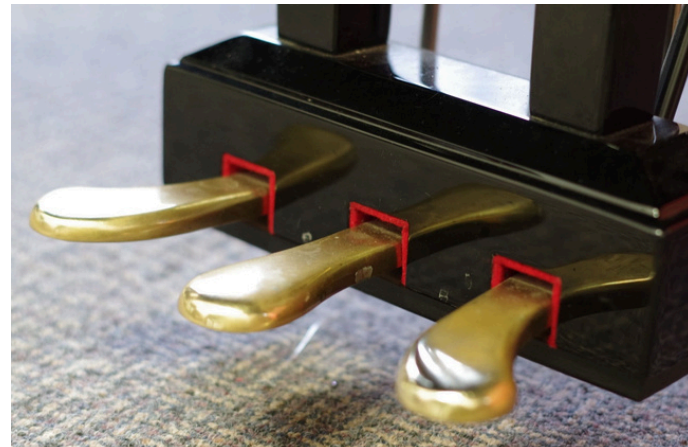


Intro to Artificial Intelligence & Digital Literacy



Objectives:

By the end of this, you will be able to:

- Identify how literacy, digital literacy, and AI readiness are connected.
- Understand the current situation in regards to literacy and digital education.
- Examine solutions to bridge the digital divide.

100% of the content herein was written by

Tina L. VanOchten Dezerne.

No part of this was written by AI.

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2025

Governors across the nation, in their
state-of-the-union addresses
this year, listed the
development of literacy
and STEM skills
as critical to the success of our nation.

National Governor's Association

Quiz





According to the Education Commission of the States,
what two skill areas did governors emphasize in their
state-of-the-union addresses
as critical to national success?

- A. History and Civics
- B. Literacy and STEM
- C. Digital Arts and Physical Education
- D. Economics and Foreign Language



According to the Education Commission of the States, what two skill areas did governors emphasize in their state-of-the-union addresses as critical to national success?

- A. History and Civics
- B. Literacy and STEM
- C. Digital Arts and Physical Education
- D. Economics and Foreign Language

Correct Answer: B. Literacy and STEM



What is literacy?



A generally
accepted definition
is:

the ability
to read, write,
comprehend,
and apply what has
been read.

According to the
The National Literacy Institute
2024-2025 Literacy Statistics

the United States ranks
36th out of 190 countries
in adult literacy.

Literacy isn't
just reading, though.

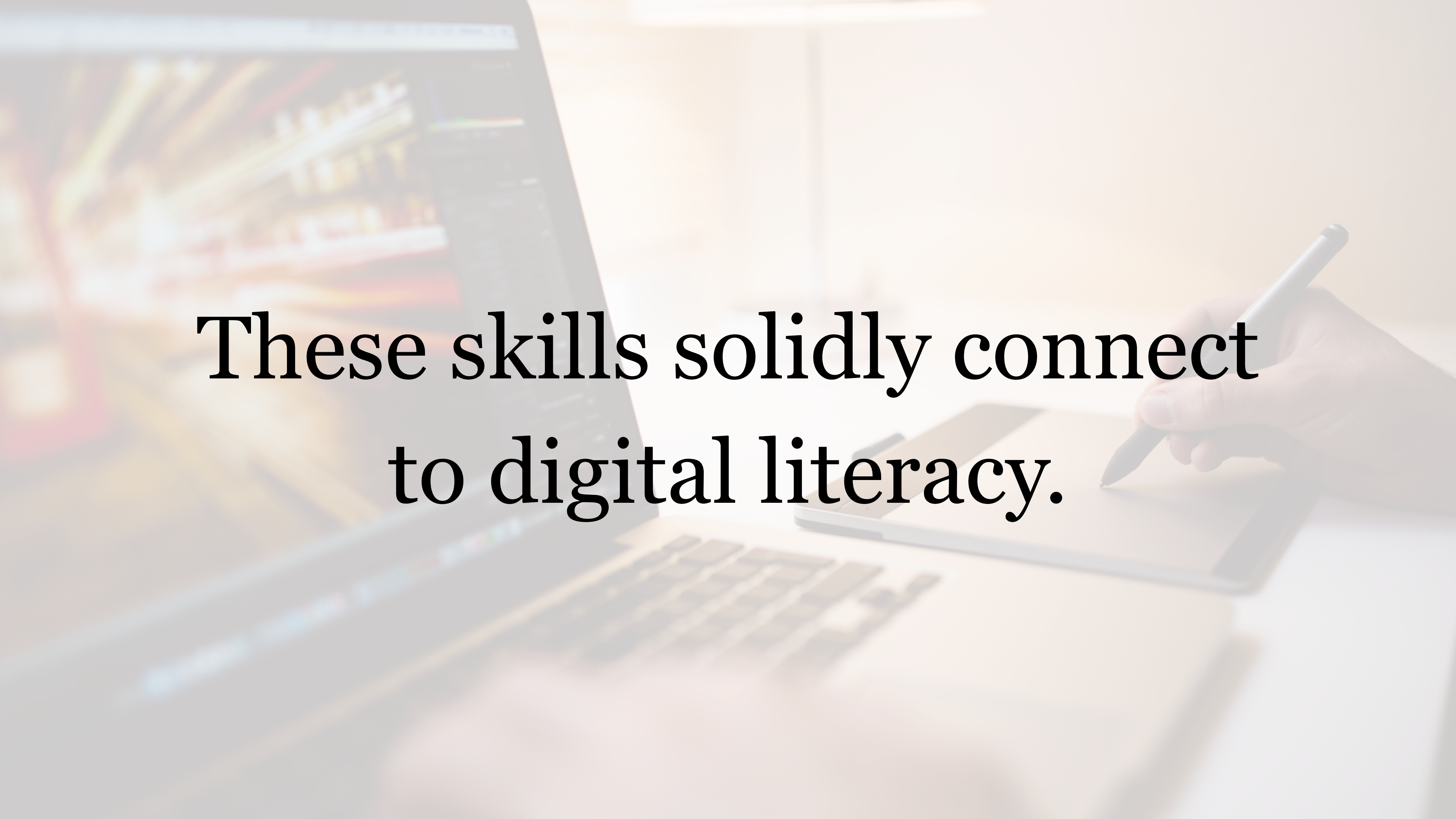




It involves critical
thinking,

using your
imagination,

and applying the
information.



These skills solidly connect
to digital literacy.

Digital literacy, defined by

United Nations Educational, Scientific and Cultural Organization
(UNESCO), is:



“the knowledge, skills and attitudes that allow children to flourish and thrive in an increasingly global digital world, being both safe and empowered, in ways that are appropriate to their age and local cultures and contexts.”

Improving
literacy rates
initiates a
profound
domino effect
that naturally
improves digital
literacy.



Literacy provides
the foundational skills of
information processing,
understanding context,
and critical thinking...

which are then applied
to digital environments
to enhance learning,
communication,
and career prospects.

Quiz



Which of the following best describes the relationship between literacy and digital literacy?

A. Digital literacy replaces traditional literacy in modern society

B. Literacy has no effect on digital literacy development

C. Improved literacy naturally enhances digital literacy through foundational skills

D. Digital literacy must be taught before students can understand literacy



Which of the following best describes the relationship between literacy and digital literacy?

A. Digital literacy replaces traditional literacy in modern society

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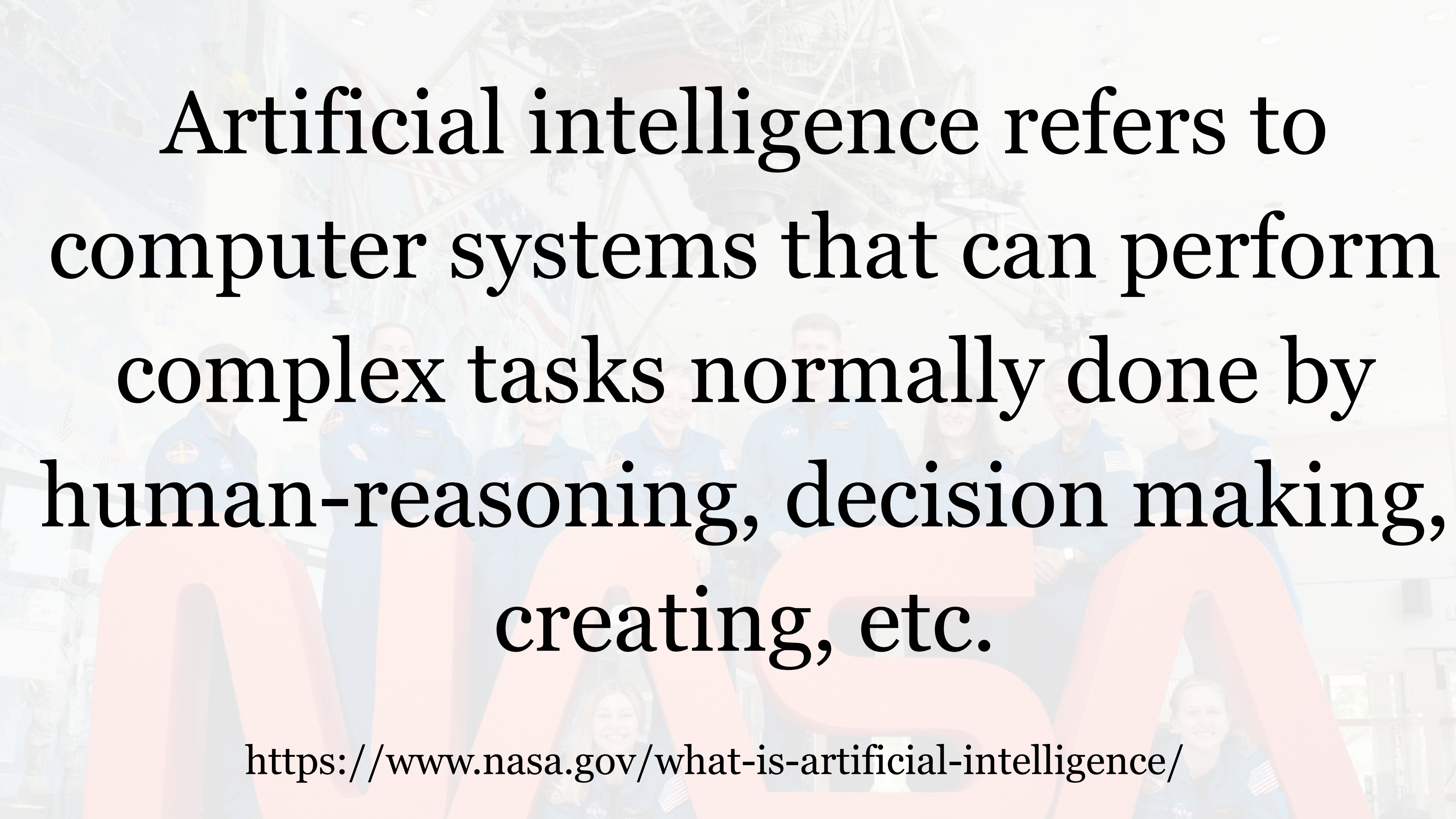
D. Digital literacy must be taught before students can understand literacy

Correct Answer: C. Improved literacy naturally enhances digital literacy through foundational skills





One part of this
Digital Literacy Age
that is expanding
rapidly is
the use of AI.

A group of NASA astronauts in blue flight suits are standing in front of a large, semi-transparent red 'NASA' logo. The background is a light blue and white space-themed image. The text is overlaid on the image in a large, black, serif font.

Artificial intelligence refers to
computer systems that can perform
complex tasks normally done by
human-reasoning, decision making,
creating, etc.

<https://www.nasa.gov/what-is-artificial-intelligence/>

A woman in a red patterned sari is sitting on the floor in a traditional Indian shop. She is surrounded by large sacks of spices and a wooden scale. The background shows a wooden door with intricate carvings and a fan. The text is overlaid on the image.

We already use AI:

We use it in neurosurgery;
in determining if certain purchases
made with your credit card might be fraud;
or to analyze data to discover
trends in kitchenware purchases.

Sometimes, when people say they're using AI at their jobs,
they specifically mean they're using LLMs.

Large language models are
artificial intelligence systems
capable of understanding and generating
human language by processing vast
amounts of text data.

<https://www.ibm.com/think/topics/large-language-models>

Examples are:

ChatGPT

Perplexity

Claude

Gemini

Mistral



By fall 2024, only 43% of teachers had been trained on the use of various LLMs.

By fall 2025, if all plans went forward, up to 75% of teachers will have been trained.

Teachers who are comfortable using them are generating practice questions, creating individualized lessons, and drafting emails to parents.





Digital natives--those who have always known the internet--
are creating,
experimenting,
and testing the boundaries.



Some of them
are also
cheating,
plagiarising, and
creating harmful
prompts for
nefarious purposes.

**Then there are
students who have to prove that
they are *not* plagiarising.**

A New Headache for Honest Students: Proving They Didn't Use A.I.

Students are resorting to extreme measures to fend off accusations of cheating, including hourslong screen recordings of their homework sessions.



Listen to this article · 8:52 min [Learn more](#)



Share full article



284

<https://www.nytimes.com/2025/05/17/style/ai-chatgpt-turnitin-students-cheating.html>



We all need to recalibrate our skills to identify factual versus potentially inaccurate information in light of the hallucinations LLMs can produce.

In June 2024,
Nieman's labs reported that ChatGPT
fabricated source links to publications.



(hallucinated is the technical term)

This means that
the publications existed,
but not the articles
that were cited.

Those who have strong literacy skills are
more likely
to question and identify
erroneous information
the LLMs can sometimes produce.

Quiz



Which of the following statements about LLMs
(Large Language Models) is true?

- A. LLMs only exist in government research institutions
- B. LLMs are incapable of generating human-like text
- C. LLMs process large amounts of text data
to understand and produce language
- D. LLMs are used exclusively by teachers and scientists



Which of the following statements about LLMs
(Large Language Models) is true?

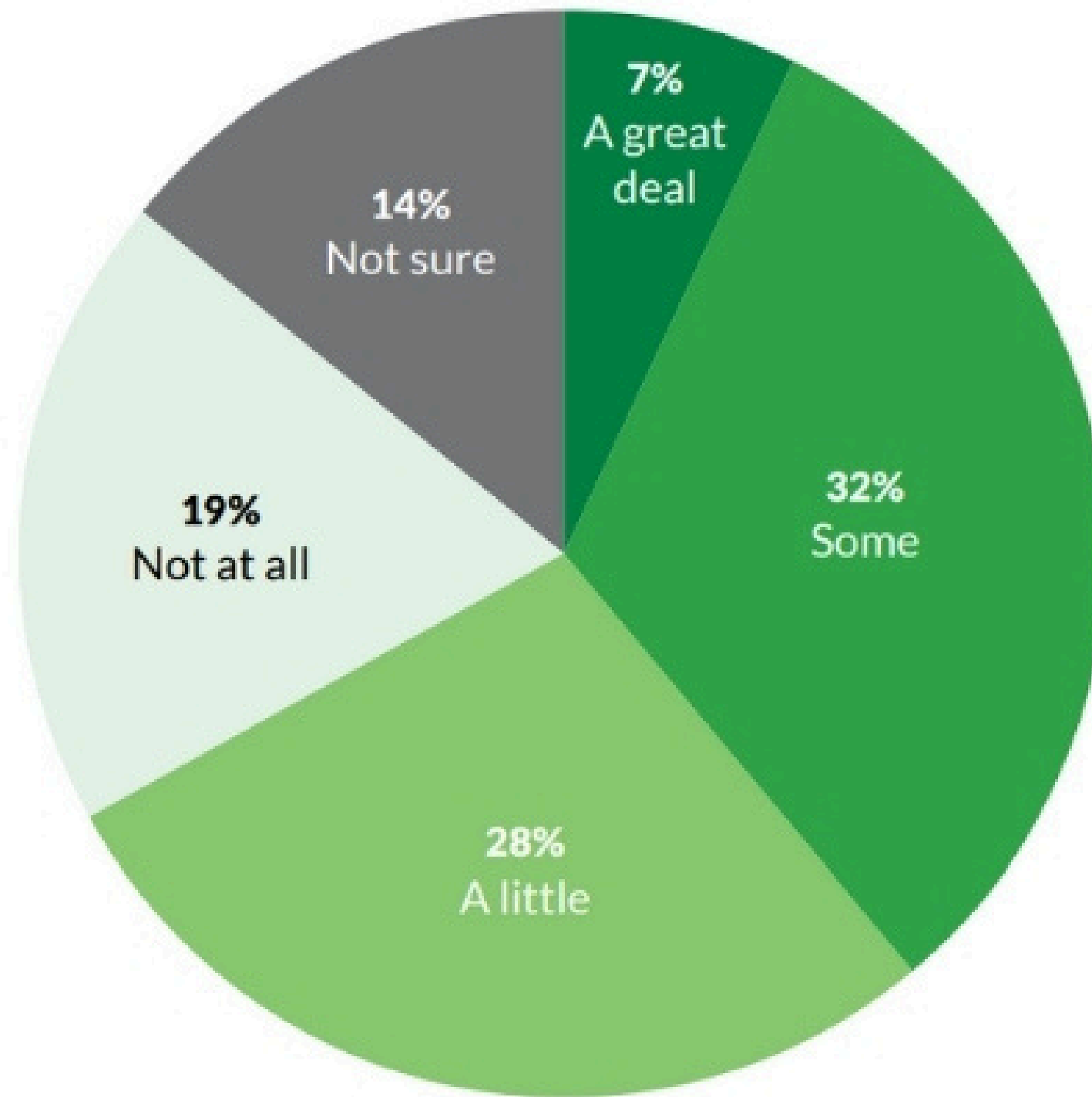
- A. LLMs only exist in government research institutions
- B. LLMs are incapable of generating human-like text
- C. LLMs process large amounts of text data
to understand and produce language
- D. LLMs are used exclusively by teachers and scientists

**Correct Answer: C. LLMs process large amounts of text
data to understand and produce language**



The people least likely
to verify LLM results
are students.

According to a study by ScienceAlert, 39% of teens trust AI some to a great deal.



Note: Q: "How much do you trust tech companies, if at all, to make responsible decisions about how they use AI in their products?"

This contrasts with adults:

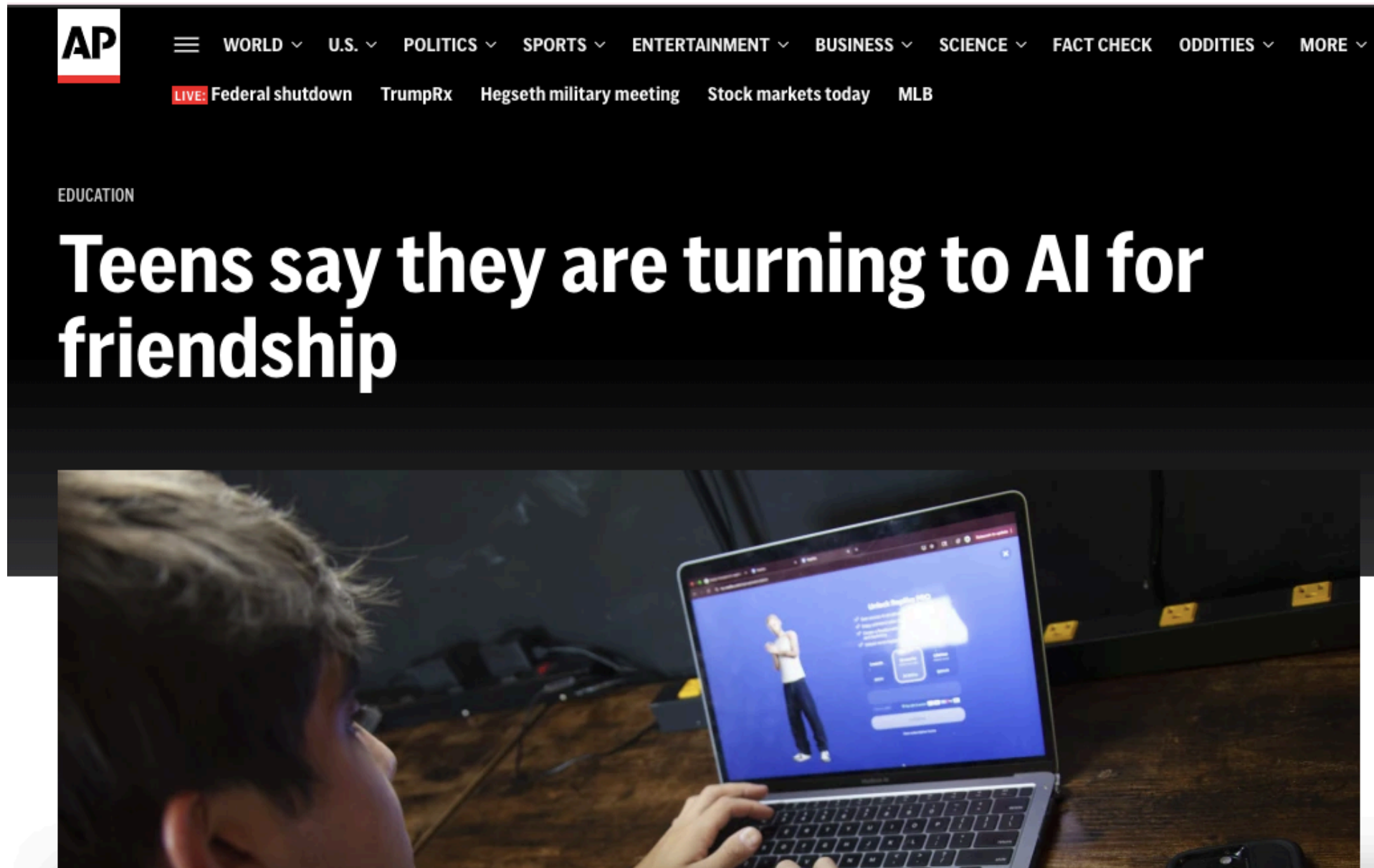
53% say AI will worsen people's ability to think creatively, compared with 16% who say it will improve this.

It is easy to understand why
kids would respond affirmatively:

LLM responses have a conversational
style that adapts to the user.

In addition, unlike search engines that match
key words to queries,
LLMs generate content based on data that is
gathered from whatever source it has been
given (training data).

This gives the impression of
authority and sensibility...
because it
sounds like you.



This is why
52% of
teens
have made
friends
with AI.

<https://apnews.com/article/ai-companion-generative-teens-mental-health-9ce59a2b250f3bd0187a717ffa2ad21f>

Article

Supportive? Addictive? Abusive? How AI companions affect our mental health

◀ Research

via Nature
May 12, 2025

In a survey of 404 people who regularly use AI companions, researchers from the MIT Media Lab in Cambridge, Massachusetts, found that 12% were drawn to the apps to help them cope with loneliness and 14% used them to discuss personal issues and mental health.

<https://www.media.mit.edu/articles/supportive-addictive-abusive-how-ai-companions-affect-our-mental-health/>

And many
adults, too.

Quiz



Why are students particularly vulnerable to misinformation from LLMs?

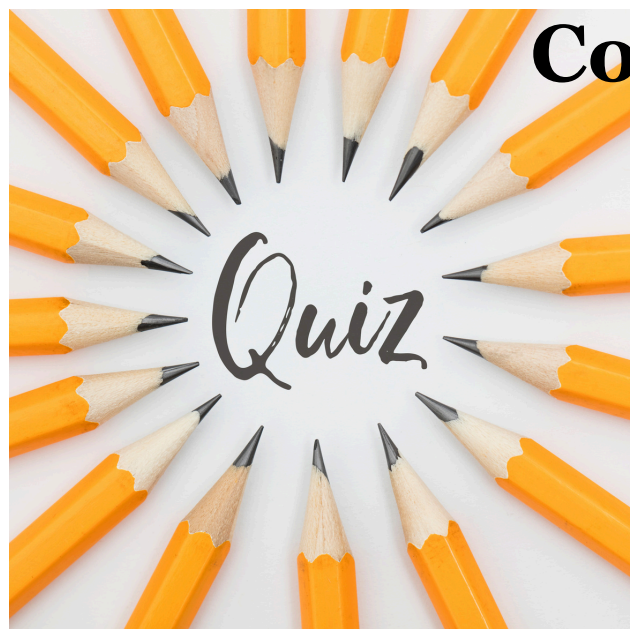
- A. They are unable to access AI tools without teacher permission
- B. They are less likely to question results and more likely to trust the AI's conversational tone
- C. They are always supervised when using AI tools
- D. They prefer using search engines over AI



Why are students particularly vulnerable to misinformation from LLMs?

- A. They are unable to access AI tools without teacher permission
- B. They are less likely to question results and more likely to trust the AI's conversational tone
- C. They are always supervised when using AI tools
- D. They prefer using search engines over AI

Correct Answer: B. They are less likely to question results and more likely to trust the AI's conversational tone



Klaudia Jaźwinska and Aisvarya Chandrasekar published a study in the Columbia Journalism Review, where they assessed the accuracy of the search results of various LLMs.

They learned:

*Premium chatbots provided more
confidently *incorrect* answers
than their free counterparts

Jaźwinska/Chandrasekar

*Generative search tools
fabricated links and cited
syndicated and copied
versions of articles

*Chatbots were generally bad at declining to answer questions they couldn't answer accurately, offering incorrect or speculative answers instead.

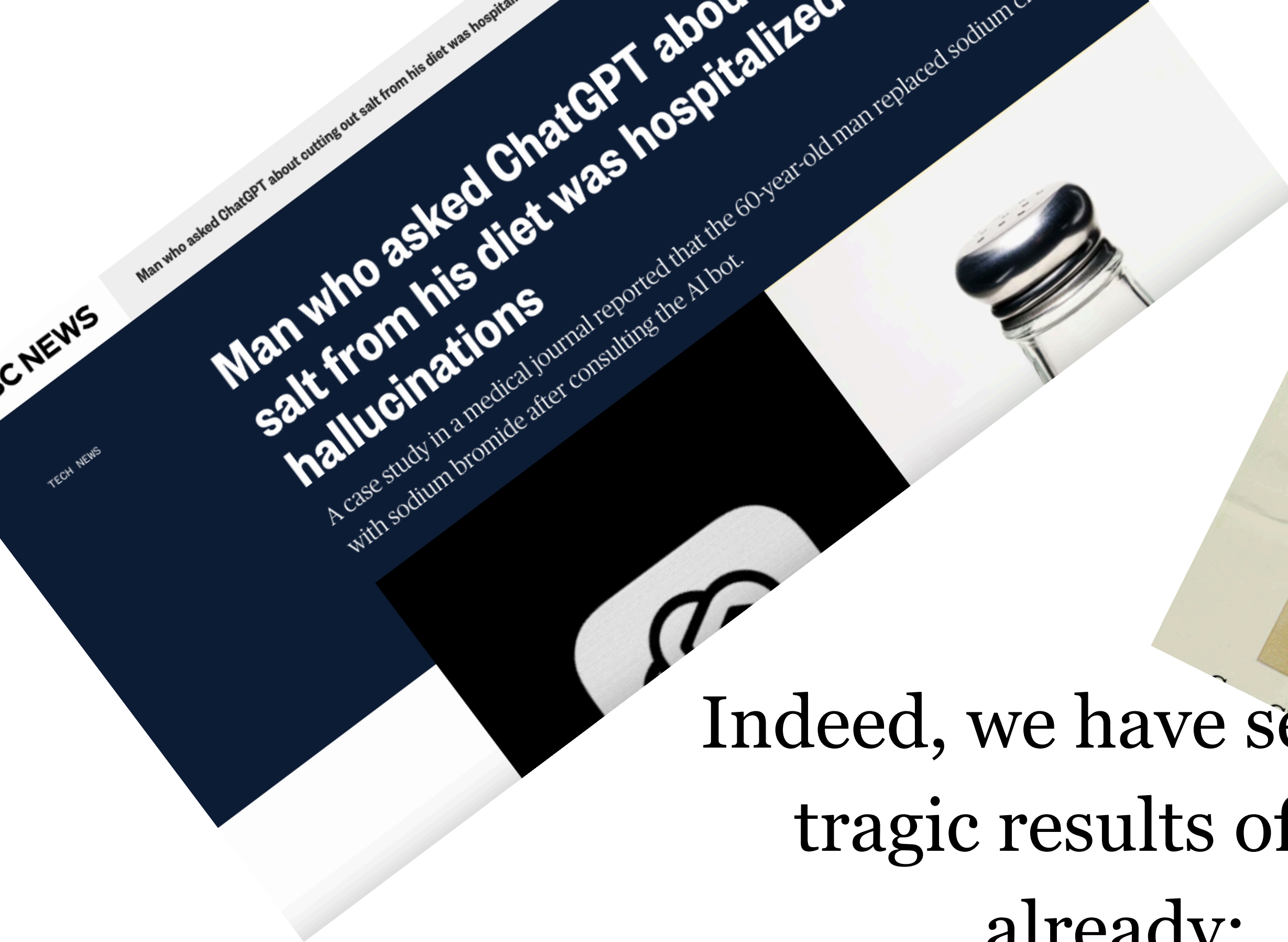
The authors of the study believed
that *AI*-powered search engines:

Jaźwinska/Chandrasekar

take away transparency
and user agency;

further amplify the problems
associated with bias in
[information access] systems;

provide ungrounded and/or
toxic answers that may go
unchecked by a typical user.

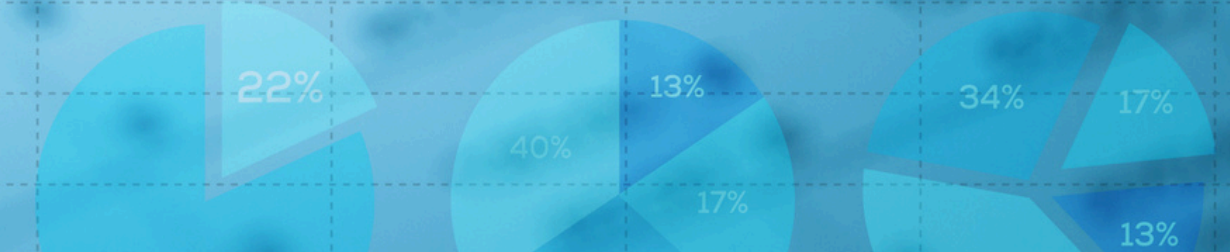
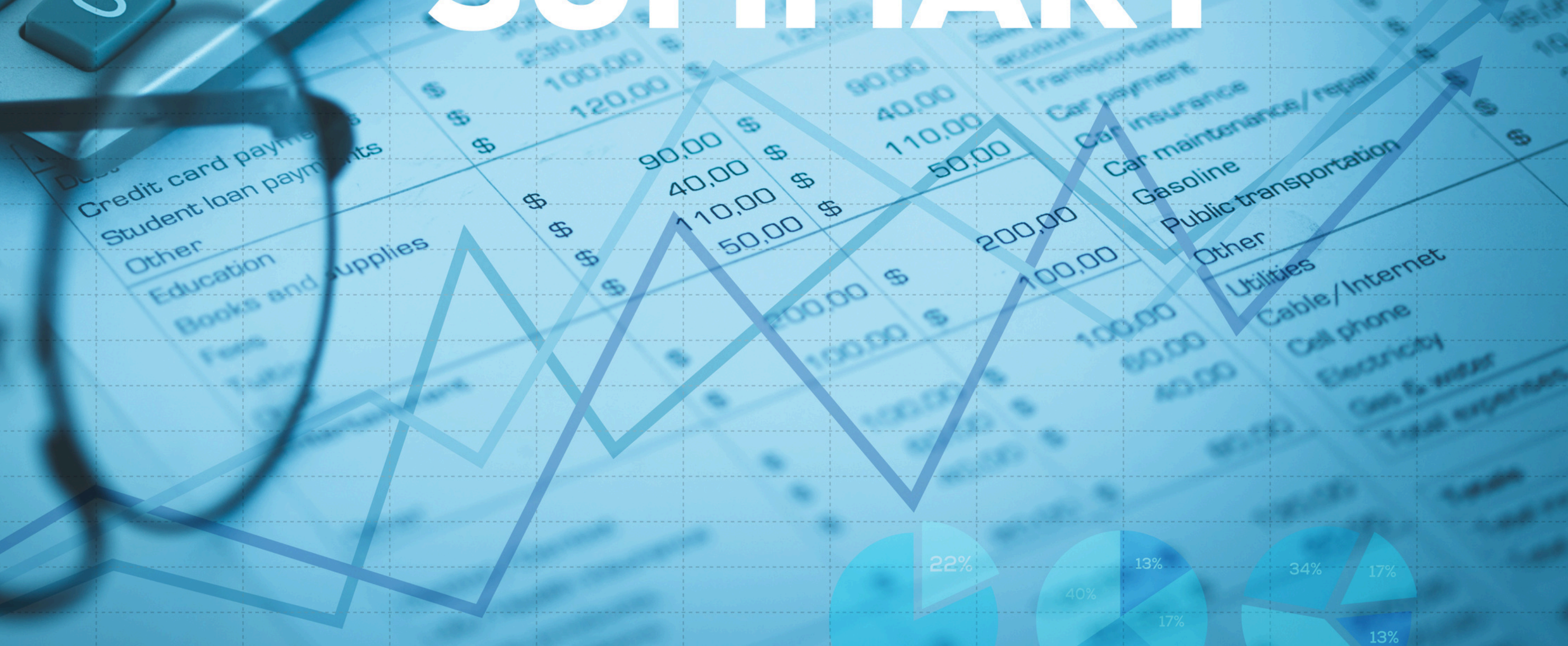


Indeed, we have seen the
tragic results of this
already:

https://www.npr.org/sections/shots-health-news/2025/09/19/nx-s1-5545749/ai-chatbots-safety-openai-meta-characterai-teens-suicide_ext

<https://www.nbcnews.com/tech/tech-news/man-asked-chatgpt-cutting-salt-diet-was-hospitalized-hallucinations-rcna225055>

SUMMARY



Literacy can bridge the
digital divide

We know that
artificial intelligence
is used successfully
in a variety of ways.

We know that a subset of AI,
large language models,
can be useful...

and can be wildly inaccurate.

We know that students
struggle with literacy
already...

and their level of trust in AI is
more elevated than
the general population.



All of these together create immense challenges for teachers.

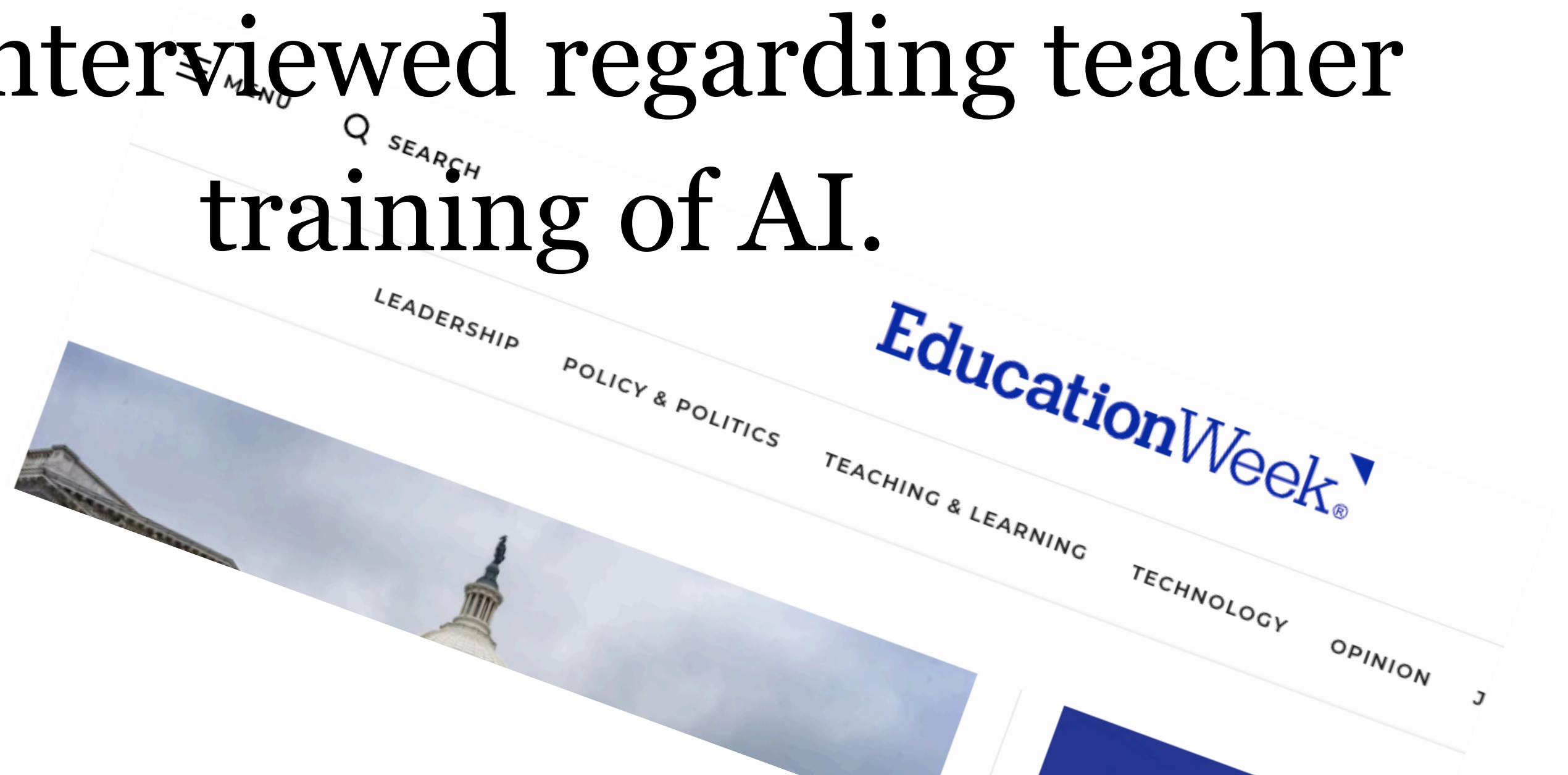


Solutions:



1. Trainings like this.

Education Week described what happened when educational leaders were interviewed regarding teacher training of AI.



Of the 14 leaders interviewed, all but one said they encountered “negative views of AI and reported that some teachers view it as a threat to traditional teaching methods or a tool for student cheating”



Teachers said the same thing
when Google came to the fore.

<https://www.pewresearch.org/internet/2012/11/01/part-v-teachers-concerns-about-broader-impacts-of-digital-technologies-on-their-students/>

2. Teachers need to be allowed to use their imaginary extra time to teach digital etiquette.



If you were standing in a room of strangers
instead of online,
would you say what you're about to say?

And would you include
the accompanying picture or video?



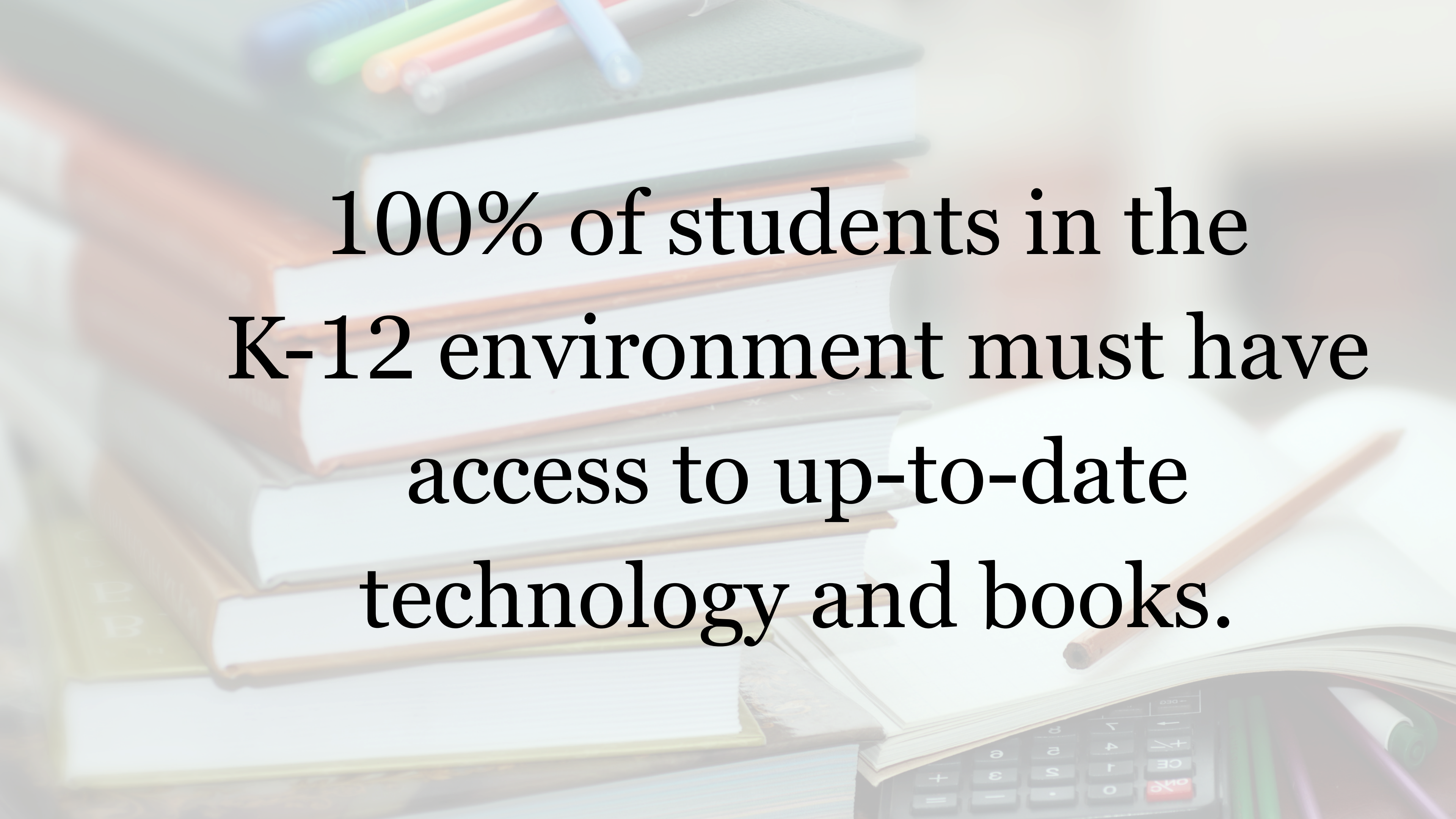
And if you did
post it anyway,
is this
something you
would be ok
reading aloud
during a
deposition?

Etiquette.

Etiquette.

Some adults need to take heed of this.

2. *We need to improve access
to technology.*

The background is a soft-focus collage of educational items. At the top, several colorful pens (blue, green, orange, red) are visible. Below them are stacks of books with various spines. In the bottom right corner, a portion of a calculator is visible, showing buttons for '+', '-', 'x', '/', and a red '%' button. The overall tone is light and academic.

100% of students in the
K-12 environment must have
access to up-to-date
technology and books.

Access to your
tools of the trade is
the only way
to stay competitive
in a global market.

The thing is,
this requires money,
the Number One
concern
of governors,
superintendents
and
all educational
thought leaders.



So when \$6.2B of K12 funds were frozen at the beginning of the 2025-2026 school year, this threatened to impact (among other important agencies) professional development workshops and technology education.

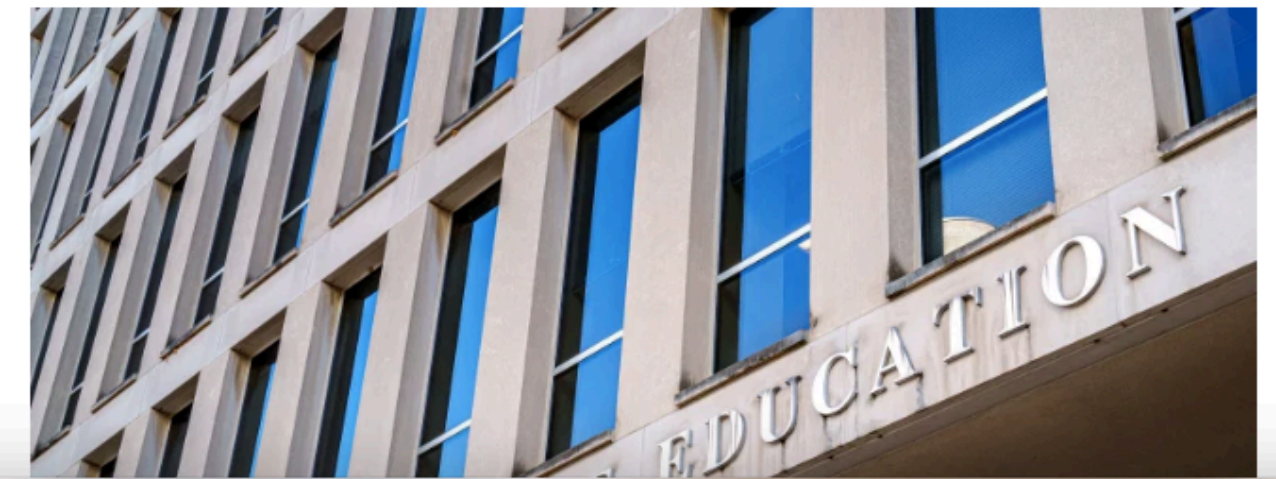
EDUCATION

The Trump admin is withholding over \$6 billion in education grants for schools

JULY 1, 2025 · 12:42 PM ET



Sequoia Carrillo



On the day of this publication,
we began Day 1
of a federal shutdown.



World ▾ Business ▾ Markets ▾ Sustainability ▾ Legal ▾ Commentary ▾ Technology ▾ Investigations ▾ More ▾ My News

Podcast · Reuters World News Shutdown starts, 'fat generals', Silicon Valley at the Pentagon and Pfizer

United States > Where each side stands

US government shutdown begins as partisan division rules Washington

The U.S. government shut down much of its operations on Wednesday as deep partisan divisions prevented Congress and the White House from reaching a funding deal, setting off what could be a long, grueling standoff that could lead to the loss of thousands of federal jobs.

7 mins ago



The U.S. Capitol dome is reflected in the Library of Congress glass door, with the sign reading "Entrance closed" in the foreground, on the first day of a partial government shutdown in Washington, D.C., U.S., October 1, 2025.

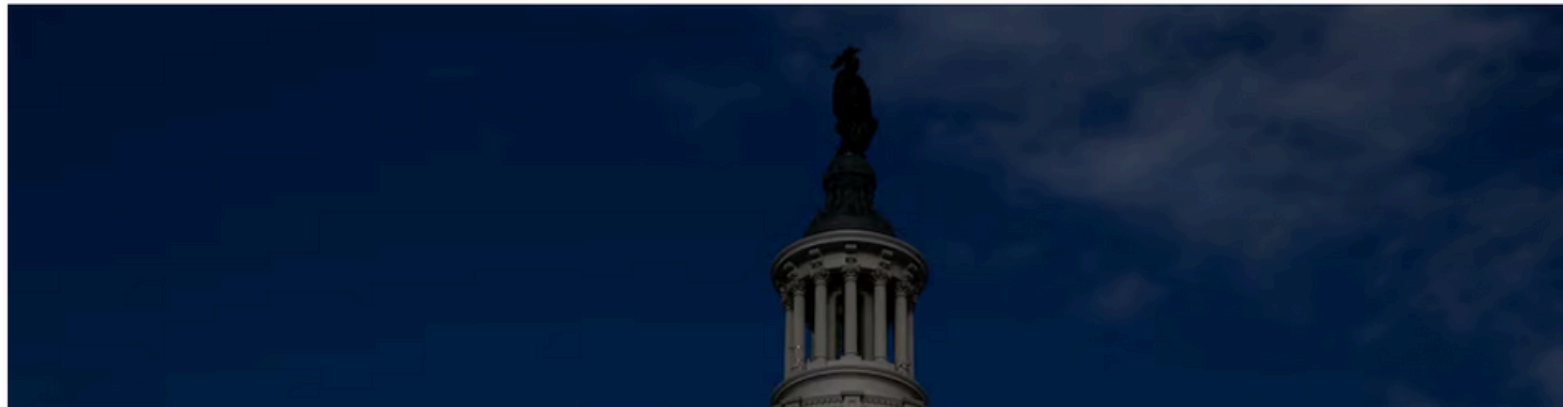
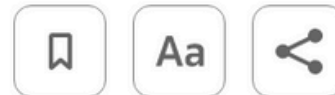
REUTERS/Nathan Howard

<https://www.reuters.com/world/us/us-government-begins-shut-down-most-operations-after-congress-fails-advance-2025-10-01/>

US House returns to Washington for vote to end government shutdown

By Nolan D. McCaskill, Andy Sullivan and David Morgan

November 11, 2025 11:05 AM EST · Updated 6 mins ago



Today is the 41st day of the
shut down.

CONCLUSION



This presentation barely
touches on the issues of this
rapidly developing science.

We haven't discussed
cultural bias,
ethics of artificial intelligence,
or age and content restrictions.

But these kinds of conversations and
this type of planning
help us move toward achieving
a consensus of respect for each other
as well as for the emerging tech
and for what
it can and can't do.

These are the kinds of actions that help develop “the knowledge, skills and attitudes that allow children to flourish and thrive in an increasingly global digital world, being both safe and empowered, in ways that are appropriate to their age and local cultures and contexts”, to quote UNESCO.



What now?

Based on this content,
and your personal knowledge,
and your degrees and experience,
list three ways in which
you can help
promote
digital literacy
tomorrow.

Then share these with your
colleagues.

From this you can
begin to create
an informal
How-To guide
(written or not)
to help you navigate this, and
then you can ask your PD
presenter to address the
issues you've come to a
consensus on.



Professional development workshops,
seminars,
teacher trainings,
keynote speaking.

Contact Us.

ThePianoInstructor.net

313.687.4433

Lessons@ThePianoInstructor.net

