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Short Communication

Artificial Intelligence and the Future of Health Education in The Gambia: Challenges and Opportunities

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Introduction

Medical education in The Gambia faces persistent challenges, including limited faculty numbers, overcrowded clinical sites, inadequate laboratory capacity, and a health system burdened by infectious diseases and rising noncommunicable diseases. These constraints mirror broader West African trends [1,2].

AI-enabled tools—such as virtual simulations, automated assessments, adaptive learning platforms, and clinical decision support—offer opportunities to expand training quality and standardization, particularly in settings with limited specialist availability [3]. For The Gambia, a small country with a young health workforce and growing medical schools, AI could help bridge gaps in clinical exposure, diagnostics, and faculty capacity.

Methods

This is a review literature based on cited reports (2024–2026), with emphasis on national infrastructure, health-system realities, and educational structures at AIUWA, UTG, and EFSTH.

Findings

Structural and Systemic Barriers in The Gambia

Infrastructure limitations—including inconsistent electricity and broadband connectivity outside the Greater Banjul Area—pose major constraints to AI adoption. Medical schools and teaching hospitals lack simulation labs and modern digital tools, and many digital-health initiatives remain donor-dependent with limited sustainability [1].

Health-System Pressures and Data Fragmentation

The Gambia's health information systems remain partially digitized, with parallel paper-based and electronic systems. National datasets are incomplete, limiting the development of locally relevant AI models. High burdens of malaria, tuberculosis, maternal health challenges, and rising NCDs further constrain clinical teaching opportunities [2,4].

Workforce Shortages and Curricular Gaps

The country has a limited number of specialists, and faculty workloads are high. AI literacy is not yet integrated into medical curricula at AIUWA, UTG, or allied health schools. Rural training sites face the greatest deficits.

Technical, Financial, and Resource Constraints

Unaffordable power, internet, and hardware for institutions and students with cloud computing costs remain prohibitive without regional or national subsidies are serious handicaps.

Data Representation and Algorithmic Bias

Gambian and West African populations are largely absent from global datasets, increasing the risk of misdiagnosis or poor model performance for local disease patterns [4,5].

Skills Gap Among Students and Faculty

Most faculty have limited exposure to AI principles, limiting their ability to supervise AI-enhanced learning and students often rely on informal AI tools without structured guidance.

Ethical, Legal, Cultural Risks and Digital Sovereignty Concerns

The Gambia lacks a comprehensive national AI or data-protection law, though draft frameworks are under discussion. Issues of consent, data privacy, and algorithmic

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transparency remain unresolved. Reliance on foreign AI models risks data extraction, loss of control over national health information, and dependency on external vendors [6].

Human-Centered Risks

Is a well know the worldwide challenge of the overreliance on AI, may weaken clinical reasoning if not paired with strong pedagogical safeguards. AI-trained professionals may be more attractive to international recruiters, potentially worsening brain drain

Emerging Innovations and Opportunities in The Gambia

National Digital Expansion

The expansion of the national fiber backbone and mobile broadband coverage creates opportunities for cloud-based learning tools.

Early Digital-Health Pilots

EFSTH and the Ministry of Health have piloted electronic medical records and telemedicine initiatives that could serve as foundations for AI-enabled systems.

Regional Models for Local AI Development

African initiatives—such as Rwanda's local-language AI models and AU sovereign cloud proposals—offer templates The Gambia can adapt [5,6].

Growing Interest in AI Literacy

Medical students increasingly use AI tools informally, creating opportunities for structured training programs

Discussion

AI presents both promise and risk for The Gambia. As a small country with limited specialist capacity, AI could democratize access to high-quality learning resources, strengthen diagnostic training, and support faculty through automated assessment and simulation. However, without deliberate governance, AI could deepen inequities between urban and rural learners, expose national data to external exploitation, and create dependence on foreign technologies. Key considerations include equity by design, ethical data stewardship, faculty empowerment, sustainable financing, and robust evaluation systems [2,4]..

Recommendations

1. In line with Africa union statement is paramount to develop national AI and data-protection frameworks ensuring consent, accountability, transparency, and digital sovereignty at the same time support ethically governed data collection to build representative datasets for locally relevant AI models
2. Invest in resilient infrastructure—stable electricity, affordable broadband, and shared computing resources.
3. Integrate AI literacy into medical and health-sciences curricula and strengthen faculty development through short courses, incentives, and regional partnerships.
4. Pilot offline-first and low-bandwidth AI tools suitable for rural training sites, starting for major rural areas and progressively expand.
5. To introduce gradually telediagnosis as a way that primary health care providers can get prompt access to senior, credible and qualify advice. Potentially can impact directly in the basic patient management, reducing mortality and ether un necessary referrals to secondary and tertiary level.
6. Promote sustainable, locally partnerships with clear capacity-building and sustainable plans across the time.

Conclusion

AI can transform medical education in The Gambia by expanding access to high-quality, standardized, and contextually relevant training. This transformation requires deliberate, equity-focused, and locally governed adoption. Aligning investments in infrastructure, data governance, faculty capacity, and human-centered design will determine whether AI strengthens or fragments medical training. The Gambia has a unique opportunity—as a small, agile nation—to build a model of ethical, sustainable AI integration that prioritizes clinical judgment, cultural relevance, and national digital sovereignty..

References

1. World Bank Group. Digital infrastructure in Sub-Saharan Africa: progress, gaps, and opportunities. World Bank; 2024. Accessed January 20, 2026. https://www.worldbank.org
2. World Health Organization. Global health workforce statistics. World Health Organization; 2025. Accessed January 20, 2026. https://www.who.int
3. University of the Witwatersrand, Wits School of Governance. The economics of artificial intelligence in Africa: course guide. University of the Witwatersrand; 2026. Accessed January 20, 2026. https://www.wits.ac.za
4. Africa Centres for Disease Control and Prevention. Continental health data governance framework. Africa CDC; 2026. Accessed January 20, 2026. https://africacdc.org
5. Digital Umuganda Research. Local language AI development in Rwanda: annual report. Digital Umuganda; 2025. Accessed January 20, 2026. https://digitalumuganda.org
6. African Union, AU Digital Strategy Unit. AfriCloud: building sovereign digital infrastructure for Africa. African Union; 2026. Accessed January 20, 2026. https://au.int