Resisting Techno-Optimism:
AI Literacy and the Politics of Inclusion Across Global Divides

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"The future of AI is already here. And it's unevenly distributed." -William Gibson

Abstract

This capstone critically examines the intersection of artificial intelligence (AI), education, and global equity, challenging techno-optimistic narratives that frame technological progress as inherently beneficial. Drawing on socio-technical systems theory, critical pedagogy, and epistemic justice, the study explores how AI literacy can serve as a transformative tool for resisting exclusionary practices and promoting justice-oriented engagement across global divides. Through qualitative methodologies, including faculty interviews and observational data from workshops, the research identifies systemic gaps in AI governance, ethical frameworks, and pedagogical integration within higher education.

Case studies on surveillance technologies, biometric systems, and algorithmic labor illustrate how AI infrastructures reproduce inequities, particularly for marginalized communities in the Global South. Findings reveal fragmented institutional policies, uneven access to AI resources, and epistemic harms embedded in algorithmic design. The study concludes with actionable recommendations for universities to embed critical AI literacy into curricula, adopt inclusive governance frameworks, and foster global collaboration to democratize technological futures. By reframing AI literacy as a civic competency rather than a technical skill, this work advocates for equity-driven strategies that resist techno-optimism and center human rights in the age of artificial intelligence.

Introduction

My earliest engagement with technology was caring for a Tamagotchi, a digital pocket pet that demanded constant attention and taught me about early human-computer interaction through digital responsibility. This digital pocket pet constructed a new narrative on the use of "responsive" technology through its portability and sociability. Today, I confront artificial intelligence, a technology whose decisions ripple across societies and whose ethics remain contested. Between these two moments lies a trajectory that reflects not only my personal evolution but also the broader cultural shift from playful digital artifacts to pervasive, ethically complex technologies. This journey informs me of my commitment to understanding technology critically and embracing innovation without surrendering to techno-optimism.

Artificial Intelligence (AI) is often portrayed as a purely technical innovation, celebrated for its ability to optimize processes and transform industries. Yet this narrative of progress that is rooted in techno-optimism, an ideology that assumes technological innovation will inherently drive social progress and universally benefit humanity, obscures the complex realities of how AI operates and whom it serves. This project resists such deterministic views by framing AI as a socio-technical system, one that intertwines computational models, data, and infrastructure with human values, ethics, and governance. While its technical foundation allows for transformative applications, AI's societal influence should be deliberately mediated through cultural norms, comprehensive regulations, and globally balanced governance to safeguard human rights. These dynamics shape who benefits from AI in education and who is excluded, revealing parallel digital realities between the Global North and Global South.

The stakes of this inquiry are high. AI literacy, the ability to critically understand and engage with AI systems, is increasingly positioned as essential for participation in contemporary knowledge economies. However, access to AI education and resources remains uneven, reinforcing structural inequalities across global divides. In higher education, particularly, the integration of AI tools raises questions about equity, algorithmic bias, and the reproduction of systemic privilege. Issues such as data privacy, surveillance, and the commodification of learning further complicate the promise of AI-driven innovation. These challenges underscore that AI is not merely a technical artifact but a complex ecosystem requiring interdisciplinary oversight.

This capstone situates AI within broader debates about governance, ethics, and inclusion through the lens of education. Drawing on socio-technical systems theory, critical race and technology studies, and global education frameworks, it interrogates how AI policies and practices shape educational futures. Through case studies and comparative analysis, the project examines how institutions in the Global North and Global South navigate AI adoption, highlighting tensions between technological advancement and social justice. Ultimately, this work argues for a reimagining of AI literacy, not as a neutral skill set, but as a critical practice that empowers learners to question, resist, and reshape the systems that govern their lives.

Insights from my study abroad program in Quindío, Colombia demonstrated that innovation grounded in local context and community engagement can achieve transformative impact even in resource-limited settings. This perspective informs my approach to AI governance, emphasizing collaborative strategies that ensure equitable access and culturally responsive policy design. By drawing on these lessons, I advocate for global frameworks that balance technological progress with social responsibility, ensuring that innovation serves diverse communities rather than reinforcing existing inequities.

Purpose of the Study

By integrating AI literacy into higher education curricula, universities can foster a generation of informed individuals equipped to address human rights challenges posed by emerging technologies. This project will contribute to the development of policies that protect human rights in the context of AI, ensuring that students are prepared to navigate the ethical complexities of AI systems. This analysis intends to demonstrate how AI literacy programs can catalyze human rights advocacy, preparing students to become policymakers, advocates, and professionals who can effectively address the ethical implications of AI in society (Parthasarathy & Katzman, 2024).

This research is timely due to the rapid advancement of generative AI tools being adopted across multiple sectors, except the education sector. In an educationally optimistic world, education would level the academic playing field for all students, regardless of socioeconomic status or geography. Much like the importance of learning the reality and history of educational institutions, it is important to reflect on the socio-technical foundations of AI systems created from human intervention.

With the absence of critical literacy and ethical frameworks, there are risks for the deepening of existing inequalities and the enabling of new forms of digital harm. Higher education has a pivotal role to play in shaping how society responds to these challenges. This study addresses that gap by proposing a justice-oriented framework grounded in critical pedagogy and epistemic justice. The central question is: *How can AI literacy be leveraged as a critical tool to resist techno-optimism and promote inclusive, justice-oriented engagement across global divides?*

Researcher Positionality

I approach education as a liberatory practice grounded in critical pedagogy, drawing on Paulo Freire's (1970) vision of learning as a means of empowerment and social transformation. This perspective compels me to center the voices and lived experiences of marginalized communities, recognizing that knowledge production is never neutral but shaped by power relations. My commitment to epistemic justice (Fricker, 2007) informs this stance: I seek to amplify narratives often excluded from dominant discourses, particularly those from the Global South, and interrogate how technological systems reproduce or challenge these inequities. In studying AI integration in education, I position myself as both a researcher and an advocate for inclusive practices, acknowledging my own location within the Global North and the privileges it confers. This reflexivity shapes my interpretation of findings and my insistence on connecting local experiences to global structures of algorithmic governance.

This research is guided by critical theoretical frameworks that challenge dominant narratives of technological neutrality and progress. Freire's critical pedagogy frames education as a site of liberation, while Fricker's concept of epistemic justice provides tools for examining whose knowledge is valued and how AI systems can perpetuate or disrupt these hierarchies. Postcolonial theory critiques Western-centric assumptions embedded in AI development and deployment, and critical race theory highlights how race and power shape access to AI and digital education. Together, these frameworks form a justice-oriented approach to AI literacy that resists techno-optimism and centers equity, inclusion, and critical consciousness.

Problem Statement

Artificial Intelligence (AI) is a pivotal and contested force shaping the future of education, labor, and society. Its rapid advancement, particularly with the emergence of generative AI tools like ChatGPT, has outpaced the development of unified institutional policies, leaving many educators and administrators uncertain about how to ethically and pedagogically respond in the classroom. While AI offers opportunities for innovation, it also raises urgent concerns around algorithmic bias, surveillance, and digital discrimination, issues that disproportionately affect marginalized communities and demand critical engagement through education.

In this digitally progressive era, universities should be tasked with integrating AI into curricula but doing so in ways that promote justice, equity, and civic responsibility. However, AI literacy programs in higher education often reproduce exclusionary narratives, emphasizing technical skills and workforce readiness while neglecting the ethical, political, and human rights dimensions of AI. This techno-optimistic framing assumes that innovation is inherently beneficial and should be led by private actors, often at the expense of public accountability and global equity (Mollick, 2024). This assumption obscures the political nature of technological development, framing innovation as inevitable rather than contested, and marginalizing public institutions and communities from shaping equitable AI futures.

The communities most affected by these shifts, marginalized students, Global South communities, and scholars in non-STEM disciplines, are frequently excluded from shaping AI discourse and policy. This exclusion not only limits the transformative potential of AI education but also reinforces existing power imbalances in knowledge production and access.

While prior research has highlighted the importance of AI literacy (Cotter & Reisdorf, 2020; Gran et al., 2021; Dogruel, Masur, & Joeckel, 2021), much of it remains fragmented. Studies often focus on historical context, technical competencies, or ethical concerns in isolation, without offering a comprehensive framework for integrating AI literacy into higher education in ways that foreground justice and inclusion. There is also a lack of empirical research on how faculty conceptualize and implement AI literacy in practice, particularly within public institutions navigating rapid technological change.

Key Terms

To support clarity and consistency throughout this research, the following key terms, presented in alphabetical order, are defined and used as foundational concepts.

Artificial Intelligence (AI)

Artificial Intelligence is commonly described as a branch of computer science focused on creating systems capable of performing tasks that typically require human intelligence, such as learning, reasoning, perception, and natural language processing (Copilot, 2025). However, the definition of AI is mushy and contentious, as highlighted by Bender and Hanna (2025) in The AI Con, who argue that "AI" is as much a marketing term as a technical one, often used to hype technologies and obscure their limitations. This contested nature makes defining AI not just a technical exercise but a socio-political one, influencing policy, ethics, and education. (Copilot, 2025; Bender & Hanna, 2025)

AI Literacy

AI literacy encompasses the knowledge, skills, and critical awareness necessary to understand, evaluate, and engage with artificial intelligence technologies. The definition is often hyper-focused on the technical skills and competencies, rather than the justice-oriented view that includes ethical reasoning, awareness of algorithmic bias, and the socio-political implications of AI. This research emphasizes the importance of equipping students and educators with the skills to make autonomous, informed decisions when engaging with the complexities of generative AI.

Critical Pedagogy

Critical pedagogy is an educational approach that emphasizes the role of teaching and learning in challenging social inequalities and fostering critical consciousness. Paulo Freire is widely recognized for shaping this tradition through his work on dialogic education, a reciprocal learning process, and the co-creation of knowledge based on lived experiences (Pedagogy of the Oppressed, 1970). However, the field also draws on thinkers such as John Dewey, bell hooks, and Henry Giroux, who highlight democratic education, engaged pedagogy, and transformative practices. Recognizing that education has a historical and political context, critical pedagogy encourages educators and learners to examine systems of power and work toward social justice through reflective and participatory learning. (Freire, 1970; hooks, 1994; Dewey, 1916; Giroux, 1988)

Democratize

Democratize refers to making technology accessible, inclusive, and participatory for all people, rather than controlled by a select few. In the context of AI, democratization involves

reducing power concentration among corporations or wealthy nations, promoting equity in education, governance, and innovation, and ensuring diverse voices shape technological futures.

Digital Equity

Digital equity emphasizes not just the need for access to devices and internet connectivity, but also the skills, support, and opportunities needed to use technology effectively. Beyond access, it is a prerequisite for meaningful participation in shaping the future of technology and AI. Without it, entire communities are systematically excluded from contributing to these fields, a concern that lies at the heart of this research. This digital divide occurs in both urban and rural areas, as well as between the Global South and the Global North, and reflects historical structural biases, ableism, inequalities, and prejudices (National Education Association, 2020).

Epistemic Justice

Miranda Fricker (2007) introduced the concept of epistemic justice to describe how individuals, in their capacity as knowers, can be wronged within systems of knowledge production. These wrongs distort the processes by which knowledge is shared and validated. Fricker identifies two primary forms:

- **Testimonial Injustice:** Occurs when a speaker's credibility is unfairly diminished due to prejudice, such as race, gender, or class, resulting in their testimony being undervalued or dismissed. This harms both the individual and collective understanding by excluding valid knowledge.

- **Hermeneutical Injustice:** Arises when individuals lack the conceptual or linguistic resources to articulate their experiences because society has not developed adequate interpretive frameworks. For example, before the term sexual harassment entered public discourse, many women struggled to name and explain their experiences, leaving them socially and epistemically marginalized.

Generative Artificial Intelligence

Generative AI is a subset of AI that focuses on creating new content, such as text, images, audio, or video, based on learned patterns from data. Unlike traditional AI, which often focuses on classification, prediction, or decision-making, generative AI generates novel outputs. Key features include content creation, advanced models like Generative Adversarial Networks (GANs), Variational Autoencoders (VAEs), and transformer models (e.g., GPT, DALL·E). Examples include ChatGPT for text, DALL·E for art, and tools for music composition and deepfake video generation. (Copilot, 2025)

Global South / Global North

The phrase "Global South" refers to broad regions including Latin America, Asia, Africa, and Oceania. Often used interchangeably with the term "Third World," it denotes areas that are predominantly low-income and frequently politically or culturally marginalized (Dados & Connell, 2012). Dados and Connell (2012) argue that the term Global South reflects shifting geopolitical power relations and serves as a critique of traditional development discourse.

On the other hand, the phrase "Global North" refers to the countries primarily located in the Northern Hemisphere that have experienced significant economic and technological development. The Global North plays a huge role in shaping global politics and economics.

According to NumberAnalytics (n.d.), the Global North comprises economically dominant countries that shape international policy and development. The Global North includes countries such as the United States, Canada, Western European nations, Japan, Australia, and New Zealand, and consists of economically developed and industrialized countries that have historically dominated global politics and economics (Fiveable, n.d.).

Techno-Optimism

Techno-optimism is the idea that advances in technology, particularly Artificial Intelligence (AI), will lead to unwavering societal progress. Researcher and author John Danaher defined techno-optimism as "the view that technology, when combined with human passion and ingenuity, is the key to unlocking a better world" (Danaher, 2022). This worldview assumes that technology is neutral and universally beneficial, usually overlooking the socio-political contexts in which it is developed and deployed. Techno-optimism will be critically examined as the dominant narrative that shapes AI literacy initiatives, and the lack thereof, that masks inequalities and reinforces global power imbalances.

Review of Literature

1. **Uneven Access to AI**

Who controls the tools?

This section examines the unequal access to artificial intelligence that marginalizes narratives from the Global South, where discourse is often dominated by actors in the Global North. Couldry and Mejias (2019) conceptualize data colonialism as a new form of colonialism, extracting everyday activities into raw material for capitalist accumulation through data extraction. Unlike historical colonialism, which seized land and natural resources, data

colonialism operates through infrastructures and platforms that normalize surveillance and consent, embedding extraction into the fabric of daily life. Gray (2023) argues that it's not just the extractive process but changing of knowledge that reorganizes epistemic systems and embeds colonial logics into digital infrastructures. These data reorganizations often prioritize what is measurable and profitable over what is contextual or culturally grounded.

This process reinforces global inequalities, as data flows and profits concentrate in wealthy nations and tech corporations, while marginalized communities provide the data points without equitable benefit. This isn't just a technical advantage, but an epistemic one where actors in the Global North dominate narratives of the construction of AI systems. This leaves the Global South dependent on systems designed elsewhere and are unable to contest or reshape meaning to them. Mirroring the logic of imperial resource extraction, today's data practices are increasingly framed as a form of economic exploitation, with data often compared to oil in terms of its value and strategic importance (Issaka, 2023).

Assertions that AI serves the public good are often advanced by actors disconnected from the lived experiences of those navigating digital infrastructures from marginalized or displaced positionalities. This disconnect is exemplified by algorithmic control and user exploitation on platforms like Uber and Bolt in parts of African countries. Western companies' control over pricing algorithms such as dynamic or "upfront" pricing increases platform rates while lowering driver earnings, widening the gap between what riders pay and what drivers receive and intensifying precarity among those already excluded from formal labor protections (Worker Info Exchange, 2025; Oxford Computer Science, 2025). These realities complicate techno-optimist narratives that digital platforms bridge divides or alleviate poverty; instead, they reveal

algorithmic extraction that entrenches inequities within local labor markets (Arubayi, 2022; Ekdale & Aidoo, 2024; Anwar et al., 2022).

For smaller nations and Indigenous communities, reliance on external technologies undermines digital sovereignty and self-determination, relegating them to consumers rather than producers in the global AI economy (Tu, 2025). Silvia Federici draws attention to the global continuum of exploitation embedded in technological progress, arguing that advancements in digital labor are linked to extractive practices in resource economies.

> *"The tremendous leap in technology required by the computerization of work and the integration of information into the work process has been paid at the cost of a tremendous increase of exploitation at the other end of the process. There is a continuum between the computer worker and the worker in the Congo who digs coltan with his hands trying to seek out a living after being expropriated, pauperized, by repeated rounds of structural adjustment and repeated theft of his community's land and natural sources." (Federici, Precarious Labor: A Feminist Viewpoint, 2015).*

The global labor dynamics of AI reveal asymmetries, as the West retains control over the most valued technological work and steers the direction of technological progress. Their dominance drives businesses and individuals from the Global South to rely heavily on foreign entities that are not home-grown. While claiming to even the playing field through programs like Facebook's Free Basics, Western companies will "harvest huge amounts of metadata about users" (Solon, 2017) on the deployment of their "free" educational programs. Educational technologies promoted by Global North tech firms frequently rely on exploitative data collection practices, undermining fair market competition and impeding the growth of locally driven technological initiatives in marginalized communities.

2. Knowledge and Literacy Gap

Who understands the tools?

From an educational perspective, literacy is vital to contribute to meaningful discussions and constructive criticism of the larger techno-utopian narrative. AI literacy is another aspect of information or media literacy, focusing on learning skills to navigate a digitally connected world without requiring AI technical knowledge or expertise (Mansoor, et al., 2024). COVID-19 accelerated society's reliance on digital platforms for education, work, and social connection. Tools such as social media, educational technologies, and online games became critical for maintaining interaction among children and families during periods of isolation (Itō, Cross, Dinakar, & Odgers, 2023). AI literacy, therefore, is not only essential for college students and professionals but has broader implications for families and communities as algorithmic systems increasingly shape everyday life.

While conversations about AI's effect on education often feel polarized, the reality for marginalized communities is far more nuanced. Many individuals occupy a paradoxical position, caught between regimes of invisibility and spectacular hypervisibility, where surface-level representation is mistaken for progress. This performative visibility often signals inclusion without redistributing power or dismantling systemic exclusion, creating a false sense of equity (MySuperiorPaper, 2023). Joy Buolamwini's work with the Algorithmic Justice League illustrates this tension vividly. Her research on facial recognition technology exposes how Black communities are rendered invisible through the absence of darker skin tones in training datasets, yet simultaneously hypervisible when misidentification subjects them to heightened scrutiny. This paradox, amplified by racial bias, underscores how algorithmic systems can reproduce and intensify structural inequities rather than dismantle them. As Buolamwini argues, "the burden of

proof of performance needs to be placed on the people developing the systems, not those who are impacted by their use," shifting responsibility toward creators of AI technology rather than communities who bear the consequences.

Educators play a critical role in shaping how AI enters the classroom, not as a neutral tool, but as a technology that must be interrogated for bias, transparency, and equity. Their engagement is essential to ensure that AI supports learning rather than perpetuating systemic exclusions and the misuse of AI. To address these challenges, Mills et al. (2024) introduce the AI Literacy Framework, which centers on three expansive components: *understanding, evaluating, and using* AI ethically and responsibly.

With no consensus on how AI should be implemented in higher education, faculty are often left to decide whether, and if they even want, AI to be integrated into their classrooms. Many institutions, such as the University of Washington, have not implemented a tri-campus policy on AI governance and usage inside and outside of the classroom. This creates fragmented expectations and uneven enforcement, leaving students to navigate a confusing landscape within an already hierarchical institution. Studies have shown that fewer than 40% of institutions have formal AI acceptable-use policies (EDUCAUSE, 2025), leaving students and educators to navigate the ethics of AI usage.

Similar to institutions in the Global North, students in the Global South navigate challenges with the use of personal gadgets at school. Due to cultural and religious factors, teachers rooted in traditional practices showed resistance to innovation (Vithanage et al., 2023). The commonality is the need for students globally to be actively involved in their own learning by engaging in digital pedagogy. A good pedagogical example is in Kenya, where the iMlango project focuses on improving educational outcomes for marginalized girls by using technology to

personalize learning for students in rural and semi-urban areas, reaching approximately 180,000 students (Vegas et al., 2019; Adeniran et al., 2023). Similarly, in Sri Lanka, the Nenasa Smart Schools project seeks to make educational content accessible to rural learners through satellite television-based distance education and a mobile app, while also providing teacher training in digital pedagogy (Vithanage et al., 2023).

These examples highlight both the potential and vulnerability of ed tech in the Global South: while initiatives are being made to expand access, they often depend on governance systems that lack transparency and resilience, making them susceptible to corruption, uneven implementation, and sustainability challenges.

3. Parallel Realities

Who benefits from the tools?

Situated in Washington State, a region at the forefront of technological innovation, I am increasingly aware of the proximity to resources and infrastructures that shape AI governance in the Global North, especially when contrasted with the parallel realities unfolding across the Global South. While the Global North debates algorithmic bias and democratic erosion, many communities in the Global South view technology as a pathway to mobility and opportunity, despite structural barriers to access. These divergent experiences underscore the need for globally inclusive AI literacy frameworks that account for both privilege and precarity in educational contexts (UNESCO, 2024).

The automatization process is likely to benefit the capital that owns AI technology and the advanced skilled workers while reducing the value of low and medium-skilled human labor. In education, similar disparities emerge institutions with robust infrastructure and funding can

integrate AI-driven learning tools, while under-resourced schools struggle to access even basic digital platforms. UNESCO warns that one-third of humanity remains offline, and access to cutting-edge AI models is reserved for those with subscriptions, infrastructure, and linguistic advantage. These parallel realities demand critical attention to the beneficiaries, the excluded, and the governance strategies required to bridge these divides through inclusive AI literacy frameworks and equitable policy interventions.

4. Policy Disparities

Who governs the tools?

The governance of AI tools remains deeply uneven across global contexts, raising critical questions about accountability and equity. As UNESCO reminds us, "The ethics of artificial intelligence is an important issue, we are all aware of how vulnerable we are in a world more and more controlled by a few high-tech companies, and we need open science to make knowledge available to all" (UNESCO, 2022, p. 34). This statement underscores a central tension: while AI systems increasingly shape education, labor, and governance, decision-making power is concentrated among a handful of corporations and regulatory bodies in the Global North.

Governance structures determine whose values shape algorithmic systems and whose interests are protected. Corporate self-regulation dominates, allowing tech companies to set their own ethical benchmarks, usually prioritizing profit over inclusivity. This creates a governance vacuum where marginalized communities have little influence over how AI tools are designed, deployed, or audited. Without global coordination and participatory governance, AI risks reinforcing structural inequalities under the guise of innovation. Addressing these disparities requires binding international standards, mandatory transparency audits, and inclusive policymaking processes that center voices from the Global South.

5. Power, Knowledge, and the Politics of AI Inclusion

Who is excluded from the tools? And whose knowledge is erased?

Exclusion from AI tools is systemic and deeply tied to power. AI systems are not neutral; they reflect the priorities of those privileged to design and govern them. Biases from the privileged often trickle down to their designs. Scholars such as Hao (2025) critique the race toward commercial AI and AGI, emphasizing how decisions about "safety" and "alignment" are made by a small, elite network, often former employees of dominant firms like OpenAI. This concentration of influence mirrors colonial logic, where global systems are imposed by actors in the Global North, sidelining marginalized communities in the Global South. The proliferation of startups such as Anthropic and Perplexity AI illustrates how power circulates within closed ecosystems, raising critical concerns about who defines utility and who is systematically excluded from that process.

These exclusions are not only structural but epistemic. As Fricker (2007) argues, epistemic injustice occurs when individuals or groups are harmed in their capacity as knowers—through testimonial injustice (credibility deficits) or hermeneutical injustice (lack of interpretive resources). In AI design, these injustices manifest in training datasets that underrepresent marginalized voices, languages, and epistemologies (Kay et al., 2024). Indigenous oral traditions and non-Western frameworks rarely appear in large language models, creating hermeneutical gaps that limit interpretive diversity (Warmhold & Mollema, 2025). Educational AI tools often present knowledge as universal and authoritative, masking cultural and political contingencies and reinforcing dominant narratives (Jose et al., 2025). Feminist scholars similarly note gendered data gaps, where generative AI systems marginalize women's experiences and reproduce patriarchal norms (Barry & Stephenson, 2025).

These omissions are not accidental; they shape what counts as legitimate knowledge in digital spaces, perpetuating epistemic dependency on dominant narratives. Addressing these harms requires participatory design, inclusive data audits, and algorithmic transparency. Policies should mandate representation of marginalized epistemologies and clarify the scope and limitations of educational AI tools. Without such interventions, AI will continue to reproduce structural inequities under the guise of neutrality.

Case Studies

These case studies explore the sociotechnical forces shaping educational futures, focusing on governance failures, asymmetrical access, and the urgent need for AI literacy. Each case illustrates how algorithmic systems reproduce inequities and why regulatory and educational interventions are critical. The Blueprint for an AI Bill of Rights (White House, 2022) calls for protections such as Safe and Effective Systems and Human Alternatives, yet these remain aspirational. Human intervention should be codified as a legal right in algorithmic workplaces, particularly to safeguard workers in the Global South.

Case Study #1: Surveillance and Predictive Technologies

Surveillance and predictive technologies are not new phenomena; they have evolved over decades, moving from early data-driven policing experiments to sophisticated algorithmic systems embedded in everyday governance. What began as localized tools for crime prediction has expanded into vast infrastructures that intersect with immigration control, tax enforcement, and social services. However, in 2025, these infrastructures are increasingly intertwined with political governance, shaping decisions in ways that raise profound ethical and accountability concerns (Kimery, 2025). Earlier this year, a Skagit County Superior Court judge ruled in favor

of a citizen requesting their records from a camera network company, “Flock Safety,” under the Washington Public Records Act (Kimery, 2025). Flock Safety System is an Automated License Plate Reader (ALPR) network that is meant to analyze and scan plate numbers, vehicles, and passengers. This data is processed and stored on a cloud-based platform. These ALPR networks are often linked to a national database that can be used to query plates for stolen vehicles, Amber Alerts, and outstanding warrants (UWCHR, 2025).

Sedro-Woolley and Stanwood, the two cities involved in installing Flock Systems, shut down their programs after the ruling. Without public knowledge or consent, both cities violated fundamental human rights to privacy (Kimery, 2025). Through an investigation by the University of Washington Center for Human Rights, at least eight local law enforcement agencies shared information with Border Patrol at some point in 2025, and at least ten other agencies, like the Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), and the Internal Revenue Service (IRS), had access to these systems without prior authorization (UWCHR, 2025). Whether known or not, agencies opened access doors for AI to be used violently and harmfully against marginalized communities.

Cross-agency data sharing amplifies risks for multiple marginalized communities. One critical impact is reproductive rights and gender-affirming healthcare. When agencies share travel pattern data derived from Automated License Plate Reader (ALPR) networks, this information can be weaponized to identify and target individuals seeking medical care across state lines, particularly in contexts where reproductive and gender-affirming services are restricted (Krieg, 2025; Williams Institute, 2024). Another significant impact relates to immigration enforcement. During periods of mass deportations, as those under the Trump administration, ALPR data has been leveraged to locate and detain immigrants, often in violation

of state sanctuary laws (UWCHR, 2025; VisaVerge, 2025). These practices underscore how surveillance infrastructures disproportionately harm vulnerable populations, eroding privacy and civil liberties under the guise of public safety.

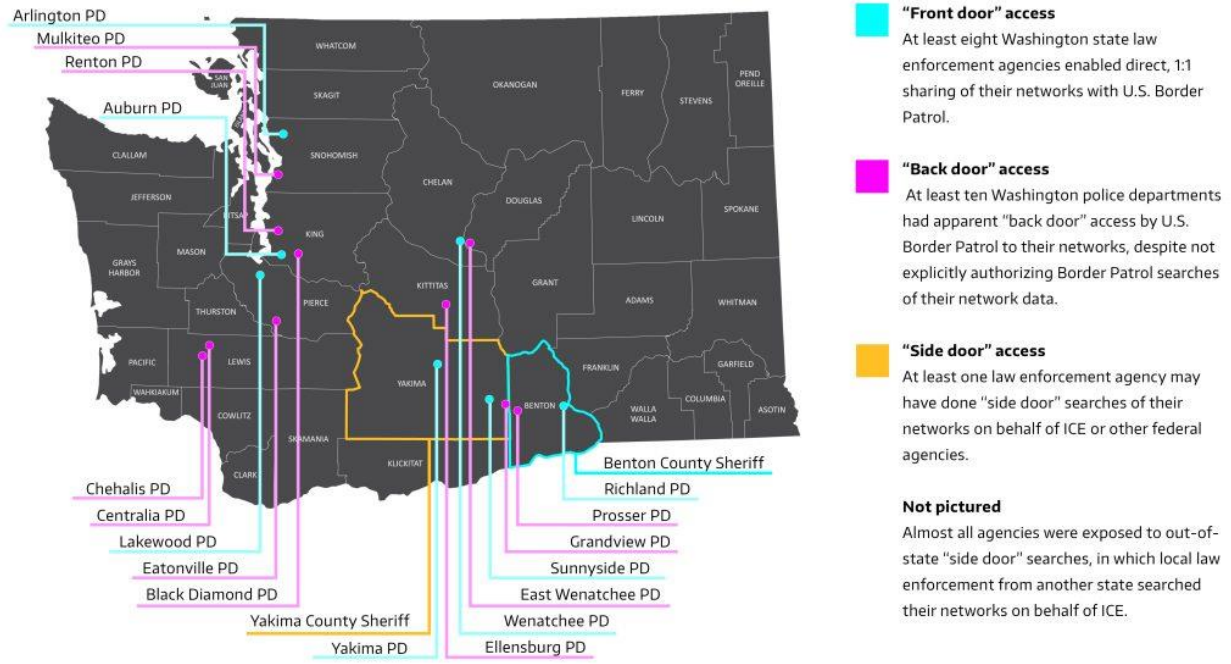

Image information: A 2025 review of Flock Safety audits by the University of Washington Center for Human Rights (UWCHR) revealed that multiple forms of access to ALPR data occurred across Washington state. Federal immigration enforcement agencies and out-of-state law enforcement agencies accessed data on Washington residents through direct sharing, back-door, and side-door methods[1]. Most local agencies were exposed to at least one of these access

[1] **Direct sharing** refers to openly and intentionally providing information or access through official channels, such as publishing data or granting permissions transparently**. Back-door methods** involve covert or unauthorized access, often bypassing formal consent or security measures to obtain data or entry. **Side-door methods** are indirect approaches, loopholes, third-party intermediaries, or alternative pathways, that technically comply with rules but circumvent their intended purpose

types. The accompanying map illustrates these patterns but does not include all agencies using Flock systems (UWCHR, 2025).

Case Study #2: Humanitarian & Biometric Systems

In a similar case using a different form of artificial intelligence, the United Nations High Commissioner for Refugees (UNHCR), a UN agency responsible for protecting and supporting refugees, asylum seekers, and stateless persons worldwide, operates a Biometric Identity Management System (BIMS). BIMS is used to capture fingerprints, iris scans, and facial recognition to register refugees and deliver aid. Through biometric registration, individuals are linked to a unique ID, enabling refugees to access essential services such as banking, SIM card registration, and even family reunification (UNHCR, 2023).

While there can be benefits to biometric systems, there is a significant power imbalance in informed consent. Refugees and those dependent on aid may be forced to register their consent with little to no alternatives or comprehension of data collection practices (Sustainability Directory, 2025. Additionally, forced participation shows a lack of personal autonomy and digital agency over their own biometric data. In fact, "function creep" refers to the repurposing of biometric data beyond its original intent, which heightens the risk of political misuse and systemic abuse (The Engine Room Report, 2023). With the rise of data responsibility, it's critical to analyze the harms of biometric data being sought by states for harmful tactics like deportation.

Case Study #3: Algorithmic Labor

Algorithms can profoundly shape our experiences in digital spaces. Many workers depend on these systems to earn a living through unconventional platforms such as ridesharing apps. Cases like Department of Justice (DOJ) vs. Lyft in October 2024 underscore the urgent

need to critically assess the harms of algorithmic discrimination. In this lawsuit, the DOJ prohibited Lyft from making misleading earnings claims in its career marketing advertisements (Teng, 2025). Beyond Lyft, other major digital employers have relied on opaque algorithms that result in non-transparent wages, disproportionately exploiting immigrants and racial minorities through digital tracking and data collection.

Algorithms increasingly shape wages and work allocation across gig platforms, creating opaque systems of "algorithmic management." In October 2024, the DOJ charged Lyft with deceptive earnings claims, alleging that its ads misrepresented typical driver pay by highlighting top earners and including tips without disclosure (Teng, 2025). Beyond Lyft, major platforms like Uber and DoorDash use dynamic pricing and behavioral data to set wages, often without transparency, disproportionately impacting immigrants and racial minorities (Human Rights Watch, 2025; *El País*, 2025). These practices illustrate how algorithmic labor can deepen precarity and exploitation, particularly in the Global South, where platform work expands amid weak regulatory frameworks. Addressing these harms requires enforceable labor rights and algorithmic transparency to ensure fairness and accountability (Teng, 2025; HRW, 2025).

Methodologies

This study employs a qualitative approach combining semi-structured interviews and observational data from workshops. To protect participant confidentiality, interviewees are identified using a code that includes their role (F for faculty, S for staff), a number, and the school or program they represent.

Faculty Interviews:

- 2 faculty from the School of Interdisciplinary Arts and Sciences (IAS)

    - **F1(IAS)** and **F2(IAS)**
- 1 faculty from the School of Science, Technology, Engineering, and Mathematics (STEM)
    - **F3(STEM)**
- 1 faculty with joint appointments in two schools
    - **F4(JOINT)**
- 1 faculty from the School of Educational Studies
    - **F5(EDS)**

Staff Interviews:

- 3 staff members from the Teaching and Learning Collaboratory
    - **S6(TLC), S7(TLC),** and **S8(TLC)**

Workshops (Observational Data)

Workshops offered a dynamic setting to observe how faculty, staff, and students engage with AI tools in practice. Unlike interviews, which capture individual perspectives, workshops revealed collective behaviors, emergent questions, and real-time problem-solving. These observations provided insight into patterns of adoption, resistance, and ethical negotiation, complementing interview data and strengthening the study's validity through triangulation. They also highlighted the institutional discourse around AI literacy, showing concerns about bias, pedagogy, and professional development surface in collaborative spaces.

Observations were conducted during AI-focused workshops and community events, including:

- AI Community of Practice (AI CoP)- recurring sessions held on the first Friday of each month since 10/4/2024

This recurring forum includes faculty and staff from the University of Washington across multiple disciplines. These forums are often small with 10 participants or less. These sessions are primarily hands-on practice using University of Washington approved tools.

- 2/14/2025: UWB Satellite Workshop: AI and Writing Across the Curriculum

This workshop explored ways to develop assignments and activities for integrating the critical analysis and context-specific use of AI in writing courses. Participants left with tangible approaches for considering AI usage and/or analysis in their writing instruction. This workshop was focused on faculty collaboration.

- 3/4/2025: Learning with AI: Student Experiences and Everyday Use Applications

A panel of students engaging in conversations about AI opportunities and challenges. Students shared experiences and insights on how AI has impacted their learning at UWB. All of the students on this panel were from STEM related majors.

- 5/22/2025: Career Coaching 2.0: LinkedIn and ChatGPT Secrets

This was a Zoom webinar with a career coach from LinkedIn. Participants learned how to leverage AI and LinkedIn to identify hidden career paths, connect students with targeted alumni networks, build tech-optimized LinkedIn profiles for AI-powered recruiting systems, and prepare to interview with confidence. Participants mostly consisted of staff from advising and career center backgrounds.

- 6/4/2025: Advanced AI Hacks for Everyone

The session demonstrated practical applications of AI beyond basic tasks like email writing. Participants learned how to instantly analyze large datasets, design polished presentations, and

build custom AI tools to streamline workflows. Participants mostly consisted of staff from advising and career center backgrounds.

This study was reviewed and approved by the University of Washington Institutional Review Board (IRB), approval number STUDY00024192.

Justification of Methodology and Limitations

Given the limited availability of resources and datasets on AI in education, I chose a qualitative methodology to provide a nuanced understanding of this emerging topic. By combining interviews and observational methods, this research offered a layered view of the importance of addressing the ethical implications of AI and promoting human rights in higher education. The lack of existing studies in this area further justified the need for this research. Additionally, qualitative methods allowed for the exploration of lived experiences and institutional contexts often overlooked in quantitative approaches.

I acknowledge that the methods I chose were subject to my experience and understanding as a student and academic advisor in a university setting. These results and conclusions were based on my interpretation and information presented to me during the 2024–2025 academic year. My positionality offered valuable insider insights but also introduced limitations related to scope, access, and subjectivity. I address these constraints through reflexivity, transparency, and alignment with critical scholarship.

Global Limitations

While this research seeks to address global dimensions of AI literacy and inclusion, my perspective is shaped by my position in the Global North. Although I studied abroad in Colombia during my master's program, my engagement was as a visitor and observer, interpreting

experiences through the lens of a student from the Global North. This positionality inevitably influences my understanding of local contexts and global inequalities. To broaden this perspective, I attended classes and interacted with speakers at the University of Quindío, which strengthened my commitment to global understanding. However, these efforts cannot fully substitute for lived experience, and the absence of interviews with stakeholders in the Global South limits the depth of this work. There is more to be done to incorporate diverse voices and provide a truly global context for research on AI and education.

Data Analysis

Data was analyzed using a Grounded Theory approach (Creswell, 2018), which was appropriate given the exploratory nature of this study and its aim to generate themes from participants' experiences rather than to test a predefined hypothesis. Grounded Theory emphasizes inductive reasoning and constant comparison, allowing patterns to emerge organically from interviews and observational data. The process involved **open coding** to identify initial concepts, **axial coding** to group related codes and explore relationships, and **selective coding** to refine core theme. Observational data from workshops were triangulated with interview findings to validate patterns and capture institutional discourse around AI adoption.

Research Setting

This study was conducted primarily at the University of Washington Bothell (UWB), one of three campuses within the UW system, which serves a diverse student population and emphasizes interdisciplinary learning. The research context included faculty, staff, and students engaged in AI-related teaching, advising, and professional development activities. In addition to campus-level initiatives such as workshops and community forums, the broader UW system is

piloting AI Purple, a custom-built generative AI platform designed to provide a secure environment for research, education, and administrative tasks.

Thematic Insights and Findings

Theme 1: Campus Climate and AI Use

My interviews reveal that UW lacks distinctive campus-wide AI policies, leaving faculty to make independent decisions about AI use in their classrooms. This decentralized approach has produced fragmented practices across disciplines. This finding aligns with Richardson et al. (2024), who similarly observed variability in institutional responses to AI integration. Faculty in my study emphasized a persistent lag in educational systems' adaptiveness to emerging technologies. F5(EDS) specifically indicated, “education is always behind,” a sentiment also echoed by several other participants in the study. This critique alignment suggests that both my data and existing scholarship recognize systemic inertia in technology adoption.

Institutional responses to these dynamics remain reactive rather than proactive, with measures such as “regulation of tests” and reverting to “paper instead of online” assessments serving as short-term fixes rather than comprehensive strategies (Richardson et al., 2024). These discussions from an analog approach came from an AI CoP forum, as the community of faculty and staff grappled with plagiarism through immediate remediation. While these measures offer temporary relief, they also reflect a campus climate marked by uncertainty and risk aversion. This highlights the urgent need for structured faculty development programs, especially for interdisciplinary majors that are further removed from technological fields (Upadhyay & Sah, 2025). Without such efforts, UW risks perpetuating inequities in AI literacy and leaving faculty

and students to navigate a rapidly changing digital landscape without sufficient support or ethical safeguards.

Theme 2: Pedagogy and Assessment

Participants, faculty, staff, and students, in my study consistently agreed that AI should be used as an assistive tool to enhance learning rather than replace it. This perspective aligns with Upadhyay & Sah (2025), who argue that AI should complement rather than substitute core pedagogical processes. Intentionality emerged as a central theme in discourses around pedagogical approaches, with S6(TLC) and S7(TLC) emphasizing the need for "compassionate conversations" and deliberate integration of AI into course design. Faculty expressed concern that students may circumvent critical stages of intellectual development, particularly in writing-intensive courses. Examples of this intentionality include the development of resources such as a library guide for AI and assignments that encourage students to engage in writing as part of the process rather than bypassing it entirely.

These perspectives frame AI not as an autonomous solution but as a tool embedded within pedagogical frameworks that value transparency, critical thinking, and ethical engagement. The integration of AI into pedagogy and assessment reflects a complex interplay between innovation and traditional academic norms. Faculty such as F2(IAS) and F4(JOINT) recognize the transformative potential of AI while remaining committed to safeguarding intellectual processes that create meaningful learning.

The tension around plagiarism concerns, discussed during an AI CoP forum, signaled a desire for familiarity and control through analog approaches. Faculty like F3(STEM) on the other

hand, felt it was important to address these concerns in the classroom through engagement and dialogue.

As F1(IAS) noted, learning is not merely about outcomes but about the processes that shape cognitive development. A useful analogy comes from Rory Gilmore's reflection in *Gilmore Girls* on a composition class that included composing music: "because of that experience, I can **see** music when I hear it. I only ever heard it before." This illustrates how immersive, process-oriented learning transforms perception and critical engagement. Building these literacies is essential for meaningful integration and for cultivating the ability to "see" the structures behind algorithmic systems rather than merely consuming their outputs.

Theme 3: Ethics, Justice, and Governance

This lack of clarity translates into a vacuum of expectations. S8(TLC) remarked, "No policy = no expectations," highlighting the ambiguity that undermines consistent application of standards across courses and disciplines.

Without structured guidance, digital inequities risk becoming entrenched, privileging students with technological fluency while marginalizing those with limited access or experience. Students with prior exposure to AI tools have a competitive edge, thereby exacerbating existing disparities. Additionally, F5(EDS) also expressed discomfort with the implicit policing role they are expected to assume, questioning, "If educators are the AI police, then what are we really teaching?" This sentiment highlights the tension between enforcing compliance and fostering authentic learning environments.

This signals both the heightened scrutiny surrounding AI-enabled misconduct and the broader uncertainty about how traditional norms apply to emerging technologies. Student

panelists also called for proactive strategies to ensure the quality and accuracy of AI- or AGI-generated content. Suggestions included developing institutional guidelines and creating exemplars of responsible AI use to model best practices for students. These suggestions and conversations point to a collective desire for policies that are not merely punitive but educative, equipping learners with the skills to critically evaluate and ethically deploy AI tools.

F1(IAS) drew parallels to earlier conversations around media literacy in the era of legacy media, when educators sought to equip students with the ability to discern bias, verify sources, and understand the power structures behind information dissemination. Just as media literacy was positioned as a civic competency in the age of newspapers and broadcast journalism, digital literacy now emerges as a civic and academic necessity in the age of algorithmic systems. This historical continuity underscores that governance is not only about regulation but about cultivating literacies that empower learners to navigate shifting epistemic landscapes.

Theme 4: Global Narratives

AI development and governance remain concentrated among a few dominant actors—primarily U.S. technology companies, alongside the European Union and Canada. These regions not only dictate the trajectory of innovation but also shape ethical and regulatory frameworks, embedding their priorities into global AI systems. The conversation with F3 (STEM) revealed that engagement with Global South perspectives was minimal and lacked depth. While several participants acknowledged that regions with limited infrastructure and policy capacity risk exclusion from both AI adoption and governance conversations, there was little elaboration on how these dynamics manifest. This gap reflects a lack of awareness and prioritization of inclusion in global AI governance, reinforcing concerns about systemic exclusion and the deepening of digital divides. Inclusive engagement and capacity-building are essential to ensure

that governance integrates diverse perspectives rather than privileging the priorities of a few dominant actors.

In global conversations about AI and education, collaborative approaches that emphasize knowledge-sharing, equitable access, and culturally responsive policy design offer significant potential for mitigating risks and fostering a more balanced, globally inclusive tech ecosystem. Such engagement ensures that benefits are distributed fairly and that governance frameworks incorporate the lived realities of diverse learners and educators worldwide—particularly those outside privileged educational systems. This shift is essential for addressing global disparities and advancing an approach to AI that prioritizes justice alongside innovation. These insights inform my critique of techno-optimism by illustrating that innovation grounded in social responsibility and community engagement provides a viable alternative to purely market-driven models.

Discussion

The findings indicate that effective AI pedagogy, anchored in intentional design, transparency, and flexibility, can transform AI from a perceived threat into a constructive learning tool. This aligns with scholarship on critical digital pedagogy and user agency, including the work of Chin (2025) on appropriation and Braun and Clarke's (2012) thematic analysis framework. Faculty and students emphasized co-construction and re-construction, echoing participatory design theories that advocate collaborative shaping of technology use. Central to this process is the principle of human judgment and justice, ensuring that technology amplifies rather than replaces critical thinking.

These insights challenge techno-optimist assumptions that AI inherently improves education. As the data show, it is not the technology itself but the people, the humans, who negotiate its role in learning. This dynamic reflects Chin's argument about user agency, where individuals reinterpret tools to fit their contexts. Equity concerns are critical: marginalized students may face greater risks if institutional policies and training lag behind. Furthermore, there is a civic responsibility for institutions cultivating ethical literacy and responsible engagement, moving beyond technical proficiency toward values-driven AI integration.

Practical Implications

Community/Campus-Level Recommendations

AI policies are difficult to implement generically due to the nuances of different academic disciplines in higher education. The use of AI in a creative writing course raises different ethical questions than its use in data science. Discipline specific AI guidelines can be co-developed to ensure it's tailored to align with distinct learning objectives and faculty's pedagogical goals. Creating expectations on acceptable use of generative AI for assignments, transparency requirements for AI usage, and ethical considerations such as bias, plagiarism, and intellectual property creates consistency across the institution.

Professional development sessions should be more frequent and targeted at equipping faculty and staff with practical skills for identifying bias and understanding algorithmic decision-making. These sessions should go beyond tool demonstrations to include hands-on training in bias detection, prompt engineering, and algorithmic accountability. For example, faculty can learn how to identify patterns of algorithmic bias in grading tools or how to craft prompts that maintain academic integrity. Embedding these workshops within ongoing faculty development

programs ensures sustainability and signals institutional commitment to ethical AI use. Collaborative development also fosters faculty buy-in and reduces resistance by making policies feel relevant and actionable rather than imposed.

Similar to the AI Community of Practice, creating collaborative learning communities allows educators to share experiences and strategies for integrating AI responsibly. These consistent forums are informal third spaces for building a culture of trust and transparency rather than punitive "AI policing." These spaces should prioritize compassionate dialogue, acknowledging diverse comfort levels with technology and centering equity in decision-making.

Organizational-Level Recommendations

Higher education institutions often lack enforceable standards and accountability mechanisms for AI policies. To address this gap, universities should adopt robust governance frameworks that include independent algorithmic audits for educational tools, strict data privacy protocols aligned with the AI Bill of Rights, and equity impact assessments prior to system deployment. These measures promote transparency and safeguard marginalized communities from unintended harm.

Effective AI governance requires inclusive decision-making. Institutions should form ethics committees that include faculty, staff, students, and external experts, particularly those from historically marginalized communities. These committees review policies, monitor compliance, and advise on emerging AI issues, ensuring that ethical considerations remain central to institutional practices.

Global Equity Recommendations

AI literacy shouldn't be a privilege reserved for well-funded institutions in the Global North. To democratize access, universities can establish open-access resources for teaching, tutorials, and ethical guidelines. These resources should be inclusive with intentional designs on:

- Multilingual content to reduce language barriers and ensure accessibility for non-English-speaking communities.
- Modules or tutorials on critical AI literacy that include localized materials on bias awareness, algorithm accountability, and ethical usage.
- Case studies that reflect realities in the Global South such as resource constraints and locally adapted AI applications.

Open-access initiatives are not merely technical solutions; they represent a commitment to knowledge equity. By making AI education accessible beyond elite academic spaces, these efforts help bridge the digital divide and foster inclusive participation in shaping AI futures.

Financial and infrastructural limitations often hinder educators in the Global South from integrating AI into their curricula. Initiatives like Collaborative Online International Learning (COIL), a term coined by the State University of New York (SUNY), have been used by the University of Washington (n.d) since 2014 to connect students globally. This type of model can address resource disparities through virtual collaboration rather than requiring costly travel or infrastructure. As a result, educators develop skills in global collaboration and digital pedagogy, while students experience cross-cultural learning environments that foster equity and reciprocity.

Conclusion

I don't know what technology and the world of artificial intelligence will look like over the next decade, but I know its limitations have not yet been reached. Considering that AI has only been an area of study for about seventy years, there is still development to be seen. Seeing that there is no foreseeable endpoint to the increased development, there will never be a better great time to start co-designing a critical literacy education. Higher education must adapt to the constant flow of data and develop strategies to process it effectively. True adaptability means being transparent with students about how machine learning works and acknowledging the possibilities of AI hallucinations or inaccuracies. Banning or limiting AI in the classroom often stems from a lack of understanding about the technology, which can lead to greater harm by restricting educational empowerment rather than fostering it.

This project began with a central question: How can AI literacy be leveraged as a critical tool to resist techno-optimism and promote inclusive, justice-oriented engagement across global divides? The analysis reveals profound asymmetries. While the Global North accelerates toward AI-driven innovation, the Global South contends with structural barriers that limit access, participation, and governance. These parallel digital realities are not incidental; they are the product of historical and systemic inequities that techno-optimistic narratives often exclude. "You can no longer trust that anything you see, or hear, or read was not created by AI" (2022, Mollick, p. 193). These realities underscore the urgency of resisting techno-optimism, not through rejection of innovation, but through a deliberate commitment to equity, literacy, and inclusion in the age of artificial intelligence.

At the root of AI is human creation and operation. The plurality of human experience must be reinforced in the systems we design. AI literacy emerges as a critical site of intervention and critical thinking of AI system designs. It is not just a technical skill but a civic competency, one that determines who can shape the future of AI and who remains subject to its biases. Without intentional efforts to embed AI ethics and literacy across higher education curricula, universities risk perpetuating algorithmic bias and reinforcing global divides.

Higher education institutions, particularly those in the Global North, carry an ethical and structural obligation to advance these initiatives, not as paternalistic benefactors, but as collaborative agents committed to dismantling the systemic inequities that techno-optimistic discourses have historically obscured. Resisting techno-optimism is not about rejecting innovation; it is about reframing progress through the lens of justice. AI will shape education, governance, and global futures, but whether it does so inclusively depends on the choices we make now. This capstone calls for those choices to center equity, literacy, and shared responsibility across borders.

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