**We Affirm, Resolved: In the United States, the benefits of the use of generative artificial intelligence in education outweigh the harms**

**C1) Absence**

**One of the biggest issues in schools is absence**

By — Gabrielle **Hays** Jan 17, 20**24** 5:23 PM EDT / St. Louis University was set to apologize for enslaving people. Hours before the ceremony, a group of descendants of Black people the school owned and traded backed out, citing concerns that the yearslong reconciliation process ultimately felt too symbolic. / Chronic absenteeism is up across the country. School leaders are trying to address why / <https://www.pbs.org/newshour/nation/chronic-absenteeism-is-up-across-the-country-school-leaders-are-trying-to-address-why#:~:text=Some%2029.7%20percent%20of%20the,according%20to%20its%20latest%20report>.

**Federal guidelines** say **districts** should **aim** to have **90 percent of students in attendance** 90 percent of the time. In Missouri, about **76** percent of students **meet this standard**, according to state data from the 2022-23 school year. This marks a **drop of more than 10 percentage** points from 2019, when 87.3 percent of students met this attendance target. The length of the average school year varies by state, but in Missouri, where students in schools with a five-day school week see 174 instructional days, being chronically absent would mean missing more than 17 days in a school year. **Research shows the effects of missing school can have lifelong impacts. Chronic absenteeism** **may make it harder for children to meet early learning milestones and** **can lead to poor academic performance,** a**ccording to the Department of Education.** At Wednesday’s event, **Tanden said absenteeism can account for up to 27 percent of test score declines in math and 45 percent of test score declines in reading, citing research from the Council of Economic Advisers. Absenteeism can also be a predictor of whether students will drop out before graduation, something that can lead to adverse health effects and lower lifetime earnings .** In Ross’ district, the **attendance rate dropped** from 83 percent in 2019 to **around 75 percent in 2022-23** school year, he said. At St. Louis Public Schools, Superintendent Dr. Keisha Scarlett told the NewsHour **nearly half of the district’s** more than 16,000 **students are chronically absent.**

**Most students claim this is because class is boring**

Author: Ric **Sweeney** April 12, 20**22** / Ric Sweeney is an Associate Professor in the Marketing Department at the University of Cincinnati's Carl H. Lindner College of Business, specializing in Principles of Marketing, Advertising, Services Marketing, Branding, and Promotions. / Why Students Get Bored in Class and What to Do About It / <https://www.mheducation.com/highered/blog/2024/06/why-students-get-bored-in-class-and-what-to-do-about-it.html>

**Several** **studies** have tried to **uncover** both the reasons why **students are bored in** the **class**room, with some **studies suggesting** that **students feel bored 1/3 of the time they’re in the classroom and others suggesting tha**t **only 25%** of 11th graders **feel engaged** by school. **Either way, this is not good news for faculty, who work hard to create a stimulating experience for students. The results of boredom can be quite detrimental;** **bored students will** likely **skip class, pay less attention** to important material, **skip assignments, get lower grades, and have a likelihood to drop out of the class,** a program, or College altogether because of lack classroom engagement.

**Thankfully, ai makes learning more engaging**

**Cenage group** October 31, 20**24** / no qual / From Hesitation to Adoption: The Growing Role of GenAI in the Classroom / <https://www.cengagegroup.com/news/perspectives/2024/from-hesitation-to-adoption-the-growing-role-of-genai-in-the-classroom/#:~:text=Improving%20student%20engagement%3A%2063%25%20of,engagement%20in%20the%20learning%20process>.

Uncertainty of how to use AI and a lack of information about the technology are the primary reasons **educators are reluctant to adopt GenAI.** This insight exposes an opportunity for edtech providers to teach and train educators on potential use cases and **learning outcomes that GenAI can support.** In addition to **increased GenAI adoption**, there is also a notable shift in HED educators’ perception of AI. In 2023, just 28% of instructors had a positive view of AI and, **in 2024, this figure increased to 49%. Both HED instructors and K12 teachers perceive GenAI’s potential to positively impact education by: Becoming a pillar of education**: **90% of HED instructors & 84% of K12 teachers believe GenAI will play** an **increasingly important** role in education in the coming years. **Supporting lifelong learning: 71% of HED instructors & 65% of K12 teachers say GenAI can play a role in supporting lifelong learnin**g**. Improving student engagement: 63%** of HED instructors & 62% of K12 teachers believe GenAI can improve student engagement in the learning process.

**I: higher academic rates**

**Ai is increasing within education**

**Horn 24** [Horn, Michael B, 5-2-2024, “AI is Officially Here, There, Everywhere, and Nowhere,” Education Next, https://www.educationnext.org/ai-is-officially-here-there-everywhere-and-nowhere/, accessed 3-3-2025] //

District responses to AI have been all over the map, and many districts have lurched from one approach to another. Several big-city districts banned ChatGPT almost immediately after it was launched in November 2022. But months later, **most had rolled back their bans and instead started to encourage the use of AI.** For example, Walla Walla Public Schools in Washington State initially banned ChatGPT. Then, the district repealed the policy and trained its teachers in how to use AI tools. “[I was] a little bit red-faced, a little bit embarrassed that we had blocked [ChatGPT] in the spring,” Keith Ross, the district’s director of technology and information services, told a local-news outlet. “[It] really shed light that we need to not wait on this and get moving and find out how to supply the tool to the students.” Recent **surveys of teachers and administrators reveal** similar contradictions. In an EdWeek Research Center survey conducted in late 2023, about one in five teachers said their district lacked clear policies regarding AI products, and the same share reported that students are not allowed to use it. That same survey also found that **more than half** of teachers **believe that AI usage in school will grow next year.**

**As ai increases, we see more students lock in. Allowing better activity.**

by **YouScience** | Feb 27, 20**24** | Blog / no quals / What is student engagement and why is it important? / <https://www.youscience.com/resources/blog/student-engagement/#:~:text=Student%20engagement%20is%20essential%20for,think%20critically%2C%20and%20enjoy%20learning>.

Student engagement is essential for a successful educational experience. **When students actively engage in their learning, they are more likely to get better grades, think critically, and enjoy learning.** Findings from the 2023 Post-Graduation Readiness Report from YouScience® revealed that 65% of high school graduates had five or fewer conversations with teachers or counselors about their post-high school opportunities. Additionally, 25% of graduates reported that their schools did not connect them or their classmates with local businesses to help them understand what local careers are available to them. Other benefits of student engagement include better attendance, reduced behavioral problems, and increased retention rates. So, why is student engagement so critical? It is the centerpiece for a fulfilling and impactful education experience.

**And now because of ai engagement, we see grad rates rising**

By James **Barron** Sept. 20, 20**23** /” I’ve worked for The Times since a week after I graduated from college. I spent a year in the bureau in Albany, N.Y., and two as a national correspondent in Detroit. “ // How A.I. Increased the Graduation Rate at John Jay College by 32 Points Software identified at-risk students, who were given extra help. Also, New London, Conn., hasn’t forgotten the traitor Benedict Arnold, 242 years later. // <https://www.nytimes.com/2023/09/20/nyregion/ai-john-jay-college.html>

Dara Byrne was so surprised by the numbers on **graduation rates** that she **triple**-checked them**. In two years,** the **graduation rate among students** at John Jay College with enough credits to get their diplomas after one more year of study **had jumped 32 percentage points, to 86 percent.**Byrne, then **the associate** provost, credits **a**rtificial **i**ntelligence — **specifically, A.I.-powered software that analyzed things like whether students’ grades were slipping and whether they had signed up for courses that would give them enough credit hours to graduate. The software generated a “risk score” for every student that told academic advisers which students to concentrate on. “It can be hard to know who requires a little more attention,” said Dana Prieto, one of two academic advisers at John Jay, who explained that students with risk scores that pointed to a chance of dropping out were given extra help, including one-on-one coaching.**

**C2) Heart Disease**

**Hundreds of people die from cardiovascular health every year**

**NY DOH 24** Heart Disease and Stroke Prevention .<https://www.health.ny.gov/diseases/cardiovascular/heart_disease/#:~:text=About%20695%2C000%20people%20die%20of,1%20in%20every%205%20deaths.>) //Bellaire MC // Ben Williamson, Alex Molnar, and Faith Boninger March 5, 2024

About **695,000 people die of heart disease in the United States every year–that's 1 in every 5 deaths.**

**We have to key point on this**

**SA) attainment**

**Low education level is linked with increased heart mortality rates**

**Quyyumi 19** (MD, Emory Clinical Cardiovascular Research Institute, Emory University School of Medicine Low Educational Attainment is a Predictor of Adverse Outcomes in Patients With Coronary Artery Disease PubMed Central.[https://pmc.ncbi.nlm.nih.gov/articles/PMC6755831/#:~:text=Clinical%20Perspective%20\*%20Low%20educational%20attainment%20is,angiography%20for%20evaluation%20of%20coronary%20artery%20disease.](https://pmc.ncbi.nlm.nih.gov/articles/PMC6755831/#:~:text=Clinical%20Perspective%20*%20Low%20educational%20attainment%20is,angiography%20for%20evaluation%20of%20coronary%20artery%20disease.)) //Bellaire MC // Arshed A Quyyumi ,2019 Sep 3

Adverse Cardiovascular Outcomes Patients who did not experience the primary outcome within 30 days of enrollment and had adjudicated outcomes data available for analysis were followed for a median duration of 4.2 [1.8–6.8] years. There were 1066 all‐cause deaths, 812 cardiovascular deaths/non‐fatal MI and 276 non‐fatal MI events. Older age, smoking, diabetes mellitus, hypertension, history of CAD, and Gensini score were directly associated; while BMI, left ventricular ejection fraction, eGFR, and estimated annual income were inversely associated with all‐cause mortality in study patients (Table S2).**Educational** **Attainment Level** and Adverse Outcomes Kaplan–Meier survival **curves** for the **association between EAL and all‐cause mortality** are shown in Figure 1 (Central Illustration). The **cumulative** survival for study participants decreased across categories of graduate, college, high school, and elementary/middle school education. A similar trend was observed for the secondary outcomes of cardiovascular death/non‐fatal MI and non‐fatal MI events (Figure 2A and 2B). In unadjusted Cox proportional hazards regression analyses, **patients with elementary/middle school, high school, or college education had a 104%, 57%, and 24% higher risk of all‐cause mortality** compared with those with graduate education, respectively. **Similar**ly, there was a **significantly higher hazard for** the secondary outcomes of **cardiovascular death**/non‐fatal MI and non‐fatal MI among those with elementary/middle school and high school education compared with graduate education level (Table 2).

**AI increases education level**

Isnaini Amirotun **Hanifah 24** recipient of the LPDP scholarship and Master of Educational Leadership at Monash University Williamson, (2024). “Evaluating the Impact of Artificial Intelligence-Based Learning Methods on Students' Motivation and Academic Achievement” Boulder, CO: National Education Policy Center.<https://journal.amorfati.id/index.php/postaxial/article/view/279/122>) //international Journal of Post Axial //Rizkyana Wahyu Laras Pertiwi1a\*, Laeli Umi Kulsum2b, Isnaini Amirotun Hanifah 09-01-2024

Moreover, the **results indicate that AI**-based  **learning methods have a demonstrable impact on students' academic achievement.** Analysis of standardized test scores and  **academic performance metrics showed improvements among students who participated in AI-enhanced learning activities** compared to their counterparts in traditional instructional settings. These findings suggest that AI technologies have the potential to facilitate deeper conceptual understanding, retention of information, and mastery of academic content, thereby enhancing overall learning outcomes.

**I: ai saves**

**Heightened Academic achievement leads to better graduation rates**

**Allensworth Clarke 24** Elaine Allensworth is the Lewis-Sebring Executive Director of the UChicago Consortium, where she has conducted research on educational policy and practice . Kallie Clark-Uribe is currently a doctoral student, and Institute of Educational Sciences Pre-doctoral Fellow at the University of Chicago' High School GPAs and ACT Scores as Predictors of College Completion: Examining Assumptions of College Completion: Examining AssumptionsFeature Articles<https://www.luminafoundation.org/wp-content/uploads/2020/01/high-school-gpas.pdf>) //Bellaire MC // Ben Williamson, Alex Molnar, and Faith Boninger March 5, 2024

We begin by simply showing college graduation rates by students’ ACT scores and HSGPA without additional control variables. As shown in Table 2, both show a relationship with college graduation controlling for the other; within any given row or column, the **graduation rate increases as the other metric of achievement goes up.** However, the incremental value of additional ACT points flattens out above scores of about 22 to 23 students with the same HSGPA.Table 3 displays coefficients from models predicting college graduation rates with HSGPAs. The odds ratios show the likelihood of graduating from college; students with a 3.0 to 3.25 HSGPA have fairly even odds (0.91), which gives them just under a 50–50 chance (48% probability), whereas **students with a HSGPA of 3.5 to 3.75** **are 3.6 times more likely to graduate as to not graduate** (odds of 3.65, or about 78% graduating and 22% not graduating). HSGPA has a strong relationship with college graduation in both the unconditional model and the model that controls for students’ backgrounds and college institutional variables, although the relationship is smaller once the control variables are introduced. The coefficients from the full model were converted into percentages and displayed graphically as the thick black line in the left panel of Figure 1. Across the range of HSGPAs, the probability of graduating from college ranges from 20% for students with HSGPAs less than 1.5 to about 80% for students with HSGPAs of 3.75 or higher after controlling for student backgrounds and college characteristics.

**Significant improvements are already being seen**

**Barron 23** I write the New York Today newsletter, a morning roundup of what’s happening in the city, for The New York Times.I’ve worked for The Times since a week after I graduated from college. I spent a year in the bureau in Albany, N.Y., and two as a national correspondent in Detroit. I wrote the moment-to-moment stories about the Sept. 11 attacks for NYTimes.com in 2001 and the lead stories on the Northeast blackout in 2003, Hurricane Irene in 2011 and Hurricane Sandy in 2012. I wrote the Coronavirus Update column for the print newspaper from 2020-21. .<https://www.nytimes.com/2023/09/20/nyregion/ai-john-jay-college.html>) Sept. 20, 2023 How A.I. Increased the Graduation Rate at John Jay College by 32 Points Software identified at-risk students, who were given extra help. Also, New London, Conn., hasn’t forgotten the traitor Benedict Arnold, 242 years later.

Dara Byrne was so surprised by the numbers on graduation rates that she triple-checked them**. In two years, the graduation rate among students** at John Jay College with enough credits to get their diplomas after one more year of study **had jumped 32 percentage points,** to 86 percent. “It was jaw-dropping,” she said. Byrne, then the associate provost, **credits** artificial intelligence — specifically, **A.I.-powered software** that analyzed things like whether students’ grades were slipping and whether they had signed up for courses that would give them enough credit hours to graduate.

**These increased education levels decrease risk of Cardiovascular Disease**

**VCU 15** Why Education Matters to Health: Exploring the Causes Center on Society and Health Center. / no quals <https://societyhealth.vcu.edu/work/the-projects/why-education-matters-to-health-exploring-the-causes.html#gsc.tab=0>) February 13, 2015

**Americans with more education live** longer, **healthier lives than those with fewer years of schooling** (see Issue Brief #1). But why does education matter so much to health? The links are complex—and tied closely to income and to the skills and opportunities that people have to lead healthy lives in their communities. How are health and education linked? There are three main connections:1 Education can create opportunities for better health Poor health can put educational attainment at risk (reverse causality) Conditions throughout people’s lives—beginning in early childhood—can affect both health and education This issue brief, created with support from the Robert Wood Johnson Foundation, provides an overview of what research shows about the links between education and health alongside the perspectives of residents of a disadvantaged urban community in Richmond, Virginia. These community researchers, members of our partnership, collaborate regularly with the Center on Society and Health’s research and policy activities to help us more fully understand the “real life” connections between community life and health outcomes. 1. The Health Benefits of Education Income and Resources “Being educated now means getting better employment, teaching our kids to be successful and just making a difference in, just in everyday life.” —Brenda Better jobs: In today’s knowledge economy, **an applicant with more education is more likely to be employed and land a job that provides health-promoting benefits such as health insurance,** paid leave, and retirement.5 Conversely, people with less education are more likely to work in high-risk occupations with few benefits. Higher earnings: Income has a major effect on health and **workers with more education tend to earn more money.**2 In 2012, the median wage for college graduates was more than twice that of high school dropouts and more than one and a half times higher than that of high school graduates.6 “Definitely having a good education and a good paying job can relieve a lot of mental stress.” —Chimere Resources for good health: **Families with higher incomes can more easily purchase healthy foods, have time to exercise regularly, and pay for health services** and transportation. Conversely, the job insecurity, low wages, and lack of assets associated with less education can make individuals and families more vulnerable during hard times—which can lead to poor nutrition, unstable housing, and unmet medical needs. Social and Psychological Benefits “So through school, we learn how to socially engage with other classmates. We learn how to engage with our teachers. How we speak to others and how we allow that to grow as we get older allows us to learn how to ask those questions when we're working within the healthcare system, when we're working with our doctor to understand what is going on with us.” —Chanel Reduced stress: People with more education—and thus higher incomes—are often spared the health-harming stresses that accompany prolonged social and economic hardship. **Those with less education often have fewer resources** (e.g., social support, sense of control over life, and high self-esteem) to buffer the effects of stress. Social and psychological skills: Education in school and other learning opportunities outside the classroom build skills and foster traits that are important throughout life and may be important to health, such as conscientiousness, perseverance, a sense of personal control, flexibility, the capacity for negotiation, and the ability to form relationships and establish social networks. These skills can help with a variety of life’s challenges—from work to family life—and with managing one’s health and navigating the health care system. Social networks: Educated adults tend to have larger social networks—and these connections bring access to financial, psychological, and emotional resources that may help reduce hardship and stress and improve health. “Being able to advocate and ask for what you want, helps to facilitate a healthier lifestyle. … If it's needing your community to have green spaces, have a park, a playground, have better trails within the community, advocating for that will help.” —Chanel Health Behavior Knowledge and skills: **In addition** to being prepared for better jobs, **people with more education are more likely to learn about healthy behaviors.** Educated patients may be more able to understand their health needs, follow instructions, advocate for themselves and their families, and communicate effectively with health providers.21

**SB) women**

**Women are more likely to be misdiagnosed for heart disease**

Zia **Sherrell** Dr**.** Payal **Kohli**, M**.**D**.,** FACC **21** Zia Sherrell is a health copywriter and digital health journalist with over a decade of experience covering diverse topics from public health to medical cannabis, nutrition, and biomedical science. Her mission is to empower and educate people by bringing health matters to life with engaging, evidence-based writing. Dr. Payal Kohli is an ABMS board certified noninvasive cardiologist specializing in advanced echocardiography, nuclear cardiology, and women’s heart disease. Dr. Kohli has also served as a section editor for Journal of the American College of Cardiology (JACC) and assistant editor for JACC Imaging. February 22, 2021 “What are the symptoms of heart disease in women?,” Medical New Today, <https://www.medicalnewstoday.com/articles/heart-disease-in-women#healthcare-disparities>

Overall, the speed and **quality of healthcare for females with heart disease is lower than** that of **males** in the U.S. According to the National Heart, Lung, and Blood Institute (NHLBI)Trusted Source, **females** are **more likely to experience delays** in getting an EKG when they visit the hospital for symptoms that could indicate heart disease in comparison with males. Doctors are also less likely to perform diagnostic tests for CAD in females, while young females are more likely to receive an incorrect diagnosis following a cardiac event. This can result in misdiagnosis and people leaving the hospital without treatment. **Females also face barriers when they** do **receive** a **diagnosis**. Compared with males, they are: 45% less likely to receive statins 35% less likely to receive beta blockers 28% more likely to visit the emergency room (ER) **more than twice in a year less likely to receive treatment from a heart specialist** less likely to receive a pacemaker or defibrillator less likely to receive procedures, such as percutaneous coronary intervention or a coronary bypass This impacts health outcomes for females, leading to increased risk of mortality.

**This is because of poor education on gender differences**

**Leonard Briggers 21** Jayne is a qualified counselor and psychotherapist, and she holds a diploma in nutritional therapy. At present, she is completing a master’s degree in counselling and psychotherapy. She is passionate about the influence of diet and lifestyle on mental health and well-being. Through her work in both private and not-for-profit settings, she hopes to empower others to take charge of their lives and improve their physical and mental health. Dr. Alana Biggers is an ABMS board certified internal medicine physician. She is an assistant professor at the University of Illinois at Chicago College of Medicine, where she specializes in internal medicine. June 17, 2021, “Gender bias in medical diagnosis,” Medical News Today, <https://www.medicalnewstoday.com/articles/gender-bias-in-medical-diagnosis>

**There are sex-based differences in** how the **symptoms of heart disease** present in males and females. **However, a lack of education on these differences** can **lead to doctors ignoring or misdiagnosing** heart disease. Doctors are more likely to regard the symptoms that affect females as “atypical” compared with the symptoms that often affect males. They are also less likely to refer females for diagnostic tests and treatment. The **same is true of heart attacks**. **Females** **are** less likely to experience “classic” heart attack symptoms, and are **less likely to receive treatment.** The American Heart Association (AHA)Trusted Source says this is because doctors use a diagnostic criteria that is geared towards males. Marginalizing the symptoms that females experience puts them at risk.

**Ai is becoming increasingly more prevalent in the medical field**

Nathan **Eddy 24** Nathan Eddy works as an independent filmmaker and journalist based in Berlin, specializing in architecture, business technology and healthcare IT. He is a graduate of Northwestern University’s Medill School of Journalism. 4-4-2024, “Medical Schools Train the Next Generation of Clinicians to Better Understand AI ,” Education Next, <https://healthtechmagazine.net/article/2024/04/medical-schools-train-next-generation-clinicians-better-understand-ai>

**Educators are integrating AI** and ML into curricula **to train medical students** to practice medicine in the real world, says Dr. Bernard Chang, dean for medical education at Harvard Medical School, which is creating an AI in medicine doctorate track. “We know AI is going to transform how healthcare is delivered. It already is doing that,” he says. “I don’t believe that AI will replace human physicians, but those who use AI will be so much more capable than those who don't.”

**AI is also demonstrating a lack of sexual biases in medical education**

**Shoja 24** Dr. Shoja’s expertise as a clinical anatomist incorporating translational clinical research is founded on his rare double specialization in the fields of clinical anatomy and medicine. His extensive research has produced numerous cutting edge findings including the discovery of the laterality of central respiratory control, the introduction of a new surgical approach for reinnervation of the paralyzed phrenic nerve in patients with high cervical spinal cord injury, the introduction of a new classification for the branching pattern of the renal artery, introduction of a novel laboratory model for neurosurgical training that simulates intraventricular endoscopic surgery, and the discovery of a new syndrome composed of hereditary gelsolin amyloidosis and retinitis pigmentosa and named “Ardalan-Shoja-Kiuru syndrome” after him and his research team. Dr. Shoja has published more than 500 research articles in internationally renowned biomedical journals including Clinical Anatomy, Critical Reviews in Toxicology, Bioscience, Life Sciences, Journal of Neurosurgery, International Journal of Cardiology, and Neurosurgery to name a few. Currently, his h-index is 50. His research findings have been cited more than 10,000 times by independent scientists in the scientific community worldwide. , 2024 Feb 19 What Goes In, Must Come Out: Generative Artificial Intelligence Does Not Present Algorithmic Bias Across Race and Gender in Medical Residency Specialties NCBI <https://pmc.ncbi.nlm.nih.gov/articles/PMC10951939/>

What Goes In, Must Come Out: **Generative A**rtificial **I**ntelligence **Does Not Present Algorithmic Bias Across** Race and **Gender in Medical Residency Specialties** Artificial Intelligence (AI) has made significant inroads into various domains, including medicine, raising concerns about algorithmic bias. This study investigates the presence of biases in generative AI programs, with a specific focus on gender and racial representations across 19 medical residency specialties. Methodology This comparative study utilized DALL-E2 to generate faces representing 19 distinct residency training specialties, as identified by the Association of American Medical Colleges (AAMC), which were then compared to the AAMC's residency specialty breakdown with respect to race and gender. Results Our **findings reveal** an alignment between **OpenAI's DALL-E2's** predictions and the current demographic landscape of medical residents, suggesting an **absence of algorithmic bias in this AI model.**

**And improving the information on signs of heart disease between genders**

**Carter 22** Ricky Carter from Department of Quantitative Health Sciences (R.E.C.), Mayo Clinic, Jacksonville, FL. 17 February 2022, Cardiovascular Disease Screening in Women: Leveraging Artificial Intelligence and Digital Tools AHA, <https://www.ahajournals.org/doi/full/10.1161/CIRCRESAHA.121.319876>

Tractable approaches to facilitating **more comprehensive CVD risk assessment in women** are **now** **offered by** the ongoing accumulation of readily available health data combined with the rapid development of machine learning (ML) and specifically **AI** tools for analyzing these data. In fact, the breadth and depth of data and analytical tools can facilitate approaches for primordial, primary and secondary prevention of CVD in women. When integrated with evolving personal health data capture systems, in addition to established electronic health record (EHR) systems, AI can be well positioned to synthesize and analyze the intrinsically complex and rapidly expanding quantities of interrelated data. For primordial prevention, **AI could expand the use of currently available personal health and web-based applications by incorporating data from multiple sensors** (eg, activity trackers, digital scales, EHRs, and fitness apps) to predict women who are at risk for developing CVD risk factors such as hypertension, obesity, and hypercholesterolemia. For primary prevention, digital tools can be used to screen women for known but undiagnosed CVD risk factors such as hypertension, as well as evaluate blood pressure control following intervention. In addition, AI-based algorithms can integrate existing clinical or imaging20 data for more accurate risk prediction and aid clinical decision support tools for appropriate early interventions. For secondary prevention, **AI algorithms can similarly identify women who already carry a diagnosis of** overt **CVD** but may benefit from more intensive guideline-directed medical therapy or facilitate remote cardiac rehabilitation21 using digital technology. Leveraging AI for CVD Screening in Women ML Potential and Purpose Effectively leveraging AI to improve health outcomes, for women as well as for men, requires an understanding of the potential and purpose of ML algorithms. The quote “All models are wrong, but some are useful,” by George Box, is often used to introduce the concept of statistical modeling to learners.22 What has been known for over a century is that statistical models provide a nonunique solution of relating a set of variables to an outcome of interest. The choice of variables, the units of the variables, and the functional form can all influence the model’s fit to the data. Historically, statistical models were written by the analyst guided on knowledge of the clinical domain and statistics. ML does not remove these elements from the modeling but rather creates a larger search space for an optimal model by leveraging robust computing capabilities. In a way, ML is allowing for systematic examination of complex relationships using the speed of computers. Deep learning extends many common regression techniques by building a network of complex data extraction and data summarization mathematical operations to provide mechanisms to identify subtle patterns in the data. One particular type of ML, AI combines these techniques in a way to provide statistical tools that allow for computational tasks that previously required human perception to address. These tasks, sometimes described as human easy–computer hard, are as common as humans using facial and voice recognition to uniquely identify a person. Programming those tasks to be robust into a computer, however, is a challenge.

**Misdiagnoses are a serious issue**

**Lix Szabo 24** [Horn, Michael B, Jan. 15, 2024, “Medical mistakes are more likely in women and minorities

NBC, <https://www.nbcnews.com/health/health-news/medical-mistakes-are-likely-women-minorities-rcna133726>

In a study published Jan. 8 in JAMA Internal Medicine, researchers found that nearly **1 in 4** hospital **patients** who **died or were transferred to intensive care had experienced a diagnostic error.** Nearly **18% of misdiagnosed patients were harmed or died.** In all, an estimated 795,000 patients a year die or are permanently disabled because of misdiagnosis, according to a study published in July in the BMJ Quality & Safety periodical. Some patients are at higher risk than others. Women and racial and ethnic minorities are 20% to 30% more likely than white men to experience a misdiagnosis, said Dr. David Newman-Toker, a professor of neurology at Johns Hopkins School of Medicine and the lead author of the BMJ study. “That’s significant and inexcusable,” he said.

**So is Heart Disease**

**CBC 24** [Horn, Michael B, 5-2-2024, “AI is Officially Here, There, Everywhere, and Nowhere,” Education Next, <https://www.cdc.gov/heart-disease/about/women-and-heart-disease.html>

**Over 60 million women** (44%) in the United States are living **with some form of heart disease**.1 Heart disease is the leading cause of death for women in the United States and can affect women at any age. In 2021, it was **responsible for the** deaths **of** **310,661 women—or about** **1 in every 5 female deaths.**2 Only about half (56%) of US women recognize that heart disease is their number 1 killer.3

**Thus we affirm**

SV

### **Answer: Prefer Util over their framing 3 warrants**

1. If you aren’t alive you literally cannot reap the benefits of equality meaning big death impacts are pre req to solvency of structural violence argument.

2. Being dead is ultimately worse than having a low quality of life, thus prioritizing big death impacts first. That’s because death is just null while have a low quality of life spans years and is intergenerational.

3. The very rhetoric that they are using to say prioritize one group over another is what started the structural violence they talk about. If you look through a lense of util in which everyone is equal, it counters that problematic rhetoric and stops it at its root which is a pre-req to their argument.

C1

### **Turn: Generative AI increases critical thinking Sardi 25**

Sardi, Juli, et al. “How Generative AI Influences Students’ Self-Regulated Learning and Critical Thinking Skills? A Systematic Review.” International Journal of Engineering Pedagogy (IJEP), vol. 15, no. 1, International Society for Engineering Education (IGIP), Kassel University Press, Jan. 2025, pp. 94–108, <https://doi.org/10.3991/ijep.v15i1.53379>. Accessed 23 Mar. 2025.

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**Generative artificial intelligence (AI), particularly tools such as ChatGPT, is transforming education by enhancing self-regulated learning (SRL) and critical thinking skills**, two essential competencies in the digital era. This study systematically analyzes the impact of generative AI on these skills using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to identify, evaluate, and synthesize relevant studies. **Document searches were conducted in Scopus, Web of Science, and ScienceDirect, focusing on publications from 2022 to 2024, when ChatGPT was first widely adopted. Of the 3,214 documents identified, 557 met the initial screening criteria, and 38 studies were selected for detailed analysis. The findings reveal that 71.4% of studies reported AI’s positive role in SRL, mainly through personalized learning, metacognitive support, and adaptive feedback. Likewise, 62.5% of studies reported its significant role in critical thinking, supporting the process of analysis, evaluation, and reflection.** However, researchers cautioned against an overreliance on technology, which one said could take away some students’ ability to think for themselves. Such findings indicate that educational institutions need to change their ways and include generative AI in a model that focuses on areas that foster learner independence. This approach will assist teachers and decision-makers in harnessing the distinctive kitsch of AI technology by creating new learning spaces that are creative and future-oriented.

**Berg 23**

van den Berg, G., & du Plessis, E. (2023). ChatGPT and Generative AI: Possibilities for Its Contribution to Lesson Planning, Critical Thinking and Openness in Teacher Education. Education Sciences, 13(10), 998. <https://doi.org/10.3390/educsci13100998>

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**Generative AI tools such as ChatGPT should be seen as tools that can assist the teacher in improving the quality of education in schools and not as a threat to teacher training, teacher education and schools.** In this regard, Saunders [3] argues that **users may also find ChatGPT to be extremely helpful when creating scenarios for real-world case-study-based assessments, especially if teachers and student teachers use ChatGPT to create individual scenarios to which their assessments will respond, such as critically evaluating lesson plans.** According to Phillips [9], “[t]he job of the educator is to hold the hand of the student as they go through the process of learning and to remind them of what the integrity of the learning process requires. It’s not about getting the answer, it’s about the process of learning. And the student’s job is to learn how to learn—not just what to learn, but also how to learn”. **Students might thus use examples from lesson plans on ChatGPT to distinguish between what is versus what ought to be. This can help enhance critical thinking. Although authors such as Kasneci et al. [2] caution against the over-reliance on these tools,** which can negatively impact their critical thinking and problem-solving skills, **they agree that activities involving them for critique and evaluation promote not only critical thinking but also creativity and problem-solving skills.**

C2

### **Answer: AI is getting significantly cheaper**

Dana **Levine** Feb 13, 20**25** Is AI Getting Cheaper or More Expensive? Medium / DVM Cornell University 2004

PhD North Carolina State University 2013

https://dana11235.medium.com/is-ai-getting-cheaper-or-more-expensive-80ad0a8635e4. Accessed 2 Mar. 2025.IL

I recently read Sam Altman’s blog post on AGI, and came out somewhat confused. His first two observations are: The intelligence of an AI model roughly equals the log of the resources used to train and run it. **The cost to use a given level of AI falls about 10x every 12 months**…

### **Answer: This drop has been proven to be occurring**

Mousume **Roy**, HCLTech Feb 13, 20**25** GenAI is 80% cheaper — businesses can’t afford to sit and watch? HCLTech / Associate General Manager https://www.hcltech.com/trends-and-insights/genai-80-cheaper-businesses-cant-afford-sit-and-watch#:~:text=Generative%20AI%20is%20now%2080,and%20consultant%20to%20CEOs%20worldwide.

**Generative AI is now 80% cheaper than it was just 16 months ago** — a shift that businesses must grasp to stay competitive said Dr. Ayesha Khanna, AI thought leader, board member and consultant to CEOs worldwide. The rapid decline in AI costs means that companies delaying adoption risk being outpaced by rivals leveraging its efficiency. But AI adoption isn’t just about speed, it’s about responsibility.

### **Turn: Generative AI gives more cost-effective and diverse education Rizvi 24**

Rizvi, Nusrat. “Building a Better Future: Generative AI’s Contribution to Affordable Education (with a Focus on Hybrid And...” ResearchGate, unknown, 30 Apr. 2024, [www.researchgate.net/publication/380205382\_Building\_a\_Better\_Future\_Generative\_AI](http://www.researchgate.net/publication/380205382_Building_a_Better_Future_Generative_AI). Accessed 23 Mar. 2025.

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**One of the most signiﬁcant advantages of hybrid education powered by GenAI is its potential to optimize resource utilization and reduce operational costs. By leveraging AI-generated content, educational institutions can streamline the delivery of course materials, thereby minimizing the need for extensive physical infrastructure and resources. This, in turn, can lead to substantial cost savings, which can be passed on to students in the form of lower tuition fees.** Moreover, the integration of GenAI-powered online modules enables educators to maximize the eﬃciency of classroom time. By oﬄoading certain instructional tasks to digital platforms, instructors can focus more on facilitating discussions, fostering critical thinking skills, and providing personalized support to students. As a result, the number of required in-person sessions may be reduced, leading to further cost savings for both students and institutions. Empowering Students and Expanding Access

Beyond cost considerations, hybrid education offers a myriad of beneﬁts for students,chief among them being increased ﬂexibility and access to a broader range of courses.With GenAI-enabled online modules, learners have the ﬂexibility to engage with course materials anytime, anywhere, allowing them to balance their academic pursuits with other personal and professional commitments. **Furthermore, hybrid education transcends geographical and logistical barriers, making quality education more accessible to learners from diverse backgrounds and locations. Whether they reside in remote rural areas or bustling urban centers, students can access high-quality educational content through online platforms powered by GenAI, thereby democratizing access to knowledge and opportunities.**

### **Answer: It has already been proven that Ai without bias is possible**

Adam **Zewe** (MIT grad and writer) Researchers reduce bias in AI models while preserving or improving accuracy December 11, 20**24** https://news.mit.edu/2024/researchers-reduce-bias-ai-models-while-preserving-improving-accuracy-1211 Accessed March 8, 2025.

MIT **researchers developed a** new **technique that** identifies and **removes** specific points in a training dataset that contribute most to **a model’s failures on minority subgroups**. By removing far fewer data points than other approaches, this technique **maintains the overall accuracy of the model while improving its performance regarding underrepresented groups.** In addition, the technique can identify hidden sources of bias in a training dataset that lacks labels. Unlabeled data are far more prevalent than labeled data for many applications. This method could also be combined with other approaches to improve the fairness of machine-learning models deployed in high-stakes situations. For example, it might someday help ensure underrepresented patients aren’t misdiagnosed due to a biased AI model.

### **Answer: AI incorporates a toolbox of bias detection capabilities.**

**Barnes, Emily and James Huston. “Navigating the ethical terrain of AI in highereducation: Strategies for mitigating bias and promoting futures.” LindenwoodUniversity Digital Commons. June [Emily Barnes is a leader and researcher with over 15 years in higher education who's focused on using technology, AI and machine learning] 2024.https://digitalcommons.lindenwood.edu/cgi/viewcontent.cgi?article=1655&context=faculty-research-papers. Accessed February 14, 2025.**

**Expanding on his previous research, Steven Umbrello, in collaboration with Ibo van dePoel [58], discusses the unique challenges that AI, especially machine learning, presentsto value sensitive design (VSD). They suggest a revised version of the VSD methodology,**

**one that incorporates a well-established set of principles to serve as design norms.From these norms, more detailed design requirements can be developed. This approachis designed to guarantee that the outcomes of AI development are not only harmlessbut also positively contribute to the greater good. Moreover, they advocate for anexpansion of the VSD process to cover the entire lifecycle of AI technology, ensuringthat ethical considerations are integrated from inception through deployment andbeyond. This comprehensive approach aims to address the specific complexities anddemands of AI and machine learning within the framework of value-sensitive design.These discussions and findings underscore the critical importance of VSD as a strategy**

**for mitigating bias and promoting fairness in AI within higher education. As thesestudies have demonstrated, addressing bias in AI within higher education involves a multi-layered strategy incorporating both technical and conceptual approaches to ensure fairness and equity. Kasif [58] introduces the concept of an “intelligent system**

**quotient” as a measure to reflect the societal impact of AI systems. This quotientsuggests a structured approach to understanding and mitigating AI bias through a multi-tier architecture, offering a quantifiable method to assess and address bias in AI,datasets, and algorithms.**