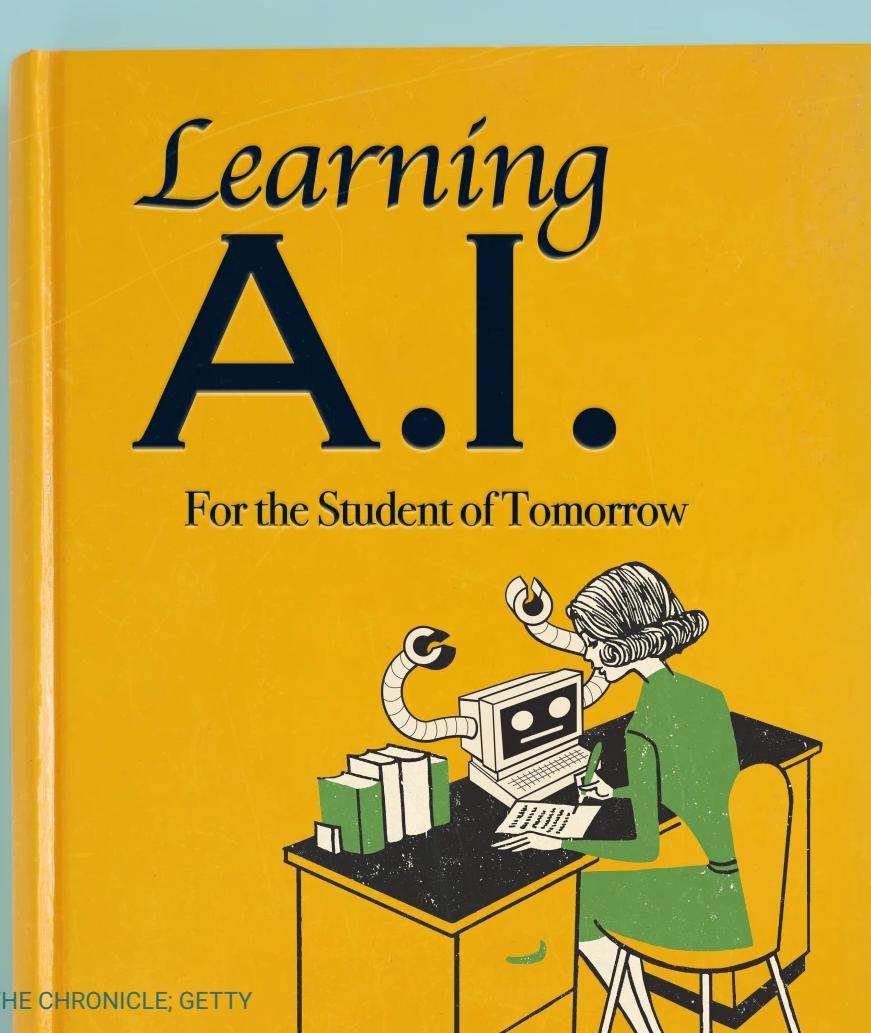


ILLUSTRATION BY THE CHRONICLE; GETTY



THE REVIEW | ESSAY

By [Justin Reich](#) November 5, 2025

This essay is excerpted from a new Chronicle special report, “[Leading in the AI Era](#),” available in the [Chronicle Store](#).

From the Chronicle Store



REPORT

Leading in the AI Era

Set the agenda and innovate with integrity.

[Visit The Store](#)

Earlier this year Ohio State University announced an [AI Fluency](#) program, promising that, starting with the Class of 2029, every student who graduates from the university will be “fluent in their field of study, and fluent in the application of AI in that field.” Faculty members across the university have been asked to identify applications for generative AI across the disciplines. I thought immediately of the classics: What kind of AI-based task could help students — and

perhaps university administrators — investigate Socrates' paradox from Plato's *Apology*: "I neither know nor think I know"?

Over the past 20 years, an education-reform strategy has emerged that we might call "technology literacies." A new technology emerges (tablets, smartphones, the web, social media, new programming languages, AI, etc.); experts define the skills associated with this new technology as a "literacy," "fluency," or some similar term; and then policymakers encourage or require schools to teach this new literacy. This strategy has failed regularly, and sometimes catastrophically.

If you have ever watched a recent graduate try to save a file to a folder, you know they have limited understanding of basic computing architecture. If you have watched a teen scroll mindlessly for hours through their feeds, you have seen that they don't possess healthy social-media literacy. Our students cannot search effectively or parse what they find online: A recent study showed that only [4 percent of high-school students](#) could recognize that a source offering "factual reports" on climate science was funded by the fossil-fuel industry. Efforts to teach skills related to these domains may be important, they may be well-intentioned, they may be urgent, but they objectively do not work very well.

One reason? Technologies now [arrive in schools](#) faster than we can determine how to use or teach with them. AI fluency is a riff on what is more commonly called "AI literacy," and self-styled experts are racing to generate checklists, frameworks, and guidance for the knowledge and skills to productively use AI. When educators rush to publish the skills of technology literacy before they actually have evidence about what those skills are, things can go very poorly.

NEWSLETTERS

Academe Today

Don't miss a beat in higher ed. Get the latest news, opinion, and advice headlines every weekday morning with our free flagship newsletter.

[Sign Up](#)

Mike Caulfield is the author of the 2017 book [*Web Literacy for Student Fact-Checkers*](#), which introduces a set of methods for sorting truth from fiction on webpages. The approaches in the book, such as the SIFT method (stop, investigate the source, find better sources, trace claims to their origin), have subsequently been validated in a [set of studies](#) demonstrating that students who learn these ideas are more capable of online discernment than others without these skills.

Technologies now arrive in schools faster than we can determine how to use or teach with them.

Caulfield's foray into web literacy began with work assessing collegewide learning goals at Keene State College in the 2010s. One of those goals was "critical consumption" of online materials, and Caulfield remembers distinctly the day in 2011 when a colleague asked him to come down to the library to look at a student's work submitted for evaluation. [Caulfield told me](#): "One of the sources was a website that was [called something like] Government Slaves, and the student was, I think, citing them on water policy or something. It had colloidal silver advertisements on the side. And so it was really clear that something had gone ... really, really, wrong."

What had gone really wrong? From Caulfield's work, and other recent research into web literacy, we now understand that for two decades before 2017, we taught students demonstrably ineffective methods for searching the internet. Early methods for web literacy emphasized closely reading web texts for markers of credibility (sometimes using checklists like the CRAAP test: currency, relevance, authority, accuracy, purpose). These early methods emerged from the criteria that librarians had historically used to [select books for inclusion](#) in a library. If you have an intuition that

the 20th-century methods for buying library books might not be the best way to train people to evaluate 21st-century online sources, you are absolutely right. More effective web-literacy approaches were not refinements of that older idea but a totally different approach. SIFT emphasizes using other web sources to vet a target source, rather than closely reading target sources for clues about veracity.

For the past decade at the Massachusetts Institute of Technology, I have asked my students how they learned about online search. Most say they got very little instruction — in a skill that's essential for a functioning democracy. But those who vaguely remember describe the kind of ineffective close-reading methods that students learned at Keene State in the early 2010s. I am still waiting to meet the first MIT student to tell me that they have already learned effective strategies like those in Caulfield's book.

Rather than inventing AI literacy from educated guesses or principles from past technologies, we should train novices based on the practices of disciplinary experts who have achieved AI fluency in their discipline. Unfortunately, there aren't any such experts yet.

There is no group of writers that can demonstrate methods for using chatbots that lead to clearer, more persuasive, more informative, more original writing. Even in domains where generative AI has made the deepest inroads, like computer programming, uncertainty abounds. A jokey aphorism circulating among software engineers is that every hour saved coding with AI costs an hour in quality assurance down the line. AI-generated code solves local problems in ways that often don't account for the goals and complexity of whole systems. Software engineers do not know the best way to balance the speed and fecundity of code generators with the wider perspective hard won by experienced programmers. And until experts figure these things out in computer science, and writing, and every other domain where we might use AI in higher education, how can anyone claim to be teaching AI fluency?

We should avoid pronouncements of what AI literacy is. Instead, we should

lead with our uncertainty.

It may be that certain practices with AI in the disciplines eventually prove very useful, and we should teach them. We also might discover that making AI spit stuff out is the easy part, and the really hard part is distinguishing between good and bad output, between hallucination and the miraculous appearance of a useful new idea from the bowels of a statistical model of language. The students best prepared to evaluate AI output could very well be the ones not with specialized AI training but with deep domain knowledge in the disciplines. This, of course, is exactly the kind of knowledge and skills that colleges have been trying to nurture for centuries.

Until research can guide us toward the answers to these questions, we should avoid declarative pronouncements of what AI literacy is. Instead, we should lead with our uncertainty. Faculty should continually remind their students that we don't yet understand good practice, so young people will probably find that what they first learned about using AI was wrong. My lab recently published [a guide for K-12 educators](#) about using AI that begins with this warning:

A guidebook of tying knots will show you exactly how to tie the knots the correct way. A guidebook on AI in schools in 2025 can't possibly do that because we don't even know what the knots are, let alone how to tie them. What we can show you is how people are taking this new kind of rope and bending it around in interesting ways, some of which might prove sturdy and some of which might prove faulty. And we won't know which is which for a long time.

I have confidence that one day we'll understand the role of AI in the disciplines much better than we do today. I am even hopeful that it will take fewer than the 20 years it took to invent robust principles of web literacy. But accelerating that timeline of discovery must begin from a stance of humility: acknowledging how little we know

today and how long it may yet take to develop verified expertise.

A version of this article appeared in the [November 14, 2025, issue](#).

Read other items in [The AI Issue](#).

We welcome your thoughts and questions about this article. Please [email the editors](#) or [submit a letter](#) for publication.

Tags

[Technology](#)

[Innovation & Transformation](#)

[Opinion](#)

Share



[About the Author](#)

Justin Reich

Justin Reich is an associate professor of digital media in the comparative media-studies/writing department at the Massachusetts Institute of Technology and the director of the Teaching Systems Lab. He is the author of [Failure to Disrupt: Why Technology Alone Can't Transform Education](#) (Harvard University Press) and the host of the podcast [The Homework Machine](#).

In The Chronicle Store

THE CHRONICLE
OF HIGHER EDUCATION.



of Teaching

How the classroom is
being transformed



THE CHRONICLE
OF HIGHER EDUCATION.

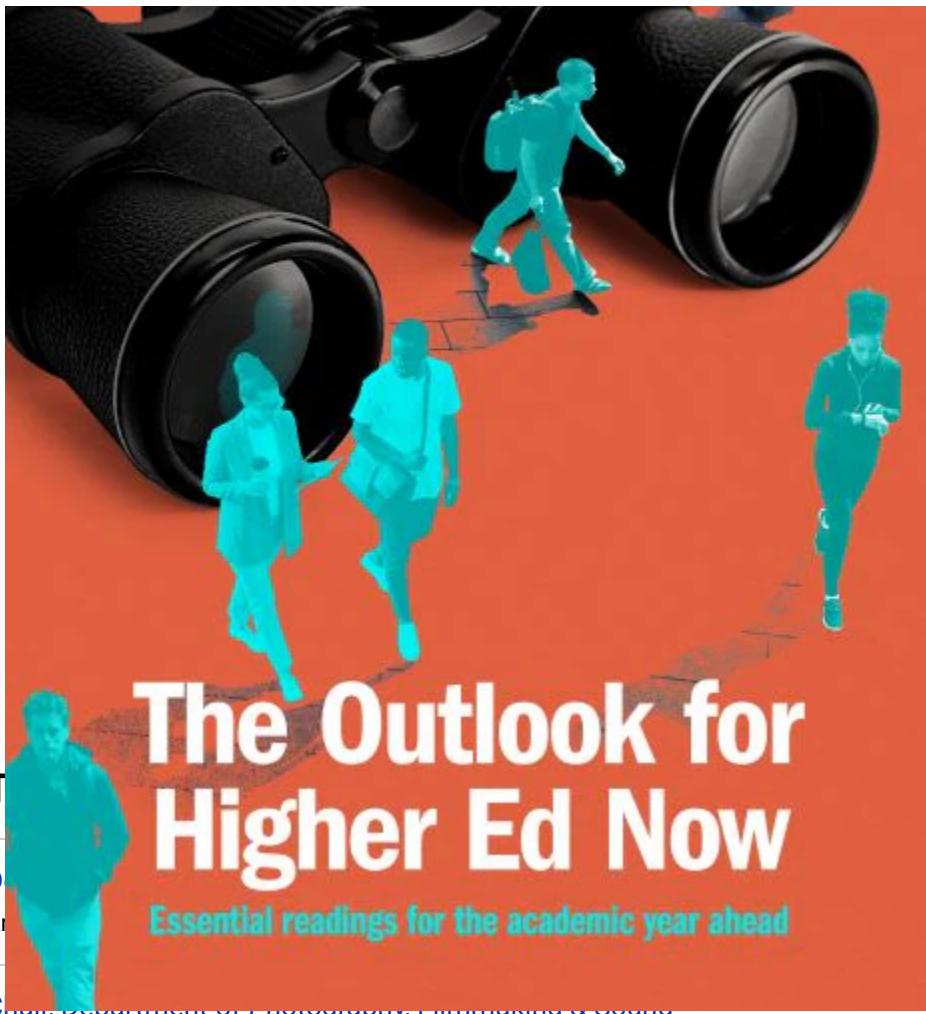


THE CHRONICLE
OF HIGHER EDUCATION.

Recruiting and
Retaining Students
in a Challenging Market

THE CHRONICLE
OF HIGHER EDUCATION.





T
D
A
C

The Outlook for Higher Ed Now

Essential readings for the academic year ahead

Chair, Department of Photography, Filmmaking & Sound

The Outlook for Higher Ed Now
Kansas City Art Institute

[Endowed Chair in Geology \(Tenure-Track, Open Rank\)](#)

St. Lawrence University

[Strategic Communication](#)

Northwestern University in Qatar

[Technology and Public Policy](#)

Harvard Kennedy School of Government

[Batten Chair in Coastal & Marine Sciences](#)

Virginia Institute of Marine Science

[Search All Jobs](#)

NEWSLETTERS

Academe Today

Don't miss a beat in higher ed. Get the latest news, opinion, and advice headlines every weekday morning with our free flagship newsletter.

[Sign Up](#)

More News



ARRESTED PROFESSOR

The Trump Administration Detained a Longtime Faculty Member, Saying He's an Undocumented Immigrant



'A HUGE OPPORTUNITY'

How a New Law Could Change the Way Low-Income Students Access College



'DEEPLY DISTRESSING'

A Professor Was Released After 3 Days in ICE Detention. His Colleagues Fear a 'New Normal.'



'THREADING THE NEEDLE'

Deborah Lipstadt's Fight Over Fighting Antisemitism

From The Review



THE REVIEW | CONVERSATION

Robert P. George and the Great Campus Vibe Shift

By [Evan Goldstein, Len Gutkin](#)



THE REVIEW | OPINION

Beware Bespoke Deals With Trump

By [Serena Mayeri, Amanda Shanor](#)



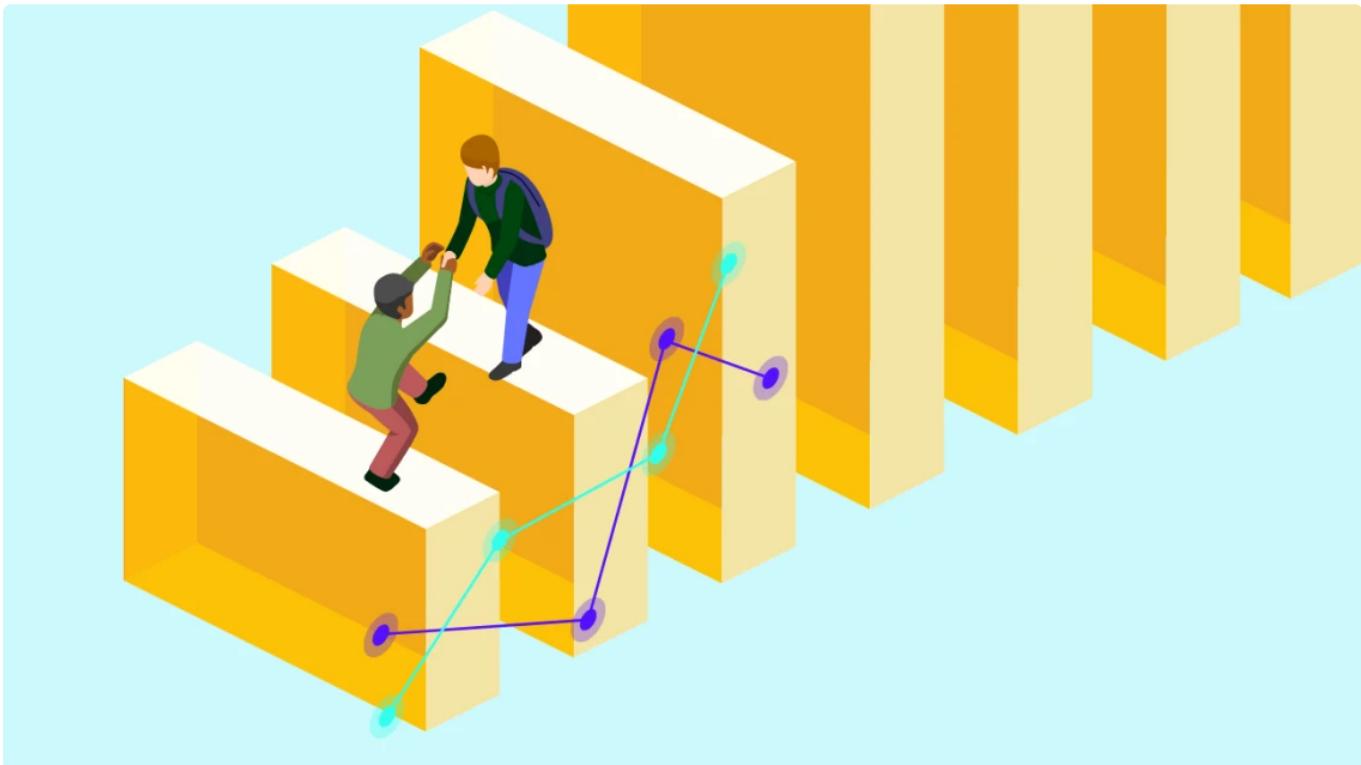


THE REVIEW | FORUM

Academic Freedom's Civil War

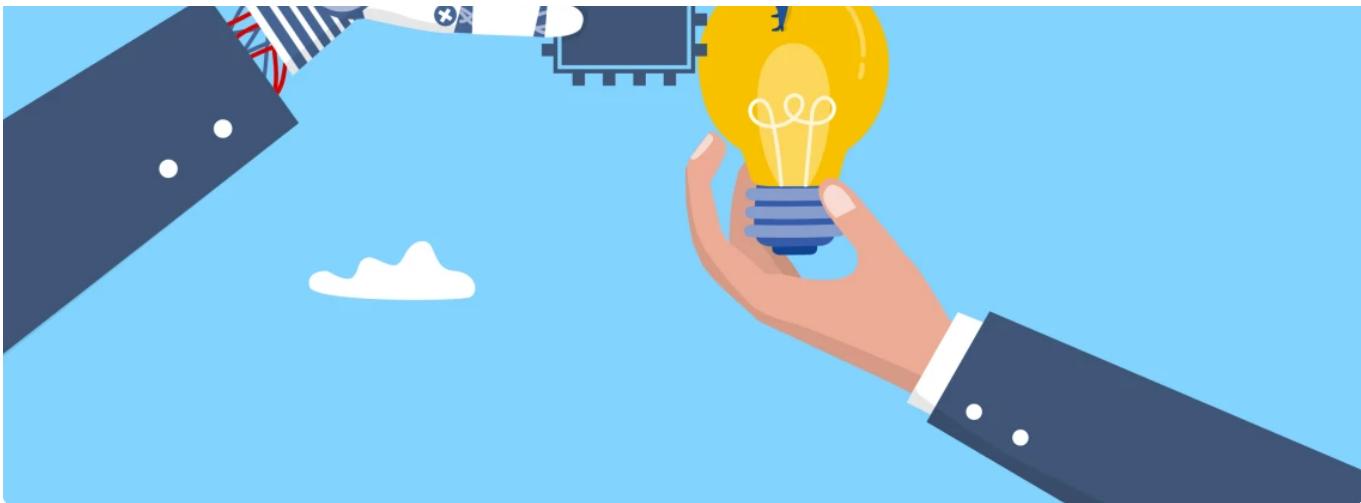
By [Len Gutkin](#)

Upcoming Events



What's Next for Using Data to Support Students?





What It Takes to Lead in the AI Era

Lead With Insight

Subscribe Today

900 19th Street, N.W., 6th Floor, Washington, D.C. 20006
© 2025 The Chronicle of Higher Education

The Chronicle of Higher Education is academe's most trusted resource for independent journalism, career development, and forward-looking intelligence. Our readers lead, teach, learn, and innovate with insights from *The Chronicle*.



Subscribe now to try unlimited access: \$1 for 3 months.

[Join us today](#) to unlock more insights from academe's most trusted news source.

[**Subscribe Now**](#)