

**Pause, reflect and realign: Ubuntu, digital degrowth
and the future of technology in education**

***Pausar, refletir e realinhar: Ubuntu, decrescimento digital
e o futuro da tecnologia na educação***

***Pausar, reflexionar y realinear: Ubuntu, el decrecimiento
digital y el futuro de la tecnología en la educación***

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Abstract

The education landscape is faced with one of the most contentious periods as a result of Artificial intelligence (AI). The Global South particularly is faced with the dilemma of adopting AI in the backdrop of underdeveloped, costly, and fragmented infrastructure as well as limited AI literacy. The efficiency discourse associated with AI in education drives us to question whether education is for impact or efficiency. I argue that pausing and reflecting on the adoption of AI in education is critical if we are to maintain the relational and humane side of education that helps students and faculty to learn important skills such as problem solving, critical thinking, as well as academic integrity. The paper is grounded in Critical Pedagogy and Ubuntu Philosophy, and raises important questions about the purpose of education, human agency in education, ethical and cognitive risks of AI, power imbalances between the Global North and Global South, and the importance of fronting and protecting relational, humane, and contextualized learning. Ubuntu, as a relational approach, can be drawn upon as a possible equalizing and humanizing philosophy that could transform the use, development, and contextualization of AI globally to maintain humanity in teaching and learning.

Keywords: critical pedagogy; Ubuntu philosophy; human agency; critical thinking; Global South; artificial intelligence.

Resumo

O cenário educacional atravessa um dos períodos mais controversos em decorrência da Inteligência Artificial (IA). O Sul Global, em particular, enfrenta o dilema de adotar a IA em um contexto marcado por infraestrutura subdesenvolvida, dispendiosa e fragmentada, bem

como por uma compreensão limitada sobre a tecnologia. O discurso de eficiência associado à IA na educação nos leva a questionar se o objetivo do ensino é gerar impacto ou eficiência. Defendo que fazer uma pausa para refletir sobre a adoção da IA na educação é fundamental para preservar a dimensão relacional e humana do ensino — aspecto que auxilia estudantes e docentes no desenvolvimento de competências essenciais, como a resolução de problemas, o pensamento crítico e a integridade acadêmica. Este trabalho fundamenta-se na Pedagogia Crítica e na filosofia Ubuntu, levantando questões importantes sobre a finalidade da educação, a agência humana no processo educativo, os riscos éticos e cognitivos da IA, os desequilíbrios de poder entre o Norte Global e o Sul Global e a importância de priorizar e proteger uma aprendizagem relacional, humana e contextualizada. O Ubuntu, enquanto abordagem relacional, pode servir como uma filosofia capaz de promover equidade e humanização, transformando o uso, o desenvolvimento e a contextualização da IA em escala global para preservar a humanidade nos processos de ensino e aprendizagem.

Palavras-chaves: pedagogia crítica; filosofia Ubuntu; agência humana; pensamento crítico; Sul Global; inteligência artificial.

Resumen

El panorama educativo atraviesa uno de sus periodos más controvertidos debido a la inteligencia artificial (IA). El Sur Global, en particular, se enfrenta al dilema de adoptar la IA en un contexto marcado por infraestructuras subdesarrolladas, costosas y fragmentadas, así como por una limitada alfabetización en esta tecnología. El discurso de la eficiencia asociado a la IA en la educación nos lleva a cuestionarnos si el objetivo educativo debe ser generar impacto o lograr eficiencia. Sostengo que es fundamental hacer una pausa y reflexionar sobre la adopción de la IA en la educación si queremos preservar la dimensión relacional y humana de la enseñanza, la cual permite a estudiantes y docentes adquirir competencias clave como la resolución de problemas, el pensamiento crítico y la integridad académica. Este trabajo se fundamenta en la pedagogía crítica y la filosofía Ubuntu, y plantea interrogantes importantes sobre el propósito de la educación, la agencia humana en el ámbito educativo, los riesgos éticos y cognitivos de la IA, los desequilíbrios de poder entre el Norte Global y el Sur Global, y la importancia de priorizar y proteger un aprendizaje relacional, humano y contextualizado. El Ubuntu, como enfoque relacional, puede servir como una filosofía capaz de igualar y humanizar, transformando el uso, el desarrollo y la contextualización de la IA a escala mundial para preservar la humanidad en los procesos de enseñanza y aprendizaje.

Palabras-clave: pedagogía crítica; filosofía Ubuntu; agencia humana; pensamiento crítico; Sur Global; inteligencia artificial.

1 Introduction

Artificial Intelligence has brought in new and complex dynamics to how technology is adopted and used in various education spaces ranging from teaching and learning to curriculum design and research. The greatest challenge so far lies in knowing how to effectively use AI without negating the power of human cognition and agency. Furthermore, AI poses unique ethical and social challenges, such as issues of fairness, transparency, privacy, and accountability. Its ability to mimic human behaviour compounds the challenges as this directly affects human agency, critical thinking, and responsible use of technology

applications among others (Unesco, 2021). Fundamental to the arguments raised in this paper are the following questions: Are we adopting tools that pose a serious risk to the values of education? Is Artificial Intelligence reducing the cognitive strength of users in education? Are we still able to think critically and problem-solve on our own? Is the AI hype detaching us from the true purpose of education and creating a high dependency that is reducing the capacity of our learners, educators, and researchers? Are we adopting AI or is AI adopting us?

Technology in education has today been reduced to a technical matter of access and usage and, in the case of AI, speed (Selwyn, 2016; Watters, 2021). There are huge concerns about the risks and threats that AI poses in education. Cognitive, ethical, and epistemic risks are among the top challenges for education. These relate to AI's negative impact on students' cognitive strength, capacity for critical thinking, and problem solving. Algorithmic bias, data privacy, academic surveillance, cognitive offloading, reduction in academic integrity, and unethical use of AI pose deeper issues for teaching and learning, research, and assessment. Given these many challenges and threats, digital degrowth becomes an urgent need and institutions must rethink their institutional frameworks where technology integration is concerned (Selwyn, 2023; Maina; Kuria, 2024).

Another threat to AI integration in education is the lack of AI literacy on the part of the users. When AI emerged, it was quickly adopted yet very few had full comprehension of its functions, threats, and opportunities. This inherently leads to epistemic risk. The accelerated use of AI in education creates serious threats to the core fundamentals of education. Thiele (2025, p. 2) creates a vivid articulation through the following commentary:

A world of driverless vehicles is burgeoning. Automated transportation might also serve as a metaphor for much of our off-road yet online lives. As patrons of digital platforms, devices, and apps, we see ourselves as fast-moving drivers on the freeways of cyberspace. In many respects, however, we have become driven. We are driven in the sense of being steered, maneuvered, goaded, and compelled by digital technologies. We are also driven in the sense that we no longer fully exercise, or develop, the aptitudes and skills required to direct ourselves.

This is scary and true in the context of AI and education, where we seem to be driven by how AI functions, accepting its continued growth and manipulation of education systems and all their users without question. There is a passive acceptance of AI, yet it is important that serious steps are taken to pause and reflect before adopting it.

The purpose of education is to foster critical pedagogy which supports and advances the importance of awareness, learner agency, and reflective and independent thinking. Artificial intelligence has however reduced these processes and systems of learning

to mere “on click” activities (Messerli; Crockett, 2024; Ramsoomair, 2025). As Woldegiorgis (2025, p. 55) points out “AI systems, particularly those powered by LLMs, can create illusions of understanding whereby users assume epistemic credibility without the critical frameworks necessary to assess the validity of AI-generated content”. Critical inquiry and academic rigour are fundamental to academic settings, hence the need to question the seeming lack of credibility of AI output. The greatest challenge is that AI is being sold as a quick fix to education’s problems, leading to worries about the commodification of education. A truth that higher education has to seriously consider is that insufficient capacity to critically utilise and engage with the technical, ethical, and epistemological dimensions of AI poses risks of “adopting prescribed, exclusionary, decontextualised, homogenised, and highly centralised knowledge systems as the foundation of their epistemologies” (Woldegiorgis, 2025, p. 55). Efficiency-driven reforms and models that AI promises create huge challenges for knowledge generation and creation, hence the importance of knowledge co-creation, which is a fundamental aspect of Ubuntu Philosophy.

There are also ethical concerns related to the replacement of human relations with humanoid robots, such as the loss of human connections, objectification of humans, and perpetuation of biases and discrimination (Giger *et al*, 2019). The speed with which AI is being adopted into education opens opportunities for discussions about whose knowledge counts in AI, whose values guide and shape AI tools development, as well as questions regarding the possible perpetuation of global inequalities (De Sousa Santos, 2014; Selwyn, 2023; Woldegiorgis, 2025; Yilma, 2025). Thus, this paper interrogates issues of power, inequality, and domination, and calls for moments of pausing and reflection before uncritically adopting AI in education, particularly in the Global South where most of the users are merely consumers of the developments of the Global North.

2 Digital degrowth as critical pause

In a VUCAH (volatile, uncertain, complex, ambiguous and hyper connected) environment in which technology is growing at a speed that we cannot practically keep up with, digital degrowth is necessary. Many scholars have called for critical review of the gains of artificial intelligence given its ubiquitous growth and commercial slant. There are deep concerns about AI and its possible risks to the historical values and purpose of education. Digital degrowth is a theme common to discourse around AI in education (Eke; Ogoh, 2022; Marone; Heinsfeld, 2023; Selwyn, 2023; 2025; Adebara, 2025; Woldegiorgis, 2025). Those that argue for degrowth are clear that it is not about rejecting technological change but

redefining how it is developed, adopted, and adapted in ways that are inclusive, interdependent, and locally grounded rather than being regarded as universalized, standardized solutions (Ingold, 2017).

The scramble for optimisation in education brings with it challenges that require rethinking AI's supposed benefits for education, especially in the Global South. We need to ask if technology providing the best practices for education is merely an illusion. This question does not imply rejecting AI but is necessary for the process of thinking critically about what AI can or cannot do for African higher education. In the process of considering digital degrowth, the founding principles should be grounded in understanding and consideration of the threats of fusing education and its various practices — teaching and learning, research, assessment, and governance — in the web of capitalist developments. This is where pausing becomes an important action before fully adopting technology, particularly AI. Knowledge is pluralistic, independent, and interdependent, leading to arguments about the inclusion of various knowledge systems in technological developments, specifically the development of AI tools and applications (Woldegiorgis, 2025). How does technology benefit the global space if it is individualistic in nature and led by developers' notions of superiority, if it is exclusionary to other forms of knowledge?

Unesco's Global Education Monitoring (GEM) Report 2023 ("Technology in Education: A Tool on Whose Terms?") acknowledges digital technology as a "powerful enabler" in education but is also quick to point out its manipulative nature. The argument in this paper is that adoption of AI must not be pushed by the fear of missing out but rather should be based on a critical evaluation of how and whether technology, particularly AI, is fit for the purpose of education. Judgements and questions around ethics, empathy, accountability, inclusion and context-sensitivity should guide the reflective process before adoption. A field experiment carried out in Turkey cited in the OECD's (2026) Digital Education Outlook 2026 report on "Exploring Effective Uses of Generative AI in Education" found that students who used Chat GPT-4 improved short-term performance by 48% with the standard interface and 127% with a tutoring version designed to support learning. The same students performed 17% worse once access was removed, showing that generative AI can undermine learning unless explicitly designed to support skill acquisition. According to the report "when used as a shortcut rather than a learning tool, generative AI can displace cognitive effort and weaken the skills that underpin deep learning" (OECD, 2026, p. 3). In another OECD (2024) report, a Teaching and Learning International Survey reported concerns on how persistent overreliance on AI has the potential to undermine

“teacher autonomy and professionalism, raise ethical risks, and, when used extensively for tasks such as marking, feedback or lesson planning, erode teachers’ professional skills” (OECD, 2024, p. 3).

In light of reported reduced cognitive ability among learners and threats to the originality of research as well as declining educator autonomy and professionalism, we may need to ask how much humans want to cede to machines (Papa; Jackson, 2021). Digital degrowth invites us to sit with these questions and to reconsider not only the technologies we deploy, but also the historical assumptions, values, and ways of knowing that have long positioned technology as both the cause of, and answer to, educational challenges. It demands “proactive renewal of technology use around goals of voluntary simplicity and slowing-down, community-based coproduction and sharing, alongside conscious minimalisation of resource consumption” (Selwyn, 2023, p. 1). In this paper, I suggest critical pedagogy combined with the African philosophy of Ubuntu to guide us in shaping AI adoption in ways that promote participatory inclusion in the development of AI tools, ensuring human agency and accountability, as well as humane and relational use of AI in the context of African Higher Education.

3 Critical Pedagogy

Central to this thinking is Paulo Freire’s notion of critical pedagogy which is deeply rooted in critical theory. It centres on critical consciousness, conscientisation, and a consciousness beyond understanding which leads to action (Freire, 1970). McLaren (1998, p. 45) defines it as “a way of thinking about, negotiating, and transforming the relationship among classroom teaching, the production of knowledge, the institutional structure of the school, and the social and material relations of the wider community, society, and nation state”.

Other scholars view critical pedagogy as a movement towards emancipation from epistemic colonisation by allowing thought beyond the surface. McKernan (2013, p. 425) summarises this view thus;

Critical pedagogy is a movement involving relationships of teaching and learning so that students gain a critical self-consciousness and social awareness and take appropriate action against oppressive forces. This idea is central to Freire’s notion of “conscientisation” or the coming to personal critical consciousness. According to Herbert Marcuse, a major figure in the Frankfurt school, no qualitative social change, no socialism, is possible without the emergence of a new rationality and sensibility in individuals themselves: there can be no radical social change without a radical change of the individual agents of change.

In a period in which technology is presented as the silver bullet to the challenges gripping education, it is important that critical consciousness be embedded in teaching, learning, and research in order to develop learners who are critically aware and have the agency to problem solve and engage with knowledge. While technology, especially AI, has made huge and rapid transformations to how teaching and learning is viewed, presented, and implemented, critical thinking is important in how we adopt and adapt to it. Critical pedagogy therefore equips users of AI to become agents of transformation so they can challenge and reject epistemic injustice or epistemicide (De Sousa Santos, 2014) that accompanies AI's transformations. Users of AI require critical AI literacies to enable them to engage with AI tools more meaningfully. Pangrazio and Selwyn (2019) articulate critical data literacy across five interrelated domains necessary for one to move from functional to critical AI literacy, namely; "data identification", "data understanding", "data reflexivity", "data uses", and "data tactics". Pangrazio and Selwyn (2019) differentiate operational literacy as the ability to effectively use AI tools from critical literacy which extend to the ability to critique the political, social, and epistemological assumptions embedded in AI tools. It is the capacity to evaluate whose interests they serve and develop practical strategies to contest or redirect them. This ability is important because "digital data are neither neutral nor independent of the thought systems that create, collect, and aggregate them" (Pangrazio; Selwyn, 2019, p. 420) hence the importance of questioning the systems instead of merely adopting them. Increased consciousness allows learners and teachers to fully understand how AI functions so that they can utilise it critically and efficiently. Freire (1974) posits that critical understanding results in critical action.

Engaging critical pedagogy in the adoption of AI in education allows users to become active participants rather than passive users and consumers. Critical pedagogy allows learners to engage critically with the reality of AI use in education in terms of its contradictions, flaws, threats, and opportunities. Central to critical pedagogy are principles that reflect the purpose of education guided by the importance of the social reality reflected in the African philosophy of Ubuntu. Critical pedagogy is the very foundation of knowledge and in this case, AI literacy.

4 Unpacking Ubuntu Philosophy

Ubuntu is a word originating from the Bantu languages of Africa and from the Nguni languages of Southern Africa. In IsiZulu and IsiXhosa "Ubuntu" is translated as humanity towards others or human kindness. Drawing from this philosophy, relationality

and humanness are binding principles for community well-being. Thus, in developing technology systems and tools, these principles need to be at the centre. Redefining the adoption of technology in higher education through approaches grounded in culturally relevant practices combined with critical pedagogy gives rise to inclusion, fairness, and critical thinking.

Ubuntu being an African philosophy strongly rooted in the well-being of the community complements elements of critical pedagogy. While it acknowledges individuality, it is guided by the premise that:

What happens to the individual happens to the whole group, and whatever happens to the whole group, community or country happens to the individual. People, country, environment, and spirituality are intricately related. The individual can only say: 'I am because we are and since we are, therefore, I am' (Mbiti, 1969, p. 106).

Central to Ubuntu are values of compassion, understanding and consideration, responsibility, honesty, self-control, care, love, and perseverance (Broodryk, 2007; Mangaroo-Pillay; Coetzee, 2022). It is thus a collection of knowledge, values, and practices for nurturing and enhancing humanity as well as guiding ethics, in this case, for AI governance in education (Yilma, 2025). The idea that has been sold that AI is globally applicable requires some critique. The extractivist and proprietary model of AI requires us from the Global South to consider alternative models that are inclusive and are fully representative of our histories and epistemologies (De Sousa Santos, 2014; Mthimkhulu, 2024). Thus, Ubuntu philosophy becomes a relevant ontological and epistemological framework from which AI tools can be designed to fully tell the African story.

The urgency of this ethical reframing is particularly evident in Global South educational settings, in which technological adoption often mirrors Eurocentric models of knowledge and market-driven imperatives. An example stems from the African Ubuntu Philosophy, which offers a counterpoint to the individualistic and utilitarian models that dominate digital ethics. The Ubuntu maxim, *umuntu ngumuntu ngabantu* (a person is a person through other people) understands education as a collective, relational project. Technology, from this perspective, should be designed for the flourishing of communities rather than for individual utility or corporate profiteering. Ethical frameworks rooted in Ubuntu emphasize dignity, reciprocity, and knowledge co-creation, reminding us that systems meant for the collective must genuinely reflect the people they claim to serve (Letseka, 2013; Ngubane; Makua, 2021; Hoffman, 2026). In the pause necessary for meaningful, inclusive, context and human sensitive AI, we need to ask questions about the neutrality and apparent

progressiveness of AI and its various affordances. Whose knowledge is being used to train AI systems, whose values shape these tools, whether or not AI creates equity and inclusion, and whether AI may be undermining education must be central to discourse about AI in education globally. Such action should be augmented by human oversight, critical consciousness, and Ubuntu.

5 Critical Ubuntu Pedagogy: The interconnectedness

Combining the lenses of critical pedagogy and Ubuntu (Critical Ubuntu Pedagogy) reframes how AI adoption is viewed in education by allowing for moments of reflection and critique before fully accepting AI as the solution to education's challenges. Education's purpose is to develop, among many other expectations, critical thinkers who are adaptable to rapid change and growth. Abraham (n.d., p.1) points to the complexities of the current challenges in education and posits that "today, when we are overloaded with information from different media to convince us about various issues, there is a need to scrutinize them critically to find out whose interests they are serving and how to react to them". The interesting connection between Ubuntu and critical pedagogy is that Ubuntu directs African users through a value system that grounds the use of AI while critical pedagogy provides the framework for using AI systems. Thus, Generative AI "promotes epistemological access for all students irrespective of their diverse social, financial, and linguistic backgrounds and redefines higher education experiences and practices while the principles of Ubuntu prioritise the well-being of stakeholders" (Suleiman *et al*, 2024, p. 188). It is this interrelatedness that requires critical evaluation before AI is adopted fully into higher education. Thus, Ubuntu philosophy ontologically and epistemologically grounds ways in which AI is engaged with (governance) in the Global South while Critical pedagogy provides a framework for using AI. By advocating for culturally relevant and sensitive content, AI can strengthen cultural and epistemological relevance for education in the Global South. An important addition to this layer of inclusion and global access is the adoption of linguistically inclusive systems where all languages are represented in new technology developments. Output in AI tools is often generated in English and continues to "dominate" the education system, overshadowing other official languages. Rethinking how and to what extent various African languages are represented is an important step towards relational, inclusive, and technological developments for education.

5.1 Revisiting the purpose of education

Education is viewed as an avenue for emancipating people from social structures that dominate them by providing knowledge that allows them to question these structures. Giroux (2020) argues that pedagogy can't be separated from how subjectivities are formed, how desires are mobilised, how some experiences are legitimised and others are not, and how some forms of knowledge are considered acceptable while other forms are excluded from the curriculum. Issues of social justice and democracy are not distinct from the acts of teaching and learning. Drawing parallels to Bernstein's Pedagogic Device, which describes the rules and procedures that guide knowledge generation and adoption, Bernstein (1990) describes the Pedagogic Device as a system for production, reproduction, and recontextualisation of knowledge. In essence it is selecting, shaping, and transmitting specific knowledge that reinforces social order and power (Bustamante; Urego, 2025). By applying critical pedagogy to Bernstein's thinking, it is evident that pausing and reflecting are critical if we are to determine whose knowledge matters. Who pushes for technology adoption? In the same vein, it is judicious to interrogate the dominance of Anglo-American scholars and institutions in the shaping of policy documents on educational AI and their strong links with big tech companies (Mochizuki; Bruillard; Bryan, 2025). Is there genuine concern for making education better or there is a push towards an agenda for the commercialisation of education through the discourse of technological efficiency? A move towards techno-capitalism, perhaps? Could this be a case of promoting the commodification of education with teachers and students being placed as consumers of technology?

AI, with its new approach to optimisation of knowledge creation and generation, draws us to question what the purpose of education is. Are we designing an education system that prioritises efficiency over impact? Do students need to focus more on speedy knowledge generation and automation or develop critical thinking and agency? Selwyn (2021) calls for digital degrowth which focuses on efficiency as longevity, sustainability, and repair rather than rapid turnover.

Critical Ubuntu Pedagogy in the process of adopting AI in education is anchored on knowledge that emancipates people from oppression by dismantling the structures through which they are oppressed. The western-centric narratives clouding AI developments should be challenged to include African narratives (Eke; Ogoh, 2022). There are fears of an impending "digital", or "algorithmic" colonisation of Africa, owing to the lack of African values or ethics in AI adoption and governance structures (Adams, 2021; Birhane, 2023; Mohammad *et al.*, 2020; Ndiaye, 2024). Pedagogy is a moral and political practice which

forms, influences, and shapes students thus, in the face of AI and its promises of optimisation, education and educators should clearly understand the complexities and dynamics of AI in education in order to train learners and faculty that align to the true purpose of education in general and higher education in particular. Developing AI literacy before speedily adopting AI for teaching and learning, research, and assessment is fundamental to guarding against the epistemic injustice embedded in AI tools development (Yilma, 2025). Giroux (2020) in his argument for critical pedagogy states that pedagogy is never neutral, instead it offers options either to share knowledge and values that support and perpetuate the cultural and political *status quo* or that challenge and dismantle it. Ubuntu is also fundamentally rooted in communalism and fairness. Given discourse on the Eurocentric hegemony of knowledge perpetuated through technology and advocacy for the use of AI in education (Selwyn, 2025; Marone; Heinsfield, 2023), training students that are critically aware and are able to challenge forms of knowledge is central to education. Students need to think critically and challenge algorithmic biases and prejudices instead of merely accepting them as facts.

Democracy, social justice, compassion and accountability are at the centre of Critical Ubuntu Pedagogy. Education's goal, in this context, is to provide and employ methodologies that help learners develop a set of skills which are critical for their long term growth and contribution to society. *Umuntu ngumuntu ngabantu* (a person is a person through other people) — the maxim underpinning Ubuntu philosophy invites us to question the benefits of AI for learners. The development of critical consciousness, problem solving, critical thinking, and contextual sensitivity are all important goals of education and should be reflected in various aspects of education. If AI is meant to make learning easy, without requiring any critical effort from students, how then does education achieve the goals it is set up for? Education should allow for and advocate for students that critique and question the impact of AI on their own learning. It is therefore important that students should be trained to understand the how, what, and why of AI before they utilise it in their day to day learning. Pausing and reflecting on the possibility of perpetuating dominant power structures through the use of AI becomes critical for the sustenance of the true purpose of education in the Global South. These are the critical questions that higher education institutions should be asking before fully adopting AI. Critical consciousness is a must pre-adoption, in-adoption and post-adoption.

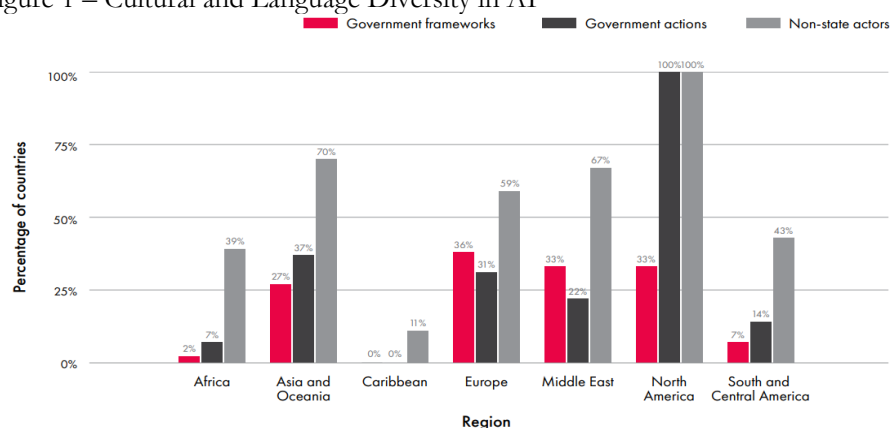
5.2 AI and the threat of erasing indigenous languages

Language and power are intricately linked hence the strong concerns in discourse about AI language representation in view of the exclusion of natives from full digital participation in their own languages (Adebara, 2025). The discussion draws our attention to issues of legitimacy. What and whose knowledge is deemed legitimate. As AI tools are being developed and Language Learning Models trained, on what data are they being trained? The clarion call in recent debates is for the inclusion of knowledge that reflects the global higher education landscape. AI output has been criticised for algorithmic biases and adulteration of local languages (Adebara, 2025; Pratik *et al.*, 2020) but surprisingly the voices of those from the Global South remain limited and fragmented regarding the importance of inclusion, diversity, and contextualisation of AI generated content. One of the most important aspects of education, as implied in the proposed Critical Ubuntu Pedagogy is that the process of gaining knowledge should constantly link to the cultural knowledge, experiences, and frames of reference of students. Language plays a fundamental role in shaping culture, and it is important that we question the English-centric nature of LLMs that sustain the design of AI for education tools. The United Nations Development Program (2025) advocates strongly for the harnessing of multilingual AI to promote community growth. It further points out that there is a language gap that needs to be addressed.

This is particularly evident with respect to language, as only a handful of widely spoken languages – such as English, Spanish and Mandarin – are considered sufficiently resourced to support effective AI development. This excludes more than 7000 languages and numerous dialects spoken around the world that are largely not accounted for (UNDP, 2025, n.p.).

A piece of research by Adams *et al.* (2024) shows that Africa remains at the bottom end of regions with languages that are reflected in AI design (Figure 1).

Figure 1 – Cultural and Language Diversity in AI



Source: Adams *et al.* (2024, p. 48).

Data underrepresentation leads to digital marginalisation thereby excluding others from the digital ecosystem. The end result is linguistic and cultural erasure (Adelani *et al.*, 2022). Through education, culture should be sustained rather than eradicated. Inclusive AI systems therefore have to be cognisant of the diverse cultural and linguistic differences that exist globally, implying that the systems must utilise data that is culturally representative and contextually sensitive. Language gaps pose a fundamental barrier to development. AI systems that do not reliably and meaningfully serve the communities in which they are deployed through local languages show a lack of linguistic diversity which is detrimental to innovation (UNDP, 2025). This leads us to one of the central questions in this paper; whose knowledge matters and should it be adopted without question or critique?

5.3 Threats to human agency in learning

The question of whose knowledge matters and whether AI output should be adopted without question or critique leads us to one of the most at risk aspects of education, that of human agency. Human agency is defined as the capacity of a human being to act intentionally, make informed choices, exercise meaningful control, and shape one's own learning (Bandura, 2006). Despite the many benefits of digital technology, especially AI, there is wide acknowledgement that “dependence on them has become central to our very sense of agency” (Paasonen, 2021, p. 55). Furthermore, the high dependence on digital technologies such as AI reduces human agency as

[...] networked devices, apps, and social media services are atrophying our attention spans, eroding our capacity to focus and think, addicting us, boring us, and stealing our time, as well as stopping us from truly relating to one another, engaging in critical thought, or contributing to public life in a meaningful way (Paasonen, 2021, p. 114).

The threats AI poses on human agency should be a cause for serious concern and rethinking AI adoption and application in teaching and learning. Taking a step back and ensuring that users of AI in education (learners, teachers and researchers) fully comprehend the nuances of AI is an important step in shaping how it is used in education. As Viberg *et al.* (2025, p. 2) point out

[...] without intentional design for practices that protect and require human agency, these technologies may shift control away from learners — narrowing their space for independent judgement, action, and even learning — and from teachers by misleading them in their instruction.

Students are not spared from these realities when presented with academic challenges. Relying on AI, which is presented as a quick fix, potentially becomes the go to

solution. In a world “surveilled, administered, and galvanized by digital technologies” (Thiele, 2025, p. 3) human agency in education requires protection through robust institutional and policy frameworks guided by Ubuntu and critical pedagogy. Viberg *et al.* (2025) underscore the importance of safeguarding the agency of learners and educators from the dangers posed by AI and learning analytics. The distribution of control and autonomy in learning environments, especially higher education, has radically shifted as a result of AI, transforming how feedback is generated and the speed with which it is generated, as AI is employed in solving complex problems, summarising content, and analysing learning traces. An MIT study revealed that excessive use of AI driven solutions can lead to cognitive atrophy and possibly shrink critical thinking abilities (Kosmyna *et al.*, 2025). With students and teachers increasingly relying on LLMs in everyday practices, there is a pressing need for metacognitive support that assists learners in regulating their engagement with AI and maintaining ownership of their learning processes (Xu *et al.*, 2025), as well as pedagogically meaningful teacher support in terms of their professional development (Tan *et al.*, 2025). Adopting pedagogical and assessment practices that maintain and advance human input is a required imperative in education. For example, asking students to map the structure of their arguments without using any AI tools is a great way of supporting their ability to think on their own outside of AI. When teachers and students are supported to become critically aware, there is improved agency in ensuring that they are making ethical decisions. Adopting AI without developing the fundamental skills for Critical AI literacy poses significant challenges to human agency hence the need to pause, reflect, and realign to sustain ethical and critically thought-out knowledge and decisions.

5.4 Towards relational, humane, and contextualized learning

While Eurocentric models of knowledge have shaped the tech space, it is critical that knowledge generation on various tech platforms be contextualised to meet the needs of African users. The rapid integration of AI into higher education “since the release of large language models such as ChatGPT in 2022 raises fundamental questions about educational equity, intellectual autonomy, and epistemic justice” (Woldegiorgis, 2025, p. 54). AI has radically and significantly shifted how knowledge is viewed, produced, and distributed. With promises and realities of personalised learning, optimisation of administrative and assessment procedures, enhancement of research capacities, as well as reduced burden on student activities related to learning, it is important that we deeply and holistically evaluate these developments by adopting context sensitive approaches that consider the unique

cultural, historical, and epistemological contexts (Dempere *et al.*, 2023; Woldegiorgis, 2025).

Tech applications that support instruction within higher education systems should be underpinned by an African-based epistemology (Bangura, 2005). African education has been dominated by Eurocentric ideas (Ngubane; Makua, 2021) and so have technology systems for a long time. It is important that where technology and education is concerned, there be “a paradigm shift that will align with the context in which it is practiced and foster values that are contextual” (Mthimkhulu, 2024, p. 85). There must be recognition of equal relationships and ownership of knowledge between various knowledge sources. Technology platforms should be guided by the concept of knowledge co-creation which borrows from the Ubuntu maxim “a person is a person through other people — *umuntu ngumuntu ngabantu*” (Letseka, 2013, p. 335). No one source of knowledge reigns supreme over others. In higher education, exposure to a wide range of information sources allows students to respect each other’s ideas, challenge ideas, and critique ideas thereby making collaboration easier. While AI promises positive transformation, the words of Woldegiorgis remain central to how we adopt technology, particularly AI in higher education because “without a critical and context-sensitive approach, it also risks reinforcing the homogenisation of knowledge by universalising Eurocentric epistemologies and marginalising indigenous intellectual traditions” (2025, p. 55).

To indicate that this is not merely an idealist clamouring for inclusion in AI design, there is evidence that across the globe several countries are building data sets based on their own native languages. In African for example, The Masakhane Natural Language Processing project, a distributed, continent-wide open-source community of researchers, linguists, and AI developers is working towards Natural Language Processing research in African languages, for Africans, by Africans. The aim is to sustain human dignity, well-being, and equity through inclusive community building, open participatory research and multidisciplinary (Orife *et al.*, 2020). This speaks to the Ubuntu communitarian spirit that prioritises relationality over individualism. By centring African linguistic knowledge, the Masakhane NLP reorients and transforms colonial technology designs that neither support, preserve nor integrate African Languages, making them technologically invisible. This will in turn ensure the process of critiquing knowledge about Africans that is being churned out by Westernised versions.

Another complementary project is Vambo AI which is a digital platform built on multilingual generative AI that supports over 40 African languages, including Zimbabwe’s indigenous languages. Vambo AI provides a translation tool that enables accessible text

translations, while Vambo Academy focuses on teaching Ndebele and other Zimbabwean local languages. This serves to prevent local languages from becoming obsolete in digital ecosystems. These examples are indicators of the possibilities that accrue from critically thinking AI as a tool for the common good.

Ubuntu Critical Pedagogy is thus informed by African communalism and interconnectedness which emphasize the importance of empathy, compassion, and collective well-being (Okyere-Manu, 2023), and this should be reflected in technological advancements before they can be adopted in higher education. Suleiman *et al.* (2024) calls for Ubuntu-infused AI to enable researchers to create adaptive learning systems that encourage collaborative learning, cultural sensitivity, and social justice, and consequently solve systemic inequalities that have long denied marginalised communities' access to quality education. A critical pause is therefore necessary to allow for the reframing of AI followed by a more inclusive design approach.

6 Conclusion

While the potential for AI in education is argued to be high, so are the threats that it comes with. The AI hype has created various challenges and opportunities that require serious interrogation and critique hence the call for digital degrowth — a pause and moment to reflect, steeped in critical pedagogy and Ubuntu ethics. The fact that AI systems are predominantly developed in the Global North calls for the interrogation of power structures, the perpetuation of inequality, and epistemic dominion. Through critical pedagogy, I encourage questions about whose knowledge matters and whose values remain constant. My argument foregrounds the importance of human agency and consciousness in the face of commercialised AI adoption and the hype for automation, efficiency, and speed. Central to this paper is the call to pause and reflect through critical consciousness so that educational tools can be critically evaluated before they are adopted based on efficiency. Relationality, respect, and humanity should be assessed before AI is fully adopted. Before the hype should come critical Ubuntu pedagogy that focuses on centring humanity, valuing interdependence, questioning Eurocentric and hegemonic structures whose aim is to maintain epistemic power and superiority, preserving relational teaching and contextualising AI to suit African realities and knowledge. There seems to be a scramble to fit our education systems around AI instead of fitting AI into our education systems, a case that requires, in my call, a need for pausing and reflecting- in essence digital degrowth.

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