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Education Above All

Artificial Intelligence Discussion Paper:

We invite our colleagues to engage in a collaborative dialogue on the ideas presented in this paper. Your insights, experiences, and critiques are invaluable for enriching our understanding and advancing our field; we hope that your participation will help foster a dynamic exchange of ideas and enhance the collective knowledge of our community. To share your thoughts, questions, and contributions, please reach out to us at innovations@eaa.org.qa.

Executive Summary

More than 1 billion people use Artificial Intelligence globally[1]. The paradox of AI is that we see it everywhere, and yet the promise of AI is currently much more than what it has been able to currently deliver. The development sector is still navigating how to harness AI into meaningful, context-appropriate solutions that serve the most marginalised learners.

We are in desperate need of innovation and new ways of working. The world is facing some of its most serious challenges with a significant increase in inequity – almost every metric in development is regressing, including the rise of out of school children, deepening learning crisis, incidences of and duration of conflict, severity and regularity of environmental disasters and increased prevalence of youth not in employment, education, or training[2] (NEET). This, compounded with the reduced global funding towards development forces us to rethink not only what we do, but how we do things.

As these inequities deepen, “catching up” for many communities may take decades and even then, toward a constantly moving target. We need to leapfrog the divide, and technology, when purposefully designed and deployed, can offer such a leap.

At Education Above All (EAA) Foundation, we remain cautiously optimistic about AI and digital technology, not as ends in themselves, but as tools to serve humanity and equity. We believe AI must help us:

- Be more efficient to reduce redundancies, unnecessary bureaucracy and automate systems so that limited resources are redirected toward impact where it matters most.
- Use data and predictive capabilities to channel funds and interventions to the communities, geographies, and learners most in need.
- Ensure speedier,cost-effective responses by using AI to expedite first drafts of backend technical work, such as proposal evaluation, curriculum development, translations and report writing, among others.
- Be bolder and more ambitious in with learning by ensuring solutions that personalise learning to diverse learning levels, capabilities, preferences, languages, and styles.
- Expand the impact of limited high-talent human resources, especially teachers, by automating administrative tasks, providing usable data and insights, and supporting continuous professional development.

[1] “Global AI adoption rises quickly but benefits remain unequal”, *dig.watch*, [accessed 09 November 2025], https://dig.watch/updates/global-ai-adoption-rises-quickly-but-benefits-remain-unequal
[2] Stoff, C. & Valenza, M., 2025, *State of Education for Crisis-Affected Children and Adolescents: Access and Learning Outcomes,* Education Cannot Wait, [accessed 09 November 2025], https://www.educationcannotwait.org/sites/default/files/2025-01/global_estimates_report_2025.pdf

- Create an impetus for legal policy advocacy and systems, especially to protect against attacks on education by timely and informed data
- Ensure we have multiple flexible pathways for adolescents and youth from secondary to higher education to support continued learning, to unlock potential pathways
- Break the cycle of poverty and disadvantage by empowering communities towards employment and entrepreneurship by enabling them to participate and not be bystanders in the AI and technology revolution
- Rethink climate financing and green skills in vulnerable geographies to promote sustainable livelihoods and practices

At the same time, we need clear guidelines and safeguards for exploring and deploying AI. Without these, we risk widening inequities, deepening systemic biases, and compromising the rights and information of communities. At the heart of every AI-powered solution must be accountability and participation of those on the ground.

EAA Foundation's fundamental belief is that humanity is the core of the work we do, and technology should be used to enable and support these human interactions and connections. In all our work, AI and technology will always play the supporting role, with us placing the user at the centre. We will only deploy AI and technological solutions when there is a clear, context-driven need and when they can be owned, adapted, and sustained by the communities themselves.

However, as we embrace the potential of AI, we must also acknowledge that technology alone does not guarantee transformation. As per the Mckinsey study of Rewired, a successful digital transformation depends on three interdependent factors – technology, people, and systems[3].

- Technology that works: Solutions must be feasible, context-aware, and responsive to the realities of underrepresented and under-resourced communities. In addition, the evaluation and constant iteration of the technology are essential.
- People who support technology: The infrastructure around digital technology needs to augment the human experience and also build the required skills and knowledge through a participatory process. When the users and stakeholders find value in and are capacitated to participate in the solution, only then will it succeed. The design must also ensure that final decision-making agency and capability are in the hands of those using it.
- Systems that integrate technology: Technology must be integrated into the infrastructural and policy framework of the system to ensure sustainability and impact. Adhering to accountability frameworks and guidelines is a prerequisite for ensuring privacy, security and transparency.

We are at an inflexion point. EAA Foundation recognises that AI is no longer emerging; it is everywhere. The question is not *if* we should engage,but rather *how* we do so responsibly, equitably, and with readiness.

[3] Lamarre, E. & Smaje, K. & Zemmel, R., (2023), *Rewired: The McKinsey Guide to Outcompeting in the Age of Digital and A*I, Wiley

التعليـم فـوق الجميـع
Education Above All

Introduction

Education Above All Foundation has reached 14.5 million out of school children, generated 3.3 million employment opportunities in over 75 countries, and provided 10,500 scholarships for youth since its conception. We work towards a mandate of ensuring equal access to quality education for all and are committed to championing lifelong learning that fosters employment opportunities and empowers the most vulnerable, guided by the principles of the Right to Education, Equality, Collaboration, Transparency, Innovation, and Diversity.

As issues in global education and employment become more complex, global funding is facing a 3.2 billion cut by 2026[4]; Some of these deteriorating conditions include:

- Low literacy levels: By the age of 10 years, 7/10 children in middle and low-income countries cannot read proficiently, while 9/10 children in high-income countries can[5].
- 20%High out-of-school population: 251 million children and youth are out-of-school[6] .
- Severe teacher shortage: We are predicted to have a global shortage of 44 million teachers by 2030[7].
- Children in conflict: There are 473 million children affected by conflict[8] who are in need of trauma- informed education. 47 million displaced and refugee children with no portable and verifiable credentials[9].
- Roughly 20% of young people aged 15 to 24 are classified as NEET — Not in Education, Employment, or Training. This classification signals a population segment that is neither building skills nor participating in the workforce, representing a loss of human capital at a formative stage of life[10].
- As well as threatening lives and livelihoods, the climate crisis has devastating impacts on education for the most marginalised and, in recent years, has disrupted the education of large numbers of children, estimated in 2022 to be nearly 40 million children every year[11].

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[4] UNICEF, (2025, September 02), *Global funding cuts could force 6 million more children out of school in the coming year*, [Press release], https://www.unicef.org/press-releases/global-funding-cuts-could-force-6-million-more-children-out-school-coming-year

[5] World Bank, (2022, June, 23), *Global funding cuts could force 6 million more children out of school in the coming year,* [Press release], https://www.worldbank.org/en/news/press-release/2022/06/23/70-of-10-year-olds-now-in-learning-poverty-unable-to-read-and-understand-a-simple-text

[6] Report on Education finance (2024), UNESCO Institute for Statistics, https://unesdoc.unesco.org/ark:/48223/pf0000391641

[7] Report on teachers: addressing teacher shortages and transforming the profession (2024), UNESCO, https://doi.org/10.54675/FIGU8035

[8] Smith, K.,(2024, December 28), *2024: One of the worst years in UNICEF's history' for children in conflict,* unicef.org, https://www.unicef.org/easterncaribbean/stories/2024-one-worst-years-unicefs-history-children-conflict

[9] *A guide to UNHCR's Global Appeal 2025,* UNHCR, https://www.unhcr.org/media/global-appeal-2025

[10] International Labour Organisation, (2024), Global Employment Trends for Youth, https://www.ilo.org/sites/default/files/2024-11/GET_2024_EN_web4.pdf

[11] FCDO (2022), *Addressing the Climate, Environment, and Biodiversity Crises in and through Girls*, https://assets.publishing.service.gov.uk/media/639071bf8fa8f569f9c82436/Addressing_the_climate__environment__and_biodiversity_crises_in_and_through_girls__education.pdf

The sobering statistics strongly support a case for employing new techniques that help us rethink the development paradigm.

And yet, when we think about the promise of technology, we recognise that there is still a significant digital divide, especially in the communities and geographies that EAA Foundation operates. 2.6 billion people around the globe are not connected to the internet[12]. In low-income countries, 90 per cent of adolescent girls and young women aged 15-24 are offline, compared to 78 per cent of adolescent boys and young men of the same age who do not use the internet[13].

At the same time, 7/10 teenagers in LMICs have access to a smartphone, and technology is readily available to them all at their fingertips[14].

While we identify a significant need to unlock the promise of AI and technology, we are bound to identify opportunities that truly help close the inequities, are context-specific and feasible.

Global Context and Rationale

Addressing systemic injustices in education and economic empowerment is a complex challenge, but AI offers promising solutions that can help close achievement gaps, increase student engagement, create access to education and generate economic opportunities. For example, AI-driven tools have played a key role in improving internet access in rural and low-income areas, allowing students and communities to access technology and learning content that would otherwise be out of reach[15]. Additionally, AI can help policymakers collect data more efficiently, enabling them to make informed decisions and track progress in real-time.

AI tools have been used to identify the specific villages and communities hosting the majority of out of school children within neglected geographies. This is then extended to create relevant behavioural nudge strategies to help a more efficient recruitment drive and community engagement and mobilisation effort[16].

AI has the potential to enable students to leapfrog gaps in understanding, accelerating their academic progress by providing tailored resources and support. With adaptive learning technologies[17] students can receive real-time feedback and customised pathways that cater to their individual learning styles and needs. This approach not only enhances comprehension but also fosters a sense of agency and motivation among learners.

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[12] *International Telecommunication Union*, (2023, September, 12), *Population of global offline continues steady decline to 2.6 billion people in 2023,* [Press release], https://www.itu.int/en/mediacentre/Pages/PR-2023-09-12-universal-and-meaningful-connectivity-by-2030.aspx
[13] Avanesian, G. & Pandolfelli, L., *Bridging the Gender Digital Divide*, UNICEF, Global Partnership for Education Knowledge, https://data.unicef.org/resources/ictgenderdivide/
[14] OECD (2025), How's Life for Children in the Digital Age?, OECD Publishing, Paris, https://doi.org/10.1787/0854b900-en
[15] Portela, C., et al., (2024), *AI in Education Unplugged Support Equity Between Rural and Urban Areas in Brazil*, Association for Computing Machinery, https://doi.org/10.1145/3700794.3700810
[16] Ravinutala, S., (2019, April, 29), *Rebuilding the Educate Girls machine learning model*, ID Insights, https://www.idinsight.org/article/rebuilding-the-educate-girls-machine-learning-model/
[17] *Rori,* hundred.org, https://hundred.org/en/innovations/rori

The issue of educator preparedness is also being managed by positioning them as facilitators rather than lecturers. With the support of AI coaches[18] the educator is also supported with student data and insights, as well as pedagogical techniques. We can reimagine agentic AI to support educators in handling repetitive tasks and acting on their behalf while also hyper-personalising responses to the data, inputs, and training.

Beyond education, blockchain technology is emerging as a vital tool for credentialing, enabling the secure verification of students' prior learning experiences across states and countries[19]. This decentralised approach ensures that qualifications are easily transferable, fostering greater workforce mobility and enhancing opportunities for learners worldwide. The Smart Ecosystem for Learning and Inclusion (SELI) platform exemplifies how these technologies converge. It integrates blockchain to issue verifiable micro-credentials and manage learner data through smart contracts, while AI-driven analytics support inclusive and adaptive learning. Together, these innovations illustrate how emerging technologies can make education systems more accountable, equitable, and learner-centered.

Traditionally, the development sector has operated reactively, often preparing for adverse events only after they occur. However, there is an increasing imperative to embrace a more anticipatory approach. By leveraging advanced algorithms and predictive models to forecast trends in displacement and population movements, organisations can allocate personnel and resources proactively. Furthermore, AI-powered tools have been employed to analyse satellite imagery for disaster response, enabling organisations to assess damage and coordinate relief efforts more efficiently[20]. This shift not only enhances operational efficiency but also strengthens the overall effectiveness of humanitarian interventions.

AI is also making significant strides in supporting climate intervention within the development sector. For instance, machine learning algorithms are being utilised to predict climate-related hazards, enabling organisations to develop resilient strategies for communities vulnerable to environmental changes. The United Nations Development Programme reported that AI-driven data analytics can identify areas at high risk of natural disasters, facilitating pre-emptive actions to mitigate impact[21]. AI has also found a place in transforming climate finance by improving risk assessment, optimising investments and enhancing climate action monitoring. Beyond predicting climate risks and early warning systems, it can be used to stimulate scenarios that help manage risks of investment portfolios and carbon markets. AI has also been used to analyse community-level environmental data to provide targeted recommendations for green skills.

In terms of economic empowerment, AI is revolutionising financial inclusion through mobile banking and access to market information – when combined with AI-powered learning platforms and support tools, this can help many previously left out participate more effectively in the economy. There is

[18] https://taleemabad.com/
[19] R. Arenas & P. Fernandez, CredenceLedger: A Permissioned Blockchain for Verifiable Academic Credentials, 2018, IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC), Stuttgart, Germany, 2018, pp. 1-6, doi: 10.1109/ICE.2018.8436324
[20] Briefing Note on Artificial Intelligence and the Humanitarian Sector, (2024), United Nations Office for the Coordination of Humanitarian Affairs (OCHA), https://www.unocha.org/publications/report/world/briefing-note-artificial-intelligence-and-humanitarian-sector
[21] Ramiah, D., *5 ways AI can help crisis response around the world*, UNDP.org, https://www.undp.org/5-ways-ai-can-help-crisis-response-around-world

also the rise of the AI-enabled gig-economy, allowing trained communities to participate in the global economy even from fragile and vulnerable countries. By utilising AI-driven platforms, organisations can connect marginalised individuals with remote job opportunities that align with their skills, thus enhancing their economic resilience. For example, initiatives like the Digital Jobs Africa programme leverage AI to match job seekers with training and employment opportunities, thereby addressing unemployment in vulnerable populations[22].

When applied effectively, AI can significantly enhance access and outreach, facilitate targeted interventions through predictive analytics, support personalised learning experiences, and broaden access to resources. However, it is crucial to recognise the considerable pitfalls associated with implementing AI systems, particularly in development contexts. AI models often fail to account for cultural nuances, overlook local expertise, and misalign with the needs of target communities. This can perpetuate existing biases and marginalise valuable knowledge. Such issues have been repeatedly observed in educational settings, where racial biases embedded in AI-driven tools can impact outcomes. For instance, algorithms used for academic and success predictions frequently assess racial minorities as less likely to achieve academic and professional success, largely due to the design of these algorithms and the data upon which they are based.

With such examples in mind, we acknowledge the immense responsibility of ensuring the ethical and transparent deployment of AI-related interventions for our programme stakeholders.

As we strive to support the most vulnerable and marginalised populations worldwide, our use of AI within EAA Foundation projects will adhere to the principle of “do no harm,” ensuring that our initiatives promote positive outcomes without causing unintended consequences. It is also important for us to be very thoughtful in the deployment of technology, only doing so when it is a significant enabler that can be sustained.

However, as we pursue these opportunities, it is essential to remain vigilant regarding the challenges that AI presents to human capacity building. Some of the trends that are important we continue to track include:

- Can we ensure that the evolving role of the educator enhances the learning experience rather than diminishes it?
- How could cultural nuances inform the design of AI systems to ensure they are relevant and effective within diverse contexts?
- Can we engage communities in the AI development process, ensuring that technology reflects their unique realities and addresses their immediate needs?
- Does the new access to data create increased vulnerability for specific populations?
- How will the changing landscape of employment due to AI impact job opportunities, skill requirements, and economic stability for vulnerable populations?

[22] International Labour Organization (2022), Digital Jobs Africa: Leveraging AI for Employment Opportunities

How is AI currently being used within the development context?

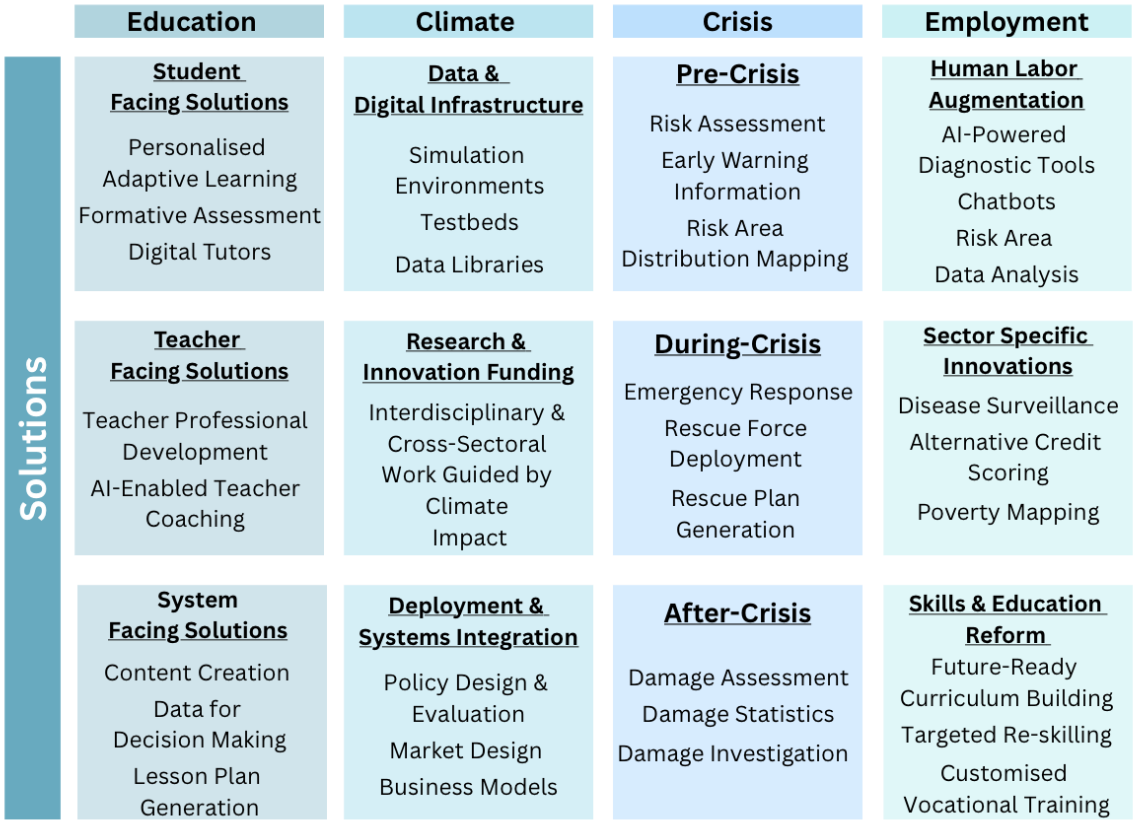

Fig. 1, AI within the development context; authors' own

Position Statement:

At Education Above All Foundation, we view Artificial Intelligence as a promising tool to leapfrog persistent challenges in the development education and economic empowerment space. We believe that technology needs to advance equity, protect human dignity and expand opportunity and should only be used when proven as the most viable innovation and can be sustained by communities. AI is not an end in itself, rather an enabler to the human connection that is central to our work. We believe AI should serve the public good: human-centered, context-aware, and rights-based by design.

EAA Foundation's early experiments with Artificial Intelligence

FERBY

FERBY is an easy-to-use chatbot that aims to curate and adapt IFERB to users' needs in order to create meaningful learning experiences.

DigiWISE

DigiWise is an intervention currently at pilot stage that aims to reach 6,000 students aged 11 to 15 and 200 teachers in public schools across three regions of Peru. Through expert-designed learning modules, lessons will focus on critical thinking, media literacy, and AI literacy. Lessons will also apply specific methodology adapted to both high- and low-connectivity contexts. The project will aim to strengthen learners' digital skills and prepare them to engage in the digital world safely and responsibly.

Digital School Project

The Digital School Project (DSP) is aimed at creating a digitally powered alternative to traditional schooling that enhances access to quality, accredited learning for "last mile learners," who are out-of-school secondary-age students. DSP emphasises flexible, personalised learning that accommodates individual preferences and paces, reduces reliance on teachers by leveraging technology and community support, and provides recognised education pathways to further learning or employment. It operates within a scalable ecosystem of partners, including technology and community access providers.

OOSC Digital Mapping Project

This AI-powered/driven predictive model is a pipeline project aimed at identifying geographic areas with high concentrations of OOSC, using AI. This model, developed by EAC and ID insight will focus initially on Sierra Leone in support of a project to achieve Zero OOSC. The model would be further developed into a tool adaptable to other countries or large regions, enabling targeted intervention where they are needed most. The overarching objective of this initiative is to improve targeting efficiency and cost-effectiveness.

Dropout Prediction Model

In partnership with World Vision and Microsoft, EAC aims to develop an AI model to predict children at risk of dropping out in Zambia. Successful dropout prevention requires effective early warning systems. This tool will leverage the power of AI and predictive analytics to give a more precise early indication of the chance of a student's dropout, triggering on-time preventive measures. Once developed as a tool, it will be adaptable to other countries or large provinces/states.

<u>What are EAA Foundation's key principles when it comes to AI?</u>

We have made significant progress in understanding the role of AI in education and economic empowerment, and as we continue to scale this innovative phenomenon, it presents exciting opportunities to enhance implementation and maximise positive outcomes.

In this section, we will explore some of the pivotal questions to help us define our approach to AI and its potential to empower educational equity while safeguarding human agency:

1. **Purposeful AI: Is it genuinely adding value?**

AI and technology must be deployed only when needed and when genuine value is being added. Given the significant upfront investment in developing context-relevant AI tools, the infrastructural

and connectivity digital divide and the human capability gap, AI is not always the best solution in the development context.

Once a specific challenge is identified, thoughtful technology can demonstrate how it will work to solve that inefficiency or gap, or to open a new way of working. It is important to ask whether the solution effectively addresses entrenched issues in education and economic empowerment, and whether its approach is genuinely innovative.

Some of the main questions include:

- Does the solution respond to the real educational or economic empowerment needs which have been identified?
- Is it a justified intervention with clear value added beyond existing human-led or low-technology approaches?
- Does it complement human user-driven solutions?
- Does technology add value? If so, to which area in specific?

2. Human Empowerment: Is it enhancing human interaction and empowering participants?

AI needs to be an enabler for human connections and relationships. Technology is an important tool to support the unlocking of human potential through education and economic empowerment opportunities.

Technology should not isolate. Instead, it should promote human connections and foster socialisation and mental health. Consequently, any AI system employed should demonstrate that its learning strategies not only support cognitive development but also contribute to the holistic well-being of its users. Furthermore, there should be clear evidence of how the solution complements human-led innovation and promotes offline growth for participants. This includes the development of soft skills that enhance social participation and skills applicable within the community, ultimately leading to a positive impact.

The technology needs to be effectively integrated in the solution to simultaneously enhance the abilities of the involved users. In order to do this, we need to expose and train relevant participants on the technology. Thoughtful integration with the relevant users is essential to promote adoption and effectiveness of the technology. “The true power of AI lies not in replacing humans, but in working alongside us to achieve what neither can do alone” said Sebastian Thrun, Co-founder of Udacity.

The upskilling of users should be done through a participatory approach involving a diverse range of users through: (i) integrating stakeholder insights in the design, testing, and evaluation of systems or involving them directly in decision-making processes that shape these systems; (ii) engaging stakeholders at both the early and late design phases to ensure their real-world needs and concerns are reflected and to mitigate potential biases; and (iii) initiating professional development efforts in parallel with the deployment of AI systems, enabling local stakeholders to advance the intervention independently while allowing practitioners to be involved in monitoring, evaluation, and ethical considerations. It is important that the agency remains in the hands of the users.

Some of the main questions include:

- Does the technology enhance human interaction and connections?
- Does it help empower the users and stakeholders with new skills and abilities?
- Do all those involved have background knowledge and access to tools to manage the technology?
- Does it amplify human intelligence and human interaction?
- Are there meaningful channels to question AI-driven actions and decisions?
- How is the technology prioritising the well-being of participants while balancing digital and non-digital activities?

3. **Equity-First: Is it reducing or increasing the gap?**

AI needs to be the revolution that reduces the divide and empowers marginalised communities to participate more effectively in the global economy. Systems need to be designed to be just and equitable ensuring that the vulnerable are supported. The technology needs to be innovative in its design and delivery to have additional provisions to promote inclusivity. The focus would be to design tools that level the playing field for participants.

There are increasing concerns regarding the impact of AI on educational equity, particularly how biased algorithms can significantly affect learners' educational trajectories, creating new systemic barriers in education. For instance, predictive analytics tools that use historical data to forecast student success may inherit past patterns of discrimination, leading to reduced opportunities for certain demographic groups in areas like university admissions, course recommendations, or academic support services. We should also account for the potential for misinformation being disseminated through biased data and algorithms. It is therefore critical to assess solutions based on their ability to mitigate algorithmic biases through a multi-stakeholder approach that strengthens policy frameworks and institutional accountability.

Some of the main questions include:

- Are user-group segments disadvantaged by the technology?
- Is the technology reducing or widening the gaps and divides in achievement and opportunity?
- Is there a specific focus on creating innovations that help include users with multiple barriers?
- Are there any biases that can impact opportunity?

4. **Context-Aware: Is the technology designed for feasibility and relevance?**

Despite advancements in technology, many technologies remain unaffordable and inaccessible to AI solutions, exacerbating existing digital divides. AI and technology need to be developed for low-resource requiring communities with limited infrastructure, connectivity and exposure – it is essential for feasibility.

In addition, when thinking about the context, the AI needs to be representative of the voices of the stakeholders involved. Datasets used to train AI often reflect unintended biases rooted in the Global North – and without safeguards, these can reinforce harmful stereotypes and deepen inequities. Many existing AI systems are predominantly developed using English and Western paradigms,

which presents a significant challenge, as a substantial portion of the global population does not speak English fluently or is unfamiliar with these frameworks.

While the responsibility for the technology design may rest on solution providers, there must be an inclusion of contributors who can help to shape the innovation as one that positively contributes to their ecosystem.

EAA Foundation feels that AI systems need to be built to adapt to local realities and local voices in order to be effective.

Some of the main questions include:

- Does it ensure that participation is not tokenistic but genuinely shapes design, use, and evaluation?
- Is the solution feasible given the investment in hardware, software and connectivity?
- Does the solution remain functional and relevant in low-connectivity/low-resource contexts?
- Does the technology adapt to diverse learning contexts or expect the context to adapt to it? Does it reflect the cultural, linguistic, and contextual realities of the people it serves?

5. **Evidence Driven: Are we continuously evaluating and improving the technology?**

Given the novelty of many technology-driven solutions, we need to carefully evaluate their effectiveness. There is an opportunity to help improve technology to serve a purpose with continuous testing and feedback loops to ensure there are no unintended lapses and at the same time there is improvement in the services. It is essential that monitoring and evaluation is built into not only the design of the technology systems, but also into the programme design in order to test its effectiveness as a tool in the overall offering and as an enabler to human capacity development.

A thorough evaluation of AI innovations should include an examination of accountability mechanisms and the ethical guidelines governing their development and deployment.
It is important that the users and practitioners have the opportunity to co-design the research and evaluation process of the technology to ensure its usefulness. Encouraging data sharing with these community members is vital to streamline processes, ensure effective governance, and leverage insights for further innovation development.

A prerequisite for AI investment should be how effectively relevant stakeholders can evaluate the solution's efficacy, allowing for the integration of AI concepts and frameworks into lesson plans.

Some of the main questions include:

- Does the solution make decision-making processes transparent and understandable to those affected by them?
- Does it create meaningful channels for learners, teachers, and communities to question and improve AI-driven decisions?
- Are there clear feedback loops for the technology effectiveness to be tested?
- Is the efficiency of the role of technology within the larger programme being evaluated?
- Are other unintended consequences being monitored and managed?

6. **Sustainability: Is the solution designed and deployed to stick after the initial investment?**

Moving away from a project-based approach and adopting a broader development perspective, sustainability should be a primary consideration in decision-making. The discussion must start with the design questioning whether the solution has leveraged existing infrastructure and deliberately used local resources. This resource utilisation should extend to financial aspects, with clear evidence of a long-term financial plan to sustain the innovation and improvements beyond its initial funding.

Outside of the infrastructure, the solution and the technological aspects would also need to be embedded within the existing ecosystem. This is important to not create a separate system that requires constant external support and funding.

It is important to consider the collaborative efforts and ownership of various stakeholders, which would foster its growth and sustainability. When all the users are involved, capacitated and have agency over the solution, it can be sustained.

Some of the main questions include:

- Does it integrate into local and national systems vs. parallel structures?
- Is there evidence of ownership of the technology by local communities and practitioners?
- Does it account for long-term maintenance?
- Is there funding and capacity to continuously iterate and improve the technology?
- Does the solution create dependency or can it be sustained locally?
- Are local stakeholders equipped to scale it independently, without reliance on external support?

7. **Rights based safeguards: How does the technology ensure privacy, safety and transparency?**

When selecting a potential AI solution, the degree of government oversight within the relevant region must be carefully assessed. This oversight does not necessarily imply direct government involvement in the project but should be reflected in how well the solution aligns with Human Rights Due Diligence (HRDD) best practices, as well as established human rights and ethical standards. Compliance with localised government regulations regarding AI usage, such as data privacy, is essential. Furthermore, the technology should be auditable by government regulators, particularly in instances where vulnerable populations may be at risk of exploitation due to its implementation. The deployment of the AI system should also align with a national strategic approach to AI; if such a strategy is absent, there should be a framework to utilise the data and research outcomes from the project to inform the future development of a national strategy.

While each implementation context will vary in terms of its AI infrastructure, selected solutions should demonstrate a robust legal framework for secure data-sharing among organisations, researchers, and government entities. Moreover, solution providers must clearly outline the safeguards in place for anonymising personal data. Given that the end users of these solutions may include children, adolescents, marginalised communities, or vulnerable populations, it is imperative that solution providers demonstrate stringent processes related to consent requirements, ensuring

individuals are fully informed about how the AI systems may process their data. Furthermore, obtaining informed consent from programme participants—be they students, parents, youth, caregivers, or guardians—is central to this issue.

Further, when examining ethical AI practices in education, it is pertinent to inquire not only about how data is processed but also about the type of data being collected and analysed. Since AI relies on datasets for decision-making, content development, and assessment of end users, it is crucial to ensure that the design phases of the solution involve research and consultation with multilateral stakeholders, with designated owners responsible for data quality checks. These checks are particularly important when employing digital tools for evaluating and assessing learners. Thus, it is the responsibility of the solution provider to demonstrate transparency regarding the objectives and processes by which algorithms derive their recommendations.
Transparency is also an essential right to consider; the data and analysis process should be made available to the communities from which the data is collected. It is essential that the users and stakeholders own their own data and are informed of who it is being shared with and to what end. They must also have the agency and capability to make decisions based on the data provided by the technology.

Some of the main questions include:

- Does the solution make decision-making processes transparent and understandable to those affected by them?
- Does the technology get consent from the communities from which the data is being collected and used?
- How are privacy norms considered and how are users safeguarded?
- What are the terms of data use? Can any of the data use be exploitative?
- Does the solution comply with the relevant frameworks for human rights?
- Do the users know how their data is being used?

Future Outlook

Leapfrogging the Development Divide

EAA Foundation is invested in and interested in making the digital tools work to address multiple challenges and invite partners to collaborate and innovate on the below.

1. **Policy Makers Making Data-Driven Decisions**

Empowering local governments to manage and regulate AI systems is crucial for ensuring sustainable implementation and governance. By leveraging insights and outcomes from our on-the-ground projects, policymakers can enhance their decision-making processes, leading to broader policies that yield significant impact. For example, EAA Foundation can offer education-focused AI applications, such as systems for identifying OOSC and predicting dropout rates. These tools can significantly improve the efficiency of Education Management Information Systems (EMIS) and enhance monitoring efforts, ultimately fostering a more effective educational landscape.

2. **Education Access**

For OOSCA for whom conventional schools are not effective, AI can support the development of innovative educational theories and practices. Investing in offline AI solutions that operate autonomously without requiring internet connectivity is crucial, particularly in rural or infrastructure-constrained regions. For example, student-facing personalised adaptive learning (PAL) systems can provide tailored educational experiences, adjusting to individual learning styles and paces, thereby enhancing engagement and effectiveness. These systems, when integrated with Education Management Information Systems (EMIS), can enable better tracking of student progress and needs.

3. **Personalised and Inclusive Learning**

Exploring adaptive applications and assistive technologies is vital for enhancing the cognitive potential of learners with disabilities. For example, Tiblo, an interactive electronic block system, aids dyslexic learners by providing multisensory learning experiences.

Adaptive learning can also personalise Technical and Vocational Education and Training (TVET), ensuring that students focus on the competencies most needed in the market.

4. **Teacher Shortage / Capability**

Supporting AI-powered professional development and "co-pilot" tools can enhance pedagogy while alleviating administrative burdens. Solutions such as Plu, developed by SOMOS Educação and Amazon Web Services, streamline class preparation, allowing educators to concentrate on personalised student engagement. Furthermore, AI can contribute to monitoring and evaluation innovation through real-time beneficiary feedback, fraud detection in aid delivery, and adaptive programming, which are relevant across all EAA programmes.

5. **Systems Intelligence and Decision Support**

Investing in early-warning analytics and planning dashboards simplifies data interpretation for non-technical practitioners. EAA Foundation will advocate for frameworks that enable stakeholders to collect quality data and promote collective accountability. Moreover, enhancing community preparedness by integrating AI-driven early warning systems into school and youth networks can significantly improve response efforts during crises.

6. **Green and Resilient EdTech**

Prioritising environmentally sustainable interventions can enhance communities' resilience to climate-related shocks and stresses. AI can support climate education initiatives, carbon-credit verification in schools, and youth green-skills programmes. This represents a significant opportunity to link AI with resilience and EAA Foundation’s emerging climate-finance portfolio.

7. **Skills and Livelihood Pathways**

It is important to recognise that for departments like Silatech, AI can play a pivotal role in facilitating the recognition of prior learning and aligning skills with labor market demands. Utilizing existing systems that can scan certificates or CVs enables the identification of transferable skills for refugees, effectively connecting them with relevant job opportunities. By investing in AI-enabled upskilling and job-matching services, we can bridge the gap for out-of-school youth and crisis-affected learners, linking them to dignified work opportunities.

What's Next

While the strategic pillars and position statement anchor and guide EAA Foundation's AI initiatives, we are committed to prioritising the principle of "last learner first." Our recommendations moving forward include:

Introducing an Annual Scorecard

We will publish an "AI for Equitable Learning" scorecard regularly, transparently sharing insights on initiatives scaled, adjustments made, and projects discontinued. This will help to track progress across our portfolio. This scorecard will document which AI-powered solutions EAA Foundation has funded and scaled; what has been adapted; and what has been discontinued to ensure transparency, accountability, and continuous learning in how AI is used in the sector.

Extending an Invitation

We invite partners, governments, practitioners, researchers, innovators, and youth voices to collaborate with EAA Foundation in co-designing the next generation of responsible AI solutions, fostering a collective approach to equitable education.

Conclusion:

AI represents a remarkable opportunity, accompanied by significant responsibilities. We stand at a pivotal moment in history, where urgent challenges such as inequity, conflict, and environmental degradation demand bold and transformative solutions. However, technology alone cannot bridge these divides; it must be steered by purpose, empathy, and inclusivity.

At EAA Foundation, we believe that AI should serve as an enabler—enhancing human potential, accelerating learning outcomes, and directing limited resources to areas of greatest need. Our approach reflects a commitment to cautious optimism: we embrace innovation while ensuring that each digital transformation is grounded in humanity and accountability.

To effectively harness AI for the greater good, we must design systems that are equitable, context-aware, and participatory—developed in collaboration with communities rather than imposed upon them. It is essential to invest in the people, infrastructure, and policies that will ensure technology strengthens, rather than replaces, the essential human connections that underpin education and development.

The future will not pause for us to catch up. By reimagining how we learn, teach, and collaborate through responsible AI, we can empower communities to overcome barriers and unlock pathways to opportunity. EAA Foundation is positioned to lead this journey—ensuring that technology is not the focal point but a powerful instrument in our collective mission to achieve inclusive, quality education for all.

Appendix: AI Checklist

1. Purposeful AI: Is the technology suggested genuinely adding value and designed to solve the challenge it is created for?
    a. Does the solution respond to real educational or economic empowerment needs that are pre-identified?
    b. Is it a justified intervention with clear value added beyond existing human-led or low-technology approaches?
    c. Does it complement the human user-driven solution?
    d. Does the technology add value? If so, to which specific area?

2. Human Centered AI: Can the users effectively use this technology and is this enhancing their abilities?
    a. Does the technology enhance human interaction and connections?
    b. Does it help empower the users and stakeholders with new skills and abilities?
    c. Do all those involved have the background knowledge and tools to manage the technology?
    d. Does it amplify human intelligence and human interaction?
    e. Are there meaningful channels to question AI-driven actions and decisions?
    f. How is the technology prioritising the well-being of participants, balancing digital and non-digital activities?

3. Equity First: Does the technology reduce the gap or marginalise any user group further?
    a. Are any user-group segments being disadvantaged by the technology?
    b. Is the technology reducing or widening any of the gaps and divides in achievement and opportunity?
    c. Is there a specific focus on creating innovations that help include users with multiple barriers?
    d. Are there any biases that can impact opportunity?

4. Context Aware: Is it feasible in the low-resource environment? Does it represent local datasets and voice?
    a. Does it ensure that participation is not tokenistic but genuinely shapes design, use, and evaluation?
    b. Is the solution feasible given the investment in hardware, software and connectivity?
    c. Does the solution remain functional and relevant in low-connectivity/low-resources contexts?
    d. Does the technology adapt to diverse learning contexts or expect the context to adapt to it?
    Does it reflect the cultural, linguistic, and contextual realities of the people it serves?

5. Evidence Driven: Are there clear metrics to test the effectiveness of the tech in the overall programme design?
    a. Does the solution make decision-making processes transparent and understandable to those affected by them?
    b. Does it create meaningful channels for learners, teachers, and communities to question and improve AI-driven decisions?
    c. Are there clear feedback loops for the technology effectiveness to be tested?

   d. Is the efficiency of the role of technology within the larger programme being evaluated?
   e. Are other unintended consequences being monitored and managed?

6. Sustainability: Is the solution designed and deployed to stick after the initial investment?
   a. Does it integrate into local and national systems vs. parallel structures?
   b. Is there evidence of ownership of the technology by local communities and practitioners?
   c. Does it account for long-term maintenance?
   d. Is there funding and capacity to continuously iterate and improve on the technology?
   e. Does the solution create dependency or can it be sustained locally?
   f. Are local stakeholders equipped to scale it independently, without reliance on external support?

7. Rights based safeguards: How does the technology ensure privacy, safety and transparency?
   a. Does the solution make decision-making processes transparent and understandable to those affected by them?
   b. Does the technology get consent from the communities from which the data is being collected and used?
   c. How are privacy norms considered and how are users safeguarded?
   d. What are the terms of data use? Can any of the data use be exploitative?
   e. Does the solution comply with the relevant frameworks for human rights?
   f. Do the users know how their data is being used?

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