



Responsible AI in Education:

Ethical Data Governance for Inclusive Learning in the Democratic Republic of Congo

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Executive Summary

The Democratic Republic of Congo (DRC) is undergoing a gradual yet visible digital transformation in education. A landmark step occurred in 2025, when the Ministry of Primary, Secondary and Technical Education deployed Artificial Intelligence (AI) solutions to grade the Examen d'État, the national secondary school examination^[1]. While this reform improved efficiency and reduced manual errors, it raised urgent governance questions: How are student data protected? Who ensures algorithmic fairness? And what safeguards exist against bias or misuse?

At present, the DRC has no national AI strategy. Although the 2023 Code du Numérique established a Data Protection Authority (Autorité de Protection des Données à Caractère Personnel – APDCP), it remains non-operational.^[2] Consequently, educational data are often processed using foreign-hosted platforms, exposing sensitive information to risks of privacy breaches, bias, and loss of data sovereignty. Generally, teachers and policymakers exhibit low AI literacy, and the public's awareness of data rights remains limited.

This policy brief proposes a roadmap for building ethical and inclusive AI governance in education, grounded in the DRC's legal, institutional, and developmental context. It draws lessons from African peers such as Rwanda, Ghana, and Mauritius, and aligns with the African Union's Digital Transformation Strategy (2020–2030) and UNESCO's recommendations on the ethics of AI.

[1] Ministry of National Education and New Citizenship (2025), [Artificial intelligence at the heart of the State Exams marking process](#)

[2] Présidence de la RDC, [ordonnance-loi No 23/10 du 23 Mars 2023 portant code du Numérique](#)



The brief identifies five interlinked governance challenges:

1

AI tools are being deployed without ethical or legal oversight.

2

Data protection and governance mechanisms remain weak and fragmented.

3

Digital and AI literacy among educators and policymakers is limited.

4

Rural schools are excluded from digital initiatives due to poor infrastructure.

5

Regional peers have adopted national strategies to address these issues; the DRC has not.

To address these, the following actions are critical:

- Developing a National Ethical AI Framework for Education;
- Operationalising the Data Protection Authority with education as a priority sector;
- Integrating AI ethics and data literacy into teacher training and policymaking;
- Establishing transparency and audit mechanisms for AI tools; and
- Ethical AI standards will be piloted in select provinces before being rolled out nationally.

These measures would help ensure that AI use in public education aligns with principles of transparency, accountability, inclusion, and data sovereignty, making technology a tool for equity rather than exclusion.

Context: Existing Disparities



Education is central to the DRC's national development objectives, accounting for over 20% of public expenditure.^[3] Yet learning outcomes remain highly uneven. Fewer than six in ten students complete lower secondary school, and only one in three schools has access to electricity or digital tools. Conflict and displacement have further disrupted education.

The digital divide is particularly acute in rural provinces, where broadband and electricity access are minimal. Only a few public schools have computers or other digital equipment, and only a small proportion have electricity. This lack of digital infrastructure has hindered the development of digital skills among students and teachers.^[4] These constraints limit progress towards Sustainable Development Goal 4 (SDG 4) on quality education and the objectives of the Ministry of National Education's Five-Year Plan and the New Citizenship 2024–2029, which emphasises digital inclusion and human capital development^[5].

While the government has initiated efforts to modernise educational data systems, digital transformation remains fragmented. Globally, AI tools such as adaptive learning platforms, facial recognition attendance systems, and predictive analytics for dropout risks offer transformative potential. Importantly, some of these solutions can operate even in resource-constrained environments. In Kenya, for example, M-Shule delivers personalised lessons via SMS, demonstrating that AI can reach remote learners. Similarly, AI-driven platforms, such as Nigeria's uLesson and Kenya's Eneza Education, are enabling personalised learning pathways and individualised support in overcrowded classrooms.

In the DRC, the Ministry of Primary, Secondary and Technical Education has begun experimenting with AI-based grading systems for the Examen d'État. While the reform was introduced to improve efficiency, it has raised significant governance and ethical concerns.

[3] UNICEF (2025), Pour un financement soutenable de la gratuité de l'éducation de base en RDC

[4] World Bank (2024), An assessment of Digital Readiness of Secondary Schools in The Democratic Republic of Congo, Education working paper

[5] Ministère de l'éducation Nationale et nouvelle citoyenneté, Plan quinquennal de l'éducation nationale (2024-2029)

This brief situates itself at the intersection of AI governance and ethical data stewardship, focusing on how the DRC can strengthen transparency, accountability, and equity within its education system.

The Policy and Institutional Challenge: Unregulated AI Use and Weak Data Governance

The 2023 Code du Numérique established a legal framework covering digital activities, electronic transactions, and personal data protection. It mandates the creation of three key bodies: the Digital Regulatory Authority (ARN), the National Electronic Certification Authority, and the Data Protection Authority (APDCP). However, none are yet fully operational^[6].

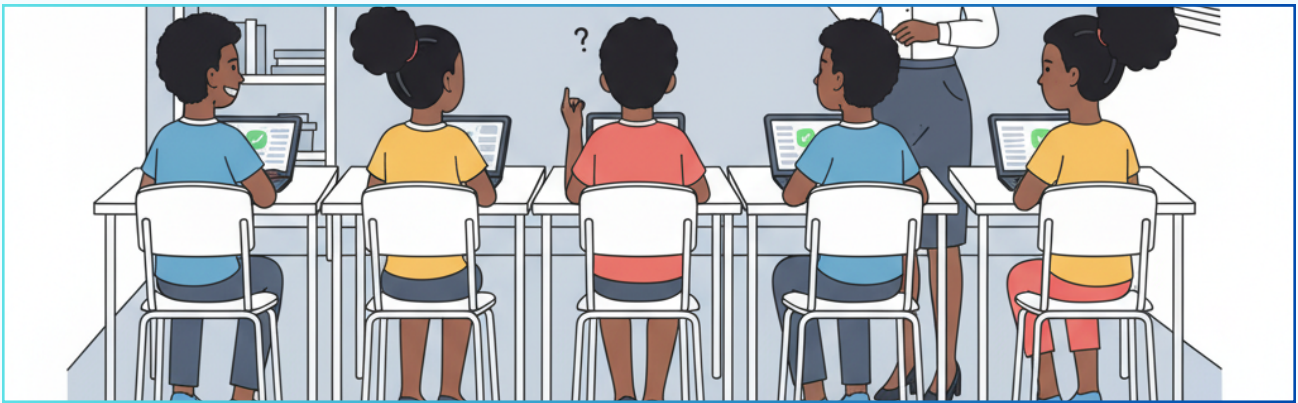
The DRC has also validated its National Report on AI Readiness (2025) with UNESCO's support, signalling its intent to engage in ethical AI governance^[7]. While these developments are positive, they remain fragmented and are not integrated within a broader digital education strategy. Ministries continue to operate in silos, with limited coordination between the education, digital affairs, and telecommunications sectors, undermining the creation of a coherent framework for ethical AI deployment and data accountability.

In 2025, the Ministry of Education deployed AI-assisted grading for the Examen d'État. The move was applauded for reducing human error and grading time, but it also exposed serious governance gaps. The system's functioning, data handling, and bias-prevention mechanisms were not publicly disclosed. Students and teachers received no explanation of how scores were calculated or how appeals could be lodged.

Consider a student in Lughutu, North Kivu province, whose future depends on passing the Examen d'État. Their script, one of hundreds of thousands, is scanned and analysed by an AI-powered grading system designed to improve efficiency. Yet students are never informed how scores are determined or whether they can challenge errors. With no transparency, accountability, or appeal process, a single algorithmic misjudgement could unfairly determine a student's future. A technological reform intended to

^[6] [Loi sur la protection des données](#).

^[7] [UNESCO \(2025\), The DRC validates its national report on artificial intelligence: a strategic turning point for an ethical and inclusive digital future.](#)

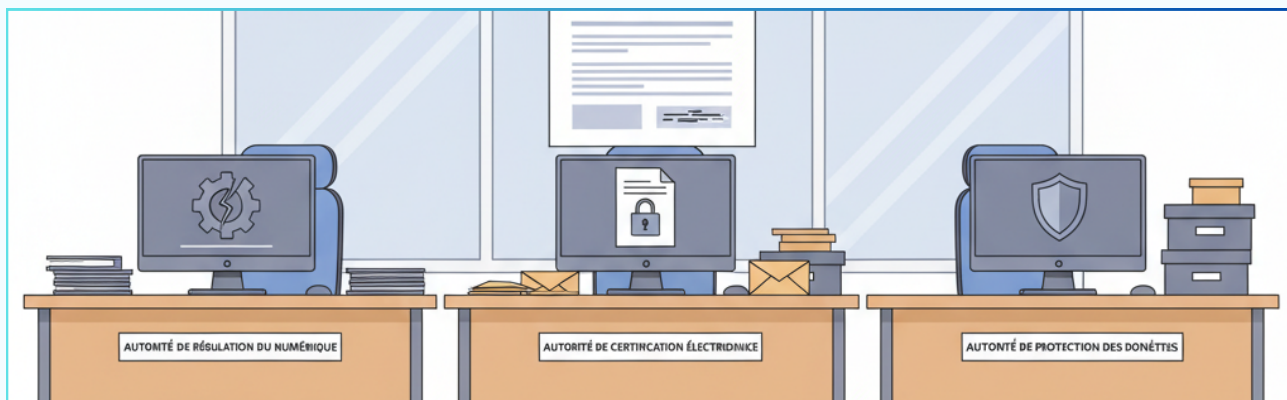


promote fairness thus risks entrenching exclusion and injustice.

This case illustrates a broader issue: AI tools are being deployed faster than governance frameworks can evolve. Student data, such as performance scores, behavioural patterns, and in some cases biometric indicators, are being collected and processed without explicit consent, safeguards, or oversight. In a country lacking an operational Data Protection Authority, the above exposes citizens to risks of misuse, data leakage, and external dependency.

Moreover, most AI systems used in the DRC's education sector are foreign-built and trained on non-African datasets. In a multilingual country where French, Swahili, Lingala, and Tshiluba dominate, these systems risk systematic inaccuracy in automated assessments, marginalising students from under-represented linguistic or cultural backgrounds.

Without strong institutions, AI adoption risks deepening digital dependency, where control over local educational data is ceded to external vendors and opaque algorithms. Unless addressed, these deficiencies will entrench inequality and erode trust in national examinations. The DRC's experience reflects a broader continental dilemma: how to harness AI's benefits while safeguarding data sovereignty, fairness, and ethical stewardship.



Key Findings and Implications

1 Absence of a National AI and Data Governance Strategy for Education

The DRC has yet to establish a comprehensive AI strategy or education-specific data governance policy. In its absence, ministries and private actors deploy digital tools without clear standards for privacy, fairness, or accountability. According to the UNESCO (2023) report, countries that do not have AI strategies are more likely to experience unregulated adoption that exacerbates inequality.^[8] By contrast, Rwanda's National AI Policy (2022) requires sensitive data to be stored on national servers;^[9] Ghana's National

AI Strategy (2023) embeds transparency and inclusivity in teacher training;^[1] and Mauritius' AI Council oversees ethical compliance in public-sector applications.^[11]

Implication: Ad hoc AI deployment risks data misuse, undermines trust, and erodes equity in educational outcomes.

2 Imported and Opaque Systems Reinforce Dependence

Foreign AI systems are often designed for different linguistic and pedagogical contexts but currently dominate the DRC's early adoption landscape. The 2025 Examen d'État grading software

relied on models trained on non-Congolese handwriting data. Such systems are difficult to audit or adapt, leaving ministries dependent on foreign developers.

[8] UNESCO (2025), [AI and Education Protecting the rights of learners](#)

[9] Ministry of ICT and innovation-Rwanda (2022), [National AI Policy](#)

[10] Min of Communication and digitalization-Ghana (2022) [National Artificial Intelligence Strategy 2023-2033](#)

[11] Government of Mauritius (2018) [Mauritius AI Strategy](#)

Implication: Without local adaptation, the DRC risks algorithmic bias, a lack of explainability, and growing “digital neo-colonialism”, where decisions about exams and data governance are externally shaped.

3 Limited Capacity and Infrastructure Perpetuate Inequality

Most public schools are in rural areas with limited or no electricity or internet access. Around 70% of secondary teachers lack the minimum qualifications for digital instruction. According to the World Bank’s Digital Readiness Assessment (2025), this dependence on foreign expertise limits the government’s ability to evaluate or regulate AI solutions.^[12]

Implication: Weak infrastructure and limited capacity convert governance gaps into structural inequalities. Tools that function in Kinshasa’s urban schools may be unusable in rural Kasai or Ituri, deepening the divide.

4 Digital Divide and Low Public Trust

Public trust in digital reforms is fragile. A survey following the 2025 grading pilot found that over 40% of teachers and parents doubted the fairness of AI scoring. Without transparency or appeal mechanisms, digital reforms risk being perceived as opaque or exclusionary.^[13]

Implication: If unaddressed, mistrust in AI-driven education may spill over into scepticism towards wider digital governance, undermining the government’s digital transformation agenda.

[12] World Bank Group (2025), [DRC Digital Skills Analysis Completion Note](#)

Table 1. Summary of Risks and Opportunities

Dimension	Risks (Current Reality)	Opportunities (With Reform)
Policy & Regulation	Absence of AI strategy, fragmented oversight, no accountability mechanism	Develop a national ethical framework aligned with AU and UNESCO standards
Technology & Data	Foreign-hosted platforms, biased algorithms, no data sovereignty	Promote locally adapted, transparent AI tools and a national data repository
Capacity & Skills	Low digital literacy, reliance on external vendors	Build national expertise in AI and data governance
Equity & Trust	Unequal access, opaque systems, declining confidence	Strengthen transparency, appeal mechanisms, and stakeholder participation

Source: Author's construction

Policy Recommendations



To transition from uncontrolled AI adoption to sovereign, equitable, and resilient AI governance, the Government of the DRC must implement four concrete policy interventions.

1 Develop and Adopt a National AI Framework for Education

The Ministry of Primary, Secondary and Technical Education, in collaboration with the Ministry of Digital Affairs (Ministère du Numérique) and the Ministry of Higher and University Education (MINESU), should develop a National Ethical AI Framework for Education. The objective is to establish a clear vision for the responsible and inclusive use of AI in education. This framework should define principles, standards, and operational guidelines governing the ethical deployment of AI across all educational levels.

Key actions:

- **Establish a multistakeholder task force** led jointly by the three key ministries, including representatives from academia, the private sector, civil society, and teachers' unions.
- **Conduct a comprehensive diagnostic** to map existing digital infrastructure, data systems, and local AI initiatives, establishing a national baseline.
- **Define strategic pillars, structured around:**



Infrastructure – prioritising electricity and connectivity for schools;



Data governance and ethics – establishing clear protocols for data collection, storage, and use in education;



Teacher capacity building – integrating AI literacy and digital pedagogy into teacher training;



Content and curriculum development – encouraging the creation of locally relevant AI-powered educational materials.

- **Create a phased implementation plan**, outlining short-term (pilot projects, policy formulation), medium-term (infrastructure and capacity development), and long-term (nationwide AI integration) goals.

Why this makes sense:

This recommendation directly addresses the absence of ethical oversight revealed by the 2025 AI-based exam grading reform. It establishes a national reference point for aligning innovation with ethics and harmonising education practices with African Union and UNESCO frameworks.

2 Operationalise the Data Protection Authority and Strengthen Sectoral Data Governance

The government should urgently operationalise the Autorité de Protection des Données à Caractère Personnel (APDCP) and designate the education sector as one of its priority focus areas. The objective is to ensure that educational data are collected and used in ways that are ethical, secure, and protective of students' and educators' rights –thus building trust in digital systems.

Key actions:

- **Clarify the institutional mandate for education data governance.** Establish or strengthen the APDCP's dedicated education unit to oversee compliance, coordinate with ministries, and issue guidance.
- **Develop sector-specific data protection guidelines.** In collaboration with the APDCP (or the interim ARPTIC), the Ministry of National Education should publish clear protocols on:



informed consent for students and parents;



data minimisation and purpose limitation;



security standards for storage and processing of student information;



algorithmic audit procedures to detect bias, particularly across linguistic or cultural groups.

- **Launch a national awareness campaign** targeting school administrators, teachers, parents, and learners to promote understanding of data rights and responsible data practices.

Why this makes sense:

This plan addresses the risks of data breaches, loss of sovereignty, and weak accountability. Strengthening data governance will also help the DRC comply with the Malabo Convention and enhance international credibility with partners who increasingly demand robust data protection frameworks

3 Build National Capacity for AI Ethics and Digital Literacy in Education

The DRC should integrate AI ethics, data protection, and digital literacy in teacher training programmes, public administration curricula, and higher education. The objective is to develop human capital capable of evaluating, managing, and innovating with AI technologies responsibly and sustainably.

Key actions:

- **Integrate AI and digital literacy into pre-service and in-service teacher training.** Revise curricula to include modules on digital pedagogy, ethical use of AI tools, and foundational data literacy.
- **Develop specialised university programs in data science, AI, and educational technology** by building a pipeline of local experts equipped to design, evaluate, and regulate AI tools.
- **Establish a National Centre for Artificial Intelligence** as a hub for research, innovation, and capacity development in education-focused AI.
- **Create an online repository** of resources, standards, and best practices on responsible AI in education, accessible to teachers and policymakers.
- **Run nationwide public awareness campaigns and workshops** to demystify AI, promote inclusion, and highlight both its benefits and ethical risks.

Why this makes sense:

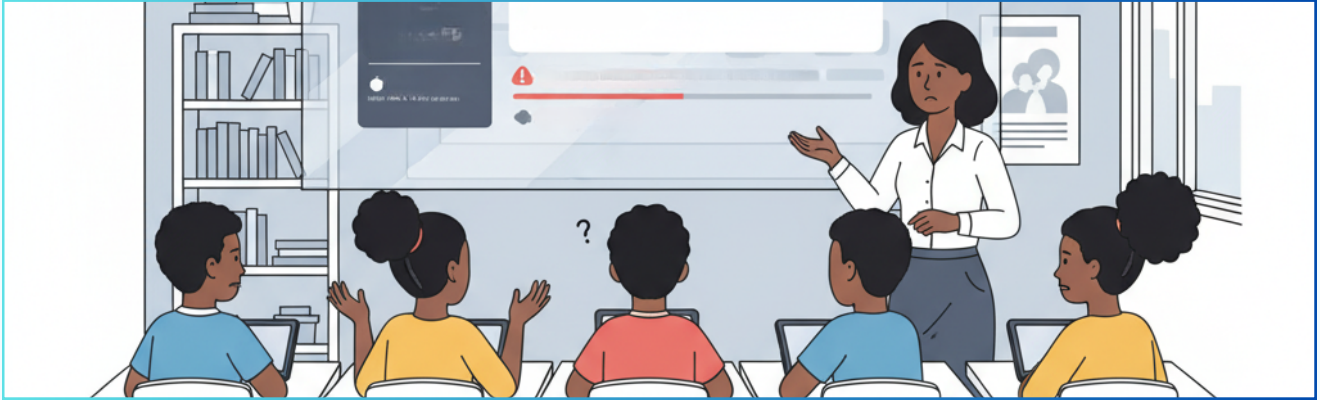
This responds directly to the low levels of AI literacy among educators and policymakers identified in the findings. Strengthening local knowledge ensures that human oversight and critical understanding evolve alongside technological innovation. Building domestic expertise also fosters local innovation and reduces dependency on foreign vendors.

Implementation Considerations

The proposed reforms are feasible if pursued through a phased, collaborative, and well-coordinated approach. However, the greatest challenge will be overcoming bureaucratic inertia and vested interests that benefit from the status quo.

Phase 1:

Establish the Data Protection Authority, develop the national AI strategy, and launch small-scale pilot projects in select provinces.



Phase 2:

Scale successful pilot models, strengthen teacher and IT staff capacity, and expand digital infrastructure to underserved regions.

Phase 3:

Progressively integrate validated AI tools into national systems while maintaining a focus on equity and inclusion, particularly in rural and conflict-affected areas.

Institutional and Stakeholder Roles

A single ministry cannot drive this agenda alone. A National Steering Committee should be established, co-chaired by the Ministries of National Education, Higher and University Education, and Digital Affairs, supported by dedicated technical working groups.

Funding and Partnerships:

- Integrate digital and AI programmes into national budgets, with dedicated allocations for infrastructure and capacity building.
- Partner with telecommunications firms (e.g., Airtel, Vodacom) to support connectivity and hardware provision.
- Engage EdTech startups for localised software development.
- Collaborate with development partners for financial and technical assistance.

Table 2. Roles and Responsibilities of Key Stakeholders

Stakeholder	Role and Responsibilities
Ministry of Telecommunications and Digital Affairs	Lead coordination on AI policy, oversee the National Ethical AI Framework, and ensure alignment with continental digital strategies.
Ministry of Primary, Secondary and Technical Education	Integrate ethical AI guidelines into education policy, teacher training, and national assessments.
Ministry of Higher and University Education	Support curriculum reform, promote AI ethics in academic programmes, and develop higher-level AI research capacity.
Data Protection Authority (APDCP)	Enforce compliance, monitor and audit AI systems, and ensure data protection standards in education.
Universities and Research Institutions	Conduct applied research on AI governance, provide expert training and certification programmes, and support innovation.
Civil Society Organisations	Raise awareness of digital rights, monitor their implementation, and advocate for inclusivity and accountability.
Private sector and Startups	Develop ethical, transparent AI products and participate in public-private partnerships for local innovation.
Regional and International Partners	Offer technical assistance, funding, and policy harmonisation support aligned with the AU and UNESCO frameworks.

Source: Author's construction

Potential Challenges to Implementation

Several challenges could hinder progress if not addressed proactively:

- Limited domestic funding for digital infrastructure and governance initiatives.
- Resistance from educators and administrators unfamiliar with AI tools or ethical principles.
- Competing policy priorities that could delay implementation without strong political will and accountability.
- Fragmented coordination across ministries and overlapping mandates that may slow reform momentum.

Addressing these constraints requires sustained leadership, cross-sector collaboration, and consistent communication to build stakeholder confidence and maintain public trust.

Conclusion

AI adoption in education provides a path for the DRC to improve efficiency, personalise learning, and enhance data-driven policy decisions. Yet, without strong ethical and institutional safeguards, these technologies risk deepening inequality and undermining trust. The 2025 AI-assisted grading of the Examen d'État demonstrated both the promise and the peril of unregulated digital transformation.

By developing a National Ethical AI Framework for Education, operationalising the Data Protection Authority, and investing in infrastructure, digital literacy, and institutional capacity, the DRC can ensure that AI enhances, rather than undermines, educational equity. Responsible data governance is not a technical luxury; it is a foundational necessity for protecting students' rights and preserving national sovereignty in the digital age.

The time to act is now, so that every learner in the DRC benefits from a fair, transparent, and inclusive digital education system.

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