## **Contention 1 is LLMs**

**LLMs are no longer profitable—companies are moving now.**

**Babenko-24** [Konstantin Babenko, 9-19-2024, [M.S. Computer Science @ National Technical University of Ukraine, Ph.D. Computer Science @ Institute of Cybernetics], “Why Enterprises Are Turning to Prompt Engineering Instead of Custom LLMs,” Babenko.

https://archive.is/b60kw //DS]

Beyond the technical and computational challenges, **enterprises face** other **obstacles that make developing** and **deploying custom LLMs even more difficult**. **Financial and operational limitations are key concerns.** According to Deloitte, **developing a state-of-the-art LLM** **can cost anywhere from $1 million to $10 million, covering expenses like infrastructure, data acquisition, and ongoing maintenance.** **These high costs can be a major barrier, especially for mid-sized companies or those in industries with tight budgets.** On the operational side, managing large, diverse, and up-to-date datasets is essential for training effective models, but it’s not easy. Building and maintaining a strong data pipeline and governance system is challenging, and many companies struggle with data quality issues. In fact, a survey by MIT Sloan Management Review found that 47% of companies face problems with data quality, which can undermine their AI projects and reduce trust in AI systems. Moreover, because business environments change quickly, the data used to train models can become outdated, making continuous monitoring and retraining necessary. This adds further strain on resources. Additionally, companies must comply with data privacy regulations like GDPR and CCPA, adding complexity to custom LLM projects. Given these difficulties, **many organizations are moving away from developing custom LLMs** and are **instead exploring alternatives like prompt engineering and in-context learning.**

**Diversification wins the race.**

**Marcus-25** [Gary Marcus, 1-26-2025, [B.A. Cognitive Science @ Hampshire College, Ph.D. Cognitive Science @ MIT] “The race for "AI Supremacy" is over — at least for now,” https://garymarcus.substack.com/p/the-race-for-ai-supremacy-is-over //DS]

**The only hope for the US to regain a** clear **lead is** for a government agency, a US company, or an academic lab **to think outside the LLM box.** **The moves around LLMs** **are** simply **too well understood for anyone to get a** decisive **lead there anymore.** Furthermore, as I have argued for years, LLMs are too opaque, too unwieldy, and too difficult to debug and verify. **The answer lies elsewhere; betting our future on that single idea is foolish.** **The race to AGI will be won not by the country with the most chips but by the one that best fosters true innovation.** That could be the US, China, or perhaps some other country **less locked into LLM orthodoxy**, and more willing to bet big on new ideas.

**Affirming upends progress.**

**Lee-24** [Jinsook Lee, 7-12-2024, [B.A. Home Economics @ Korea University, M.S. Human Ecology @ Korea University, Ph.D. Philosophy & Information Science @ Cornell University], “The life cycle of large language models in education: A framework for understanding sources of bias’”, BERA. <https://bera-journals.onlinelibrary.wiley.com/doi/10.1111/bjet.13505?af=R> //DS]

**Large language models (LLMs) are increasingly adopted in educational contexts to provide personalized support to students and teachers.** The unprecedented capacity of LLM-based applications to understand and generate natural language can potentially improve instructional effectiveness and learning outcomes, **but the integration of LLMs in education technology has renewed concerns over algorithmic bias,** which **may exacerbate educational inequalities.** Building on prior work that mapped the traditional machine learning life cycle, we provide a framework of the LLM life cycle from the initial development of LLMs to customizing pre-trained models for various applications in educational settings. We explain each step in the LLM life cycle and identify potential sources of bias that may arise in the context of education. We discuss why current measures of bias from traditional machine learning fail to transfer to LLM-generated text (eg, tutoring conversations) because text encodings are high-dimensional, there can be multiple correct responses, and tailoring responses may be pedagogically desirable rather than unfair. The proposed framework clarifies the complex nature of bias in LLM applications and provides practical guidance for their evaluation to promote educational equity.

**Education is the primary market.**

**Hicks-19** [Alex Hicks, 6-19-2019, [B.B.A. @ University of Iowa, SVP @ US Bank],“Why impact investors love the education sector”, Mergers & Acquisitions, https://www.themiddlemarket.com/opinion/why-impact-investors-love-the-education-sector //DS]

Up to now, the education sector has made up a relatively small part of the impact investing pie. The Global Impact Investing Network estimates that only 4 percent of the half a trillion dollars in total impact investments is devoted to education, far behind financial services and energy. That small share, perhaps, has to do with the perceived complexities of the education sector, the traditional dominance of government in this area, and the difficulty of measuring outcomes precisely. But there are signs that **the market is changing as** some **big impact investment players warm to the education sector.** Several **recent developments and deals have highlighted this trend**, suggesting it has the potential to become a theme for mid-market funds as well as the bigger players. ● Bain Capital’s $390 million Double Impact fund last year led a group of investors that purchased online education provider Penn Foster. Penn Foster, which focuses on providing post high-school skills training, then went on to acquire online institution Ashworth College this February. ● U.S. private equity firm TPG Capital’s $2 billion Rise Fund announced last year it was investing $130 million to take a majority stake in DreamBox, a K-8 educational technology company used by nearly 3 million students in the United States, Canada, and Mexico. ● KKR announced last year it was jumping on the impact investing bandwagon. With its new fund aiming for deals around the $50-$75 million range and with investment themes tied to the United Nations’ Sustainable Development goals, the education sector can be expected to benefit. Largely the prior realm of large foundations, non-profits and governments, these **recent transactions show that big funds are starting to wake up to the unlocked potential in the education sector**, both **in the United States and globally.** They are now **willing to consider putting hundreds of millions of dollars to work** in the sector, **rather than the tens of millions** previously. Much room for growth **Several factors are driving this trend,** which should **make the education sector an attractive target for impact investors** and mid-market PE firms in the coming years. First, there is a sense that education is not working around the world, **creating a clear need for private-sector dollars to make up for a global shortfall in education** **investment.** Even as global demand for access to quality education has grown, governments have failed to keep pace with the necessary investment in schools and colleges. Education systems in many rich countries have struggled due to public spending cuts and soaring prices for higher education. Total spending on education will need to go from $1.2 trillion per year in 2016 to $3 trillion by 2030 across all low- and middle-income countries in order to meet the U.N. Sustainable Development goals for education, according to the International Commission for Financing Global Education. Second, **technological advances have revolutionized the way in which education can be designed** and delivered. Rather than building and running bricks-and-mortar schools, **modern education firms are more likely to be focused on improving students’ access to learning through software platforms, online classes, and support.** This **has reduced** some of **the old complexity and costs of education investing, making it a more attractive proposition.** One successful example of this is Bridge International Academies, which has rolled out its “academy in a box” program to cover nearly 100,000 students in several African countries. It has attracted funding from venture capital investors like LearnCapital and Rethink Education as well as impact investors Omidyar Network and CDC. Lastly, there is the supply side of the equation. U.S. private equity is sitting on about $2 trillion in dry-powder funds, according to Bain Capital and facing a diminishing range of things to do with it. With so much money chasing relatively few opportunities, **investors are taking a closer look at alternative investments and are willing to accept more modest returns.** Returns are not everything These days, an IRR of 15-20 percent is seen as acceptable, which brings many education investment opportunities into range over a seven-year time frame. For PE firms, **buying impact assets in education** and other sectors **has also become an attractive way to boost their image**, **differentiate themselves, and attract investors** who are increasingly **interested in being benevolent** as well as generate investment returns. All levels of education are set to benefit from this trend, but perhaps the most promising in the medium term is the field of corporate training and professional development. This is where a lot of U.S. ed tech investment has been focused recently in an effort to address a growing skills gap in the workforce between high school, college, and the workplace. Bain’s purchase of Penn Foster and its subsequent acquisition of Ashworth College are among those that are squarely focused on this theme.

**LLMs trigger bioterror—we’re on the brink.**

**Egan-23** [Janet Egan, 11-6-2023, [B.A. Philosophy & German Studies @ Monash University, M.A. Public Policy @ Harvard University, Senior Fellow @ CNAS, DAAD Scholarship Winner - 2014], "Biosecurity in the Age of AI: What’s the Risk?", Belfer Center. https://www.belfercenter.org/publication/biosecurity-age-ai-whats-risk] AB

“**The** **biggest** **issue** with **AI** is **actually** **going** to **be** … **its** **use** in **biological** **conflict**,” **according** to **former** **Google** **CEO**, **Eric** **Schmidt**.[1] And **he’s** **not** **the** **only** AI **expert** **worried**. In **his** **testimony** **before** the **Senate** **Judiciary** **Committee** **Subcommittee** on **Privacy**, **Technology**, and the **Law**, the **CEO** of **Anthropic**, **Dario** **Amodei**, **warned** that in **just** **two** to **three** **years**, **AI** **has** the **potential** **to** “**greatly** **widen** the **range** of **actors** **with** the **technical** **capability** to **conduct** a **large**-**scale** **biological** **attack**.”[2] OpenAI’s Sam Altman has called for regulation on AI models “that could help create novel biological agents.”[3]President Biden’s recent Executive Order on Safe, Secure and Trustworthy Development and Use of Artificial Intelligence explicitly tasks relevant agencies with assessing the ways in which AI can increase, and potentially help mitigate, biosecurity risks.[4]But what exactly has experts and officials so worried? The deliberate use of microorganisms like viruses or bacteria to cause disease or death[5] has a long and terrible history: Japan weaponized typhus and cholera in World War II,[6] and the Soviet Union’s bioweapon program throughout the Cold War included producing and stockpiling smallpox, anthrax, and drug-resistant plague.[7] The United States also developed its own bioweapon program in this period, including anthrax and Q-fever, until it was terminated by President Nixon in 1969.[8] Today, the Centers for Disease Control warns that the bacteria that causes anthrax is one of the most likely agents to be used in a biological attack.[9] To date, the development, containment, and deployment of such weapons have required significant resourcing and expertise.[10] This does not mean such weapons have only been accessible to nation-states, but it has ensured that only a limited number of actors have had the capability to develop them. AI experts are concerned that highly capable AI models could assist non-experts in designing, synthesizing, and using these weapons, thus expanding the pool of actors that could access these dangerous capabilities. Concerns are increasingly centered around future capabilities, rather than those of the present day. **MIT** **students** **recently** **demonstrated** how **large** **language** **model** (**LLM**) **chatbots** **could** be **used** **to** **help** **non-experts** **understand** the **process** of **manufacturing** **risky** **pathogens**.[11] **Within** **one** **hour**, **students** without **science** **backgrounds** had **used** the **chatbots** to **list** **four** **viruses** **capable** of **causing** a **pandemic**, **identify** **reverse** **genetics** as a **means** to **manufacture** **them** and **suggest** **acquisition** **methods** that **could** **help** **bypass** **misuse** **screening**.[12] But in this and other experiments, such as a recent report by RAND, LLMs have not yet generated explicit, directly actionable instructions on how to create bioweapons, and it is not clear that today’s LLMs offer significant advantages over what can already be gleaned from the internet.[13] **In** **the** **future**, more **advanced** **AI** **capabilities** **may** **cause** **greater** **concern**, as **LLMs** **increasingly** **enable** the **synthesis** and **production** of **sophisticated** and **accurate** **insights** at an **expert** **level**.[14] Even less advanced models, when focused on biological data, might give rise to biological risks. In 2022, an experiment revealed how AI used in pharmaceutical design could be tweaked to design highly toxic chemicals instead.[15] **As** **AI** **models** are **increasingly** **trained** and **deployed** to **aid** **research** in **areas** like **pathogens** and **cancers**, **they** may **have** **the** **potential** to be **similarly** **co**-**opted** to **design** **new** and **more** **harmful** **pathogens**. Given the potentially catastrophic impacts of biological agents, it will be necessary for AI, biology, and broader experts to collaborate on better understanding these risks.

**Bioterror causes extinction.**

**Walsh-21** [Bryan Walsh, the Future Correspondent for Axios, Editor of the Science and Technology Publication OneZero, Former Senior and International Editor at Time Magazine, BA from Princeton University, “BIOTECHNOLOGY: Engineering a Killer,” End Times: A Brief Guide to the End of the World, Chapter 6, pp. 204-206, ISBN: 978-0275948023] WP + IB + SJID + EHSRJ <3

I’ve lived through disease outbreaks, and in the previous chapter I showed just how unprepared we are to face a widespread pandemic of flu or another new pathogen like SARS. But **a deliberate outbreak caused by an engineered pathogen would be far worse**. We would face the same agonizing decisions that must be made during a natural pandemic: whether to ban travel from affected regions, how to keep overburdened hospitals working as the rolls of the sick grew, how to accelerate the development and distribution of vaccines and drugs. To that dire list add the **terror** that **would spread** once it became clear that the death and disease in our midst was not the random work of nature, but a deliberate act of malice. We’re scared of disease outbreaks and we’re scared of terrorism—put them together and you have **a formula for chaos**. As deadly and as disruptive as a conventional bioterror incident would be, an attack that employed existing pathogens could only spread so far, limited by the same laws of evolution that circumscribe natural disease outbreaks. But **a virus engineered in a lab to break** those **laws could spread faster and kill quicker than anything that would emerge out of nature. It can be designed to evade medical countermeasures, frustrating doctors’ attempts to diagnose cases and treat patients. If health officials manage to stamp out the outbreak, it could be reintroduced into the public again and again. It could, with the right mix of genetic traits, even wipe us off the planet, making engineered viruses a genuine existential threat. And** such **an attack may not even be that difficult to carry out. Thanks to advances in biotech**nology **that have rapidly reduced the skill level and funding needed to perform gene editing and engineering**, what might have once required the **work** of an army of virologists employed by a nation-state **could soon be done by** a handful of talented and trained **individuals**. Or maybe just one.

**Contention 2 is REGULATIONS.**

**Trump’s making AI great again.**

**Booth-24** [Harry Booth, 11-8-2024, (AI Reporter @ Time, B.A. in Global Politics @ University of Auckland), “What Donald Trump’s Win Means For AI,” Time Magazine. https://time.com/7174210/what-donald-trump-win-means-for-ai/ DOA: 2/27/2025] //vy

**Trump’s first major AI policy move** will likely be to **repeal** President [Joe **Biden’s Executive Order** on **AI**](https://www.whitehouse.gov/briefing-room/presidential-actions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence/). The sweeping order, signed in October 2023, sought to address threats the technology could pose to civil rights, privacy, and national security, while promoting innovation, competition, and the use of AI for public services. Trump [promised](https://www.c-span.org/video/?532074-1/president-trump-campaigns-cedar-rapids-iowa) to repeal the Executive Order on the campaign trail in December 2023, and this position was reaffirmed in the [Republican Party platform](https://edition.cnn.com/interactive/2024/07/politics/republican-gop-platform-annotated-dg/index.html) in July, which **criticized** the **executive order** for **hindering innovation** and **imposing** “**radical leftwing ideas**” on the **technology’s development**. Read more: [Republicans’ Vow to Repeal Biden’s AI Executive Order Has Some Experts Worried](https://time.com/6996927/republicans-repeal-biden-ai-executive-order/) Sections of the Executive Order which focus on racial discrimination or inequality are “not as much Trump’s style,” says Dan Hendrycks, executive and research director of the Center for AI Safety. While experts have [criticized](https://time.com/6996927/republicans-repeal-biden-ai-executive-order/) any rollback of bias protections, Hendrycks says the **Trump Administration** may **preserve other aspects** of **Biden's approach**. “I think there's stuff in [the Executive Order] that's very bipartisan, and then there's some other stuff that's more specifically Democrat-flavored,” Hendrycks says. “It would not surprise me if a Trump executive order on AI **maintain**ed or even **expand**ed **on** some of the **core national security provisions within** the **Biden Executive Order**, building on what the Department of Homeland Security has done for evaluating cybersecurity, biological, and radiological risks associated with AI,” says Samuel Hammond, a senior economist at the Foundation for American Innovation, a technology-focused think tank. The **fate** of the **U.S. AI Safety Institute (AISI)**, an institution created last [November](https://www.commerce.gov/news/press-releases/2023/11/direction-president-biden-department-commerce-establish-us-artificial) by the Biden Administration to lead the government's efforts on AI safety, also **remains uncertain**. In [August](https://www.nist.gov/news-events/news/2024/08/us-ai-safety-institute-signs-agreements-regarding-ai-safety-research), the AISI signed agreements with OpenAI and Anthropic to formally collaborate on AI safety research, and on the testing and evaluation of new models. “Almost certainly, the AI Safety Institute is **viewed** as an **inhibitor to innovation**, which **doesn't necessarily align** with the rest of **what appears to be Trump's tech** and **AI agenda**,” says Keegan McBride, a lecturer in AI, government, and policy at the Oxford Internet Institute. But Hammond says that while some fringe voices would move to shutter the institute, “most Republicans are supportive of the AISI. They see it as an extension of our leadership in AI.” Read more: [What Trump’s Win Means for Crypto](https://time.com/7173421/what-donald-trump-election-win-means-for-crypto/) Congress is already working on protecting the AISI. In October, a broad coalition of companies, universities, and civil society groups—including OpenAI, Lockheed Martin, Carnegie Mellon University, and the nonprofit Encode Justice—signed a [letter](https://responsibleinnovation.org/wp-content/uploads/2024/10/20241021ARI_ITIOctoberAISIHillLetter.pdf) calling on key figures in Congress to urgently establish a legislative basis for the AISI. Efforts are underway in both the Senate and the House of Representatives, and both reportedly have “pretty wide bipartisan support,” says Hamza Chaudhry, U.S. policy specialist at the nonprofit Future of Life Institute. America-first AI and the race against China **Trump’s previous comments suggest** that **maintaining** the **U.S.’s lead in AI development** will be a **key focus** for his **Administration**.“*We* ***have to be at the forefront***,” he said on the Impaulsive podcast in June. “*We* ***have to take the lead over China***.” Trump also framed environmental concerns as potential obstacles, arguing they could "hold us back" in what he views as the race against China. **Trump's AI policy** could **include rolling back regulations** to **accelerate infrastructure development**, says Dean Ball, a research fellow at George Mason University. "There's the **data centers** that are **going to have to be built**. The **energy to power those data centers** is **going to be immense**. I think even bigger than that: chip production," he says. “We're **going to need a lot more chips**.” While Trump’s campaign has at times [attacked](https://www.youtube.com/watch?v=hBMoPUAeLnY) the **CHIPS Act**, which provides **incentives for chip makers manufacturing** in the U.S, leading some analysts [to believe](https://www.cnbc.com/2024/11/07/trump-likely-to-uphold-chips-act-despite-his-campaign-rhetoric-experts-say.html) that he is **unlikely to repeal** the act. Read more: [What Donald Trump’s Win Means for the Economy](https://time.com/7095898/donald-trump-economy-plan-2024/) **Chip export restrictions** are **likely to remain** a **key lever** in **U.S. AI policy**. Building on measures he initiated during his first term—which were later expanded by Biden—**Trump** may well **strengthen controls** that **curb China's access** to **advanced semiconductors**. "It's fair to say that the Biden Administration has been pretty tough on China, but I'm sure **Trump wants to be seen** as **tougher**," McBride says. It is “quite likely” that Trump’s White House will “**double down**” on **export controls** in an **effort** to **close gaps** that have **allowed China** to **access chips**, says Scott Singer, a visiting scholar in the Technology and International Affairs Program at the Carnegie Endowment for International Peace. “The overwhelming majority of people on both sides think that the export controls are important,” he says. The [**rise**](https://time.com/7171962/open-closed-ai-models-epoch/) **of open-source AI presents** **new challenges**. China has shown it can leverage U.S. systems, as demonstrated when Chinese researchers [reportedly](https://www.reuters.com/technology/artificial-intelligence/chinese-researchers-develop-ai-model-military-use-back-metas-llama-2024-11-01/)adapted an earlier version of Meta's Llama model for military applications. That’s created a policy divide. "You've got people in the GOP that are really in favor of open-source," Ball says. "And then you have people who are 'China hawks' and really want to forbid open-source at the frontier of AI." "My sense is that **because** a **Trump platform** has **so much conviction** in the **importance** and **value of open-source** I'd be **surprised** to **see a movement** **towards restriction**," Singer says. Despite his tough talk, Trump's deal-making impulses could shape his policy towards China. "I think **people misunderstand Trump** as a **China hawk**. He **doesn't hate China**," Hammond says, **describing Trump's** "**transactional**" **view** of **international relations**. In 2018, **Trump** [lifted restrictions](https://www.reuters.com/article/technology/us-reaches-deal-to-keep-chinas-zte-in-business-congressional-aide-idUSKCN1IQ2JY/) on Chinese technology company ZTE in exchange for a $1.3 billion fine and increased oversight. Singer **sees similar possibilities** for **AI negotiations**, particularly if Trump accepts concerns held by many [experts](https://www.safe.ai/work/statement-on-ai-risk) about AI’s **more extreme risks**, such as the **chance that humanity** may **lose control over future systems**.

**Indeed,**

**Potas-25** [Dace Potas, 02-02-2025, (B.A. Political Science @ DePaul University, Columnist @ USA Today), "Trump is right to invest in AI development. But is it too late to beat China?", USA Today. https://www.usatoday.com/story/opinion/columnist/2025/02/02/deepseek-ai-trump-invest-development/78035041007/ DOA: 2/27/2025] AB

Prevailing in the AI arms race is essential for America to prevent the Chinese Communist Party from shaping worldwide narratives and ultimately expanding its international influence. Beyond the economic downside of more nations cozying up to China, Americans should worry about an authoritarian, genocidal regime gaining more influence over the international community. Trump has wisely chosen to invest in American artificial intelligence **DeepSeek's** **arrival** **comes** just **days** **after** President **Donald** **Trump** **announced** a **$100 billion investment** in **AI** **infrastructure** **under** the name **Stargate**, a **collaboration** by **Oracle**, **OpenAI** and **Japanese** **technology** giant **SoftBank**. Additional **investments**, **bringing** the **total** **up** to **$500 billion**, are **anticipated** to **follow**. **Trump** **also** has **ordered** a **review** of **existing** **policies** to **determine** which **regulatory** **burdens** are **hindering** **AI** **development**, **allowing** **developers** to **make** **advancements** **without** **restraint**. Opinion:Tablets, screen time aren't 'parenting hacks.' They're killing kids' attention spans. These efforts are a good start, but the United States needs to do more if it wants to remain at pace with China, where innovation is already in full swing. Facilitating American investments in the AI landscape is pivotal in our race against China in pioneering these new technologies. **Trump** is **taking** **positive** **action** in **promoting** **investments** in **these** **fields**, and I **would** **like** to **see** his **administration** **continue** to **facilitate** **investment** in **infrastructure**. American companies need help pushing AI innovation **Trump** should **continue** to **roll** **back** **red** **tape** and **unnecessary** **regulations** **that** only **stifle** **innovation**. Allowing **American** **companies** to **innovate** without **impediment** is **vital** to **allowing** the **free** **market** to **take** the **lead** over **China**. At the same time, closing loopholes and combating the smuggling of intelligence chips into China is vital to maintaining our advantage. This is a fight in which we must play offense and defense. While Trump’s initial actions to promote domestic AI innovation are positive, this will be an issue that demands prolonged attention throughout his second administration. **Eliminating** **red** **tape**, **encouraging** **investment** in **AI** **infrastructure** and **combatting** **China** **directly** are **all** **essential** to **winning** the **next** **frontier** of **innovation**.

**Universities drive private sector AI development.**

**Schmidt-ND** [Dr. Eric Schmidt, No Date, (Chair @ NSCAI, Fmr. CEO @ Google, Co-Founder @ Schmidt Futures, B.S.E @ Princeton, M.S. + P.h.D @ UC Berkeley), “Chapter 11: Accelerating AI Innovation,” National Security Commission on Artificial Intelligence.

https://reports.nscai.gov/final-report/chapter-11?overlay=Brain-Drain DOA: 2/27/2025] //vy

**American technology firms** are **accountable** to their **shareholders** and **will logically not invest** in **areas** of **national security importance** or **make uncertain bets** on fundamental **research** that **does not hold** commercial or economic **benefit** for the **company**.1 **While return-focused** **investments** can **lead to applications** that **contribute** to the **public good** or **benefit government work**, there are **gaps**. **ML** and the **underlying algorithms** were in **exactly this position two decades ago**—seemingly **without commercial promise**—only to be **sustained by federal research dollars** until computing power and an overabundance of data transformed the discipline.2 A **recent study found** that **82% of the algorithms in use** **today originated from** federally funded non-profits and **universities**, **compared to** just **18%** that **originated from private companies**.3

**But, they are incentivized to regulate.**

**Aniston-24** [Amber Aniston, 10-17-2024, (Analyst @ MLS PLLC), “Urgent Need for AI Policies in Education,” Masterly Legal Solutions PLLC.

https://www.masterlylegal.com/why-schools-must-act-now-the-urgent-need-for-ai-policies-in-education DOA: 3/3/2025] //vy + AB

Schools need to create policies that address these concerns and clearly define acceptable AI use. The challenge is finding a balance between embracing the benefits of AI while maintaining the principles of academic honesty and critical thinking that are the bedrock of education. In **today’s rapidly changing digital environment**, **failing** to **create** these **policies opens schools up** to **legal risk** and undermines the credibility of academic achievements. Why Schools Need AI Policies Now With **AI’s growing presence** in **classrooms**, schools cannot afford to delay the creation of formal AI policies. These policies need to be more than just a set of rules; they should be comprehensive frameworks that guide both students and teachers on the responsible use of AI. Without such policies, schools may struggle to maintain fairness, transparency, and accountability, which are essential in education. The case in Massachusetts is a prime example of how the absence of an AI policy can lead to confusion and disputes. The student and his family argued that AI was used for research purposes, much like using a search engine, and did not constitute cheating. However, because the school had no clear rules about AI use, the student faced serious consequences. The lack of a formal policy put the school in a precarious position, exposing it to **legal action** and **potential damage** to its **reputation**. This incident is just one of what **could be many cases** if **schools do not act swiftly** to **regulate AI use**. **As AI continues to develop** and **become** even **more embedded** in the **academic world**, **schools** must **take proactive steps** to **protect** their students and staff **from** unnecessary **legal** **risks**. By implementing AI policies now, schools can ensure they are prepared for the future and minimize the chance of facing similar legal challenges. Legal Risks of Inaction **Schools that fail** to **implement clear AI policies risk facing legal battles** similar to the one in Massachusetts. Without a formal policy, disciplinary actions for AI use are vulnerable to legal scrutiny. Students may argue that they were unaware of the rules regarding AI, leading to lawsuits over unfair punishments. Moreover, **schools** that **rely on outdated** or **vague policies** may **find themselves** on the **losing side** of **legal disputes**, **especially if** the **courts view AI** as an **emerging technology** that **requires explicit guidelines**. **Beyond individual lawsuits**, **schools** also **risk long-term reputational damage** if they are **perceived** as **unprepared** to **handle** the **complexities of AI in education**. Parents, students, and faculty expect educational institutions to provide clear guidance on how to use new technologies responsibly. Schools that fail to do so may lose the trust of their communities and **find it harder** to **attract top talent** in **both their student body** and **teaching staff**. Additionally, **universities** and **colleges** are **already beginning** to **implement their own AI policies**. As more higher education institutions formalize their rules around AI, K-12 schools will likely need to follow suit to ensure that their students are prepared for the expectations of university life. The sooner schools establish AI policies, the better positioned they will be to navigate the inevitable challenges that come with integrating AI into the educational system.

**Indeed,**

**Poinski-24** [Megan Poinski, 4-18-2024, (B.A. Journalism @ George Washington, M.I.M. Information Management @ University of Maryland), "AI Regulation Has Strong Bipartisan Approval", Forbes. https://www.forbes.com/sites/cio/2024/04/18/ai-regulation-has-strong-bipartisan-approval/] AB

**Even** in **these** **polarized** **times**, **there** is **one** **thing** most **Americans** **actually** do **agree** **on**: The **U.S**. government **needs** to **regulate** **AI**. That’s the topline finding from a recent survey published by the Program for Public Consultation at the University of Maryland’s School of Public Policy. Researchers briefed 3,610 registered voters about some of the major issues about AI regulation, giving them arguments in favor of regulations as well as against them, then asked their opinion. **The** **results** **were** very **clear**: **Both** **Republicans** and **Democrats** are **strongly** in **favor**. The **specific** **policies** **asked** **about** on the **survey** **include** **creating** a **new** **federal** **agency** to **oversee** **AI** (**supported** by **74% total**, **including** **68%** of **Republicans** and **81%** of **Democrats**). In the area of deepfakes, respondents agreed they should be prohibited in political campaign ads (84% total), and all of them should be clearly labeled (83% total). There was also consensus that AI systems used to make decisions that impact people—including healthcare, banking, hiring, criminal justice and welfare—should be regulated. **More** than **eight** in **10** of **all** **respondents** said **AI** **systems** should **pass** **tests** to **determine** **compliance** with **regulations**, **biases** and **security vulnerabilities** before **launch**. A total of 77% said the government should be able to audit programs that are currently in use, and 72% want to require companies to disclose information about how their AI system was trained to the government. “**Americans** **are** **wary** of **government** **regulation**, **but** **they** are **clearly** **more** **wary** of the **unconstrained** **development** **and** **use** of **AI**,” PPC Director Steven Kull said in a written statement.

**Even uncertainty triggers it.**

**Urcan-24** [Oktay Urcan, 12-16-2024, (Professor of Accounting @ UIUC), “Do AI Laws Inhibit Innovation?” SSRN.

https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=5046045 DOA: 2/27/2025] AB

**AI** **regulation** could **depress** **AI** **innovation** **given** the **uncertainty** of **how** **new** **laws** and **regulations** will **impact** **payoffs** from **investment** (**Callander** and **McCarty** **2024**). **AI** **regulation** can **induce** **regulatory** **uncertainty** **causing** **firms** to **restrict** **their** **use** of **AI**. The uncertainty is the result of ambiguity regarding the future direction of AI regulation and how policy interventions will be enforced (Beazer 2012; Fowler 2006). Prior literature documents that regulations in other settings have induced more uncertainty, rather than resolving it, including with respect to option exchanges (Battalio and Schultz 2011) and FinTech (Campello, Cong, and Dietrich 2024). **During** **periods** of **heightened** **regulatory** **uncertainty**, **firms** are **unlikely** to **undertake** **risky** **activities** (**Park**, **Wu**, and **Funk** **2024**). With **respect** to **AI**, this **could** **cause** **firms** to **restrict** **data** **used** in **training** **AI** **models** to **develop** and **customize** **products** **and** **services**. **Regulatory** **uncertainty** can **also** **prevent** **firms** from **experimenting** and **learning** from **various** **alternatives** (**Babina** **et** **al**. **2024**). **By** **causing** **firms** to **forego** such **investments**, regulatory **uncertainty** can **reduce** **AI’s** **potential** to **generate** **new** **ideas**, **evaluate** **alternative** **ideas**, **improve** **decision** **making**, **accelerate** **prototyping**, and **speed** **up** **risk** **assessment** **thereby** **slowing** the **pace** of **innovation** (Kulakauskaite 2024). We state our main hypothesis as follows:

**And within universities,**

**Barnes-23** [Julian E. Barnes, 10-18-2023, [B.A. Social Studies @ Harvard University, National Security Reporter @ NYT], “Allied Spy Chiefs Warn of Chinese Espionage Targeting Tech Firms,” The New York Times.

https://www.nytimes.com/2023/10/18/us/politics/china-spying-technology.html DOA: 2/27/2025] //vy

“That unprecedented meeting is because we are **dealing** **with** another **unprecedented threat**,” said Christopher A. Wray, the F.B.I. director. “There is **no greater threat** to **innovation** than the Chinese government.” The warnings come as the United States and China [engage in an intense, and expanding, spy-versus-spy contest](https://www.nytimes.com/2023/09/17/us/politics/us-china-global-spy-operations.html), and as U.S. officials say that **China’s espionage efforts** have **reached across every facet of national security**, **diplomacy** and **advanced** commercial **technology** in the **United States** and partner nations. The intelligence chiefs said they were making the case to private industry that the security interests of the West were aligned with their business interests. No one profits if China steals intellectual property, they argued. The spy chiefs said **China** is **intensely interested** in **Western artificial intelligence**, a technology that will allow countries to improve their intelligence collection and analysis and is set to be a driver of economic gains for years. Just before the spy chiefs met on Tuesday, the Biden administration announced that it was [limiting the sale of advanced semiconductors to China](https://www.nytimes.com/2023/10/17/business/economy/ai-chips-china-restrictions.html), a restriction that could curb China’s development of artificial intelligence. At a news conference on Tuesday evening, Mr. Wray said **China** was **stealing American technological know-how** and then **turning around** and **using** the **stolen knowledge** to **steal more**. “They are using A.I. to improve their already massive hacking operations, in effect using our own technology against us,” Mr. Wray said. Ken McCallum, the director general of MI5, said that the number of investigations into Chinese espionage had risen substantially in Britain since 2018, and that China had increased the number of approaches it has made to potential informants there. The technologies China is trying to steal have potential to transform both economics and security, and **China** is **undertaking** an **ambitious effort** of **large scale**, he said. “**If you are** **anywhere near** the **cutting edge of tech**, **you may not be interested** in **geopolitics**, but **geopolitics is interested in you**,” Mr. McCallum said. The **intelligence chiefs** said **China was using hacking**, **pressure** on Chinese **students**, informants in Western companies and joint ventures with Western firms to try to **steal critical technology**. David Vigneault, the director of the Canadian Security Intelligence Service, said Western companies needed to understand that China had “**changed** the **rules of the game**.” He said **laws** in **China compelled** its **nationals anywhere** in the **world** to **provide information** to **Beijing’s intelligence services**. “It means they have a **way to coerce people here** in our countries to **essentially tell them**, to **give them the secrets**,” Mr. Vigneault said. U.S. national security officials have said that **preventing Beijing from imposing** its **rules on people overseas** is a **top priority**. The United States is working to shut down [illegal overseas police stations](https://www.justice.gov/opa/pr/two-arrested-operating-illegal-overseas-police-station-chinese-government) that the Justice Department says are used to monitor and intimidate dissidents. Mike Burgess, the director general of the Australian Security Intelligence Organization, said **China** was **exploiting the openness** of the West, and the **desire** of **Western universities to collaborate**.

**All this is putting us at the brink.**

**Buchaniec-22** [Catherine Buchaniec, 9-13-2022, (B.S. Journalism & Political Science @ Northwestern, M.S. Journalism @ Northwestern), “US approaching ‘critical time’ in teach race with China,” C4 Isrnet.

https://www.c4isrnet.com/artificial-intelligence/2022/09/13/us-approaching-critical-time-in-tech-race-with-china-report-says/ DOA: 2/27/2025] //vy

The nearly 200-page assessment, called the “Mid-Decade Challenges to National Competitiveness,” is the first published by the Special Competitive Studies Project, a private group led by Eric Schmidt, former Google CEO and co-chairman of the U.S government’s National Security Commission on Artificial Intelligence, and Work, who serves on the group’s board of advisors. The organization seeks to build on the work completed by the congressionally mandated AI commission, which identified technology as the central element of the rivalry between the U.S. and China. The commission wrapped up its work last October. According to the report, **the years 2025 to 2030 will prove critical in deciding whether the U.S. keeps pace or falls behind in the technology battle. Losing the competition could comprise Americans’ daily lives**, the report said. Not only could China use its techno-economic advantage for political leverage, but Chinese domination could threaten free access to the internet and create a dependence on the country for most core digital technologies, making nations vulnerable to cyber attacks. “**Up to this point, because of the 20 years we spent in the Middle East, it kind of took our eyes off the ball**,” Work said. “As this technological rivalry and competition was really growing in strength, we didn’t really respond as we normally have done in the past.” **Three technology battlegrounds — microelectronics, fifth-generation wireless technology (5G), and AI — tell the story of the U.S. and its allies coming perilously close to ceding the strategic technology landscape**, the report said. Those technologies represent the critical hardware, network infrastructure and software underpinning everyday life in the U.S. as well as the country’s national security apparatus.

**Crucially,**

**Kroenig-19** [Matthew Kroenig, 11-12-2019, (Published author, Associate Professor of Government and Foreign Service at Georgetown University and Deputy Director for Strategy in the Scowcroft Center for Strategy and Security at the Atlantic Council.), “Will disruptive technology cause nuclear war?” The Bulletin.

https://thebulletin.org/2018/11/will-disruptive-technology-cause-nuclear-war/ DOA: 1/14/2024] //recut vy

Rather, we should think more broadly about how new technology might affect global politics, and, for this, it is helpful to turn to scholarly international relations theory. **The dominant theory of** the **causes of war** in the academy **is the “bargaining model of war.”** **This** theory **identifies rapid shifts in the balance of power as a primary cause of conflict.** International politics often presents states with conflicts that they can settle through peaceful bargaining, but when bargaining breaks down, war results. **Shifts in** the **balance of power are problematic because they undermine effective bargaining**. After all, why agree to a deal today if your bargaining position will be stronger tomorrow? And, a clear understanding of the military balance of power can contribute to peace. (Why start a war you are likely to lose?) But **shifts in the balance of power muddy understandingsof which states have the advantage**. You may see where this is going. **New technologies threaten to create** potentially **destabilizing shifts in the balance of power**. **For decades, stability in Europe and Asia has been supported by US military power**. **In recent** years, however, **the balance of power in Asia has begun to shift, as China has increased its military capabilities**. Already, **Beijing has become more assertive in the region, claiming contested territory in the South China Sea**. And the results of Russia’s military modernization have been on full display in its ongoing intervention in Ukraine. Moreover, **China may have the lead over the U**nited **S**tates **in emerging technologies that could be decisive for the future of military acquisitions and warfare, including 3D printing, hypersonic missiles, quantum computing, 5G wireless connectivity, and** artificial intelligence (**AI**). And Russian President Vladimir Putin is building new unmanned vehicles while ominously declaring, “**Whoever leads in AI will rule the world**.” If China or Russia are able to incorporate new technologies into their militaries before the United States, then this could lead to the kind of rapid **shift** **in** the **balance** of power that often causes war. **If Beijing believes emerging technologies provide it with a newfound**, local **military advantage over the U**nited **S**tates, for example, **it may be more willing** than previously **to initiate conflict** **over Taiwan**. **And** if Putin thinks new tech has strengthened his hand, he may be more tempted to launch a Ukraine-style invasion of a NATO member. Either **scenario could bring** these **nuclear powers into direct conflict with the U**nited **S**tates, **and once nuclear armed states are at war, there is an inherent risk of nuclear conflict through limited nuclear war strategies, nuclear brinkmanship, or** simple **accident or inadvertent escalation**. This framing of the problem leads to a different set of policy implications. The concern is not simply technologies that threaten to **undermine** nuclear second-strike capabilities directly, but, rather, any technologies that **can** **result** in a **meaningful** **shift** in the **broader** **balance** of **power**. And the solution is not to preserve second-strike capabilities, but **to preserve prevailing** power balances more broadly. **When it comes to new technology, this means that the United States should seek to maintain an innovation edge.** Washington should also work with other states, including its nuclear-armed rivals, to develop a new set of arms control and nonproliferation agreements and export controls to deny these newer and potentially destabilizing technologies to potentially hostile states. These are no easy tasks, but **the consequences of Washington losing the race for technological superiority to its autocratic challengers** just **might mean nuclear Armageddon.**

**Contention 2 is FINANCES**

**Universities are in peril**

**Wadhwani-25** [Emily Wadhwani, 1-15-2025, (Senior Director @ Fitch, MBA @ Iowa, B.A. @ Creighton), “U.S. Higher Education Navigating Numerous Changes in 2025,” Fitch Ratings. https://www.fitchratings.com/research/us-public-finance/us-higher-education-navigating-numerous-changes-in-2025-15-01-2025 DOA: 2/25/2025] //vy

Fitch Ratings-Chicago/New York-15 January 2025: While the universe of Fitch-rated U.S. colleges remain fundamentally stable in performance, cracks will continue to surface this year, as discussed in a webinar hosted by Fitch Ratings yesterday.

Fitch maintains a **deteriorating** **sector** **outlook** for **higher education** in **2025**, **driven** in part **by** a **softer operating environment, reduced financial flexibility**, a **fragile** international **enrollment pipeline**, and an **expectation** for **increased consolidation** and **college closures**. Though much of the sector’s unrest comes from unrated colleges, even rated **institutions** at both ends of the rating spectrum are **now** also **facing reduced** an **increasingly** **challenging fundraising environment**, **shrinking** **class** **sizes** and **more intense cost control pressures**.

The perceived value of higher education versus its cost is a long-term behavioral shift that colleges will have to navigate, with the incoming administration being an important barometer for how the sector may fare, according to Fitch Senior Director Emily Wadhwani.

“With **tuition growth** still **moderating**, **flattening enrollment prospects**, and a **great deal** of **policy uncertainty** at both state and federal levels, **margins** will **likely remain very modest** at **best** in **fiscal 2025**,” said Wadhwani. “Further, **endowments** have **benefitted** from **recent market gains**, but **access to ready liquidity** will **continue to be critical** as **colleges navigate** operating and environmental **uncertainty**.”

**State funding** should **help keep financial risk at bay** in the **near term,** a bright spot of sorts tempered by more intangible risks the sector faces. Key person risk is a particular area of concern, with Wadhwani pointing to more ‘turnover at the top’ as average tenure of university presidents continues to decline. “There is also an elevated percentage of university staff that are very likely looking for new employment over the next 12 months,” said Wadhwani.

**Even for large ones**

**Azziz-24** [Ricardo Azziz, 8-19-2024, (Exec. Director “Why is the higher education sector so fragile in the US?” Higher Ed Drive.

https://www.highereddive.com/news/merger-watch-us-fragile-higher-education/724471/ DOA: 3/7/2025] //vy

**Declining enrollment** has **increased** the **financial challenges** of **most types of colleges**. **All sectors** of **institutions**, when **viewed by size**, have **recently experienced enrollment decreases** — with the **exception** of the **colleges that enroll over 30,000 students**.

Institutions with fewer than 1,000 students have seen the most significant decrease in enrollment, which has declined 36% between fall 2012 and fall 2021. **Paradoxically**, **larger colleges** and **universities** that **enroll between 20,000** and **29,999 students** — which are often regional institutions — also **lost 30% of their enrollment** over that same period.

**Indeed,**

**Dickler-24** [Jessica Dickler, 12-22-2024, (Financial Journalist @ CNBC, B.A. in Political Science @ Johns Hopkins, M.A. @ Columbia SIPA), “College closures expected to spike amid ‘unprecedented fiscal challenges,’ Fed research finds,” CNBC. https://www.cnbc.com/2024/12/11/college-closures-could-jump-amid-financial-challenges-fed-research.html DOA: 2/25/2025] //vy

But now, the **number of colleges set to close** in the **next five years** is [**expected** to **spike**](https://www.philadelphiafed.org/-/media/frbp/assets/working-papers/2024/wp24-20.pdf), a new study found.

**Higher education**, as a whole, is “**facing serious financial headwinds**, both due to long-term trends and to the post-pandemic recovery,” according to a working paper by the [Federal Reserve Bank of Philadelphia](https://www.philadelphiafed.org/-/media/frbp/assets/working-papers/2024/wp24-20.pdf).

“**Colleges** and **universities** are **facing unprecedented fiscal challenges** in **today’s economic climate**,” the **Fed researchers** **wrote**.

More from Personal Finance:  
[The 2025-26 FAFSA is open ahead of schedule](https://www.cnbc.com/2024/11/19/2025-26-fafsa-is-open-ahead-of-schedule-why-it-helps-to-file-early.html)[These are the top 10 highest-paying college majors](https://www.cnbc.com/2024/09/05/top-10-highest-paying-college-majors-stem-continues-to-dominate.html)[More of the nation’s top colleges roll out no-loan policies](https://www.cnbc.com/2024/02/28/more-of-the-nations-top-colleges-roll-out-no-loan-policies.html)

**At least 20 colleges** **closed** in **2024**, and **another nine schools announced** they **will close** in **2025**, according to the latest tally by Implan, an economic software and analysis company.

In the worst-case scenario, as many as **80 additional colleges** would **shut** from **2025** to **2029**, the **Fed** analysis **found**.

**It’ll accelerate now**

**Kingson-24** [Jennifer A. Kingson, 7-3-2024, (Chief Correspondent @ Axios), “Schools are bracing for the looming “enrollment cliff”” Axios.

https://www.axios.com/2024/07/03/education-enrollment-cliff-schools DOA: 3/7/2025] //vy

The **number of U.S.** [**high school graduates**](https://www.axios.com/local/columbus/2023/05/26/class-of-2023-columbus-ohio-high-school-graduation) **is expected to** [**peak**](https://public.tableau.com/app/profile/jonboeckenstedt/viz/FinalWICHE/Topline) **in 2025 or 2026 and then decline for years to come — posing severe** [**challenges**](https://www.axios.com/2024/05/19/us-cities-school-student-enrollment-decrease) **to schools** at all levels.

Why it matters: Schools and **colleges are** [**closing**](https://www.axios.com/2024/05/21/cities-public-school-conundrum-whats-next), faculty members are being [laid off](https://www.axios.com/local/chicago/2024/06/11/columbia-college-chicago-future), and districts are facing financial dilemmas — **all as education is under political fire from every side**.

Driving the news: **Due to a birthrate drop after the 2008 recession, schools are planning for a decades long dry spell that's being referred to as the "enrollment cliff"** or "demographic cliff."

**AI expenditures ensure full collapse**

**Burke-25** [Lilah Burke, 1-2-2025, (Fmr. Reporter @ Inside Higher Ed, News Intern @ Bloomberg Law, B.S. in Foreign Service @ Georgetown, M.A. in Journalism @ CUNY), “Why more colleges are embracing AI offerings,” Higher Ed Drive.

https://www.highereddive.com/news/colleges-artificial-intelligence-programs-investments/736196/ DOA: 2/25/2025] //vy

Despite the growing interest in the emerging technology, **investing** in **AI**-related programming is **often difficult**. For one, depending on the level and focus, it **can be expensive**. **AI curricula** can **require colleges** to **hire qualified faculty** and **staff** and **pay** for **significant computing power**.

That’s why many of the **institutions** that are investing in AI, such as Carnegie Mellon University and Massachusetts Institute of Technology, are well-resourced with large endowments, Koslosky said.

Other institutions are pursuing partnerships with industry to make their goals possible. University of Florida, for instance, has a partnership with chipmaker Nvidia, which includes a $50 million gift from the company and one of its cofounders. Arizona State University is partnering with OpenAI, to provide enterprise subscriptions to ChatGPT for approved faculty and staff.

Stony Brook University, part of the State University of New York system, recently expanded an AI institute into [a universitywide initiative](https://news.stonybrook.edu/university/stony-brook-university-launches-ai-innovation-institute/), which will focus on research and applications in healthcare, infrastructure, education and finance. The university is investing about $15 million, which includes support from Empire AI, a college research consortium focused on AI and heavily funded by the state.

Stony Brook Provost Carl Lejuez said that “$15 million is nothing and a lot of money all at the same time.”

“We’re seeing companies **struggle** with this **immensely because** they’re **having to make decisions** about — are they **going to fall behind so far** that they’re **not going to be able to compete**?” Lejuez added. “But in the **meantime** they’re **spending millions** and in **some cases billions** in cases where they’re not generating real revenue yet.”

Whether an **investment** in **AI programming** is right for an institution will likely depend on its circumstances, including its resources, faculty, mission and connections to industry.

“If you’re a major research university, you’re going to be really far behind if you are not investing in this,” Lejuez said. “For research **universities**, it’s an absolute necessity.”

For other institutions though, a **big AI investment** might be **riskier**.

“If your school doesn’t have a huge computer science department and doesn’t have a lot of industry connections to companies using AI or building AI, then you shouldn’t drop everything to stand up a brand new AI program right now,” Koslosky said.

**Additionally**, **investments** in **AI** are **so far untested**. Although many business leaders believe AI is going to change the American workforce, that transformation hasn’t fully come to pass. Although current research predicts the number of AI jobs trending upwards, what those jobs look like might change. That means that trying to integrate AI into other disciplines is the financially safer approach, Koslosky said.

“**Schools** are **struggling** with **lots of things** and **balancing competing priorities**,” he said. “AI is important and will continue to be, but it’s not the only important thing.”

**It’s unpredictable**

**Tobenkin-24** [David Tobenkin, May/June 2024, (Senior Industry Analyst @ Federal Energy Regulatory Commission, B.A. @ Berkeley), “Artificial Intelligence and the Future of Higher Education, Part 2,” AGB

https://agb.org/trusteeship-article/artificial-intelligence-and-the-future-of-higher-education-part-2/ DOA: 3/3/2025] //vy \*brackets are og

**Institutions** that **intend** to **drive AI change** **through major initiatives** will **have to be aware** of the need to provide adequate **resources** to **support ambitious AI** and other data analytics **efforts**, Hilbelink says. “As an example, at **one** well-known **institution**, a [chief information officer] said he was told that they were going to **hire 100 new faculty** next year, which is a lot of new faculty, yet were **not going to give** a **penny** to **increasing technology services**, **showing** that they’re **not necessarily taking into consideration** the **IT needs that would grow** with that number of new faculty. So that’s a perfect example of a school not thinking **towards the future**.”

But many institutions are not, and will never be, on the leading edge of AI change by design, says Andrew Lounder, associate vice president of programs at AGB and a board member of Wheaton College in Massachusetts. **Major initiatives** to **drive** and **steer AI** on **campus** can **represent enormous financial** and **reputational gambles** that **many universities** and colleges simply **cannot afford**, he notes. For such institutions, it may be a perfectly legitimate approach to allow better-funded peers to be pioneers and to learn from their experiences. “Tech revolutions don’t always happen in sweeping fashion, the way that futurists predict,” Lounder says.

**Collapse is rapid**

**Troller-23** [Mark Troller, 12-27-2023, (CIO @ Tangoe), “Beware of Ai’s Hidden Costs Before They Bankrupt Innovation,” Tangoe.

https://www.tangoe.com/blog/ais-hidden-costs-can-bankrupt-innovation/ DOA: 3/7/2025] //vy

Unpacking this issue requires understanding AI’s addiction to the cloud. **AI relies heavily on cloud storage and computing powers. Separate they are nothing, but together AI has velocity**. Cloud infrastructure and applications give advanced analytics, hyper-automation, and large language models the fast, scalable delivery channels they need to be effective. But **this addiction** also **quietly triggers** cloud **expenditures that can go unforeseen and undetected**. The Wall Street Journal recently published an article on [how **AI is impacting the ability to control** cloud **costs**](https://www.wsj.com/articles/companies-tried-to-spend-less-on-cloud-then-ai-showed-up-1bb6344e?page=1). **Hidden infrastructure and application costs pile expenses on an already difficult cloud dynamic**:

[**Prices are rising**](https://www.forbes.com/sites/forbestechcouncil/2023/04/18/organizations-can-still-increase-their-cloud-roi-despite-economic-slowdown-and-cloud-flation/?sh=6a703cb9544f) **for infrastructure** and applications

[Cloud **services dominate IT budgets**](https://www.gartner.com/en/newsroom/press-releases/2022-02-09-gartner-says-more-than-half-of-enterprise-it-spending) and [IaaS **invoices can spin out of control**](https://www.theregister.com/2023/09/11/cloud_costs_feature/)

**Most** [companies **are already spending more** on cloud **than they budgeted**](https://www.networkworld.com/article/971855/idc-with-possible-recession-looming-it-pros-plan-spending-adjustments.html)

**When you factor in AI’s costly yet indispensable ally with the high demands for new GenAI tools, it’s easy to see why investment strategies can quickly become financially unsustainable. GenAI is driving another layer of technical debt** for many businesses.**Under the pressures of constant innovation, we could see AI-cloud growth at new record-breaking speeds. As these factors come together in 2024, we may even see cloud hangovers of the past three years grow into full-fledged AI-cloud bankruptcies. Hidden costs have the potential to bankrupt** AI innovation, because they **limit the ability for CIOs and CFOs to create new budget**, finding funding from within as a means to sustain the economic cycles of digital transformation.

**For enrollment,**

**Tobenkin-24** [David Tobenkin, January/February 2024, (Senior Industry Analyst @ Federal Energy Regulatory Commission, B.A. @ Berkeley) “Artificial Intelligence and the Future of Higher Education, Part 1,” AGB.

https://agb.org/trusteeship-article/artificial-intelligence-and-the-future-of-higher-education-part-1/ DOA: 3/3/2025] //vy

**Perhaps** **most** **significant**, a substantial number of educators and consultants interviewed think that as **AI’s functionality expands**, it **could eventually pose** an **existential threat** to **many HEI** functions by **rendering them obsolete**. “If you **keep leveraging AI** and other digital trends to **provide highly competitive, lower-cost alternatives** to **traditional [HEI]** and research, you **start to see the economic model** of **traditional institutions** really **gets messed** **up**—their **primacy starts to crumble**,” says Scott Pulsipher, president of the online, nonprofit Western Governors University (WGU).

**And for their endowments,**

**Ahmad-24** (Zaki Ahmad, 12-12-2024, (Researcher @ Univesriti Utara Malaysia, PhD in Finance and Banking @ UUM), “Exploring the Potential of Artificial Intelligence in the Endowment Management and Investment,” American Journal of Economic and Management Business.

https://ajemb.us/index.php/gp/article/view/150/228 DOA: 3/3/2025] //vy

**Endowment management** **involves** the **strategic stewardship** of **financial assets** or **funds permanently set aside** to **ensure long-term financial stability** for nonprofit organizations, **educational institutions**, and charitable foundations (Bryce, 2017). These **funds** are **invested strategically** to **generate sustainable income** while **preserving** the **principal amount**. Investments, as a broader concept, entail allocating financial resources across various assets-such as stocks, bonds, real estate, or mutual funds-with the aim of generating returns, income, or capital appreciation. **Within endowment management, investments** **play** a **pivotal role** in maintaining the value of **endowments** while **producing income** to **support** the **organization's ongoing activities** and **objectives** (Madanchi et al., 2017).

**Globally**, the **rising complexity** of **financial markets** has **intensified** the **need** for **innovative tools** and **strategies** in **investment management**. According to recent statistics, **Al-driven technologies** are **increasingly being adopted** in financial sectors, with projections showing that the global Al market in finance will exceed $50 billion by 2030. This trend underscores the urgency to explore Al applications in **niche areas**, such as **endowment management**, where **research remains relatively limited** (Chui & Francisco, 2017).

**Unfortunately,**

**Letiner-24** [Georg Letiner, May 2024, (Strategy Analyst @ Raiffeisen Bank international, Lecturer of Macroeconomics @ Vienna University, Financial Stability Analyst @ ECB, Researcher @ Institute for Advanced Studies, MS.c. + BS.c. @ Vienna University) “The rise of artificial intelligence: benefits and risks for financial stability,” European Central Bank.

https://www.ecb.europa.eu/press/financial-stability-publications/fsr/special/html/ecb.fsrart202405\_02~58c3ce5246.en.html DOA: 3/3/2025] //vy

**Overreliance** and a **limited number of AI suppliers** may **make the operational backbone** of the financial system **more fragile**. To leverage potential efficiency gains, **financial institutions** may **increasingly substitute AI resources** for **human resources**, potentially **inducing** an **overreliance on AI** in **core functions** that could render the financial system more **vulnerable** to **inherent operational flaws** and **failures or cyberattacks**. Both would be amplified if the number of AI suppliers is limited, as this would **additionally increase** the financial system’s dependency on third-party providers and introduce **single-point-of-failure risks**. This **constitutes** a **potential threat** to **financial stability from** the **perspective** of **operational risk** and **cyber risk** (Box A).

The **widespread adoption of AI** may **increase market concentration** in the **financial services industry**. The integration of AI into business structures may **require large initial fixed investments** and **entail economic risks**. It may be easier for larger firms with well-established data infrastructure and third-party networks to obtain the requisite technological knowledge and levels of data availability. Accordingly, some financial institutions may miss the transition or be unable to make the necessary investments, ending up permanently behind and dropping out of the market. Like other information technology, AI may prove to be a winner-takes-all market. AI may thus contribute to a further shift in market power amid an increasingly digitalised environment, leading to a higher concentration in the financial system, among either existing players or new players (e.g. from the technology industry). **Ultimately**, this could **result in fewer institutions remaining on the market**, **accelerate too-big-to-fail externalities**[[25](https://www.ecb.europa.eu/press/financial-stability-publications/fsr/special/html/ecb.fsrart202405_02~58c3ce5246.en.html#footnote.25)] and **transfer economic rents** from **consumers** to **financial institutions**.

**AI may distort** the **information processing function** of **markets**, **increasing financial markets’ endogenous crisis potential**. Conceptually, **AI** can be **thought of as a filter through which information** is **gathered, analysed** and **assessed**. The **interpretation of information** may **become more uniform if increasingly similar models** with the **same embedded challenges** and **biases** are **widely used to understand financial market dynamics**. As a result, **AI may make market participants’ conclusions systematically biased**, **leading** to **distorted asset prices**, **increased correlation**, **herding behaviour** or **bubbles**. Should many institutions use AI for asset allocation and rely only on a few AI providers, for example, then **supply** and **demand** for **financial assets** may be **distorted systematically**, **triggering costly adjustments** in **markets** that **harm their resilience**. Similarly, extensive use of AI by retail investors **may result in large** and **similar shifts** in **retail trading patterns,** which **would increase volatility** in **market sentiment**, trading volumes and prices.

**Universities are key post-Trump**

**Riles-20** [Annelise Riles, 12-15-2020, (Professor of Law & Associate Provost @ Northwestern Pritzker, Founder @ Meridian 180, Fmr. Professor @ LSE, Yale, and Cornell, B.A. @ Princeton SPIA, M.S.C @ LSE, J.D. @ HLS, PhD @ Cambridge), “Universities can help the U.S. retake its seat at the global table,” Northwestern University

https://news.northwestern.edu/stories/2020/12/us-international-community/ DOA: 3/4/2025] //vy

On his first day in office, President-elect Biden vows to take swift action to ensure that the U.S. re-joins the World Health Organization and Paris Climate Accord. But while the U.S. might be about to re-join the international community, it should not return to its old role as “leader of the free world.”

That archetype no longer serves the interests of the **U.S.** — which is **no longer willing** to **bear the costs** — or the **international community** — which has got used to a more consensus-based international order. Accordingly, the new administration will **need to learn** to **lead laterally** — as a **collaborator** and **coordinator**. This is **where American universities can help**.

‘Track-two diplomacy’

Working through global networks such as the U7+ Alliance of World Universities, **higher education institutions** are n**ow positioned to serve** as **crucial sources** of **policy innovation** and **social impact**. During this year’s second annual U7+ summit, hosted at Northwestern University, nearly 100 university leaders from 17 countries gathered virtually to discuss how **higher education** can **play** a **key role** in a “**track-two diplomacy**” that has **so often bolstered fragile** “**track-one**” **diplomatic relations**.

During the summit, held at the end of November, university presidents unanimously voted to **create new opportunities** for **mutual understanding** and **equitable resource sharing across generations** through **direct engagement** with the G7 group of nations. This builds on previous U7+ Alliance commitments and work to set targets for reducing greenhouse gas emissions, identify best practices for less carbon-intensive globalization, and establish guidelines for the ethical use of AI and digital technology.

**Many academics already collaborate** to **conduct** and **publish research** on **global challenges**, but **universities historically** **haven’t coordinated** **across national borders** to push a common agenda. They **haven’t operated** as **global actors** in their **own right**, alongside formal G7 engagement groups such as the Business7, Science7 and Women7. Yet, unlike other sectors of society beholden to short-term election or sales cycles, **universities** are **uniquely poised** to **take** the “**long view**” on **policy issues** and advocate for intergenerational justice — **ensuring** that **solutions** to **global challenges** are **developed in a way** that **takes the interests** and **rights** of **future generations into account**.

Rebuilding American credibility

**Robust global networks** of **universities** with **U.S. institutions** at their heart can be **activated** to **rebuild American credibility** and **pursue coordinated global agendas** on **issues** such as **health, climate change, inequality,** and **digital innovation**. As a formal G7 engagement group, the U7+ Alliance can take coordinated action to bring scientific evidence to the fore of policy debates on these issues. Consisting of top-tier universities from across the globe, the alliance can also mount credible, international information campaigns to cut through the cacophony of fake news and encourage the millions of young people they collectively serve to elevate and amplify science.

[Related Q&A: Why **universities** are in a **prime position** to **lead during** a **global** **crisis**](https://news.northwestern.edu/stories/2020/04/annelise-riles/)

The U7+ is already building relationships with G7 leaders, including with the organisers of the 2021 G7 meeting in the UK. Alliance members from the US and dozens of other countries have also **already self-organized into working groups dedicated** to **taking concrete** [**actions**](https://www.u7alliance.org/commitments/) that contribute to attaining the United Nations’ Sustainable Development Goals, which 193 countries have adopted.

New geopolitical order

If the past four years have proved anything, it’s that, despite the attempts to kill it, multilateralism isn’t dead. It just looks and feels more inclusive than it used to — and how could it not as a new generation of citizens and political leaders less beholden to the legacy of the Second World War takes charge? The new UN treaty on the prohibition of nuclear weapons, championed by NGOs and acceded to primarily by countries in the Global South, despite strong lobbying against it by the US — is an example of the new diplomacy at work, within which American leadership is not accepted as a given.

The **new American leadership** will be as **one among a number of nations** **within** a **new geopolitical order** — one in which **networked power supplants** **super power** and **distributed leadership trumps hegemony**. A **punishing dose** of **humility** for **American diplomatic gaffes** and **betrayal of our allies** over the past four years may serve as the perfect antidote to a previous overabundance of US pride and exceptionalism.

Big global problems **require coordinated solutions**, but the Biden administration must employ new diplomatic resources to address them. **Higher education institutions** with the **scientific knowledge**, the **moral obligation** and, **now**, the **structure** for **coordination** can **play a pivotal role** in **developing** and **promoting those solutions**.

**Crucially,**

**Sasnal-20** [Patrycja Sasnal, 2020, (Professor @ UCLA, Advisor @ UN Human Rights Council, Member @ European CFR, Fmr. Fulbright Scholar @ JHU SAIS), “Mistaking Panacea for Pathogens: The Case for Existential Multilateralism,” Council on Foreign Relations.

https://www.cfr.org/sites/default/files/pdf/Mistaking%20Panacea%20for%20Pathogens%2C%20The%20Case%20for%20Existential%20Multilateralism.pdf DOA: 3/4/2025] //vy

These **first-tier global challenges**—**climate change**, **terrorism**, **mass migration**, **infectious diseases**, **nuclear weapons, economic hardship,** and **cyberattacks**—are not only substantively but also **qualitatively different**. That **quality** **rests** neither on the number of victims nor on the kind of perpetrator (state, individual, or natural) hut instead **on** the **potential** to **threaten** the **existence of humanity**. **Three threats** have this **potential**: **climate change**, highly **infectious diseases**, and **nuclear weapons**. Of course, abstract **scenarios** are **easily imagined** in which **human existence is endangered** because of a massive **cyberattack**, **mass migration**, or **vicious artificial intelligence** that **leads** to a **conflict** in **which nuclear weapons** are **used** and **humanity kills itself**. Such potential futures, though, require a chain of events, whereas the three existential menaces are present and direct. Unlike other threats, they are all global and equal. No community is immune from them or their aftermath. **All three** can **reach** a **tipping point**, after which the **danger spirals out of control**.

This set of existential threats is not conventionally recognized. The term existential threat has proliferated in political debates to mean anything across a spectrum of minor and major challenges: the opiate crisis to the policies of the Donald J. Trump administration. In twentieth-century politics, the expression was barely used despite the omnipresent danger of the nuclear bomb. For the past two decades, it has been mostly associated with terrorism. Terrorism, however, is not a threat to human existence—not even to Middle Easterners, where 95 percent of deaths from terrorist attacks occur. Classing mass migration as an existential threat is even more preposterous given how little insecurity migrants have brought to already stable host countries. Similarly, little suggests that inequality or economic hardship are existential threats, though their complex forms and far-reaching consequences render them categories of their own.

The **distinction between existential** and **other international threats matters** for **multilateralism** and **global governance** in light of the functional difference in the roles of the state in fighting them. The **former can be taken on only by international efforts**. **Other concerns** can be **fought in other ways**: a **unilateral** national **decision** to act internally or on another state; or a national bottom-up societal effort to reduce terrorism, disrupt cyber capabilities, or influence local migration patterns. **Climate change**, **nuclear weapons**, and **infectious diseases**, however, **require global multilateral efforts** to **prevent** their **destructive potential** from **manifesting** itself.

REVIVING TRUST IN INFORMATION AND SCIENCE

**National responses** to the **pandemic** have often **been provisional**—decisions of utmost importance to civil liberties are **taken without proper argumentation** or **scientific judgment**, because **none is available**. Not in living memory have **governments** watched each other as closely as now on decisions such as when and how to lock down and open societies and economies—at least in Europe. **Since** the **pandemic**, **hunger** for **information** and **knowledge** seems to have **increased exponentially** in **international relations** and the **global public sphere** because **specific epidemiological expertise** was **needed**—such that was available to only a few. Perhaps for the first time on such a scale, information is seen as directly correlated with human well-being. What scientists know about the virus—the way it is transmitted, how it mutates, how strong the antibodies are—is no longer seen as abstractly affecting our individual lives but directly affecting them.

The **shortening** of this **perception chain** is an **opportunity** for the scientific and analytical community to **revive trust in experts** by learning from the experience of life scientists. Medicine advanced as a result of interdisciplinary and international teams, and innovative fast publishing procedures (short communications and case reports). Given the importance of information to physical, political, and social life, further plans are being enacted to make scientific publications available for free, something social scientists should ponder as well.

The pandemic also exposes the weight of information in politics. First, information has been critical to assessing how effectively governments are responding to COVID-19. Without reliable statistical information from the health sector, it is impossible to analyze the scale of the pandemic, and therefore say anything about the measures authorities have taken. The Open Data Inventory 2018/19, which assesses the coverage and openness of official statistics, including health data, finds them open and covered only in Europe, North America, and a handful of other countries. Second, states have used the pandemic to spread propaganda and misinformation. China and Russia have a lot to answer for here by vilifying the European Union and the United States, as do Iran (which blamed the virus on the United States) and several Gulf states (which blamed Iran).

EXISTENTIAL MULTILATERALISM

The Indian novelist Arundhati Roy sees the pandemic as a portal between the old and new world. In international politics, this may translate into a passage from the post-1989 preoccupation with terrorism and economic growth based on consumption and exploitation to new existential politics. **Little** can be **said** **about** the **future** with **certainty** **except** that it will **face global existential threats**: **climate change, infectious diseases, nuclear war**. Because of the **nature of these menaces**, they **cannot be mitigated** save by **multinational**, **informed**, and **expert** **governance**.

# **A2 1AC — Strake HH**

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## **A2 Teachers**

1. **[DL] Teachers are unknowledgeable about AI.**

**Bickerstaff-24** [Amanda Bickerstaff, 6-24-2024, "Establish a Teacher AI Literacy Development Program," Federation of American Scientists, https://fas.org/publication/teacher-ai-literacy-development/, DOA: 2-14-2025] oli

Generative artificial intelligence (GenAI) has emerged as a profoundly disruptive force reshaping the landscape of nearly every industry. This seismic shift demands a corresponding transformation in our educational systems to prepare the next generation effectively. Central to this transformation is building a robust GenAI literacy among students, which begins with equipping our educators. **Current**ly, the **integration of GenAI** technologies in classrooms is **outpac**ing **the preparedness of** our **teachers**, with **less than 20%** feeling **adequately equipped to utilize AI tools** such as ChatGPT. Moreover, **only 29% have received professional development** in relevant technologies, and **only 14 states offer any guidance on GenAI implementation** in educational settings at the time of this writing. The urgency for federal intervention cannot be overstated. Without it, **there** **is a significant risk of exacerbating** **educational and technological disparities** among students, which could **hinder their readiness** **for future job markets dominated by AI**. It is of particular importance that **AI literacy training** is **deployed equitably to counter the** **disproportionate impact of AI and automation on women and people of color.** McKinsey Global Institute reported in 2023 that women are 1.5 times more likely than men to experience job displacement by 2030 **as a result of** AI and automation. A previous study by McKinsey found that Black and Hispanic/Latino workers are at higher risk of occupational displacement than any other racial demographic. This proposal seeks to address **the critical deficit in AI literacy among teachers**, which, if unaddressed, **will leave our students ill-prepared for an AI-driven world.**

1. **[T] AI increases teacher burnout**

**Shah-24** [Priten Shah (CEO of Pedagogy.Cloud, which provides innovative technology solutions to help educators navigate global challenges in a rapidly evolving world), I Was An AI Optimist. Now I’m Worried It’s Making Teacher Burnout Worse, 6-5-2024, archive.vn, https://archive.vn/LxcLE] accessed 2-20-2025 // bellaire FL  
While I still see these opportunities for our educators and remain hopeful that **AI** can help teachers make time for the most meaningful parts of education, I’m afraid that having to keep up with its challenge**s** represents **an added burden for already struggling teachers**. As my company works with educators around the country to help them learn about AI technology and what it means for education, we’ve noticed that a few conditions must be met for us to see the promise of reduced teacher workload realized. These are not insurmountable hurdles, but if we want AI to be our ally and not our foe, we must make clear that the promise is contingent on these factors. How teacher professional development can catch up to AI Seemingly **overnight,** understanding **AI** technology **went from** being **a niche skill to an essential** life **skill**. While many educators across the country have diligently spent their free time, prep periods, and summer vacations pursuing professional development, an **overwhelming majority are rightfully daunted by** the prospect of **learning how to navigate this new tech**nology. **The learning curve for** many **educators** has been **much steeper than** is being **acknowledged**. The prospect of learning a brand-new tool can be overwhelming as you learn its features, capabilities, and limitations, and how it works best for you. Using AI tools also involves learning more than just the user interface of a new tool; it requires our educators to learn how this technology works to feel empowered to use it responsibly and have meaningful conversations with their students about it. For others, the technology remains unaffordable as major tools begin to paywall their strongest features. Absent support from their district, this often means that many teachers have an additional expense that they must pay out of pocket to use these technologies in the powerful ways advertised. This only further limits the number of teachers who are seeing the benefits of developing AI literacy. Even those who manage to find the time and money to pursue some professional development or are part of a small contingent of American teachers who receive resources from their schools still face the task of staying current with the developments and rapid changes that the AI space is currently undergoing. Schools and districts need to acknowledge the challenge AI creates for teachers who want to become active, responsible users of the technology. They must find space in their existing professional development schedules and allow teachers to spend meaningful time learning about and using AI technology in ways that can eventually reduce their workload. How AI has changed curriculum **Part of the frustration** we hear from educators **is** **how** many of their **assignments need to be restructured**, given the ability for students to use AI technologies to complete their homework easily. This has created a crisis for educators who assign out-of-class work, especially those who extensively use independent writing as an assessment tool. Teachers are facing the need to rethink their assessments and pedagogical practices, with very little guidance on how to effectively and sustainably make these changes. **The definition of “AI-proof assignments” shifts so rapidly** that **it has become** a relatively **futile** goal for educators to pursue. Some “AI proofing” has relied on generative AI’s limited knowledge of recent events and its inability to perform math, while other anti-cheating efforts turned to now-defunct AI detectors or the lack of students’ voices in writing.

**Prefer on time frame—teachers are already on the brink of burnout per their UQ. Large scale implementation triggers a learning curve that is steep.**

1. **AI automation reduces teachers' wages.**

Jack **Kelly 21**, 6/18/2021, Senior Contributor at Forbes, Artificial Intelligence Has Caused A 50% To 70% Decrease In Wages—Creating Income Inequality And Threatening Millions Of Jobs, Forbes, DOA: 4/28/2022, https://www.forbes.com/sites/jackkelly/2021/06/18/artificial-intelligence-has-caused--50-to-70-decrease-in-wages-creating-income-inequality-and-threatening-millions-of-jobs/?sh=58c08fa61009] //JC

**Artificial Intelligence Has Caused A 50% To 70% Decrease In Wages**—Creating Income Inequality And Threatening Millions Of Jobs The middle and working classes have seen a steady [decline](https://www.pewresearch.org/social-trends/2020/01/09/trends-in-income-and-wealth-inequality/) in their fortunes. Sending jobs to foreign countries, the hollowing out of the manufacturing sector, pivoting toward a service economy and the weakening of unions have been blamed for the challenges faced by a majority of Americans. There’s an interesting, compelling and alternative explanation. According to a new academic research study, [automation technology has been the primary driver in U.S. income inequality](https://www.nber.org/papers/w28920) over the past 40 years. The report, published by the National Bureau of Economic Research, claims that **50% to 70% of changes in U.S. wages**, since 1980, can be attributed to wage declines among blue-collar workers who were replaced or degraded by automation**. Artificial intelligence, robotics and new sophisticated technologies have caused a wide chasm in wealth and income inequality. It looks like this issue will accelerate. For now, college-educated, white-collar professionals have largely been spared the fate of degreeless workers. People with a postgraduate degree saw their salaries rise, while “low-education workers declined significantly.” According to the study, “The real earnings of men without a high-school degree are now 15% lower than they were in 1980.” Much of the changes in U.S. wage structure, according to the paper, were caused by companies** **automating tasks that used to be done by people**. This includes “numerically-controlled machinery or industrial robots replacing blue-collar workers in manufacturing or specialized software replacing clerical workers.” Artificial intelligence systems are ubiquitous. AI-powered digital voice assistants share everything you want to know just by asking it a question. Instead of a live person addressing a problem, a corporate chatbot forces you to engage with it. The technology is remarkable. It helps diagnose cancer and health issues. Banks use sophisticated software to check for fraud and bad behaviors. Driverless automobiles, newsfeeds, social media and job applications are all controlled by AI. The World Economic Forum (WEF) concluded in a recent report, “A new generation of smart machines, fueled by rapid advances in AI and robotics, could potentially [replace a large proportion of existing human jobs](https://www.weforum.org/agenda/2020/10/dont-fear-ai-it-will-lead-to-long-term-job-growth/).” Robotics and AI will cause a serious “double-disruption,” as the pandemic pushed companies to fast-track the deployment of new technologies to slash costs, enhance productivity and be less reliant on real-life people. The WEF asserts automation will slash about 85 million jobs by 2025. In a dire prediction, WEF said, “While some new jobs would be created as in the past, the concern is there may not be enough of these to go round, particularly as the cost of smart machines falls over time and their capabilities increase.” Management consulting giant [PriceWaterhouseCoopers](https://www.pwc.com/sk/en/publikacie/the-impact-of-automation-on-jobs.html) reported, “AI, robotics and other forms of smart automation have the potential to bring great economic benefits, contributing up to $15 trillion to global GDP by 2030.” However, it will come with a high human cost. “This extra wealth will also generate the demand for many jobs, but there are also concerns that it could displace many existing jobs.” Concerns of new technologies disrupting the workforce and **caus**ing **job losses** have been around for a long time. On one side, the argument is automation will create new and better jobs and erase the need for physical labor. The counterclaim is that people without the appropriate skills will be displaced and not have a home in the new environment. Amazon, Google, Microsoft, Apple, Zoom and other tech giants greatly benefited financially during the pandemic. The virus outbreak accelerated trends, including choosing technology over people. There’s still a need for humans. For example, although Amazon invested heavily in automation for its warehouses, the online retail giant still needed to hire over 300,000 workers during the pandemic. This brings up another important overlooked issue: the quality of a job. Proponents of AI say that there’s nothing to worry about, as we’ve always successfully dealt with new technologies. You may have a job, but [what is the quality of it](https://www.forbes.com/sites/jackkelly/2021/06/17/amazon-prime-day-offers-great-sales-heres-what-workers-suffer-through-to-make-this-happen/)? **To remain relevant, you** will **have to learn new skills to stay ahead of the curve.** [**Bloomberg**](https://www.bloomberg.com/news/articles/2019-09-06/robots-displacing-jobs-means-120-million-workers-need-retraining) **reported, “More than 120 million workers globally will need retraining in the next three years due to artificial intelligence’s impact on jobs, according to an IBM survey.” The amount of individuals who will be impacted is immense. The world’s most** [**advanced cities aren’t ready**](https://www.forbes.com/sites/jackkelly/2020/10/27/us-lost-over-60-million-jobs-now-robots-tech-and-artificial-intelligence-will-take-millions-more/?sh=2541084e1a52) **for the disruptions of artificial intelligence, claims Oliver Wyman, a management consulting firm. It is believed that over 50 million Chinese workers may require retraining, as a result of AI-related deployment.** The U.S. will be required to retool 11.5 million people in America with skills needed to survive in the workforce. Millions of workers in Brazil, Japan and Germany will need assistance with the changes wrought by AI, robotics and related technology. For those who may be left behind, there’s a call for offering a [universal basic income (UBI)](https://www.forbes.com/sites/jackkelly/2020/07/10/twitter-ceo-jack-dorsey-partners-with-us-mayors-to-offer-free-income-to-their-residents/?sh=21acdd332e84). This idea gained national attention when it became a major part of Democratic candidate Andrew Yang’s 2020 presidential campaign. **Yang’s policy was to lift people out of poverty or help them through rough patches with a guaranteed monthly income. Supporters say it gives people needed financial security to find good jobs and avoid debt. Critics have argued free money would be a disincentive to work, creating a society dependent on the state. According to a Wells Fargo research report,** [**robots will eliminate 200,000 jobs in the banking industry**](https://www.forbes.com/sites/jackkelly/2019/10/08/wells-fargo-predicts-that-robots-will-steal-200000-banking-jobs-within-the-next-10-years/) **within the next 10 years. This has already adversely impacted highly paid Wall Street professionals, including stock and bond traders. These are the people who used to work** on the trading floors at investment banks and trade securities **for** their banks, clients and themselves. It was a very lucrative profession until algorithms, quant-trading software and programs disrupted the business and rendered their skills unnecessary—compared to the fast-acting technology. There is no hiding from the robots. Well-trained and experienced doctors will be pushed aside by sophisticated robots that can perform delicate surgeries more precisely and read x-rays more efficiently and accurately to detect cancerous cells that can’t be readily seen by the human eye. Truck and cab drivers, cashiers, retail sales associates and people who work in manufacturing plants and factories have and will continue to be replaced by robotics and technology. Driverless vehicles, kiosks in fast-food restaurants and self-help, quick-phone scans at stores will soon eliminate most minimum-wage and low-skilled jobs. The rise of artificial intelligence will make even software engineers **less** sought after. That’s because artificial intelligence will soon write its own software, according to Jack Dorsey, the tech billionaire boss of Twitter and Square. That will put some beginner-level software engineers in a tough spot. When discussing how automation will replace jobs held by humans, Dorsey told Yang on an episode of the Yang Speaks podcast, “We talk a lot about the self-driving trucks and whatnot.” He added, “[[AI] is even coming for programming [jobs]](https://youtu.be/qkt-iphB40U). A lot of the goals of machine learning and deep learning is to write the software itself over time, so a lot of entry-level programming jobs will just not be as relevant anymore.” When management consultants and companies that deploy AI and robotics say we don’t need to worry, we need to be concerned. Companies—whether they are [McDonald’s, introducing self-serve kiosks](https://www.forbes.com/sites/edrensi/2018/07/11/mcdonalds-says-goodbye-cashiers-hello-kiosks/#67a9e17a6f14) and firing hourly workers to cut costs, or top-tier investment banks that rely on software instead of traders to make million-dollar bets on the stock market—will continue to implement technology and downsize people, in an effort to enhance profits.

This trend has the potential to adversely impact all classes of workers. In light of the study’s spotlight on the dire results of AI, including lost **wages** and the rapid growth in income inequality, it's time to seriously talk about how AI should be managed before it's too late.

**Brink matters here too–if teachers**

## **A2 Ecology**

1. **No evidence ecology studies collapsing now—means no need for AI to augment ecological research which also means no extinction.**
2. **They literally do not have an internal link to extinction happening devoid of ecological research—they just assert “if not then extinction.”**
3. **[T] Generative AI causes overreliance and impairs independent thinking.**

**Zhai-24** [Chunpeng Zhai, Santoso Wibowo, and Lily D. Li (School of Engineering & Technology/Tertiary Education Division, CQUniversity, Rockhampton, Australia) 06/18/24 “The effects of over-reliance on AI dialogue systems on students' cognitive abilities: a systematic review” Smart Learning Environment 11, 28<https://slejournal.springeropen.com/articles/10.1186/s40561-024-00316-7> //doa: 02/12/25 ]//kl recut

Moreover, concerns regarding plagiarism, decreased creativity, data bias, security issues, and potential discrimination have also emerged. Kim et al. ([2023](https://slejournal.springeropen.com/articles/10.1186/s40561-024-00316-7#ref-CR58)) investigated the challenges English as a Foreign Language (EFL) learners face when employing AI dialogue systems for text paraphrasing. The study involved 15 individuals who are non-native English speakers. It reveals that the main difficulty arises from the lack of comprehensive explanations accompanying AI-generated paraphrases. This deficiency makes it challenging for learners to grasp the context and verify the accuracy of the reformulated content. Furthermore, the study highlights the issue of data bias: when explanations are overly simplified, it may result in an increased reliance on AI. Consequently, this undermines learners’ ability to analyze and grasp the information independently, impairing their decision-making skills. Semrl et al. ([2023](https://slejournal.springeropen.com/articles/10.1186/s40561-024-00316-7#ref-CR98)) examined the feasibility of dialogue systems in addressing scientific questions and assisting academic writing. The findings show that AI dialogue systems are a promising tool for assisting in the writing of scientific papers. However, their lack of originality, the tendency for excessive text, and the use of nuanced and vaguer language could suggest that a paper is produced by AI rather than a human author. Additional challenges identified in the study include limited creativity, data bias issues, AI hallucinations (inaccurate or misleading information generated by the AI), and concerns regarding transparency in the AI’s decision-making processes. Overreliance on AI dialogue systems can significantly impact decision making, critical and analytical thinking abilities by fostering dependency and potentially diminishing individual judgment skills. When individuals rely heavily on AI for problem-solving or decision-making, they may become less inclined to engage in independent, critical information analysis, decreasing their ability to judge between AI-generated and human-generated insights.

**Lack of critical thinking hinders ecological research—people can’t think for themselves and thus can’t do research. It also applies to their C3—trade students can’t learn high-skill techniques if they lose critical thinking capabilities.**

1. **[T] GAI steals copyrighted data, causing litigation.**

**Dzuong-24** Jocelyn Dzuong, a master's student in the Knight Foundation School of Computing and Information Sciences at Florida International University, Zichong Wang, a third-year Ph.D. candidate in the Department of Computer Science at Florida International University, Wenbin Zhang, an Assistant Professor in the Knight Foundation School of Computing & Information Sciences at Florida International University, 3-31-2024, "Uncertain Boundaries: Multidisciplinary Approaches to Copyright Issues in Generative AI", arXiv.org, https://arxiv.org/abs/2404.08221

In the rapidly evolving landscape of generative artificial intelligence (AI), the in**creasingly pertinent issue of copyright infringement arises as AI advances to generate content from scraped copyrighted data,** prompting questions about ownership and protection that impact professionals across various careers. With this in mind, this survey provides an extensive examination of copyright infringement as it pertains to generative AI, aiming to stay abreast of the latest developments and open problems. Specifically, it will first outline methods of detecting copyright infringement in mediums such as text, image, and video. Next, it will delve an exploration of existing techniques aimed at safeguarding copyrighted works from generative models. Furthermore, this survey will discuss resources and tools for users to evaluate copyright violations. Finally, insights into ongoing regulations and proposals for AI will be explored and compared. Through combining these disciplines, the implications of AI-driven content and copyright are thoroughly illustrated and brought into question. In the swiftly progressing realm of generative artificial intelligence (AI), the pressing concern of copyright infringement emerges prominently. As AI technologies continue to autonomously generate content from copyrighted data, inquiries about ownership and safeguarding rights surface, reverberating across diverse professional domains. This escalating trend raises critical discussions surrounding ethical, legal, and socio-economic implications, necessitating nuanced exploration and strategic interventions to navigate this Figure 1: Actual screenshot from Dune (2021) versus its Midjourney-generated counterpart evolving landscape effectively. For instance, in July 2023 a group of novelists collectively sued OpenAI for alleged usage of their books to train their models and output similar content to the novelists’ prose [117]. Moreover, in December 2023 **The New York Times filed a lawsuit against OpenAI and Microsoft, alleging copyright infringement by having** its articles scraped without permission to train their generative models [118]. More recently, Marcus and Southen revealed how generative models such as Midjourney and OpenAI’s Chat GPT-4 produced outputs strongly reminiscent of scenes from copyrighted films and shows [82, 124]. As a concrete example, Figure 1 illustrates how a prompt from Southen resulted in an output resembling a shot from the trailer of Dune (2021). Notably, Midjourney’s terms of service [87] highlight that users assume liability when requesting the model to generate content featuring copyrighted trademarks. This delegation of responsibility not only places the burden of infringement on users, but also diverts accountability from Midjourney’s developers, who have openly admitted to using copyrighted trademarks without authorization [103]. In light of these developments, this survey aims to delve into the complex interplay between generative AI and protecting intellectual property (IP). Through synthesizing existing methods and legal analyses, we provide a comprehensive overview of the current landscape surrounding copyright in generative AI. To the best of our knowledge, this work presents the first thorough study on robust and applicable solutions to copyright issues in generative AI, which also combines contextual legal analysis for future consideration. The challenges and opportunities inherent in this burgeoning field offer insights that can inform policymakers, practitioners, and researchers alike when developing generative AI. Our main contributions are: i) A detailed examination of the most advanced methods for detecting AI-generated copyright violations across various mediums such as text, image, and video, establishing itself as an invaluable resource for both researchers and practitioners in the field. ii) Innovative strategies designed to safeguard copyrights within the AI sphere, highlighting cutting-edge techniques like watermarking, fingerprinting, and machine unlearning, contributing to the protection of IP. iii) A comprehensive array of tools and resources for assessing copyright violations, including extensive datasets, search engine capabilities, and metrics quantifying infringement. iv) An in-depth analysis of the regulatory framework surrounding generative AI, navigating through current international copyright laws and proposing solutions to tackle the emerging challenges in generative AI.

**Even a perceived risk of litigation kills research.**

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Startups need **balanced, certain copyright** frameworks. Well-tailored laws that focus on enforcement of legitimate rights can support innovation. But it is too easy for those frameworks to get **out of whack** and **become imbalanced**, which we’ve seen time and again. For example, right now the law allows bogus infringement allegations to dictate that non-infringing content is (routinely) removed from the Internet. **Uncertainty** over what copyright law permits, coupled with **high** **litigation** **costs**, **slows startups** down and has even forced some out of business. **And the risk of a startup being sued for something a user does — and something the startup knows nothing about — alone can scare away investors.** But what does balanced, **innovation-friendly** copyright policy look like? And how does this play out in today’s policy debates? Here are just a few examples: Fair use and interoperability: Some big companies would like to **expand** **the universe** of what software is protected by copyright and which development activities constitute infringement. If that happened, it would prevent startups from using **fundamental software development** **tools**, expose them to new **litigation risks**, and make it harder to launch and compete. But after a decade of litigation, the Supreme Court recently confirmed that developers can use software interfaces — known as application programming interfaces (APIs) — without infringing copyright. The Court held that **reimplementing APIs**, which creates **interoperability and compatibility** between computer programs, is a **fair use** under copyright law. Intermediary liability and the ability to host user-generated content: Scores of startups engage with user content — helping artists connect with fans, providing e-commerce platforms, hosting podcasts, or offering **basic Internet infrastructure**. These companies, and the creators and small businesses that depend on the Internet, interact with the copyright system every day. And they **rely on balanced laws** that allow the startups to **resolve allegations of infringement** without scrutinizing every post, upload, and comment for **potential copyright violations**. Some countries have started to replace those laws, instead moving to complex and expensive regimes that would force Internet companies to purchase **expensive** and imperfect upload filters, **remove** **more non-infringing** **content**, and **negotiate licenses** with big organizations that own a lot of copyrights. That is all do-able for big Internet platforms, but it will put startups at a substantial disadvantage. Yet similar ideas are being floated in the U.S. — where policymakers have proposed **changes to copyright law** (and trademark law). Ancillary copyright and link taxes: Countries around the world have adopted or considered new copyright-like laws that would require websites to pay **licensing fees** or **face lawsuits** whenever they — or their users — link to a news article or quote the headline. These proposals, positioned as a solution to problems facing local media, have so far failed to deliver those benefits, but they carry substantial **unintended consequences**. Linking to news articles is something many startups and innovators — from media to edtech — rely on. But engaging with information and current events, **which** is central to public discourse and free speech, requires being able to link to and quote the news. Using copyright-like law to **restrict** that engagement would **hinder innovation** and the creation and **exchange of ideas online.** Intersection of copyright and artificial intelligence: Startups and other companies developing AI technology have to input a lot of data into their systems, **ingesting content to train**, tune, and test new AI. As countries around the world review how intellectual property law applies to emerging AI, some are asking how copyright law should account for this ingesting of information, data, and content. But redefining copyright infringement to cover these uses of content to train AI could substantially **hamper innovation.**

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**That’s worse for ecology—people can’t do effective research without funding and it outweighs any benefits on time frame because it’s perceptual.**

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## **A2 Trade Schools**

1. **Their first link on calling to close trade school deals isn’t topical—1) it’s not talking about generative AI whatsoever and 2) salespeople in trade schools are outside marketers that aren’t in the realm of education.**
2. **The Alexandria evidence also doesn’t mention generative AI at all, and it just says AI can improve people’s abilities to explore careers, not that it is make-or-break for trade schools.**
3. **Their UQ doesn’t match their second link—the Alexandria card also doesn’t mention enrollment whatsoever.**
4. **Trade schools have low inclination to adopt AI—perceptions lean towards these jobs solely because of the fact that they can’t be automated, they are less likely to be keen to use AI. Their own NAA evidence proves.**
5. **The impact of trade schools is negligible—their Boss evidence just isolates that there are some infrastructure benefits from trade schools, not that they are key to overall infrastructure development. Their terminal impact is reliant on full-scale infrastructure collapse which they don’t have any evidence of happening from trade schools.**