First an Overview

You should be skeptical of AI's effectiveness – almost no research supports it

Williamson '24 concludes (Ben Williamson is a Chancellor's Fellow at the Centre for Research in Digital Education and the Edinburgh Futures Institute at the University of Edinburgh. Alex Molnar is a Research Professor at the University of Colorado Boulder. Faith Boninger is NEPC's Publications Manager and Co-Director of NEPC's Commercialism in Education Research Unit and holds a PhD from Ohio State University. Williamson, B. Molnar, A., & Boninger,
F. (2024). "Time for a pause: Without effective public oversight, AI in schools will do more harm than good." Boulder, CO: National Education Policy Center. http://nepc.colorado.edu/publication/ai) //Bellaire MC

AI in Education Since the 1960s, scientists and technology companies have explored ways to apply AI in education. AI in Education (AIED) is a major field of research and development.55 The AI applications being promoted to schools today were preceded in the 1960s and 1970s by "Intelligent Tutoring Systems" and "Computer-Assisted Instruction" systems.56 Since the early 2000s, researchers have gathered, stored, and analyzed massive quantities of educational data with the intention of informing institutional and instructional strategies.57 These approaches are now routinely considered synonymous with AIED, and have also been rapidly commercialized by the ed tech industry.58 Most AIED applications employ big data and machine learning to produce various predictions and automated actions—such as predicting that a student may fail an assessment or creating a "personalized" intervention intended to produce a desired learning outcome.59 Research on AI in education has developed and tested various approaches and reported modest effectiveness on measurable learning achievement—performance on quizzes and tests, for example.60 Current excitement about its potential is motivating both public and private sources to generously fund researchers trying to find ways to improve learning outcomes using AI.61 However, the assumption that AI in education can be understood primarily as a technical matter best addressed by scientists and companies is increasingly challenged by researchers who argue that a narrowly technical perspective may lead to both bad policy and bad pedagogy.62 They point out that AI exists in social, economic, and political contexts that shape its development and uses.63 How AI is adopted by different educational stakeholders (including AIED researchers, ed tech entrepreneurs, corporate leaders, and policymakers) will have significant implications for its use in schools.64 The fact that entrepreneurs and corporations funded by venture capital and private equity are rushing to promote AI in education will inevitably narrow possible applications to those preferred by stakeholders with financial interests.65 Small-scale ed tech start-ups and Big Tech corporations alike see AI as an opportunity,66 leveraging popular hype to market such education products as personalized learning programs, automated lesson plan generators, and AI tutoring chatbots, called "tutorbots," to schools.67 **Compelling evidence** for the effectiveness of tutorbots in education **remains scarce**.68 Though this does not prevent entrepreneurs and researchers from proclaiming their usefulness.69 Policymakers routinely invoke AI rhetorically, calling on schools to embark on "digital transformation,"70 often with little attention to social, economic, legal, or ethical implications.71 These calls dovetail with existing political priorities on performance monitoring, account, ability, efficiency, and effectiveness—all of which require extensive collection of data about students.72 Although systems of test-based accountability have existed in schools since the 1990s,73 they will expand and intensify as AI is used to continuously monitor and assess student learning.74 As a result, commercial AI systems will increasingly serve as private actors in public education as schools, districts, and governments relinquish key tasks, functions, and responsibilities to third-party technology vendors.75 Existing and potential uses of AI in education are not merely innovative technical add-ons to teaching and learning practices or engineering solutions to schools' existing pedagogic and administrative problems. Rather, AI in education has been spurred by multiple forces: longstanding efforts by scientists to measure, predict, and support learning processes and outcomes; commercial aspirations to profit from selling products to schools; and the political objective of being perceived as having improved school efficiency and accountability while cutting costs. As things currently stand, these ambitions have begun to coalesce into a vision of AI-driven schooling in which commercial products assess student learning, automate teaching, and make decisions about student progress. Inadequate Research Base

Despite the **extensive research in** the field of **AI** in **Education** (AIED) and the burgeoning¶ research on machine learning, **there is remarkably little evidence to support claims of AI's ability to "transform" schools.**76 While AIED researchers have produced many research findings, their studies tend to focus primarily on measures of individual student engagement and performance (assessed by standardized achievements tests), or on "engineering" problems such as designing increasingly sophisticated algorithms and enhancing machine learning effectiveness.77¶ Overall, AIED **studies** tend to **find ambiguous results, lack independence and scale, and** fail to address more fundamental questions about educational goals.78 AIED research therefore often promotes a view of education transformation as improving measurable individual outcomes despite very limited evidence that AI "works."79 In effect, such studies **reduce** well-researched and **nuanced theories of how humans learn** to whatever can be made **into a mathematical model** (however complex), and they ignore the contested terrain of exactly which goals and curriculum public schools should embrace.80 Moreover, claims that AI can solve major educational problems—such as lack of qualified teachers, student underachievement, and educational inequalities—rely to a considerable extent on **conjecture rather than evidence**.81¶ **Even more problematic are the serious methodological flaws** in machine learning research that call into **question** the **validity of hundreds of studies.**82 The nature of the flaws, in general, leads toward "over optimism" with respect to the usefulness and value of machine learning applications in a variety of fields.83 These findings are particularly concerning because they call into question not only commercial marketing claims, but also the scientific evidence base supporting the widespread implementation of AI systems in all sectors,84 including education. Finally, because of the very high computing costs associated with running machine learning models, most [and] **researchers** have to rely on systems from the dominant AI companies themselves in order to conduct research85—the same corporations that often fund AI studies.86 This makes research **depend**ent **on corporate** resources, **funds**, and business practices, **giving AI firms considerable**

influence over not only AI development, but also the academic research that depends on their systems.87 It also compromises an important part of the research process, which is reproducing findings to verify their validity. **When** a

company changes or **stops** supporting **a particular model, researchers cannot reproduce studies conducted earlier**.88 This **renders** the **research** base **unstable and unverifiable**—and thus unusable as a basis for assessing subsequent models.

Our first argument is Critical Thinking

Smith '95 explains:

An Invitation to Cognitive Science. (1995). [online] The MIT Press eBooks. The MIT Press. doi:https://doi.org/10.7551/mitpress/3966.001.0001. // JA CCHS

The ability to solve problems is one of the most important manifestations of human thinking. The range of problems people encounter is enormous: planning a dinner party, tracking deer, diagnosing a disease, winning a game of chess, solving mathematical equations, managing a business. This radical diversity of problem domains contrasts with the relative specificity of many human cognitive activities, such as vision, language, basic motor skills, and memory activation, which have a relatively direct biological basis and which all normal individuals accomplish with substantially uniform proficiency. **In the course of normal development we all learn, for example, to speak a native language, but without specialized experience we will never acquire competence in deer tracking or chess playing.** On the other hand, all normal people do acquire considerable competence in solving at least some of the particular types of problems they habitually encounter in everyday life. **We might therefore suspect that problem solving depends on general cognitive abilities that can potentially be applied to an extremely broad range of domains. We will see, in fact, that such diverse cognitive abilities as perception, language, sequencing of actions, memory, categorization, judgment, and choice all play important roles in human problem solving. The ability to solve problems is clearly a crucial component of intelligence.**

However, employing AI degrades educational quality and critical thinking. Ma '24 reports:

Ma, L. (2024). AI Eases Our Mental Load at the Expense of Critical Thinking. [online] Psychology Today. Available at: https://www.psychologytoday.com/us/blog/the-art-of-critical-thinking/202410/ai-eases-our-mental-load-at-the-expense-of-critical [Accessed 23 Feb. 2025]. // JA CCHS

A new study of students at a German university has found that employing ChatGPT in the search for information makes the work easier and reduces mental load, but it comes at the expense of quality arguments, grades, and critical thinking. Ultimately, using it created superficial assignment results. The study was established specifically to measure both the cognitive load of students, and the quality and diversity of their arguments. It split students into two groups: those who used AI, and those who used traditional search methods, and tasked them with researching information about the safety of sun cream for their fictional friend "Paul." Students were asked to draw conclusions and give advice to Paul, who had concerns over the safety of some ingredients. **The study found that: Students using AI (large language models – LLM) had a lower cognitive load and less stress** There was no significant difference between the diversity of their arguments, suggesting that AI does not specifically lead to homogenous conclusions Students that use AI have weaker reasoning in their arguments, likely because of ~~lower~~ engagement with the content and significantly reduced critical thinking. The ultimate conclusion was that use of AI can help improve student experience because it provides direct answers rather than needing a student to draw their

own conclusions, but it currently comes at the cost of deep engagement and high-quality learning, with recommendation that the study be extended beyond the original pool of 91 students. What's more, the study did not provide scope for evaluating the quality of their LLM queries, which could – in other studies – lead to misleading or misinformed answers. **The study highlights one of the key concerns over AI, in that individuals that default to [AI] using it may lose skills that are essential in recognising how accurate information is and whether the information could be being used to intentionally mislead (disinformation). Otherwise known as critical thinking skills, the pursuit of knowledge and accuracy [which] is essential in navigating the world of ever-increasing data points, and the flood of infor- mation we are receiving from real-world encounters, social media feeds, news engines, magazines, broadcast, and other forms of digital media.** AI offers a service of immediacy while aggregating multiple sources, but often loses or eliminates the nuance of that information and the opportunity for depth of learning. This is particularly important as highlighted by Rainie and colleagues. 2019. given that a large majority of participants from an American study (81 percent) report they rely on their own web research over friends and family (43 percent) or professional experts (31 percent) when gathering information before making an important decision. ~~"While LLMs like ChatGPT offer an efficient way to reduce intrinsic and extraneous cognitive load, they may not always facilitate the deep learning necessary for complex decision-making tasks. Traditional search engines, by necessitating more~~ active engage- ment, may promote a higher quality of learning, underscoring the need for educational practices that encourage critical engagement with diverse information sources," study authors concluded.

Specifically, a research study by Zhang et al '24 illustrates:

Zhang, S., Zhao, X., Zhou, T. and Kim, J.H. (2024). Do you have AI dependency? The roles of academic self-efficacy, academic stress, and performance expectations on problematic AI usage behavior. International Journal of Educational Technology in Higher Education, [online] 21(1). doi:https://doi.org/10.1186/s41239-024-00467-0. /// JA CCHS

Conclusions To investigate the internal antecedents and potential consequences of AI dependency, this study examined the relationships among academic self-efficacy, academic stress, performance expectations, and AI dependency using the I-PACE model. **Using a sample of 300 college students in Seoul, South Korea, the results showed that academic self-efficacy was not significantly associated with AI dependency.** However, this association was mediated by academic stress and performance expectations. **The consequences of AI dependency varied; the top five negative effects were increased laziness, the spread of misinformation, decreased creativity, and reduced critical and independent thinking.** This study theoretically expanded on previous studies by providing potential intervention recommendations to reduce students' AI dependency.

Luu '24 confirms:

Luu, E. (2024). The effects of AI on education. [online] HS Insider. Available at: https://highschool.latimes.com/opinion/the-effects-of-ai-on-education/#:~:text=Another%20major%20disadvantage%20of%20AI,learning%20and%20developing%20their%20brains. [Accessed 21 Feb. 2025]. // JA CCHS

One major consequence of newly created artificial intelligence on education is the lack of human interaction. Even though AI can give students personalized educational services, it cannot replace human teachers who provide face-to-face interactions. Teachers can humanly interact, discuss, and provide feedback unlike

AI could ever. They are crucial in students' development not only in their academic careers but also as they develop social skills, as advocated by Teachers of Tomorrow. Teachers provide a sense of physical interaction that artificial intelligence could never replace. As seen through the global pandemic, human interaction is necessary for an individual's overall well-being. **AI could potentially result in decreased human interaction and end up leading to detrimental educational experiences. Another major disadvantage of AI in education is the dependence on it involving the educational process. Artificial intelligence can complete difficult, lengthy assignments almost instantaneously [thus] and students may become overly dependent on technology for tasks where they could be learning and developing their brains.** Students gain problem-solving skills and work ethic from completing assignments in their academic careers that prepare them for their futures. Relying on AI to complete these tasks where they should be learning **can be dangerous for individuals in the long run when they have no ability to think independently.** While the negative impacts of AI seem severe and hopeless, some solutions may work. For the first negative impact of decreased human interaction, current teachers could try using AI tools as a way to enhance their curriculums rather than allowing the programs to replace them entirely. Daniel Schwartz, the Dean of the Graduate School of Education at Stanford University, said in his opening remarks at the recent AI+Education summit, "I want to emphasize that a lot of AI is also going to automate really bad ways of teaching. So [we need to] think about it as a way of creating new types of teaching." He perfectly described how educators should not run away from AI and try to avoid it entirely and rather use it as a way to better education and make it a resource students can benefit from. If this is done students will still have teachers and their human interactions and the enhanced content of education from artificial intelligence.

The impact is job loss.

Critical thinking is critical to getting jobs

Georgetown University 20 [Georgetown University, "Recovery: Job Growth and Education requirements", 2020, Georgetown University, https://cew.georgetown.edu/wp-content/uploads/2014/11/Recovery2020.ES_.Web_.pdf, Accessed 03/07/2025] //ejs squad

Of all occupations, 96 percent require critical thinking and active listening **to be** either very important or **extremely important** to success.

That's terrible because employment is key to getting out of poverty Vaalavuo 21

[Maria Vaalavuo, "Jobs against poverty: a fixed-effects analysis on the link between gaining employment and exiting poverty in Europe", 06/03/2021, Taylor & Francis, https://www.tandfonline.com/doi/full/10.1080/14616696.2022.2088821, Accessed 03/07/2025] //ejs squad

This article analyses the role of gaining employment in escaping poverty at the individual level by using EU-SILC pooled panel data for 2010–2017 for 30 European countries. We assess this in a dynamic research setting using individual fixed effects that take into account unobserved time-invariant heterogeneity between individuals. We focus on the type and intensity of employment and the role of gender, education, and age. Overall, gaining **employment increased the chances of exiting poverty by 33 percent**age points among men and 30 percentage points among women. Shorter employment spells and part-time employment were less effective routes out of poverty. The results also suggest that poor individuals with higher education were more likely to benefit from employment to exit poverty. We found substantial cross-country variation. However, the unemployment rate, prevalence of precarious employment or spending on active labour market policies did not moderate the association between gaining employment and exiting poverty. Further

analysis is needed on the institutional factors supporting poor people's employment and its effectiveness in significantly improving income level.

Overall poverty is devastating,

PPC 23 [PPC, "2023 National Fact Sheet", 06/16/2023, Poor People's Campaign, https://www.poorpeoplescampaign.org/resource/2023-national-fact-sheet/, Accessed 03/07/2025] //ejs squad

These tens of millions of people live in every region, state and county in the country. Poverty was the fourth leading cause of death, claiming more lives than homicide, gun violence, diabetes or obesity. Long-term **poverty was responsible for 295,000 deaths a year – or over 800 deaths a day.**

Our second argument is Water Scarcity

The use of gen AI in education is growing Westfall 23[Chris Westfall, Jan 28, 2023, "Educators Battle Plagiarism As 89% Of Students Admit To Using OpenAI's ChatGPT For Homework", Chris Westfall covers the changing nature of the leadership conversation. An international business coach to executives, entrepreneurs and aspiring leaders, he is the author of four books, and a ghost writer on eight more (including a Wall Street Journal Best-Seller). An international keynote speaker and frequent media guest, he has appeared on NBC, ABC NEWS, Bloomberg, BBC Radio and multiple broadcast outlets. His clients include influencers, Fortune 500 executives, entrepreneurs, political candidates, military leaders, professional athletes and global organizations. His entrepreneurial coaching clients have appeared on television shows like Shark Tank, Dragons Den in Canada and Shark Tank Australia. He regularly works with students across multiple disciplines at Texas A&M, where he has coached thousands of entrepreneurs, engineers and scientists - including the winners of the Rice Business Plan Competition in 2016 an 2023. He is a past recipient of the MBA top teaching award at Southern Methodist University's Business Leadership Institute. Latest book: Easier (Wiley). Contributor since: 2019., Forbes, https://www.forbes.com/sites/chriswestfall/2023/01/28/educators-battle-plagiarism-as-89-of-students-admit-to-using-open-ais-chatgpt-for-homework/]

Considering that **90% of students are aware of ChatGPT**, and **89%** of survey respondents report that they have **used the platform to help with a homework assignment**, the application of OpenAI's platform is already here. More from the survey.

Gen AI only results in the use of more AI infrastructure Voruganti 23[Kaladhar Voruganti, August 7, 2023, "What Generative AI Means for Data Centers", Senior Business Technologist, https://blog.equinix.com/blog/2023/08/07/what-generative-ai-means-for-data-centers/] //JS

he original prompt you put into the AI engine is highly important in delivering good results. Generative AI query response times can be slower (in the order of multiple seconds) compared to that of traditional AI queries (with sub-second response times) because of the extra processing and larger data sets. **Generative AI involves much larger AI training infrastructure and higher power consumption**, thus **requiring denser server racks and advanced cooling techniques**. In many use cases, subject matter experts can interact directly with generative AI systems instead of going through data scientists. Data scientists are still required for foundational model customization. Because of **the high computation and infrastructure requirements to create AI** models from scratch, companies are starting to share AI models through Model as a Service and open-source AI model marketplaces.

That's bad-they consume too much water University of Tulsa 24[The University of Tulsa, July 19, 2024, "Data centers draining resources in water-stressed communities", no author quals, https://utulsa.edu/news/data-centers-draining-resources-in-water-stressed-communities/#:~:text=Unfortunately%2C%20many%20data%20centers%20rely,thousands%20of%20households%20or%20farms.] //JS

The rapid growth of the technology industry and the increasing reliance on cloud computing and artificial intelligence have led to a boom in the construction of data centers across the United States. Electric vehicles, wind and solar energy, and the smart grid are particularly reliant on data centers to optimize energy utilization. These facilities house thousands of servers that require constant cooling to prevent overheating and ensure optimal performance. **Unfortunately**, many **data centers rely on water-intensive cooling systems that consume millions of gallons of** potable (**drinking**) **water annually**. **A single data center** can **consume[s] up to 5 million gallons of drinking water per day, enough to supply thousands of households** or farms. **The increasing use and training of AI models has further exacerbated the water consumption challenges faced by data centers.** Machine learning, particularly deep learning models, requires significant computational power, which generates a lot of heat. As a result, data centers housing these machine learning servers need even more cooling to maintain optimal performance and prevent overheating. Graphics processing units, which are commonly used to accelerate machine learning workloads, are known for their high energy consumption and heat generation..

Look to ChatGPT, a gen AI McNally 24[Paul McNally, April 3, 2024, "Critical impact-ChatGPT consumes 500 ml of water for every 50 texts you send it", Paul McNally is the Founder of Develop Al, an innovative company that reports on AI, provides training and consulting services and builds AI tools. He is the Founder of podcasting company Develop Audio and the community radio non-profit Citizen Justice Network. He has received awards and recognition for his podcast Alibi and his influential book, The Street, that investigated corrupt cops and drug lords in Johannesburg. In 2016 he was a Visiting Nieman Fellow at Harvard.
https://www.dailymaverick.co.za/article/2024-04-03-critical-impact-chatgpt-consumes-500ml-of-water-for-every-50-texts-you-send-it/]//JS

Similarly, as we ramp up towards a world of constantly generating content with AI, we are being asked to consider the environmental cost of its production. According to a paper published late last year, it is estimated that **ChatGPT is thirsty for 500ml of fresh water to generate** between **[just] five** and 50 **prompts** or questions. The range varies depending on where its servers are located and the season. The estimate includes indirect water usage which is needed to cool power plants that supply the data centres with electricity. And, frankly, **this is only the beginning**… The big guys can't hide how much more water they now need. In this environmental report, Microsoft said that its **global water consumption spiked 34% from 2021 to 2022 (to over 6 billion litres)**. This is a sharp increase compared to previous years and researchers reckon this has to do with all its work with AI.

AI is taking more water than ever Rucker and Hill 24[Karah Rucker and Zachary Hill, October 8, 2024, "AI tools consume up to 4 times more water than estimated", Karah Rucker is a morning anchor and reporter for Straight Arrow News. Her journalism career has spanned two of our largest states, covering news in Texas and

California and Zachary is a Video Editor at Straight Arrow News. Straight Arrow News, https://san.com/cc/ai-tools-consume-up-to-4-times-more-water-than-estimated/]//JS

A new report shows that artificial intelligence tools, **including ChatGPT, are using up to four times more water than previously** believed. **This discovery raises concerns** about the sustainability of data centers **as AI continues to expand.** Researchers from the University of California, Riverside found that processing 10 to 50 queries on AI chatbots can consume up to 2 liters of water, far exceeding the earlier estimate of half a liter. The increase is attributed to the intense cooling needs of data centers, where

Firstly, gen AI is only hurting wildfires, look at California,Tobin 25[Taylor Tobin, Jan 11, 2025, "ChatGPT Is Under Attack For Its Use Of Water — But How Does That Even Work?", Taylor Tobin is a Brooklyn-based food and lifestyle writer whose work can be seen in publications like Insider, Observer, Fairygodboss, and Apartment Therapy. She spends most of her free time on some combination of bikes, books, and bourbon.https://www.huffpost.com/entry/how-does-chatgpt-use-water_l_6782a3d6e4b0788bdb62b2ba] // JS

AI platforms can't generate content without the help of massive data center servers. These centers "contain thousands of high-performance computer chips that process user queries," explained Daniel Kearney, the chief technology officer of Firmus Technologies, which focuses on creating sustainable operating solutions for AI companies. "Because the computers and chipsets that power servers are so densely packed, they generate an incredible amount of heat. Running complex AI applications like **ChatGPT requires immense amounts of computing power**, which generate lots of heat 24 hours a day," explained HP Newquist, an artificial intelligence historian and the author of "The Brain Makers: Genius, Ego, and Greed in the Quest for Machines That Think." To prevent servers from crashing, cooling systems are put in place to help regulate data center temperatures. And, in many cases, "water is used to physically cool AI servers," explained Mia Montoya Hammersley, an assistant professor specializing in environmental law and the director of the Environmental Justice Clinic at the Vermont Law and Graduate School. So how much water are we talking about here? "Many of these systems rely on water to absorb and dissipate the heat through cooling towers or evaporative cooling methods," Kearney told us. "For some large facilities, this can mean using millions of gallons of water per year."The current wildfires were caused in part by drought affecting much of Southern California. "**With California already experiencing an ongoing drought, the water necessary to fight these fires is further straining the state's water supply**," Montoya Hammersley said. **"Water is a finite resource, and cutting back on AI use will have direct impacts on the state's water availability and ability to respond to this climate disaster."**

Waddick 25 explains[Karissa Waddick, January 14, 2025, "How many homes have burned in the Los Angeles wildfires so far?", no author quals, AOL https://www.aol.com/many-homes-burned-los-angeles-175405693.html#:~:text=How%20many%20homes%20have%20burned%20in%20the%20Los%20Angeles%20wildfires%20so%20far%3F,-Karissa%20Waddick%2C%20USA&text=More%20than%2012%2C000%20homes%2C%20businesses,Los%20Angeles%20area%20last%20Tuesday.]//JS

More than **12,000 homes**, businesses, schools and other structures **have been destroyed by** raging **wildfires** that began ripping **through** the Greater **L**os **A**ngeles area last Tuesday. Cal Fire said in an update

Monday that a total of 40,300 acres have burned across multiple blazes including the Pacific Palisades fire west of Los Angeles, the Eaton Fire near Altadena and the Hurst fire near Sylmar. At least 24 people have died and more than **100,000 have been forced to flee their homes.**

But secondly, millions in the US suffer from a lack of water Shane 23 finds

[Cari Shane, Cari Shane is a D.C.-based freelance journalist who writes on subjects she finds fascinating — especially science, medicine, and health. Her work can be found in a wide variety of publications, from *Scientific American* to *Smithsonian*. "'We're going backwards in water access': How 46 million Americans still don't have safe drinking water", 03/17/2023, Fast Company, https://www.fastcompany.com/90858376/were-going-backwards-in-water-access-how-46-million-americans-still-dont-have-safe-drinking-water]//JS

They're not alone. **More than 46 million people in the U.S. live with water insecurity—either no running water or water that may be unsafe to drink.** Experts say at least $18.4 billion is needed over the next 10 years to bring water security to more people, although the Environmental Protection Agency and American Water Works Association estimates it would cost close to fully $1 trillion to replace and repair the U.S.' aging infrastructure. People are likely familiar with the water crises in Jackson and Flint, Michigan. In the former, flooding last summer overwhelmed the main water plant, and nearly 200,000 residents woke up to a boil water advisory; reports showed that high levels of lead in the city's drinking water were ignored for years. In the latter, toxic levels of lead in the water system—the result of aging, corroded pipes—sickened 100,000 residents and killed more than a dozen. But issues like this are happening all over the country in places like Tallulah, Louisiana; Grapeland, Texas; and parts of New Hampshire, Idaho, Kansas, Nevada, South Dakota, and Puerto Rico, where residents also don't have safe running water—their stories simply haven't made national headlines.

Water scarcity only results in deaths United Nations ND finds that[United

Nations, No Date, "World Water Day Reminds Us of the Value of a Precious Resource", no author quals, https://www.un.org/en/academic-impact/world-water-day-reminds-us-value-precious-resource#:~:text=Approximately%203.5%20million%20people%20die,water%20supply%2C%20sanitation%20and%20hygiene.] //JS

(Young girls fetch water at a communal water pump drilled by the United Nations Children's Fund (UNICEF) in Bubango, Tanzania.) According to the World Health Organization unsafe drinking water, inadequate availability of water for hygiene, and lack of access to sanitation together contribute to about 88 percent of deaths from diarrheal diseases, which kill 900 children under 5 years old per day according to new UN estimates, or one child every two minutes. UN-Water, the United Nations inter-agency coordination mechanism for all freshwater related issues including sanitation, concluded that the major sources of water pollution are from human settlements and industrial and agricultural activities. Approximately **3.5 million people die each year due to inadequate water supply**, sanitation and hygiene.

Rebuttal:

A2 Disseminates Education

AI exacerbates resource inequality.

Admin, **CRPE**. “AI Is Coming to U.S. Classrooms, but Who Will Benefit?” Center on Reinventing Public Education, 16 May 2024, The Center on Reinventing Public Education (CRPE) is a research organization at Arizona State University’s Mary Lou Fulton College for Teaching and Learning Innovation, where transformative ideas are rigorously examined and tested, and research informs action. We are truth tellers who combine forward-thinking ideas with empirical rigor. Since 1993, we have been untethered to any one ideology but unwavering in a core belief: that public education is a goal—to prepare every child for citizenship, economic independence, and personal fulfillment—and not a particular set of institutions. crpe.org/ai-is-coming-to-u-s-classrooms-but-who-will-benefit/ . Accessed 15 Feb. 2025. //ejs squad

Teachers’ and district leaders’ concerns about AI use seem less about school-specific applications and more about student privacy, potential bias in AI, and the impact of AI on society in general. The district leaders we interviewed tended to believe that cheating and plagiarism concerns could be covered under existing district rules. They did, however, **express the need for more policy guidance from trusted sources**, **like school board associations or respected local school districts,** and noted that **developing policies around AI is especially difficult due to the technology’s rapidly evolving** nature. Worrying signs: AI could exacerbate educational inequality Our study points to early signs of faster uptake of AI in more advantaged settings. Suburban, **majority-white, and low-poverty school districts are currently about twice as likely to provide AI-use training** for their teachers **than urban or rural or high-poverty districts**. **Advantaged districts are also more likely to have plans to roll out training in the coming school year.**

UK proves millions get left behind

Oscar **Hornstein 24** [UKTN, 12-16-2024, "Generative AI could increase education inequality, report warns," Oscar is a senior reporter at UKTN. https://www.uktech.news/ai/generative-ai-could-increase-education-inequality-report-warns-20241216, accessed 2-18-2025\\graowinsstates]//ejs squad

Generative AI technology could increase inequalities, according to a new report from the Digital Poverty Alliance (DPA). The report, unveiled in parliament**, found that across England**, local authorities have no oversight of the use of AI in education, with **children facing digital poverty vastly less likely to be able to use the technology.** The DPA defines digital poverty as a lack of access to suitable devices, reliable internet connectivity and skills needed to leverage new technologies. According to the group, digital poverty **affects 19 million people**. “Generative AI has the power to transform education by personalising learning and supporting the education sector in new and exciting ways,” said Elizabeth Anderson, CEO of the Digital Poverty Alliance. **“But without the efforts from all bodies to address digital poverty, these advancements could leave the most vulnerable students further behind.”** The report said AI policies in the UK regarding education are underdeveloped and lack clear implementation strategies. The DPA has therefore called for comprehensive teacher training on the use of AI tools, advancing access to the technology for all students. “The ’Rethinking Education with Generative AI’ report that we have launched, emphasises the urgent need for comprehensive AI training for teachers and students, and access to the right technologies, to prepare the next generation for an AI-driven future,” added Anderson. “Tackling these challenges means that the **one in five children** in digital poverty

can view Gen AI as a tool for empowerment, bridging gaps rather than widening them." The DPA also warned that AI systems trained on limited datasets were at risk of being overly influenced by societal biases. The group did, however, acknowledge that done correctly, the implementation of AI in education could massively improve support for children, particularly those with special requirements.

A2 Disabilities

AI is discriminatory and inherently can't incorporate outlier data

Eileen **O'Grady** (Eileen is the former managing editor of the The Scope at Northeastern University, an experimental digital magazine focused on telling stories of justice, hope and resilience in Greater Boston. She is also a former staff writer for The Shelburne News and The Citizen, with bylines in The Boston Globe, U.S. News & World Report, The Bay State Banner and VTDigger. She holds a BA in politics and French from Mount Holyoke College and a MA in journalism from Northeastern University.), 4-3-20**24**, "Why AI fairness conversations must include disabled people — Harvard Gazette," Harvard Gazette, https://news.harvard.edu/gazette/story/2024/04/why-ai-fairness-conversations-must-include-disabled-people/, accessed 2-25-2025 //ejs squad

"A lot of research so far has focused on how AI technologies discriminate against people with disabilities, how algorithms harm people with disabilities," Shah said. "My aim for this project is to talk about how even the conversation on AI fairness, which was purportedly commenced to fix AI systems and to mitigate harms, also does not adequately account for the rights, challenges, and lived experiences of people with disabilities." For his research, he's interviewing scholars who have studied the issue and evaluating frameworks designed to maintain AI fairness proposed by governments and the AI industry. Shah said developers often consider disability data to be "outlier data," or data that differs greatly from the overall pattern and is sometimes excluded. But even when it's included, there are some disabilities — like non-apparent disabilities — that are overlooked more than others. If an AI is trained on a narrow "definition" of disability (like if data from people who stutter is not used to train a voice-activated AI tool), the outcome will be that the tool is not accessible.