AI POLICY FRAMEWORK FOR TEACHER EDUCATION INSTITUTIONS (TEIs) IN THE EAST AFRICAN COMMUNITY

INTER-UNIVERSITY COUNCIL FOR EAST AFRICA

P.O. BOX 7110 KAMPALA

Foreword

The rapid advancement of Artificial Intelligence (AI) is reshaping education systems across the globe, presenting both transformative opportunities and complex challenges. Within the East African Community (EAC), Teacher Education Institutions (TEIs) hold a critical responsibility to lead this transformation by preparing educators who are not only technologically competent but also ethically grounded in the use of AI. As institutions entrusted with shaping the future teaching workforce, TEIs must ensure that AI is integrated in ways that enhance educational quality, promote equity, and safeguard human dignity.

In response to these emerging demands, the Inter-University Council for East Africa (IUCEA), in partnership with the Commonwealth of Learning (COL), initiated a regional effort to strengthen the readiness of Teacher Education Institutions to harness Artificial Intelligence for quality education, innovation, and responsible practice. This effort culminated in a collaborative workshop in Entebbe, Uganda, which brought together representatives from Teacher Education Institutions, policymakers, regulatory bodies, and digital education experts across the region.

This AI Policy Framework for Teacher Education Institutions is one of the key outputs of that collaborative process. It reflects a shared commitment to establishing a harmonized, forward-looking, and contextually relevant approach to AI adoption across the EAC. The framework is anchored in the principles of ethical governance, human-centered innovation, transparency, and accountability, and aligns with national, regional, continental, and global priorities for digital transformation.

Through this framework, the East African Community positions itself as a proactive and responsible actor in the integration of AI within education. It provides a strategic foundation to guide Teacher Education Institutions in leveraging AI to enhance teaching, learning, research, and institutional management, while ensuring that technological advancement is guided by strong pedagogical, ethical, and societal considerations.

Acknowledgements

The development of this AI Policy Framework has been made possible through the collective efforts and contributions of a wide range of stakeholders across the East African Community. In particular, the Inter-University Council for East Africa (IUCEA) and the Commonwealth of Learning (COL) provided strategic leadership, technical guidance, and coordination throughout the process.

We extend our sincere appreciation to the representatives of Teacher Education Institutions from across the EAC Partner States including universities and national teacher education bodies who actively participated in the regional workshop and subsequent consultations. Their practical insights, institutional experiences, and commitment to innovation were instrumental in shaping a framework that is both contextually relevant and implementable.

We also acknowledge the valuable contributions of Ministries of Education, regulatory and quality assurance agencies, AI and ICT experts, and development partners. Their expertise ensured that the framework aligns with regional priorities while remaining consistent with international standards, including global guidelines on ethical and responsible AI in education.

Special recognition is given to all participants who engaged in the co-creation process through expert presentations, group work, peer review sessions, and collaborative drafting. Their dedication and collaborative spirit have resulted in a policy framework that not only supports the integration of AI in teacher education but also strengthens regional cooperation and positions the EAC as an active contributor to the global discourse on ethical, inclusive, and human-centered Artificial Intelligence.

Executive Summary

This AI Policy Framework provides a comprehensive and harmonized approach to guide the ethical, responsible, and effective integration of Artificial Intelligence in Teacher Education Institutions across the East African Community. It emerges in response to the increasing adoption of AI in education globally and the growing need for structured guidance to ensure that such technologies are used in ways that enhance learning, protect stakeholders, and uphold educational values.

The framework recognizes both the opportunities and challenges associated with AI in the regional context. While AI has the potential to transform teaching, learning, assessment, and institutional management, many Teacher Education Institutions in the EAC continue to face constraints related to infrastructure, human capacity, policy coherence, and ethical governance. This policy therefore seeks to address these gaps by providing clear direction for institutions to adopt AI in a manner that is inclusive, transparent, and aligned with regional and international standards.

At its core, the framework articulates a shared vision for AI-enabled teacher education that prioritizes human-centered approaches, equity, and innovation. It establishes guiding principles and strategic directions that inform how AI should be integrated across key institutional functions, including pedagogy, research, administration, and capacity development. It further outlines governance structures at regional, national, and institutional levels to ensure accountability, coordination, and compliance.

The policy introduces mechanisms for managing risks associated with AI through a structured classification framework and emphasizes the importance of data protection, ethical oversight, and human supervision in high-impact applications. It also highlights the need for strong alignment with existing legal and regulatory frameworks, including national data protection laws, regional digital strategies, and global ethical standards.

Eventually, this framework positions TEIs as central actors in driving responsible AI adoption within the education sector. By equipping educators with the necessary competencies and establishing robust governance systems, the policy aims to enhance the quality and relevance of teacher education, strengthen research and innovation, and contribute to the broader goals of digital transformation and sustainable development in the East African Community.

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1. Operational Definition of Terms

- **AI Ethics**: Principles guiding the responsible use of AI, including fairness, transparency, accountability, and respect for human rights
- **AI Governance**: Structures, policies, and processes that ensure AI systems are used ethically, transparently, and accountably.
- **AI in Education:** Application of AI technologies to enhance teaching, learning, assessment, research, and institutional management.
- **AI Literacy**: The knowledge and skills required to understand, use, and critically evaluate AI technologies.
- **Algorithmic Bias**: Systematic errors in AI systems that result in unfair outcomes for certain groups.
- **Artificial Intelligence (AI):** Computer systems capable of performing tasks that typically require human intelligence, including learning, reasoning, and decision-making.
- **Data Protection:** Legal and institutional measures to safeguard personal and sensitive data.
- **Generative AI**: AI systems capable of generating content such as text, images, or code (e.g., chatbots, automated writing tools).
- **Human Oversight:** The requirement that human judgment remains central in AI-supported decision-making.
- **Learning Analytics**: Use of data and AI tools to analyze student learning behaviors and improve educational outcomes.

2. Background

2.1. The Global Context of AI in Education

Artificial Intelligence (AI) is reshaping education globally, influencing pedagogy, assessment, governance, and policy. International organizations such as UNESCO and the Organisation for Economic Co-operation and Development (OECD) emphasize that AI must be deployed in ways that promote equity, inclusion, transparency, and human oversight. UNESCO's *Recommendation on the Ethics of Artificial Intelligence* underscores the need for rights-based, human-centered AI systems that safeguard data privacy and prevent algorithmic bias (UNESCO, 2021). Similarly, the OECD highlights AI's potential to personalize learning, enhance formative assessment, and support data-driven decision-making, while cautioning against widening digital divides (OECD, 2021).

Globally, AI-powered tools ranging from adaptive learning platforms to automated grading systems are improving efficiency and learner engagement. However, disparities in infrastructure, digital literacy, and regulatory capacity create uneven adoption between high-income and low-

and middle-income countries. In regions such as sub-Saharan Africa, AI adoption remains largely reactive. Policy discourse largely centers on responsible integration, capacity building, and curriculum reform to prepare learners for AI-driven economies. Thus, the global context of AI in education reflects both transformative potential and significant governance challenges, requiring coordinated international frameworks, national policies, and institutional ethical guidelines.

2.2. AI's Rise in Africa: Implications for Teacher Education Institutions (TEI)

Artificial intelligence (AI) is gaining strategic traction across Africa, with growing implications for TEI systems. The African Union has advanced a continental AI strategy aimed at strengthening research capacity, digital infrastructure, and innovation ecosystems across member states (African Union, 2024). This policy direction signals a shift toward positioning TEIs not merely as consumers of AI technologies but as producers of AI knowledge, talent, and governance frameworks. Across East Africa, particularly in Kenya, Rwanda, and Uganda, universities are beginning to embed AI into the curricula, research design, and institutional management systems, supported by expanding digital innovation ecosystems (International Monetary Fund [IMF], 2024).

The hopes associated with AI in African teacher education institutions are substantial. AI offers opportunities for curriculum transformation through adaptive learning systems, automated feedback, and AI-assisted research tools that enhance teaching efficiency and student engagement. It strengthens research productivity by accelerating data analytics in agriculture, climate science, public health, and governance fields central to Africa's development agenda. AI integration also enhances TEIs' contribution to digital economies by producing industry-ready graduates and fostering startup ecosystems. Furthermore, AI-enabled online and blended learning platforms may expand access to higher education in underserved and rural communities, supporting equity and lifelong learning (World Bank, 2023).

However, significant impediments constrain this transformation. Persistent infrastructure deficits, including limited broadband penetration, unreliable electricity supply, and inadequate high-performance computing capacity as well as inadequate/absence/poorly performing cloud technologies restrict effective AI deployment. A shortage of AI-specialized staff and interdisciplinary expertise undermines curriculum reform and research advancement. Funding constraints limit investment in advanced laboratories and data infrastructure. Additionally, regulatory and governance frameworks remain underdeveloped, raising concerns about data protection, algorithmic bias, academic integrity, and ethical oversight in AI adoption (UNESCO, 2021). Without sustained policy coordination and institutional capacity building, AI risks deepening rather than reducing educational inequalities across the region.

2.3. Importance of ethical and responsible AI use in teacher education

Ethical and responsible use of artificial intelligence (AI) in TEIs is critical to uphold academic integrity, protect student rights, and ensure technology serves teacher educational values rather

than undermines them. As one report on AI integration in teacher education institutions observes, rapid AI adoption often outpaces institutional policies and ethical guidance, leading to confusion about acceptable use and academic standards (Mazaheriyan & Nourbakhsh, 2025). A recent UNESCO global survey found that while many universities are developing AI guidance, institutions still grapple with how to balance innovation with fairness, privacy, and equity in teaching, research, and assessment (UNESCO, 2025). The EDUCAUSE Review highlights that ethical frameworks must go beyond data protection to address questions of fairness, autonomy, and equity, asking, "Who gains? Who loses?" when AI shapes admissions, feedback, and learning analytics (Georgieva & Stuart, 2025).

Responsible AI use protects learners and educators by safeguarding personal data, preventing algorithmic bias, and maintaining trust in educational credentials. Unregulated AI can amplify inequities if powerful tools are available only to those with resources or if models embed existing societal biases in grading and hiring decisions (Georgieva & Stuart, 2025). Ethical AI policies promote transparency and shared governance, ensuring students and faculty contribute to decisions about how AI is integrated. This is essential not only for preserving academic integrity but also for preparing graduates who understand both the capabilities and the ethical limits of AI in their future professions.

2.4. Gaps in Institutional AI Support in the East African Community

Despite growing interest in Artificial Intelligence (AI), many TEIs in the East African Community face substantive gaps in the policies, capacities, and structures needed to support responsible and effective AI integration. There is not even an AI curriculum & competency framework for teacher education institutions (TEIS) as well as an AI Code of Conduct for Teacher Education Institutions.

These gaps undermine the ability of TEIs, universities involved in teacher training to leverage AI for quality teaching, research, and administration. The following are some of the notable gaps that ought to be addressed in the context of this policy:

i. Limited Strategic Policies and Governance Frameworks

Many institutions lack formal AI strategies, ethical guidelines, or governance mechanisms. Without clear policies on acceptable AI use, data protection, algorithmic accountability, and academic integrity, students and staff are left without shared expectations, increasing the risk of misuse and inequitable practices. National regulatory frameworks in countries like Uganda and Tanzania are still emerging, leaving institutions without external guidance to shape their own AI governance.

ii. Weak Infrastructure and Digital Resources

AI depends on high-quality, well-managed data and computing resources. TEIs in East Africa often operate with limited broadband access, erratic power supply, and constrained access to high-performance computing. These infrastructure gaps restrict faculty and students from using AI tools for research, simulation, and real-time analytics, and they inhibit the development of locally relevant AI models.

iii. Insufficient Human Capacity and Expertise

There is a shortage of faculty with advanced skills in AI, machine learning, deep learning, and data science across the region. Professional development opportunities for existing educators on AI pedagogy and ethics are also limited because of the lack of an AI curriculum & competency framework for teacher education institutions (TEIS).

iv. Funding and Research Support Constraints

AI research and infrastructure require sustained financial investment. Teacher education institutions often depend on project-based funding rather than stable institutional budgets for technology upgrades. This creates fragmentation in research support and hinders long-term capacity building. Limited access to research grants focused on AI further constrains faculty and graduate student innovation.

v. Lack of Localized and Inclusive AI Tools

Most widely available AI systems are developed outside Africa and are trained on data that may not reflect regional languages, contexts, or societal needs. Language diversity in East Africa, including Kiswahili and local languages, remains largely unsupported in mainstream AI tools. Teacher education institutions have little support for creating or curating localized datasets and AI tools, which reduces relevance and increases the risk of bias.

vi. Ethical and Responsible AI Education Deficits

While ethics is central to responsible AI use, adoption, and adaptation, explicit instruction on ethical AI use, bias mitigation, and governance are not integrated consistently across curricula. Without such education, students and educators risk deploying AI in ways that perpetuate inequity, compromise privacy, or undermine trust.

Addressing these gaps will require coordinated national and institutional action to strengthen policies through the use of local strategies, guidelines, and an AI Code of Conduct for Teacher Education Institutions; invest in digital infrastructure; build human capacity; secure sustainable funding; and promote ethical, context-aware AI practices. Doing so can help East African teacher education systems responsibly harness AI for equitable development and academic excellence.

3. Policy Framework Rationale

Artificial Intelligence (AI) is reshaping education systems worldwide. For the Inter-University Council of East Africa (IUCEA), strengthening teacher education is central to achieving knowledge-based and innovative-driven economies. It behooves Teacher Education Institutions (TEIs) in the East African Community (EAC) to integrate AI in education in ways that enhance quality, equity, and regional competitiveness while safeguarding ethics and human rights.

Teacher Education Institutions (TEIs) in East Africa face significant AI readiness gaps, including limited faculty capacity, weak infrastructure, and fragmented policy alignment (African Union, 2024; World Bank, 2023). This is critical because TEIs shape the educators who will drive system-wide digital and AI literacy. UNESCO (2021) underscores the need for ethical, inclusive AI integration in education. The Commonwealth of Learning supports this transition through capacity-building and regional curriculum development, positioning technology as a strategic lever for teacher preparedness and innovation resilience (OECD, 2021).

This policy provides a harmonized regional framework to guide the responsible adoption and governance of AI in TEIs. It responds to shared regional priorities, including youth employment, digital transformation, gender, disability, marginalization, underrepresentation, cross-border mobility, and data protection.

The policy aligns with the continental vision of the African Union (AU) (2024) and its AI strategic direction, which emphasizes the following:

- Human-centered and inclusive AI
- Ethical governance and accountability
- Capacity development and digital sovereignty
- Regional cooperation and innovation ecosystems

By anchoring AI use in these principles, the EAC positions teacher education as a catalyst for sustainable development and continental integration.

4. Key Expected Outcomes

The implementation of this policy framework should lead to the realization of the following:

i. Improved Quality of Teacher Education with AI Integration: Digitally competent teachers capable of using AI responsibly in diverse classrooms.
ii. Ethical and Human-Centered AI Governance: Strong safeguards for privacy, fairness, transparency, and accountability.
iii. Inclusive Digital Transformation: Reduced digital divides across urban, rural, and refugee-affected communities.

iv. Stronger Research and Innovation Capacity: Enhanced regional collaboration and AI-driven educational research.
v. Regional Harmonization: Coordinated AI standards across EAC partner states aligned with AU continental priorities.

5. Vision, Mission & Core Values

5.1. Vision Statement

To transform Teacher Education Institutions in the East African Community into centres of excellence that promote responsible, ethical, and inclusive AI use, empowering educators to innovate in teaching, learning, and research while upholding fairness, equity, and sustainable development.

5.2. Mission Statement

To provide a coordinated regional framework that enables teacher education institutions in the East African Community to integrate artificial intelligence ethically, responsibly, and effectively into learning, teaching, research, and institutional practice, safeguarding human agency, pedagogical integrity, equity, and learner protection while preparing future teachers for competent, ethical, and innovative AI use.

5.3. Core Values

This policy framework will be guided by the following core values:

- **Integrity:** Uphold honesty, academic honesty, and professional ethics in all uses of artificial intelligence. AI tools shall support teaching and learning, and decision-making without compromising originality, authenticity, or professional conduct in TEIs.
- **Equity and inclusion:** This policy should be committed to fairness, inclusiveness, and equal access in the use of AI technologies. AI shall be used in ways that reduce bias, respect diversity, and ensure that no learner or educator is disadvantaged due to gender, disability, marginalization, underrepresentation, or inadequacies in technological access
- **Collaboration:** This policy promotes shared responsibility and partnership among educators, learners, administrators, policymakers, and technology providers. AI adoption shall encourage teamwork, knowledge sharing, and co-creation of best practices in teacher education.
- **Accountability:** This policy framework recommends that institutions take responsibility for decisions, outcomes, and impacts arising from the use of AI. Clear roles, oversight mechanisms, and ethical guidelines should be put in place to ensure that human judgment remains central, and that misuse of AI is addressed appropriately.

- **Transparency:** This policy is committed to openness and clarity in how AI systems are selected, used, and evaluated. Educators and learners should be informed about when and how AI is used, including its limitations, data sources, and implications for teaching, assessment, and research.
- **Human-Centeredness:** AI policy should augment, not replace, human judgement, supporting teachers' pedagogical decision-making and learner development.
- **Data Privacy and Protection:** The policy should Safeguard personal and sensitive learner information, adhering to legal and ethical standards
- **Innovation and Excellence:** Promote creativity, evidence-based experimentation, and continuous improvement in teaching, research, and institutional practice.
- **Sustainability:** The policy integrates AI solutions responsibly to support long-term educational, social, and environmental development goals.

6. Guiding Principles

These principles guide how TEIs regulate, adopt, and manage AI at institutional levels. The guiding principles of this policy are:

- **Collaboration and Networking:** Collaboration and networking should unite governments, academia, industry, cross-border tech companies, and civil society to shape responsible AI practices. Cross-border partnerships would strengthen global interoperability and shared standards. Open research, data sharing, and policy dialogue across universities help prevent fragmented approaches.

- **Skills Development and Public Awareness:** AI literacy should be integrated into teacher education institutions' curricula to prepare all citizens for future careers, not just specialists. Teacher training programs are vital to adapt lessons to AI-driven labor markets, while public awareness campaigns help communities demystify AI and highlight opportunities. Workforce training across the East African Community ensures adaptability and resilience in rapidly evolving AI-driven economies.

- **Ethics and Responsibility**: AI must be used ethically, promoting fairness, professional integrity, and responsible pedagogical practice.
- **Privacy and Security**: Learner, educator, and institutional data must be protected according to legal and ethical standards.
- **Traceability and Attribution:** AI decisions, outputs, and content sources should be traceable, transparent, and properly attributed.
- **Accountability:** Accountability in Teacher Education Institutions involve clearly defined governance structures and designated officers who oversee AI procurement, deployment, and compliance. Reporting mechanisms and audit processes help ensure that AI-informed decisions particularly in assessment, admissions, and practicum evaluations are transparent, traceable, and supported by human judgment. Responsibility for AI outcomes rests with identifiable institutional actors rather than the technology itself.

- **Cost-Effectiveness**: AI adoption should optimize resources, ensuring sustainable and equitable implementation across TEIs.
- **Contextual Relevance:** Solutions must suit TEI environments and promote regional alignment, stakeholder engagement, and harmonised practices.

7. Purpose of the Policy Framework

The purpose of this AI Policy for Teacher Education Institutions (TEIs) in the East African Community (EAC) is to:

- Promote responsible AI adoption by ensuring that AI technologies are deployed in ways that are ethical, safe, and aligned with societal values. Prevent misuse of AI that could threaten privacy, security, or human rights.
- Develop AI-Ready Educators by equipping teachers with AI literacy, digital skills, and pedagogical strategies for AI-enhanced teaching.
- Support education, research, and innovation by encouraging the use of AI for educational research, data analysis, and curriculum innovation in the region, and facilitate adaptive learning platforms and AI-driven feedback systems to improve learning outcomes within TEIs.
- Strengthen Institutional Competitiveness: Position TEIs as leaders in AI-integrated teacher education in East Africa.
- To help understand context, user analysis and AI needs identification
- To establish a clear, coordinated foundation for responsible AI integration in East African Community teacher education institutions by ensuring innovation advances educational quality, ethical standards, and long-term system resilience across the region

8. Policy Objectives

The primary objective of the Regional AI Policy is to provide a harmonized framework that guides the ethical, responsible, and effective use of artificial intelligence across member states. It seeks to ensure that AI technologies are developed, deployed, and managed in ways that maximize societal benefits while minimizing risks. Specifically, the policy aims to:

- **Harmonize Regional AI Standards for Teachers:** Develop a common EAC AI competency framework that defines the knowledge, skills, and ethical standards teachers must acquire. This should facilitate cross-border teacher mobility, mutual recognition of qualifications, and regional education integration.
- **Integrate AI Literacy and Pedagogy into Teacher Education**: Embed AI fundamentals, AI-assisted pedagogy, and responsible AI use into all pre-service and in-service teacher training programs. Future teachers should be able to confidently integrate AI tools into classroom teaching and assessment.

- **Strengthen Multilingual and Inclusive AI Solutions:** Promote AI systems that support Kiswahili, English, French, and indigenous languages to reflect East Africa's linguistic diversity. Ensure AI tools enhance inclusive education for learners with disabilities, refugees, and marginalized communities.
- **Bridge the Rural–Urban Digital Divide:** Advocate for low-bandwidth AI platforms, offline AI applications, and shared regional infrastructure to ensure equitable access across rural and under-resourced TEIs. This reduces inequality in digital teacher preparation.
- **Provide Guidelines for Ethical, Safe, and Responsible AI Use:** Develop harmonized ethical guidelines, data protection standards, and AI risk management frameworks. Teacher trainees should understand issues of bias, privacy, misinformation, and algorithmic accountability.
- **Enhance Institutional Efficiency and Quality Assurance through AI:** Use AI-driven analytics to improve student monitoring, accreditation processes, teacher workforce planning, and institutional decision-making. This supports evidence-based management within TEIs.
- **Foster Public–Private Partnerships and AI Entrepreneurship:** Encourage collaboration between TEIs, EdTech companies, and innovation hubs to co-develop AI solutions for education challenges. Support AI incubation programs that enable teacher trainees to innovate
- **Promote Gender Equity and Youth Inclusion in AI Skills:** Implement targeted initiatives to increase women's participation in AI-related teacher education programs. Provide scholarships, mentorship, and inclusive training opportunities to prepare a diverse AI-skilled workforce.
- **Position EAC TEIs in Continental and Global AI Dialogue:** Enable TEIs to actively contribute to African and global AI policy discussions, research networks, and partnerships. This ensures East Africa's education priorities are represented in shaping AI governance and standards.
- **Protect Data Integrity, Privacy, and Digital Rights of Learners and Teacher-Educators:** Establish robust data governance and cybersecurity frameworks to safeguard personal, academic, and institutional data. Ensure informed consent, transparency in AI-driven analytics, protection against algorithmic discrimination, and compliance with national and regional data protection laws.
- **Promote the Practical and Responsible Use of AI in Teacher Education Institutions:** The policy shall advance the practical, ethical, and contextually relevant integration of artificial intelligence in Teacher Education Institutions across pedagogy, assessment, research, and governance. It shall build AI competencies among educators and trainees, ensuring responsible use, academic integrity, data protection, inclusivity, and innovation aligned with national and continental development priorities.

9. Scope & Applicability of the Policy Framework

i. This policy framework applies to all Teacher Education Institutions (TEIs) within the East African Community (EAC), including both public and private institutions across all Partner States. It provides a harmonized approach to guide the development, deployment, and use of Artificial Intelligence (AI) in teacher education, ensuring consistency, accountability, and alignment with regional and continental priorities.

ii. The framework covers universities, teacher training colleges, and affiliated research and innovation centers involved in AI-related activities. It governs the integration and use of AI across core institutional functions, including teaching, learning, and assessment; research and innovation; institutional management and administration; quality assurance; data governance and protection; and capacity building for educators and student teachers.

iii. This policy is intended to guide a broad range of stakeholders engaged in AI within TEIs, including policymakers, regulators, institutional leadership, academic staff, researchers, administrators, ICT personnel, students and teacher trainees, as well as third-party technology providers. It establishes clear expectations for governance, ethical use, transparency, accountability, and responsible AI integration in curriculum development, pedagogy, research, and institutional decision-making.

iv. The framework further ensures that AI adoption within TEIs is safe, effective, and equitable by promoting adherence to established standards and best practices. It emphasizes the importance of compliance with relevant national education laws, ICT policies, and data protection regulations across EAC Partner States, while aligning with broader continental frameworks under the African Union.

v. By defining a comprehensive scope and clear applicability, this policy supports coordinated implementation, fosters innovation and professionalism, and strengthens the role of TEIs in advancing responsible and contextually relevant AI use across the region.

10. Policy statements

10.1. Teaching, learning, and assessment

The IUCEA and TEIs recognize the transformative potential of AI technologies, including generative AI tools to support innovation in pedagogy, learning, and assessment. They also affirm that AI should augment, not replace, human teaching, critical thinking, and authentic student engagement. Within teacher education, AI integration must strengthen the preparation of future teachers by modeling responsible, ethical, and pedagogically sound use of AI in classroom practice.

Strategic Directions

i. Pedagogical Innovation through AI Augmentation

TEIs shall integrate AI in ways that:

- Enhance differentiated instruction and inclusive teaching practices.
- Support reflective practice among student teachers.
- Model responsible AI-enabled classroom strategies that future teachers can replicate in schools.

AI must remain a tool that strengthens, not substitutes, teacher agency and learner engagement.

ii. Authentic Student Engagement

TEIs shall:

- Integrate generative AI tools (e.g., chatbots, tutoring assistants) to support inquiry-based and problem-based learning.
- Encourage critical evaluation of AI-generated responses to develop higher-order thinking skills.
- Promote collaborative learning where AI supports but does not dominate intellectual interaction.

Student teachers must learn both how to use AI and how to teach responsibly with AI.

iii. Assessment Redesign for Integrity and Authenticity

TEIs shall:

- Re-examine course learning outcomes, teaching activities, and resources to ensure meaningful AI integration.
- Design authentic assessment tasks such as classroom simulations, lesson demonstrations, portfolios, reflective journals, and real-world problem-solving projects.
- Use AI analytics responsibly to identify learning gaps and suggest remedial support.
- Clearly communicate permitted and prohibited AI use in assessments.

AI-assisted grading or feedback must remain under human oversight and comply with academic integrity standards.

iv. Use of AI in Assignments

TEIs shall:

- Clearly define the permissible scope of AI use in coursework and continuous assessment.

- Allow AI tools for support purposes such as idea generation, language enhancement, and structuring responses.
- Require students to demonstrate original understanding, critical thinking, and independent engagement.
- Prohibit the submission of fully AI-generated work as original output, unless explicitly authorised for specific pedagogical purposes.

AI shall support learning processes without replacing student intellectual effort**.**

10.2. Research and innovation

The TEI shall foster a culture of AI-enabled research and innovation that prioritizes contextualized knowledge production, ethical integrity, and the development of solutions for national and regional challenges, ensuring that human researchers remain the primary architects of new knowledge.

Strategic Directions

i. Human-Centered Innovation and Capacity Development

TEIs shall:

- Promote AI-supported research that strengthens teacher education, pedagogy, assessment, and educational leadership.
- Encourage applied research focused on improving classroom practice, inclusive education, multilingual instruction, and digital equity.
- Ensure that AI tools augment, but do not replace scholarly reasoning, critical analysis, or original intellectual contribution.
- Require researchers and teacher trainees to critically validate, interpret, and take responsibility for AI-assisted outputs.

ii. Community-Engaged and Contextualized Research

TEIs shall:

- Promote research that responds to regional educational priorities, local schools, teacher professional development needs, and community challenges.
- Support innovation aligned with national education strategies and regional harmonization frameworks.
- Encourage collaborative research involving schools, teacher networks, and educational stakeholders.

iii. Ethical Compliance and Responsible Research Practice

TEIs shall:

- Ensure AI-assisted research complies with institutional ethics review processes, data protection laws, and academic integrity standards.
- Require disclosure of AI involvement in research design, data analysis, drafting, or publication.
- Implement bias testing and data protection safeguards when AI systems process educational data.
- Develop institutional AI research guidance, including requirements for disclosure on AI-assisted research outputs

iv. Institutional Capacity Building

TEIs shall:

- Provide structured training in AI literacy, research ethics, bias mitigation, and responsible innovation for faculty and student teachers.
- Integrate AI research competencies into teacher education programs in alignment with the AI Curriculum Framework.
- Promote interdisciplinary collaboration research to innovate in terms of AI in education.

10.3. Capacity building for educators and student teachers

Teacher Education Institutions (TEIs) shall prioritize continuous professional development (CPD) for academic staff, technical personnel, and student teachers to ensure competent, ethical, and pedagogically sound integration of artificial intelligence (AI) in teaching, learning, assessment, research, and institutional practice.

Strategic Direction

TEIs shall establish structured, progressive, and competency-based AI capacity-building programs that:

i. Strengthening AI Literacy and Pedagogical Integration Skills

TEIs should:

- Develop and implement structured AI literacy training aligned with the AI curriculum and competency framework.
- Integrate AI pedagogy modules into pre-service and in-service teacher education programs.
- Provide hands-on workshops on prompt design, AI-assisted lesson planning, and adaptive assessment strategies.

ii. Promote Ethical, Transparent, and Accountable AI Use

TEIs should:

- Develop clear institutional guidelines on permitted and prohibited AI use.
- Conduct mandatory training on AI ethics, bias mitigation, data protection, and academic integrity.
- Require AI Use Declarations in academic and research submissions.
- Implement periodic audits of AI-supported assessment and administrative systems.
- Establish confidential reporting mechanisms for AI misuse.

iii. Prepare Student Teachers to Model Responsible AI Use in Schools

TEIs should:

- Embed responsible AI use scenarios in teaching practicum and micro-teaching activities.
- Require student teachers to demonstrate ethical AI integration in lesson plans and portfolios.
- Incorporate critical evaluation of AI tools into pedagogy courses.
- Provide case studies on AI bias, misinformation, and digital responsibility in classroom contexts.
- Assess student teachers on their ability to teach about AI responsibly.

10.4. Institutional AI Governance Framework for TEIs

The governance framework for AI in Teacher Education Institutions shall operate at regional, national, and institutional levels, ensuring coherence with East African Community (EAC) priorities and continental AI strategies under the African Union.

i. Regional Oversight – IUCEA Secretariat

The IUCEA Secretariat shall:

- Provide strategic coordination and harmonization of AI standards across EAC TEIs.
- Facilitate regional collaboration, joint research initiatives, and shared AI infrastructure.
- Monitor compliance with agreed regional AI policy frameworks.
- Promote cross-border recognition of AI competencies and governance standards.

ii. National Policy Direction – Ministries of Education

Ministries of Education shall:

- Align national teacher education policies with regional and international AI governance frameworks.

- Approve AI integration strategies within TEIs.
- Allocate resources and funding to support AI capacity-building and infrastructure.
- Ensure compliance with national data protection and education regulations.

iii. Regulatory Compliance – National Councils and Quality Assurance Bodies

National Councils and Commissions shall:

- Accredit AI-related academic programs and teacher education initiatives.
- Conduct audits of AI-enabled assessment and certification systems.
- Enforce compliance with cybersecurity, data protection, and academic integrity standards.

iv. Teacher Education Institution Institutional Governance Structures

TEI leadership shall:

- Approve AI policies and operational guidelines.
- Establish AI Steering Committees and AI Ethics & Oversight Committees.
- Allocate financial and human resources for AI integration.
- Conduct risk assessments prior to AI procurement and deployment.
- Integrate AI governance into institutional quality assurance systems.
- Submit annual AI implementation and impact reports through structured monitoring and evaluation processes.

v. AI Ethics and Oversight Committee

Each TEI shall establish an AI Ethics and Oversight Committee responsible for:

- Conducting AI impact and risk assessments.
- Classifying AI systems based on risk level.
- Reviewing AI procurement and vendor compliance.
- Monitoring data protection, transparency, and bias mitigation.
- Establishing grievance and redress mechanisms.
- Recommending modification, suspension, or termination of high-risk AI systems.

vi. Teacher Organizations and Professional Bodies

Teacher organizations and unions shall:

- Safeguard pedagogical autonomy and professional integrity.
- Advocate against bias or unfair AI-supported assessment practices.
- Promote AI capacity-building among educators.
- Participate in consultations regarding AI governance and implementation

11. Institutionalizing the Policy framework

This policy framework ensures that its institutionalization is strategically guided, ethically grounded, accountable, and aligned with institutional goals. The sample institutionalization framework that institutions can adopt is presented in Appendix 2.

12. Data Governance and Protection

Data governance and protection shall be governed by and interpreted in accordance with the applicable data protection and privacy laws for institutions and the region. These laws are designed to safeguard the privacy of individuals and personal data by regulating data sharing of personal information. TEIs should implement the following practical steps:

- Establish Clear Governance Structures
- Align with Applicable Laws and Regulations
- Develop Internal Data Policies and Procedures
- Implement Technical Safeguards
- Strengthen Consent and Transparency Mechanisms
- Build Capacity and Awareness
- Establish Monitoring, Audit, and Enforcement Mechanisms
- Integrate Data Governance into Research and Innovation
- Ensure Equitable and Secure Data Sharing

13. Implementation Roadmap

A policy without implementation roadmap risks becoming declaratory rather than transformative. A roadmap ensures strategic intent converts into tangible, sustainable outcomes. Every institution is encouraged to develop its own implementation roadmap for this AI policy framework by following the sample given in Appendix 1.

14. Regional and International Cooperation on AI

The East African Community recognizes that AI development, deployment, and governance are global in nature. To maximize the benefits of AI in teacher education while mitigating risks, TEIs should actively engage in regional and international cooperation. This ensures knowledge sharing,

harmonization of standards, and positioning East Africa as a contributor to global AI governance. The following activities should be done:

14.1. Intra-East Africa Coordination on AI

Strengthen collaboration and harmonization among EAC Partner States to ensure consistent, ethical, and effective AI adoption in teacher education. Key initiatives should be:

- **Regional AI Standards and Guidelines:** Collaborate with IUCEA and other regional bodies to develop harmonized AI competency frameworks, curricula, and pedagogical practices for teacher education. So, an AI Curriculum framework and a Regional Code of Conduct are necessary to translate principles into practice. The curriculum ensures harmonized AI competencies across Teacher Education Institutions, equipping future teachers with skills in AI literacy, pedagogy, ethics, and data governance. It prevents fragmented implementation and builds institutional capacity. The Code of Conduct will operationalize ethical standards by defining acceptable use, accountability, attribution, transparency, and data protection obligations. While the policy sets direction, the curriculum builds competence, and the Code safeguards integrity—together to ensure responsible, consistent, and effective AI integration across the region's teacher education systems.
- **Shared Research and Infrastructure:** Promote cross-border AI research initiatives, shared datasets, AI labs, and centers of excellence in TEIs.
- **Policy Alignment and Mutual Recognition:** Ensure AI-related programs, certifications, and teacher competencies are mutually recognized across partner states to facilitate teacher mobility and professional development.
- **Regional Knowledge-Sharing Platforms:** Organize conferences, workshops, and online forums for educators, researchers, and policymakers to exchange best practices and innovations in AI-enhanced teacher training.

14.2. Fostering Partnership between East Africa and Other Regions and Countries

Leverage international expertise, innovation, and funding opportunities to accelerate AI adoption in teacher education institutions. Key initiatives are:

- **Bilateral and Multilateral Research Collaboration:** Partner with universities, AI research institutes, and EdTech companies outside Africa to co-develop AI tools, curricula, and teacher training solutions.
- **Capacity Building and Exchange Programs:** Facilitate internships, fellowships, and exchange programs for teacher educators and researchers with institutions abroad.
- **Joint Innovation and Start-Up Support:** Collaborate with global EdTech startups and AI innovators to pilot AI solutions that address regional education challenges.

- **Access to International AI Datasets and Tools:** Establish agreements for ethically compliant access to global datasets, AI platforms, and learning analytics tools to enhance research and pedagogy.

14.3. Strengthen East African Participation in Global AI Governance

Ensure that EAC TEIs and regional stakeholders actively contribute to shaping ethical, legal, and technical AI standards at continental and global levels. Key Initiatives are:

- **Representation in International AI Forums:** Encourage participation of TEIs, IUCEA, and Ministries of Education in AU, UNESCO, OECD, and other global AI policy and governance platforms.
- **Policy Input and Advocacy:** Submit East African perspectives on AI ethics, data protection, inclusion, and pedagogy to influence global AI policies.
- **Collaboration on Global AI Research Networks:** Engage in multi-country research consortia to co-create AI tools that address both global and local educational needs.

15. Monitoring & Evaluation (M&E) Framework for AI in TEIs

The monitoring and evaluation framework for AI in TEIs should be made of the results framework (Logical Model), Governance & Compliance mechanisms, Teaching & Learning effectiveness tracking, Capacity Building for staff and students, Research & Innovation monitoring, and Infrastructure and Technology assessment

This policy recommends the following approaches to evaluation: (1) Formative Evaluation (Continuous) made of Quarterly reviews, Staff & student feedback surveys, and AI tool usage analytics; (2) Summative Evaluation (Annual) made of Impact on learning outcomes, Comparative exam performance, Teaching quality improvement metrics, Cost-benefit analysis; (3) Data Collection Tools that may be made of LMS analytics dashboards, AI system usage logs, Classroom observation tools, Structured surveys, Focus group discussions, Academic performance databases, Institutional KPIs; and (4) the Ethical Monitoring Component (Critical in TEIs) includes Bias detection audits, data privacy compliance checks, transparency in AI-generated feedback, student consent protocols, and clear AI disclosure policies.

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Appendices

Appendix 1: Sample Implementation Roadmap

Phase	Key Focus Areas	Responsible Body/Actor	Roles & Responsibilities	Indicative Timeline	Performance Indicators
Phase 1: Pilot	Select pilot departments/programmes; test AI tools in teaching, assessment and research; develop AI usage guidelines; conduct initial staff and student training	TEI Leadership; AI Steering Committee; Directorate of ICT/ODeL; Deans & Heads of Department; Faculty; Research & Ethics Committee	Approve pilot scope; coordinate pilot design and standards; ensure infrastructure readiness; supervise implementation; integrate AI into courses; ensure ethical compliance	Months 1–6	- % of teacher educators trained in AI - Number of pilot courses/programmes using AI - Availability of institutional AI guidelines - Number of staff and students trained - Number of AI tools tested and evaluated
Phase 2: Scale-Up	Expand AI integration across faculties; institutionalize AI guidelines; strengthen digital competencies; integrate AI into administrative functions	TEI Leadership (Council, Senate); AI Steering Committee; ODeL; Directorate of ICT; Quality Assurance Directorate	Approve scale-up and allocate resources; oversee expansion; embed AI into LMS and curricula; upgrade infrastructure; monitor academic integrity and learning outcomes	Months 7–18	- Number of AI-integrated courses across faculties - % of programmes adopting AI-supported teaching and assessment - System uptime and infrastructure readiness levels - % of staff demonstrating digital/AI competencies - Number of administrative processes supported by AI

Phase 3: Consolidation	Refine policies based on lessons learned; standardize AI practices; strengthen data governance mechanisms	AI Steering Committee; Data Protection Officer; Internal Audit Unit; Deans & Academic Units	Review and refine AI framework; ensure compliance with data protection laws; assess risk management; enforce standardization across units	Year 2	- Existence of revised AI policy framework - % of departments compliant with AI standards - Number of data protection audits conducted - Reduction in AI-related ethical or compliance issues - standardization of AI practices across programmes
Phase 4: Sustainability	Secure funding for AI initiatives; continuous professional development; promote research and innovation; strengthen partnerships	Academic Affairs & Finance Leadership; Finance Directorate; International Relations Office; Research Directorate	Ensure long-term funding; integrate AI into budgeting; promote partnerships; support AI research and innovation	Year 3 onward	- Budget allocation for AI initiatives (% of institutional budget) - Number of staff undergoing continuous AI professional development - Number of AI-related research projects and publications - Number of regional and international partnerships established

Phase 5: Monitoring & Evaluation	Develop AI performance indicators; conduct impact assessments; ensure ethical compliance; review and update policies	TLAR/Quality Assurance; AI Steering Committee; Academic Senate; Staff & Student Representatives	Develop M&E framework; produce annual AI reports; recommend policy revisions; approve corrective actions; collect stakeholder feedback	Annual (ongoing)	- Annual AI implementation and impact reports produced - Student AI literacy levels (measured through assessments) - Stakeholder satisfaction levels (staff and students) - Number of policy revisions informed by evidence - Compliance rate with ethical and academic integrity standards

Appendix 2: Sample institutionalization framework

Governance Body / Leadership Role	**Key Responsibilities**	**Accountability Mechanisms**
Institutional Head (Vice Chancellor/ Rector/ Principal/ DVC)	● Provide overall strategic direction for AI adoption ● Approve AI policies, budgets, and initiatives, including Teaching, Learning, Assessment & research (TLAR) ● Champion ethical, inclusive, and pedagogically sound AI use ● Establish an AI governance committee to oversee AI adoption, compliance, and strategic alignment. ● Mandate annual reporting on AI initiatives, outcomes, and risks to institutional leadership.	● Reports to Governing Council/Board ● Annual AI & TLAR strategy report

AI Steering Committee	● Approve AI integration in TLAR activities ● Oversee institutional AI risk management and compliance. ● Ensure alignment with national, EAC, and AU frameworks ● Ensure alignment with national, EAC, and AU frameworks	● Minutes submitted to institutional leadership ● Annual performance review of AI in TLAR
Schools/ Faculties / Departments of education	● Operationalize AI policies and frameworks within teaching, learning, assessment, and research (TLAR) activities ● Contextualize AI integration to discipline-specific pedagogical needs and curricula ● Design and implement AI enhanced teaching and assessment strategies aligned with programme learning outcomes ● Monitor and report on AI usage, effectiveness, and challenges within departments ● Facilitate capacity building and peer support among academic staff on AI integration ● Ensure compliance with ethical standards, data protection policies, and institutional AI guidelines	● Departmental and faculty reports submitted to AI Steering Committee and TLAR/QA units ● Programme review reports including AI integration indicators ● Staff performance appraisal incorporating AI use in teaching and research ● Internal audits and peer reviews of AI-enabled teaching practices

	● Promote innovation through pilot projects, action research, and experimentation with AI tools in classrooms ● Engage students in responsible and critical use of AI technologies ● Contribute to curriculum review and continuous improvement integrating AI competencies	
AI Ethics & Oversight Committee	● Conduct AI impact and risk assessments for TLAR ● Monitor ethics, data protection, and inclusivity in TLAR applications ● Recommend suspension/modification of high-risk AI systems ● Ensure transparency, fairness, and human oversight in all AI applications. ● Implement accountability mechanisms for AI deployment and decision-making processes	● Reports to AI Steering Committee and Institutional Head ● Maintain records of AI audits and grievance cases related to TLAR
Data Governance/Protection Unit	● Enforce data privacy and integrity for learners and educators ● Approve AI data collection, storage, sharing, and analytics supporting TLAR ● Monitor cybersecurity of TLAR-related AI systems	● Reports to AI Steering Committee and Institutional Head ● Compliance audits and data breach reports
ICT / Technical Unit	● Ensure technical feasibility and interoperability of AI systems for TLAR	● Technical performance reports to AI Steering Committee

	• Maintain AI infrastructure supporting teaching, learning, assessment, and research • Support pilot projects, AI research, and innovation labs • Provide secure, high-performance computing resources to support AI teaching, learning, and research. • Ensure reliable internet connectivity, cloud platforms, and virtual AI labs for all faculty and students. • Maintain technical support and maintenance plans for all AI systems and tools. • Promote scalable and sustainable AI infrastructure aligned with institutional growth.	• Incident reporting system failures or security breaches
Teaching, Learning, Assessment & Research (TLAR) / Quality Assurance	• Conduct annual continuing professional development (CPD) programs focused on AI literacy, pedagogy, and ethics. • Encourage faculty and staff to stay current with emerging AI technologies and responsible practices. • Encourage faculty and staff to stay current with emerging AI technologies and responsible practices. • Ensure AI is effectively applied to improve teaching methodologies, personalized learning, adaptive assessments, and research productivity • Integrate AI tools for pedagogy, analytics, and innovation in teacher training	• Monitored through institutional reports, performance dashboards, and AI impact assessments • Feedback from educators, students, and oversight committees

	● Promote responsible AI-enabled pedagogy that enhances learning while safeguarding ethics. ● Require AI-use declarations by faculty and students when AI tools influence learning or research outputs. ● Maintain human-centered assessment practices alongside AI-supported evaluation methods.	