



**ASSOCIATION OF AFRICAN UNIVERSITIES**  
**ASSOCIATION DES UNIVERSITES AFRICAINES**  
**اتحاد الجامعات الإفريقية**

# Digital Education and the Future of Learning: Perspectives of Higher Education

*AAU Perspective and input to the GUAF Policy Brief*

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# The African Context

Africa is the youngest continent in the world, with 60% of its population under 25. Africa is the continent that has the greatest need for education, with sub-Saharan Africa being identified by UNESCO as having the highest rates of educational exclusion worldwide. The digital maturity of different African countries varies greatly, not only in terms of the necessary supporting skills and population's digital literacy, but also in terms of the supporting infrastructure. Wide-ranging and current issues have been covered by the idea of digital education and the future of learning in Africa, such as the decolonization of education, the effects of COVID-19 on higher education institutions, pandemic discourse and education in Africa, gender issues in education, indigenous knowledge systems, transnational education (TNE) partnerships, and issues with distance learning. In contrast to educational outcomes, access to education has generally improved. On the continent, equitable access to high-quality education is still elusive. Many students and educators in Africa run the risk of falling behind, even though the Covid-19 pandemic accelerated the need for a renewed focus on digital transformation in higher education and demanded strategic alliances between governments, businesses, universities, development agencies, technology companies, and venture capital firms.

Eight of the numerous current obstacles to digital education in Africa are mentioned here: lack of electricity, limited number of trained lecturers, limited access to technology, lack of internet access, political unpredictability, lack of gender equality, lack of technical support, and lack of language skills. In sub-Saharan Africa, less than 50% of people have access to electricity, according to World Bank data from 2021. The average is only 28.5% in rural areas. It is practically hard to use computers, internet routers, and other digital equipment for teaching when many people, schools, and communities lack the power to operate them. There is a dearth of skilled educators in many African nations who can use technology and digital tools in the classroom. This is especially true in rural places where there is little access to equitable higher education.

It can be challenging to obtain digital teaching resources in Africa due to the continent's economic circumstances. For students to access digital learning materials, many Higher Education Institutions (HEIs) across the continent continue to lack the necessary hardware, including as computers, tablets, and smartphones, as well as internet resources and applications. This implies that digital technology cannot be used by lecturers or students for learning or teaching purposes. Lack of inexpensive and dependable internet access is one of Africa's biggest infrastructure problems. Students' and instructors' capacity to use online learning resources, interact with peers, and take part in digital learning activities is restricted when they do not have access to the internet. Eleven African nations were listed among the twenty-one countries whose



governments consciously blocked their citizens' access to the internet in 2021. Although the intention is generally to quell civil unrest, educational institutions are particularly hard hit by such shutdowns; this was particularly concerning during the pandemic when academic activities moved online.

The already inadequate adoption of digital education in Africa can be greatly impacted by gender inequality. Women's relative lack of access to technology is one of the effects of gender inequality. The United Nations Development Programme (UNDP) reports that women and girls in Africa are more likely to encounter obstacles when attempting to participate in the digital economy and are less likely to have access to technology and digital resources. Their ability to access and benefit from digital education is hampered as a result. The support personnel required to assist instructors and students with technical problems relating to digital resources and technology is lacking at many HEIs in Africa. This makes it difficult for instructors and students to access and make efficient use of technology and digital resources. On the continent, there are between 1000 and 2000 different languages spoken. It is obvious that in Africa, linguistic obstacles can seriously limit access to digital learning materials. While the majority of people in Africa speak indigenous languages, many digital educational resources and platforms are only available in languages spoken by a tiny percentage of the population, such as English and French.

Regarding the eight obstacles mentioned above, there are consistent differences throughout geopolitical zones. Given the circumstances, it appears that a comprehensive strategy that takes into account the political, social, economic, and historical contexts must be used. In pursuit of this objective, the Association of African Universities has worked closely with HEIs in Africa and external partners to comprehensively and systematically address some of these barriers, although we still have a long way to go. These include digital transformation initiatives that encourage a holistic and sustainable approach to digital transformation in higher education institutions; and the AAU-eLearnAfricaLMS, which hosts e-learning summits and other online education events. Others include the Africa Higher Education Centres of Excellence (ACE) Impact Project, which aims to bridge the knowledge gap in digital development and train students and professionals; as well as the C-CoDE Model, a model for digital transformation initiatives in universities, emphasizing a holistic and sustainable approach. These initiatives combined with the necessary regulatory frameworks and support from governments and HE stakeholders, can be leveraged to mitigate barriers to equitable access to higher education across the continent.



# 1. Institutional perspectives: opportunities and challenges of digital education

## a) Strategies for learning and teaching approaches

The Association of African Universities (AAU) has implemented several strategies to enhance learning and teaching approaches in Higher Education Institutions (HEIs) in Africa, including:

- Supporting the core functions of Higher Education Institutions (HEIs)
- Facilitating a favorable Higher Education policy environment
- Providing a platform for discussions on emerging issues
- Increasing access to Higher Education through new modes of teaching and learning
- Providing extensive networking opportunities for member institutions
- Offering staff mobility among member universities in Africa
- Brokering research and project partnerships among member universities and development partners
- Offering discounted research consultancy services from member universities
- Providing eligibility to apply for various competitive institutional grants
- Offering access to the AAU Knowledge and Information Hub
- Offering free access to the AU-eLearnAfrica Learning Management System for academics
- Participating in institutional quality benchmarking exercises through the African Quality Rating Mechanism (AQRM)
- Creating awareness on available ICT-Driven tools to facilitate teaching and learning
- Organizing capacity building workshops and training programs for staff development
- Offering virtual workshops and training sessions on ICT-driven tools and platforms for teaching and learning
- Encouraging the use of software, applications, and platforms to enhance research output and teaching methods



## **b) How to ensure that students are able to learn in digital environments**

The Association of African Universities (AAU) has implemented several initiatives on learning and teaching approaches and digital platforms in Higher Education Institutions (HEIs) in Africa, including:

- Creating awareness on available ICT-Driven tools to facilitate teaching and learning
- Capacity Building Workshops Platform for Learning and Exchange
- Training programs on the use of Learning Management Systems (LMS) for faculty and students
- Educational technology support
- Workshops on 'The Teaching of Modern Irrigation Engineering Techniques' and 'Working in ICT Driven Higher & Tertiary Education Spaces'
- Encouraging the use of software, applications, and platforms to enhance research output and teaching methods
- Promoting digital transformation of African higher educational institutions
- Annual training programs on the use of the university LMS for faculty and students

## **c) Assessment of student learning**

The Association of African Universities (AAU) has launched several initiatives to assess student learning using technical approaches, learning outcomes, 21st-century competencies, and literacy domains in Africa, including:

- AfriCAS: A competency-based assessment framework for African universities.
- eLearning platforms: Utilizing digital platforms to assess student learning outcomes.
- Digital badges: Awarding micro-credentials for demonstrating 21st-century skills.
- Learning analytics: Leveraging data to inform instruction and improve student outcomes.
- Competency-based education: Focusing on students' demonstration of skills rather than seat time.
- Literacy assessments: Evaluating students' literacy skills in various domains.
- Collaborations with ed-tech companies: Partnering to develop innovative assessment tools.
- Capacity building: Training faculty members on effective assessment methods.
- Research and development: Encouraging research on assessment and learning outcomes in African higher education.
- Pan-African assessments: Developing regional assessments to compare student learning outcomes across Africa.



## d) Quality assurance

The Association of African Universities (AAU) has launched several initiatives on quality assurance in Higher Education Institutions (HEIs) in Africa, including:

- HAQAA Initiative: Harmonising African Higher Education Quality Assurance and Accreditation to promote quality culture among HEIs and National Quality Assurance Agencies.
- African Standards and Guidelines for Quality Assurance (ASG-QA): Supporting HEIs and quality assurance agencies in Africa to ensure quality education.
- Consultancy visits and agency reviews: Promoting distinctly African approaches to quality assurance and accreditation through pilot exercises.

## e) Capacity building: How institutions support their staff in teaching, research and technical support

The Association of African Universities (AAU) has several capacity building initiatives for training, research, technical support and equipment for Higher Education Institutions (HEIs) in Africa, including:

- Organising capacity building workshops for university registrars and other administrative staff
- Establishing the Africa Research, Innovation, and Development (AfRID) platform to empower HEIs
- Offering training programs on the use of Learning Management Systems (LMS) for faculty and students
- Providing educational technology support
- Organising a regional webinar on leadership and capacity building in food and agriculture
- Mobilising higher education experts to support the delivery of required workshops
- Developing annual training programs for faculty and students





## 2. Implications for governance and campus development trends of digital education

### **i. The legal frameworks in Higher Education Institutions (HEIs) in Africa have significant implications for governance and campus development trends in digital education, including:**

- Regulatory compliance: HEIs must comply with national and regional regulations, such as data privacy laws and copyright regulations.
- Intellectual property rights: Clear policies on intellectual property rights encourage innovation and creativity in digital education.
- Cybersecurity: Legal frameworks must address cybersecurity concerns to ensure the safety of digital learning environments.
- Digital rights management: HEIs in Africa must establish policies for digital rights management to protect digital resources.
- Online learning regulations: Legal frameworks govern online learning, including course delivery, accreditation, and quality assurance.
- Student data protection: HEIs must ensure the privacy and security of student data in digital education.
- Faculty rights and responsibilities: Clear policies govern faculty roles, responsibilities, and intellectual property rights in digital education.
- Institutional autonomy: Legal frameworks balance institutional autonomy with regulatory oversight in digital education.
- Funding and resource allocation: Legal frameworks influence funding and resource allocation for digital education initiatives.
- Collaboration and partnerships: Legal frameworks facilitate collaboration and partnerships among HEIs, industry, and government in digital education.

By addressing these implications, HEIs in Africa can create a supportive legal environment for governance and campus development trends in digital education.

### **ii. The implications of quality assurance in Higher Education Institutions (HEIs) in Africa for governance and campus development trends in digital education include:**

- Accountability: Quality assurance ensures accountability in digital education programs and services.



- Standards and benchmarks: Established standards and benchmarks guide digital education development and improvement.
- Accreditation and recognition: Quality assurance leads to accreditation and recognition of digital education programs, enhancing their reputation.
- Student satisfaction and engagement: Quality assurance focuses on student satisfaction and engagement in digital learning environments.
- Faculty development and support: Quality assurance emphasizes faculty development and support for effective digital teaching and learning.
- Continuous improvement: Quality assurance fosters a culture of continuous improvement in digital education.
- Risk management: Quality assurance identifies and mitigates risks associated with digital education.
- Institutional effectiveness: Quality assurance enhances institutional effectiveness in delivering digital education programs.
- Graduate employability: Quality assurance ensures digital education programs prepare graduates for the workforce.
- Regional and international collaboration: Quality assurance facilitates collaboration and recognition of digital education programs across Africa and globally.

By prioritizing quality assurance, HEIs in Africa can ensure the excellence and relevance of digital education programs, enhancing governance and campus development trends.

### **iii. The implications of credentialing in Higher Education Institutions (HEIs) in Africa for governance and campus development trends in digital education include:**

- Validation of learning: Credentialing validates students' learning and skills in digital education.
- Standardization and consistency: Credentialing ensures standardization and consistency in digital education programs.
- Quality assurance: Credentialing is a quality assurance mechanism for digital education programs.
- Recognition and acceptance: Credentials earned through digital education are recognized and accepted by employers and other HEIs.
- Student mobility and transfer: Credentialing facilitates student mobility and transfer between HEIs.
- Digital credentialing and badging: HEIs can issue digital credentials and badges, enhancing student employability.
- Micro-credentialing and upskilling: Credentialing supports micro-credentialing and upskilling in emerging fields.
- Industry partnerships and collaborations: Credentialing fosters partnerships between HEIs and industry, ensuring relevant skills development.



- Regulatory compliance: Credentialing ensures compliance with regulatory requirements and standards.
- Enhanced reputation and branding: Credentialing enhances the reputation and branding of HEIs offering digital education programs.

By prioritizing credentialing, HEIs in Africa can ensure the credibility and value of digital education programs, enhancing governance and campus development trends.

**iv. The implications of shared protocols and tools in Higher Education Institutions (HEIs) in Africa for governance and campus development trends in digital education include:**

- Interoperability: Shared protocols and tools enable seamless communication and data exchange between systems.
- Standardization: Standardized protocols and tools ensure consistency and efficiency in digital education delivery.
- Collaboration and resource sharing: Shared protocols and tools facilitate collaboration and resource sharing among HEIs.
- Scalability and flexibility: Shared protocols and tools enable scalability and flexibility in digital education programs.
- Cost savings: Shared protocols and tools reduce costs and improve resource allocation.
- Enhanced security and privacy: Standardized protocols and tools ensure enhanced security and privacy in digital education.
- Improved student experience: Shared protocols and tools provide a seamless and integrated learning experience for students.
- Faculty development and support: Shared protocols and tools enable faculty development and support in digital education.
- Institutional efficiency and effectiveness: Shared protocols and tools enhance institutional efficiency and effectiveness in digital education delivery.
- Regional and international collaboration: Shared protocols and tools facilitate collaboration and recognition of digital education programs across Africa and globally.

By adopting shared protocols and tools, HEIs in Africa can enhance governance and campus development trends in digital education, promoting regional and international collaboration and recognition.



**v. The implications of African government support for governance and campus development trends in digital education include:**

- Policy development and implementation: Governments develop and implement policies supporting digital education.
- Funding and resource allocation: Governments provide funding and resources for digital education infrastructure and programs.
- Regulatory frameworks: Governments establish regulatory frameworks ensuring quality and standards in digital education.
- Infrastructure development: Governments invest in digital infrastructure, including broadband and connectivity.
- Digital literacy and skills development: Governments prioritize digital literacy and skills development for students and faculty.
- Access and equity: Governments focus on increasing access to digital education, particularly for underserved populations.
- Public-private partnerships: Governments collaborate with private sector partners to support digital education initiatives.
- Research and innovation: Governments encourage research and innovation in digital education, driving innovation and entrepreneurship.
- Capacity building and training: Governments provide capacity building and training programs for faculty and staff.
- Regional and international collaboration: Governments facilitate regional and international collaboration, promoting African digital education globally.

By supporting digital education, African governments can enhance governance and campus development trends, driving economic growth, innovation, and social development.

**vi. The implications of industrial relations in Africa for governance and campus development trends in digital education include:**

- Partnerships and collaborations: Industry partners with HEIs to develop relevant digital education programs.
- Skills development and training: Industry provides training and skills development opportunities for students and faculty.
- Curriculum development: Industry influences curriculum development to ensure relevance and employability.
- Internships and job placement: Industry provides internships and job placement opportunities for students.



- Research and innovation: Industry collaborates with HEIs on research and innovation in digital education.
- Capacity building and development: Industry supports capacity building and development for faculty and staff.
- Digital transformation and upskilling: Industry drives digital transformation and upskilling in HEIs.
- Employability and entrepreneurship: Industry focuses on enhancing employability and entrepreneurship skills in digital education.
- Private sector investment: Industry invests in digital education infrastructure and programs.
- Regulatory frameworks: Industry influences regulatory frameworks to support digital education development.

By engaging with industry, African HEIs can enhance governance and campus development trends in digital education, ensuring relevance, employability, and innovation in the digital age.

**vii. The implications of privacy and security in Higher Education Institutions (HEIs) in Africa for governance and campus development trends in digital education include:**

- Data protection policies: HEIs develop policies to protect student and staff personal data.
- Cybersecurity measures: HEIs implement robust cybersecurity measures to prevent data breaches.
- Secure online learning platforms: HEIs ensure secure online learning platforms and digital resources.
- Student data privacy: HEIs prioritize student data privacy and maintain confidentiality.
- Faculty and staff training: HEIs provide training on privacy and security best practices.
- Incident response planning: HEIs develop incident response plans for data breaches or cybersecurity incidents.
- Compliance with regulations: HEIs comply with regional and international privacy and security regulations.
- Digital identity management: HEIs implement secure digital identity management systems.
- Risk management strategies: HEIs develop risk management strategies to mitigate privacy and security risks.
- Continuous monitoring and evaluation: HEIs continuously monitor and evaluate privacy and security measures.

By prioritizing privacy and security, HEIs in Africa can ensure the trust and confidence of students, faculty, and staff in digital education, promoting governance and campus development trends that support high-quality digital education.

**viii. The implications of equitable access, inclusion, and digital divide for governance and campus development trends in digital education include:**

- Accessibility and inclusivity: Ensuring digital education is accessible and inclusive for all students, regardless of location, disability, or socioeconomic status.
- Bridging the digital divide: Addressing the gap in access to digital technologies and internet connectivity among



students, faculty, and staff.

- Equitable resource allocation: Allocating resources to ensure equal access to digital education opportunities.
- Culturally responsive digital education: Developing digital education that is culturally responsive and relevant to diverse student populations.
- Digital literacy and skills development: Providing training and support to develop digital literacy and skills for all students and faculty.
- Inclusive digital learning environments: Creating digital learning environments that are inclusive and supportive of diverse student needs.
- Addressing systemic inequalities: Recognizing and addressing systemic inequalities that perpetuate the digital divide.
- Partnerships and collaborations: Forming partnerships to improve access to digital education and address the digital divide.
- Policy development and implementation: Developing and implementing policies that promote equitable access and inclusion in digital education.
- Continuous monitoring and evaluation: Continuously monitoring and evaluating digital education initiatives to ensure equitable access and inclusion.

By prioritizing equitable access, inclusion, and addressing the digital divide, HEIs can ensure that digital education is a powerful tool for social mobility, social justice, and equality, rather than a perpetuator of existing inequalities.

**ix. The implications of curriculum development in the context of institutional and national policies for campus development trends in digital education include:**

- Alignment with national priorities: Curriculum development aligns with national priorities and goals for digital education.
- Institutional vision and mission: Curriculum development reflects the institution's vision and mission for digital education.
- Digital literacy and skills integration: Curriculum development integrates digital literacy and skills across disciplines.
- Interdisciplinary approaches: Curriculum development incorporates interdisciplinary approaches to digital education.
- Flexibility and adaptability: Curriculum development allows for flexibility and adaptability in response to changing digital landscapes.
- Industry partnerships and collaborations: Curriculum development involves industry partnerships and collaborations to ensure relevance and employability.
- Student-centered and inclusive approaches: Curriculum development prioritizes student-centered and inclusive



approaches to digital education.

- Continuous assessment and evaluation: Curriculum development incorporates continuous assessment and evaluation to ensure quality and relevance.
- Faculty development and support: Curriculum development provides faculty development and support for digital education.
- Scalability and sustainability: Curriculum development ensures scalability and sustainability of digital education initiatives.

By considering institutional and national policies in curriculum development, HEIs can ensure that digital education is integrated into the curriculum in a way that is sustainable, scalable, and aligned with national priorities, ultimately driving campus development trends that support high-quality digital education.

**x. The implications of governance models in Higher Education Institutions (HEIs) in Africa for governance and campus development trends in digital education include:**

- Decentralization and autonomy: Governance models that decentralize decision-making and provide autonomy to faculties and departments.
- Participatory governance: Governance models that involve stakeholders, including students, faculty, and staff, in decision-making processes.
- Strategic planning and visioning: Governance models that prioritize strategic planning and visioning for digital education.
- Risk management and innovation: Governance models that balance risk management with innovation and experimentation in digital education.
- Collaboration and partnerships: Governance models that foster collaboration and partnerships with industry, government, and other stakeholders.
- Digital transformation leadership: Governance models that prioritize digital transformation leadership and vision.
- Faculty development and support: Governance models that prioritize faculty development and support for digital education.
- Student-centered approaches: Governance models that prioritize student-centered approaches to digital education.
- Inclusive and equitable access: Governance models that prioritize inclusive and equitable access to digital education.
- Monitoring and evaluation: Governance models that prioritize monitoring and evaluation to ensure quality and effectiveness in digital education.



By adopting effective governance models, HEIs in Africa can ensure that digital education is integrated into the institution's strategic plan, prioritizing innovation, inclusion, and student success, and driving campus development trends that support high-quality digital education.

### 3. Prospects of international cooperation in higher education in the digital era

The prospects of international cooperation in Higher education in Africa in the digital era include:

- Development of new policies and guidelines
- Investment in AI literacy and education
- Encouragement of transparency and accountability
- Ethical AI research and innovation
- Ensuring inclusivity and equity in AI-driven decision-making
- Strengthening of the international dimension of teaching, research, community outreach, and engagement with partners in the region and abroad
- Higher education institutions establishing close links with and serving local and national needs, as well as society at large
- Collaboration with NGOs and other organizations to promote greater understanding of how internationalisation can strengthen higher education and ultimately higher education's contribution to the community and society at large

### 4. AI – impacts for institutions and society

The confluence of academic integrity and artificial intelligence (AI) in Higher Education Institutions (HEIs) in Africa presents both opportunities and challenges. AI can enhance academic integrity by:

- Detecting plagiarism and fraud
- Automating assessment and grading
- Identifying biases in research
- Enhancing transparency and accountability





However, AI also raises concerns about:

- Bias in AI systems
- Dependence on technology
- Ethical use of AI in research
- Potential for AI-generated fraud

To navigate this confluence, HEIs in Africa must prioritize:

- Developing AI-related policies and guidelines
- Investing in AI literacy and education
- Encouraging transparency and accountability
- Fostering ethical AI research and innovation
- Ensuring inclusivity and equity in AI-driven decision-making

By addressing these challenges and opportunities, HEIs in Africa can harness the potential of AI to promote academic integrity, innovation, and excellence.

## **5. Examples for best practices at the institutional level and at the national or regional level**

## **6. List with short titles, links and short description of major publications issued by your organization on the issue (reports, studies, policy statements, tools/ instruments)**

- "The Future of Higher Education in Africa–A Summary of Conference Subthemes"
- "Voice of Higher Education in Africa"
- "Database of Theses and Dissertation-Including Research"



- "COREVIP and GENERAL CONFERENCE Documents"
- "Conference Report – AAU COREVIP 2023"
- "Selected Papers – AAU 15th General Conference"
- "Communique – AAU 15th General Conference"
- "Selected Papers – AAU 14th General Conference"
- "COREVIP 2019 Selected Papers"
- "2019 COREVIP Communique"
- "AAU COREVIP 2019 Rapporteur Generals Report"
- "AAU 2017 General Conference Rapporteur Generals Report"
- "Final COREVIP 2015 Report"
- "COREVIP 2015 Selected Papers"
- African Standards and Guidelines for Quality Assurance (ASG-QA)
- QA in Africa: Academic articles and resources Towards an African Higher Education and Research Space (ADEA Quality Assurance in Africa:
- Validation of the Pan-African Quality Assurance and Accreditation framework





