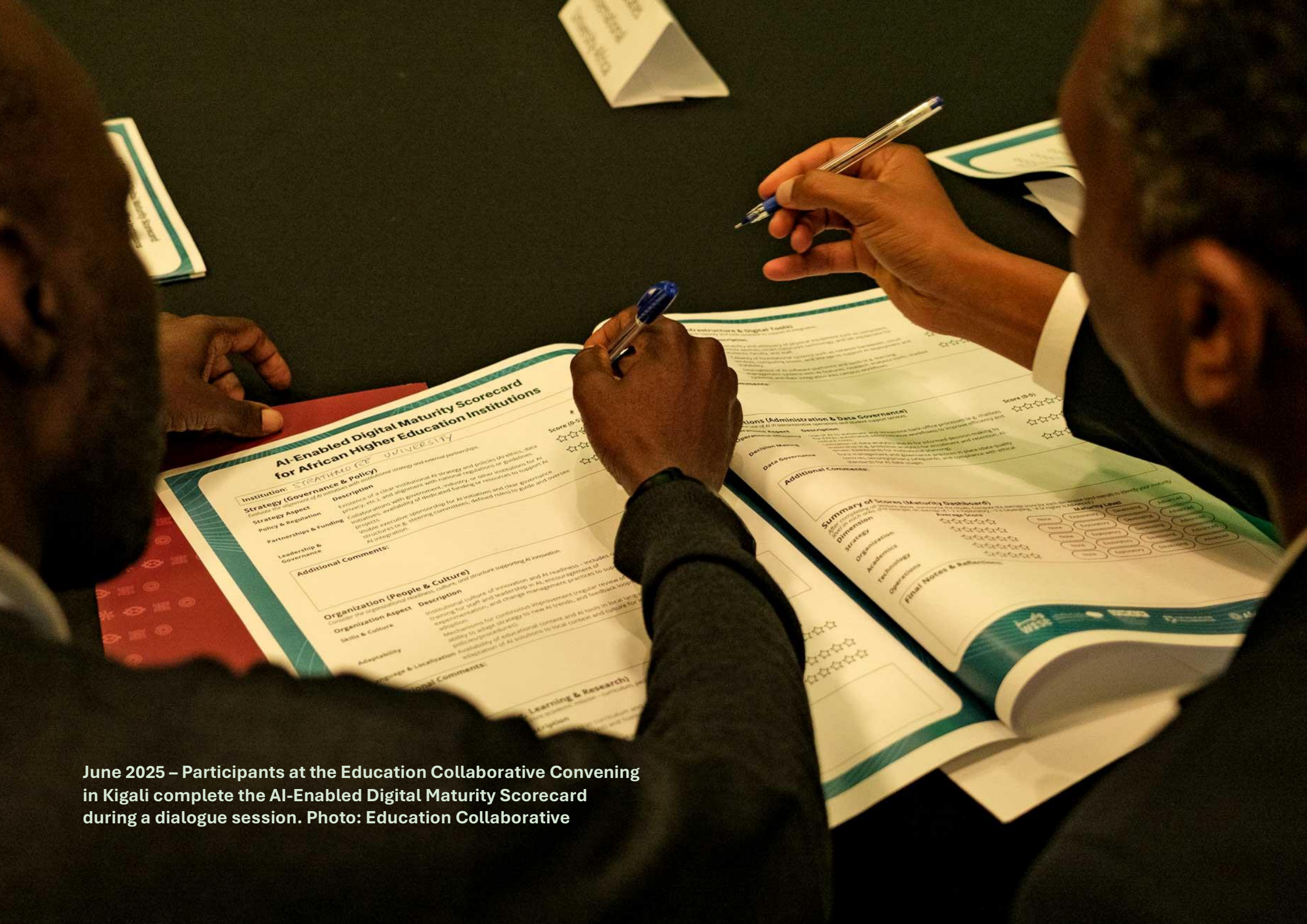
Harnessing AI for Higher Education in Africa

A Study on Adoption, Barriers, and Opportunities

November 2025

Partners



June 2025 – Participants at the Education Collaborative Convening in Kigali complete the AI-Enabled Digital Maturity Scorecard during a dialogue session. Photo: Education Collaborative

Glossary

Artificial Intelligence (AI)
Computer systems that perform tasks normally requiring human intelligence, such as learning, reasoning, or problem-solving.

AI-Enabled Digital Maturity Scorecard
A framework piloted by UM6P and IFC to assess readiness for AI adoption across infrastructure, pedagogy, governance, and culture.

Education Technology (Edtech)
Digital tools, platforms, and technologies that support teaching, learning, and educational administration.

Generative AI
A branch of AI that creates new content—such as text, images, or video—based on prompts. Examples include ChatGPT and DALL·E.

Learning Management System (LMS)
A software platform that organizes course delivery, assignments, grading, and student–faculty interaction.

Modular Architecture (AI Systems)
Design approach where different AI components (e.g., scripting, visuals, narration) are handled by separate, specialized modules.

Higher Education Institution (HEI)
Universities, polytechnics, and colleges that provide tertiary-level education.

Post-Secondary Education
Education or training pursued after the completion of secondary school, including universities, colleges, vocational and technical institutes, and other professional or adult learning pathways.

Pedagogical Frameworks
Established models for designing effective teaching and learning:

- ADDIE Model: A structured process for instructional design (Analysis, Design, Development, Implementation, Evaluation).
- Bloom's Taxonomy: Framework for articulating learning outcomes, from remembering to creating.
- Gagné's Nine Events of Instruction: Steps to structure lessons for learner engagement.

Public–Private Partnership (PPP)
Collaborations between government, universities, and industry to expand infrastructure, innovation, and investment in higher education.

Retrieval-Augmented Generation (RAG)
An AI method that combines a large language model with a curated knowledge base, enabling more accurate and context-specific responses.

The Genesis of Collaboration

Foreword

This report represents an important milestone in a collaboration that began in 2017, when Patrick Awuah received the WISE Prize for Education for his pioneering leadership in seeking to dramatically broaden access to quality higher education in Africa. When accepting the Prize, Patrick, through Ashesi University, committed to using the Prize monies to seed and host a network of African universities that would co-create, share, and innovate models of excellence in higher education, all with a view to graduating ethical and entrepreneurial leaders that would go on to transform the continent. And so, The Education Collaborative was born and has since grown, with the subsequent support of the Mastercard Foundation, to include over 470 institutions of higher learning.

WISE is proud of the part we played in seeding The Education Collaborative and of the enduring partnership we have built since. Alongside UM6P and AfriLabs, WISE and The Education Collaborative have produced a landmark report examining the adoption, governance, and use of artificial intelligence (AI) in higher education institutions (HEIs) in Africa. Its purpose is to provide a timely and accurate picture of what is happening on the ground, highlight the opportunities and challenges, and provide actionable recommendations.

The report you are about to read is illustrative of the distinctive role that WISE plays in assembling multi-sectoral partnerships from around the world to address critical issues facing education policymakers and practitioners alike. While The Education Collaborative and UM6P represent some of Africa's leading academies, AfriLabs adds the all-important voice of education entrepreneurs and technologists.

Finally, this is a report from Africa, about Africa, to be presented at the 12th edition of the WISE Summit taking place in Doha, Qatar on 24–25 November 2025. In this regard, the report demonstrates another of the unique contributions that WISE makes to the discourse on education: to ensure that it is and remains truly global.

Stavros N. Yiannouka,
Chief Executive Officer,
WISE

An Unprecedented Opportunity

Foreword

At Ashesi University, we have long believed that the work of an HEI is not only to transmit knowledge but to prepare young people to navigate complexity with ethical, entrepreneurial leadership. Today, as AI reshapes the world of work, research, and learning, this responsibility remains unchanged. Now, however, we have access to unprecedented tools and resources that allow us to tackle this work not only more effectively but at scale. AI is among the most significant of these tools.

Like many HEIs across Africa, Ashesi is only beginning its own journey of engaging with AI. We do so with humility, aware that there is much to learn, but also knowing that the choices we make now will shape the strength of learning for our students and our continent. As such, this study is both timely and necessary. It captures a higher education landscape that is experimenting with AI.

However, this study also reminds us that while AI adoption in African HEIs remains in its infancy, there are already examples that show what can happen when institutional leadership, pedagogy, and infrastructure align with strategic intent. Through The Education Collaborative, which Ashesi is privileged to host, we see the value of HEIs learning together. No single HEI can solve the challenges or seize the opportunities of AI alone. By pooling experiences, sharing insights, and holding one another accountable to our values, African HEIs can chart our own path and provide new models for the world.

I am thankful for the partnership with WISE and other stakeholders that brought this initiative to life. This study and the insights it presents to the African higher education community, our colleagues, and partners across the continent, should inspire us to take deliberate steps toward responsible AI adoption. Notwithstanding its disruptiveness, AI is a tool. And like all tools, its value depends on how we harness it.

This is an unprecedented opportunity. We, as African HEIs, should use AI wisely to widen access, strengthen learning, and empower a generation not just to adapt to the future but to shape it.

Patrick Awuah,
Founder and President,
Ashesi University

Acknowledgements

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The Education Collaborative

Founded by Ashesi University in Ghana, The Education Collaborative is a pan-African network transforming higher education through collective action. By engaging hundreds of institutions, it is helping to expand access and strengthen quality and outcomes for hundreds of thousands of students.

Mohammed VI Polytechnic University (UM6P)

UM6P is a pan-African hub for applied research, innovation, and entrepreneurial training. With a growing network of schools and research institutes, UM6P focuses on solving Africa's most pressing development challenges in areas such as sustainable agriculture, renewable energy, digital technologies, and governance.

Afrilabs

AfriLabs is one of Africa's largest networks of innovation hubs, connecting entrepreneurs across the continent to, resources, skills, and partnerships that drive growth.

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Summary

The integration of AI in education represents both a unique opportunity and a complex challenge. This report presents findings from a pioneering study on AI adoption in African HEIs, with insights from 3,875 respondents across 47 African HEIs and from 199 education technology (edtech) stakeholders.

The study, convened by the Qatar Foundation's World Innovation Summit for Education (WISE), was led by The Education Collaborative at Ashesi University in partnership with Mohammed VI Polytechnic University (UM6P) and AfriLabs. It reveals cautious optimism: HEIs and stakeholders recognize AI's transformative potential but grapple with significant implementation barriers.

Key Findings:

Most adoption is confined to AI-enabled learning management systems (LMS), where 62% of reported usage occurs, indicating narrow institutional use. Public HEIs show higher uptake (69%) compared to private ones (57%), yet private HEIs express slightly more confidence in their readiness to expand AI adoption (48% vs. 46%). This contrast highlights both momentum and hesitation across the sector.

Governance frameworks are patchy. Only four in 10 HEIs report having a comprehensive AI policy, with formal guidelines for ethical and responsible use. Public HEIs are somewhat ahead (44% with AI policies and 47% with ethical use frameworks), while private HEIs lag (at approximately 36% on both counts). The absence of robust policies undermines institutional confidence and slows systematic adoption.

The wider edtech landscape shows a sharper imbalance. Out of more than 414 active post-secondary edtech startups in Africa, HolonIQ data shows that only 45 (10.9%) focus exclusively on higher education and fewer than 2% build AI solutions tailored for HEIs. Most edtech entrepreneurial activity remains concentrated at K–12 levels, due to structural and demand bottlenecks at the tertiary level, leaving HEIs underserved.

Qualitative insights also reveal ambivalence towards AI use among HEI faculty and administrators. Participants acknowledge AI's potential to serve as both a pedagogical and administrative assistant, supporting personalized learning and nurturing problem-solving skills. Yet slow educator uptake, entrenched bureaucracies, a lack of investment, and concerns about the safeguarding of academic integrity stall progress.

Overall, adoption in HEIs is still in the low to moderate range. HEIs are running pilots, but these

remain isolated experiments rather than campus-wide strategies. Faculty and staff often lack the training or incentives to fully integrate AI into teaching and research, and bureaucratic processes slow down broader adoption. The result is that while enthusiasm is growing, HEIs are still in early stages: experimenting, testing, and learning but not yet moving into full-scale integration. AI in African higher education is being treated less as a transformative opportunity and more as a set of pilots, an approach that explains why adoption remains modest for now.

University Mohammed VI Polytechnic (UM6P) in Morocco is charting a course that all can learn from. UM6P has adopted AI as a structured enabler of institutional transformation. Instead of scattered pilots, UM6P is designing system-level solutions that solve specific pedagogical and operational challenges. The UM6P model shows what is possible when an HEI takes deliberate, problem-driven steps: anchoring technology in pedagogy, breaking complex processes into modular components, ensuring human oversight, and cultivating a culture of digital fluency. We recognize that UM6P is an elite, well-funded institution with access to resources that many HEIs in this study and otherwise do not possess. However, their approach offers a valuable conceptual framework that others can learn from, demonstrating how intentional strategy and structured implementation can guide meaningful AI integration in higher education.

Recommendations

The study makes clear that Africa's HEIs are central to the future of AI in higher education. To move beyond fragmented pilots, HEIs will need to adopt comprehensive AI policies, build faculty and student capacity, and anchor every tool in sound pedagogy. Success will depend on treating AI not as a replacement for educators but as a partner that enhances teaching, learning, and administration.

Governments and regional bodies have a critical role to play in creating the conditions for responsible adoption. By closing policy gaps, investing in infrastructure, and offering incentives to experiment, policymakers can help ensure that AI overcomes rather than deepens existing inequities. Funders and industry partners also have an opportunity to shape this trajectory. While most investment has focused on K–12, higher education remains underserved. Directing resources toward university-focused startups and supporting public–private partnerships can unlock scalable, locally relevant solutions.

Together, these actions point to a shared agenda: HEIs providing leadership, policymakers setting enabling frameworks, and funders ensuring the resources and tools are in place. If these steps are taken, AI can become not just a technological upgrade but a driver of equity, innovation, and excellence across Africa's higher education systems.

The Context for AI in African Higher Education

AI is now a defining pillar in global education, sparking debate about its impact on teaching quality, research, and learning outcomes. In Africa, its rise is layered onto an equally rapidly evolving edtech landscape, shaped by accelerating digitalization, expanding mobile penetration, and a youthful population eager to harness new education and economic opportunities. From foundational edtech platforms serving K–12 schools to emerging systems in HEIs, the continent is experimenting with new ways of delivering and scaling access to education. AI presents a significant new opportunity to accelerate this work.

The first wave of Edtech innovation focused on addressing access and content delivery gaps, especially in K–12 education. SMS-based models like Eneza Education extended low-bandwidth learning to underserved learners, while mobile-based tutoring platforms such as Edukoya and Kidato offered curriculum-aligned exam preparation. ULesson, a Nigerian platform backed by over $25 million in investment, scaled rapidly with millions of downloads, showing the appetite for digital learning in basic education. The second wave of edtech innovation is looking to introduce AI, enabling personalization, adaptive learning, and real-time analytics. At the K–12 level, platforms like M-Shule in Kenya use AI to deliver SMS-based customized revision exercises, while ULesson applies intelligent analytics to recommend tailored learning pathways.

Meanwhile HEIs have leveraged locally developed Edtech more slowly, often focusing on digital transformation through administrative platforms and blended learning tools. Some HEIs rely on Google Classroom or similar LMSs. Others experiment with virtual labs or aggregated online courses through partnerships with providers like Moringa School (Kenya) and Decagon (Nigeria). These efforts illustrate gradual digitalization but also the limited penetration of advanced AI-powered solutions.

At the 2025 Education Collaborative in Kigali, representatives from 74 African HEIs worked on an **AI-Enabled Digital Maturity Scorecard**, developed for this study. HEIs piloted the scorecard to assess their readiness across strategy, people, academics, infrastructure, and operations. Most HEIs rated themselves in the "Developing" stage, with clear signs of early progress but few examples of full-scale implementation.

What We Asked & How We Found Answers

The study set out to **map the penetration and adoption of AI in African HEIs**, examining both the opportunities and systemic barriers that shape its integration. At its core, the study sought to reveal not only the extent to which AI is being used in teaching and learning but also the perceptions of key stakeholders, the readiness of institutions, and the alignment of national and institutional policies. Four objectives guided the inquiry:

- Investigate the depth and significance of AI utilization in HEIs across the continent.
- Analyze how institutions and policymakers are responding to the emergence of AI-powered educational services, in terms of both regulation and innovation.
- Identify the strengths and weaknesses of country-level and institutional AI policies.
- Bring insights into how African HEIs might harness AI to transform technology use in teaching and learning.

The study began with a desk review that traced the history of AI in higher education globally and in Africa, identifying major concepts and frameworks to anchor the fieldwork. Building on this foundation, the research team combined several approaches: infrastructure assessments, stakeholder consultations, quantitative surveys, qualitative interviews, and case study.

Quantitative data was collected using structured surveys administered to 47 HEIs across Anglophone and Francophone Africa. The surveys captured adoption levels, institutional readiness, and policy frameworks. Survey data was analyzed using descriptive statistics.

Qualitative data was gathered through key informant interviews (KII) and focus group discussions conducted via digital platforms. These conversations provided deeper insights into faculty and administrative perspectives, institutional strategies, and perceived barriers to AI adoption.

The study also mapped the broader digital landscape by analyzing edtech startups operating in Africa, particularly those building AI-powered solutions for HEIs. This mapping was paired with an evaluation of governance structures and policy frameworks at both national and institutional levels.

Finally, the case study conducted with UM6P in Morocco examines institutional approaches to AI integration in higher education. The case focused on the initiatives of the Digital Ecosystem Office (DEO), providing in-depth insights into the design and implementation of AI-enabled systems within the university.

The methodology ensured a comprehensive view of AI adoption in African HEIs—capturing quantitative patterns and qualitative perceptions. The combination created a balanced evidence base to inform the study's findings and recommendations.

AI in African Edtech

A Scarcity of HEI-Focused Innovation

A mapping of the edtech landscape on the continent, based on data from HolonIQ, identified 414 active startups serving post-secondary education, yet only 45 of these startups specifically target HEIs. Of these 45 startups, only five focus on AI-powered solutions for HEIs, representing less than 2% of the total landscape. This scarcity of HEI-focused engagement contrasts sharply with the robust K–12 edtech sector, where 64% of startups report that they are concentrating their efforts.

Barriers to Startup Engagement with HEIs

The reasons for this market gap are seen when examining startup experiences and perspectives gathered from 199 edtech stakeholders. Entrepreneurs report that building solutions for HEIs involves navigating complex bureaucracies, lengthy decision-making processes, and uncertain payment cycles. Public HEIs often lack dedicated budgets for edtech, making it difficult for startups to establish sustainable business models. And while private HEIs show greater willingness to pay for services, they represent a relatively smaller market segment. Without structured partnerships, startups struggle to test and refine solutions, while HEIs miss opportunities to shape innovations to their needs. This disconnect limits the potential of edtech to contribute meaningfully to higher education reform.

A Landscape Still Building Skills and Lacking Funding

Additionally, most respondents described themselves as "learners" or "intermediate" in technical AI skill level. As such, the lack of AI-powered solutions appears to also reflect an ecosystem in its early stages of maturity: talent exists, but expertise is not evenly distributed, and knowledge often accumulates in specific regional hubs. There does not yet appear to be a critical mass of AI talent across the continent to build innovations at scale.

The financial challenges facing edtech startups compound these issues. Most companies rely on bootstrapping or early-stage grants, with 41 percent citing funding and revenue generation as primary obstacles to growth. The limited availability of investment capital specifically targeted at edtech creates a cycle where startups cannot scale to demonstrate impact, which in turn limits their attractiveness to investors.

Implications for the Future

While this study identified a larger mapping (115 startups serving HEIs, with 9.6% AI-focused), the conclusion remains consistent: AI innovation for HEIs is still underfunded and underdeveloped. Several forces contribute to this. K–12 edtech solutions tend to appeal more to investors because of clearer user bases (school systems and young learners), shorter sales cycles, and more immediate measurable outcomes (literacy, numeracy, standardized testing).

By contrast, HEI adoption requires longer contract negotiations, higher infrastructure investments, more complex content adaptation, and often institutional inertia. In Africa, for example, about 64% of edtech startups serve K–12 levels, with far fewer targeting higher education or professional skills. Without targeted investment, and structured partnerships with HEIs, AI-powered edtech will likely continue privileging K–12 education, leaving higher education relatively underserved.

June 2025 – Participants at the Education Collaborative Convening in Kigali complete the AI-Enabled Digital Maturity Scorecard during a dialogue session. Photo: Education Collaborative

AI Adoption in HEIs

Though startups may play a role, the main stage for AI adoption in higher education belongs to HEIs. This study surveyed 3,875 respondents across public and private HEIs, revealing both cautious experimentation and deep ambivalence about AI's role in teaching and learning. Adoption is neither uniformly advanced nor entirely absent but rather exists in pockets of experimentation surrounded by areas of traditional practice.

Patterns of AI Adoption

Perceptions of AI were split between optimism and concern. Many respondents saw AI as a pedagogical and administrative assistant: a tool to personalize learning, support grading, enhance creativity, and safeguard academic integrity. But skepticism persisted. Some feared job displacement, while others warned of ethical risks and loss of academic control.

Actual adoption reflects this tension. The study found that 62% of AI use occurs through AI-enabled LMSs, with public HEIs reporting higher uptake compared to private HEIs. This indicates a presently narrow focus on adoption. Yet, when asked about readiness to expand adoption, private HEIs expressed slightly greater confidence (48% vs. 46% for public HEIs). This contrast reflects different institutional realities: even though public HEIs may be larger and better prepared, private HEIs often feel more agile in experimenting with new technologies.

AI is also being deployed in smaller, less visible ways. Respondents also described AI use in administrative systems, from admissions to records management, as well as in teaching support, such as course preparation and plagiarism detection tools. Some respondents are also beginning to apply AI in areas that encourage creativity and problem-solving. But overall, adoption remains in the low-to-moderate range.

This finding, however, conflicts with self-reported AI competency levels, which many respondents rated as intermediate. The mismatch suggests that while individuals within HEIs are gaining skills, the institutions themselves are struggling to scale adoption.

Policy Frameworks Remain Thin

When asked about obstacles, respondents pointed to several recurring themes, key among them being a lack of policies to provide clear direction. Six in 10 respondents reported not having an institutional AI policy, and the same number said their institutions had no ethical guidelines for responsible AI use. Public HEIs were marginally better than private HEIs on both counts. However, the low overall percentages highlight a structural gap: most HEIs do not yet have clear AI-use rules or long-term strategies.

Operational barriers, notably lack of capital or affordable internet access and infrastructure, slow down and discourage large-scale experimentation. Ethical concerns about bias, fairness, and accountability also add further hesitation. While a few countries are drafting national AI strategies, political interest is low, and most HEIs are having to navigate the space on their own.

Caught Between Aspirations & Caution

The picture that emerges is of a higher education sector that's grappling with indecision. There is recognition of AI's potential to transform teaching, learning, and administration. There are early signs of adoption, especially through LMSs and administrative systems. Yet these advances are restrained by a lack of governance frameworks, infrastructure deficits, and persistent mistrust. Unless HEIs act deliberately to build trust, close equity gaps, and strengthen policy, AI in African higher education will remain fragmented and an opportunity missed rather than fully realized.

Examples of National Policy Leadership in Africa

Rwanda and Kenya stand out as two examples of forward-thinking countries in building national frameworks for AI.

Rwanda's 2023 National Artificial Intelligence Policy lays out a clear roadmap to harness AI for inclusive growth—emphasizing education, research, and human capital development. The policy prioritizes AI in university education and applied research, explicitly urging institutions to strengthen postgraduate programs, build technical infrastructure, and expand partnerships for AI-driven innovation.

In Kenya, the National Artificial Intelligence Strategy 2025–2030 defines a structured pathway for AI integration across sectors. It places HEIs at the center of national implementation, calling for expanded AI curricula, postgraduate training, and research–industry partnerships. Kenya's framework also outlines infrastructure, ethics, and governance mechanisms to guide responsible AI use and national competitiveness.

Together, these examples reflect ways in which national policy is shifting from aspiration to implementation, positioning higher education not just as a beneficiary but as a driver of AI transformation.

Table 1: List of institutions sampled for the survey

Regional Blocks	Country	Institution Private	Public
East Africa	**Kenya**	St Paul's University	Kenyatta University
		Riara University	
		Africa Nazarene University	
		Umma University	
		Aga Khan University	
		Strathmore University	
	Uganda	Cavendish University Uganda	Makerere University
		Uganda Martrys University	
		Living Stone International University	
	Tanzania	St. Augustine University of Tanzania (SAUT)	University of Dar es Salaam
	Rwanda	African Leadership University	University of Rwanda
		Carnegie Mellon University	
		Kepler College	
West Africa	**Ghana**	Wisconsin University	University of Ghana
		Ashesi University	Ho Technical University
		Catholic University College of Ghana	Akenten Appiah-Menka University
		Palm University College	
		Garden City University College	
		Knutsford University College	
	Nigeria	Bowen University	University of Ibadan
		Chrisland University	Bamidele Olumilua Univerity College
		Babcock University	Taraba State University
		Covenant University	
		Caleb University	
		Pan-Atlantic University	
	Ivory Coast	Université Polytechnique de Bingerville	
		International University of Grand Bassam	
	Togo	ISLA International Business School	
	Senegal		Université Gaston Berger de Saint-Louis
			The Dakar Institute of African Studies
Southern Africa	**South Africa**	African Leadership Academy	Rhodes University
		Honoris United Universities	Stellenbosch University
			University of Cape Town
	Botswana	Botho University	University of Botswana

Source: Field work, 2025

The Case of UM6P

To examine institutional approaches to AI integration in HEIs, this study conducted a case study with Mohammed VI Polytechnic University (UM6P) in Morocco due its structured efforts to embed AI within academic, administrative, and digital systems.

UM6P was launched in 2013 by Morocco's Office Chérifien des Phosphates (OCP) Foundation within the Mohammed VI Green City of Benguerir. Built on a 55-hectare campus and inaugurated in early 2017, UM6P was conceived as a pan-African hub for applied research, innovation, education, and entrepreneurship. Its mission is to address Africa's most pressing development challenges through interdisciplinary education and research in fields such as sustainable agriculture, renewable energy, digital technologies, public governance, and health.

The university is currently the highest-ranked university in Morocco and North Africa and ranked fourth in Africa in the 2026 Times Higher Education rankings.

At UM6P, artificial intelligence is treated as a foundation for reimagining the teaching and learning experience. From the earliest stages of academic course design to

administrative workflows, AI is woven into the institution's strategy. UM6P's approach shows what becomes possible when leadership, infrastructure, and pedagogy align. The following sections detail six defining features of UM6P's approach to integrating AI into higher education.

Setting Up a Digital Ecosystem Office (DEO)

To operationalize its ambition of becoming Africa's premier innovation-driven university, UM6P established the Digital Ecosystem Office (DEO). The DEO serves as the central engine for digital transformation at UM6P, orchestrating campus-wide technology platforms, AI-powered services, and innovation partnerships.

Its mission is to enable infrastructure, empower people, and evolve innovation by connecting AI, data systems, learning tools, research platforms, and operational services into a unified, user-centric digital ecosystem. Under the DEO's leadership, UM6P has piloted a range of AI tools while encouraging a digital mindset among its students, faculty, and staff, ensuring that technological adoption is not only widespread but pedagogically sound and purpose-driven. UM6P's DEO has built AI systems with a focus on strengthening key teaching and learning activities. These include:

- **An AI Course Builder** which streamlines course development through modular AI workflows grounded in pedagogy, cutting design timelines from months to weeks.
- **An AI-Orchestrated Video Pedagogy Pipeline (AIVPP)** which automates the creation of instructional videos, embedding proven teaching frameworks into every stage of production.
- **An AI-Powered Personalized Tutor** which provides students with adaptive, course-specific learning support, offering real-time feedback and dialogue-based guidance.
- **Deploying ChatGPT Edu university-wide (in partnership with OpenAI),** a first-of-its-kind deployment in Africa, giving 2,000+ students and faculty access within a secure, policy-controlled environment.
- **Redefining Hybrid Learning Through Immersive Virtual Classrooms** which allow students and faculty across several campuses and locations to connect in engaging synchronous virtual classes integrating AI tutors and advanced analytics.

Each initiative is framed around the same principles: start with the problem, ground the solution in pedagogy, design for scalability, and keep humans in the loop.

Rethinking Course Development

The first step in this transformation came through rethinking course development. Designing a course has always been a labor-intensive process, requiring faculty to balance curriculum goals, learning outcomes, and available content. In many HEIs, this process is still managed manually across scattered documents and communication threads, leading to extended timelines, inconsistent quality, and limited scalability.

UM6P introduced AI-enabled workflows that support faculty at each step, helping them organize objectives, structure syllabi, and align assessments with student needs. Rather than relying on a monolithic AI tool, the system distributes the workload across specialized AI agents. Each agent focuses on a specific component, such as course structure, content, activities, and assessments, allowing for modular use, transparency, and pedagogical alignment. Additionally, all tools operate in a cloud-based environment and require minimal digital infrastructure.

UM6P's AI Course Builder offers a structured, scalable approach to instructional design. By combining pedagogical theory with AI-enabled task automation, it enables faster, more consistent course development, even in HEIs with limited staffing or digital infrastructure.

The result has been a noticeable reduction in preparation time (from 8–12 weeks, down to 2–3 weeks) and greater consistency across courses. Faculty who once spent weeks on design now find themselves with more time to focus on pedagogy, mentoring, and research. Through modular workflows, accessible tools, and human–AI collaboration, the system demonstrates how educational quality and efficiency can be mutually reinforcing goals.

Making the Creation of Learning Material Easier

From there, UM6P turned to the challenge of producing high-quality instructional videos at scale, without the traditional cost and time burdens associated with professional media production. To address this, UM6P developed an AIVPP, a modular AI system designed to automate the creation of animated, captioned, eLearning content while embedding proven instructional design principles at every stage. What might once have required complex manual work is now streamlined into a single orchestrated process.

Rather than relying on a single general-purpose AI system, the AIVPP is built on a modular architecture that allows each AI component to specialize in one function, such as topic deconstruction, instructional scripting, image generation, audio narration, or quality assurance. This modular approach also increases the adaptability and replicability of the process, enabling other HEIs to adopt it in full or in part, depending on their resources and needs. UM6P's AIVPP cut production time from weeks to days, reduced costs by up to 70%, and enabled the creation of 30+ videos in just two months. Faculty reported greater

flexibility and clarity in their teaching materials, while students preferred the modular videos and showed stronger comprehension and retention.

Personalizing Learning with AI Tutors

As digital education expands, a major challenge for HEIs remains how to provide personalized, timely, and pedagogically sound learner support without high cost and time demands on human capital. Many learners in hybrid or asynchronous formats experience reduced engagement and limited feedback loops, especially outside of formal class hours.

UM6P's personalized tutor is designed to provide scalable, course-specific learning support without replacing faculty. Drawing on established theories—the Zone of Proximal Development for adaptive questioning, retrieval practice for recall, dialogic learning for interactive feedback, and scaffolding for guided hints—the system fosters deeper engagement than static course materials.

Built on a retrieval-augmented generation framework, the tutor anchors responses in actual course content. Students begin sessions with scaffolded questions, receive immediate feedback, and are guided with clarifications, hints, and targeted resource suggestions. Learner profiles track progress, tailoring subsequent interactions.

Early pilots showed high response accuracy, greater student motivation, and the ability to scale tutoring support to unlimited learners. Faculty interest was strong, with deployments already expanding into new courses. For other HEIs, the key lessons were clear: leverage existing content, focus on dialogue rather than answers, and maintain human oversight in early stages to build trust and relevance.

Redefining Hybrid Learning Through Immersive Virtual Classrooms

As HEIs embrace hybrid and digital-first learning models, a central challenge persists: how to recreate the engagement, immediacy, and social presence of in-person teaching in online or blended settings. Many remote learners struggle to sustain focus and connection, while faculty seek environments that enable dynamic teaching beyond conventional videoconferencing tools.

The UM6P Virtual Classroom addresses this challenge by recreating the immediacy and interactivity of face-to-face teaching through an immersive, technology-enhanced environment. Equipped with advanced audiovisual systems, intelligent sound, and dynamic lighting, the Virtual Classroom allows faculty to conduct synchronous sessions with a lifelike connection to learners. Up to 98 students appear life-size on a panoramic wall, enabling natural eye contact, movement, and discussion—restoring the human dimension often lost in online learning.

Current developments are extending this experience further by integrating AI tutors for personalized learner support and adding sentiment analysis to track attention and engagement in real time. Together, these innovations

mark a step toward data-informed, human-centered teaching that blends technology with authentic academic presence.

Deploying ChatGPT Edu university-wide (in partnership with OpenAI)

In 2025, UM6P became the first African HEI to form a strategic partnership with OpenAI to deploy ChatGPT Edu: a secure, institution-specific version designed for educational settings. This collaboration is being framed as a knowledge exchange initiative, with both parties committing to learn from UM6P's experience to better understand user behavior, digital readiness, and educational transformation at scale.

As part of the pilot, more than 2,000 students, faculty, and staff across UM6P are receiving free access to GPT-4's full suite of tools within a policy-controlled, private environment. The DEO is managing the initiative, provisioning accounts, coordinating training, and co-developing a university-wide AI-use policy to align the deployment with UM6P's pedagogical values and standards of academic integrity.

This deployment has multiple goals. UM6P is seeking to generate institutional learnings about how African HEIs are engaging with generative AI across teaching, learning, and operations. UM6P is also fostering digital fluency by encouraging experimentation in a safe, institution-wide sandbox. By democratizing access, UM6P is ensuring that all disciplines can explore AI's potential.

Early use cases are emerging across UM6P. Students are drafting essays and reports, creating summaries of readings, practicing coding, and accessing translation support. Faculty and staff are preparing syllabi, generating rubrics, designing lectures, automating reports, and brainstorming research directions. Workshops on AI policy are sparking campus-wide debate on ethics, assessment, and the evolving role of faculty in an AI-enabled classroom. And surveys show that users are reporting higher productivity and greater confidence in experimenting with AI tools.

By positioning ChatGPT Edu as a learning partnership rather than simply a tool rollout, UM6P is creating buy-in across its community. By documenting learnings in real time, UM6P is generating insights that are being shared both internally and globally.

	What UM6P Did	Why it Works	Action for Leaders
1. Centralize Digital Transformation Efforts	Established the Digital Ecosystem Office (DEO), led by a Chief Digital & AI Officer, to coordinate all AI and digital initiatives.	Centralization avoids duplication, enables clear standards, and ensures AI adoption aligns with institutional pedagogy philosophy and strategy.	Create a cross-functional digital office or task force to pilot, evaluate, and scale AI initiatives.
2. Start With Real Problems, Not Novelty	Targeted challenges like slow course design, costly video production, and limited tutoring support. AI tools were introduced to address these pain points directly.	Faculty buy-in increases when AI solves visible problems.	Run an internal audit to identify persistent problems (*where do delays, bottlenecks, or gaps exist in teaching and administration?)* and let those pain points guide your first AI pilots.
3. Build Pedagogy Into Every Instructional Tool	Designed AI solutions around established educational models (ADDIE, Bloom's Taxonomy, Gagné's Nine Events, etc.).	AI outputs stay academically credible and consistent across courses.	Pair technologists with instructional designers. Require all AI solutions to be grounded in pedagogical frameworks, not just technical capacity.
4. Pilot With Accessible Tools	Used cloud-based, modular tools like Canva, and ChatGPT Edu. These required no major infrastructure investment.	Low entry barriers made adoption scalable and affordable.	Choose tools that can integrate into existing systems (LMS, video platforms) without heavy new infrastructure.
5. Keep Humans in the Loop	Automated processes but retained faculty, instructional designers, and reviewers to check for contextual relevance, tone, and quality.	Trust and adoption grow when faculty see AI as a partner, not a replacement.	Frame AI as a *co-pilot* for staff and faculty. Formalize human reviews in every AI workflow.
6. Build Culture and Capacity	Paired new tools with training, onboarding, and workshops to grow AI literacy.	Adoption is sustainable only when the whole community has confidence in using AI responsibly.	Offer structured faculty development, student workshops, and staff training.
7. Scale Gradually, Document Learnings	Treated each initiative, video production, course builder, tutoring, ChatGPT Edu, as a learning experience, documenting results, lessons, and metrics.	Iterative scaling reduces risk and builds evidence of impact.	Be willing to pilot and refine before scaling. Share outcomes and use metrics like cost savings, faculty workload reduction, student engagement, and learning outcomes to guide decisions.

A Call for Collective Action

The integration of AI into African higher education represents both an imperative and an opportunity. The imperative stems from the pressing need to expand educational access, improve quality, and prepare students for an AI-transformed world. The opportunity lies in the potential to reimagine education, while addressing longstanding systemic challenges.

This study reveals a sector at a turning point. While current AI adoption remains limited and uneven, the foundations for transformation are emerging. HEIs recognize AI's potential, students and faculty show willingness to engage with new technologies, and successful implementations demonstrate what is possible. The gap between current reality and future potential is significant but can be overcome. The evidence suggests that African HEIs are not merely capable of integrating AI but are uniquely positioned to pioneer innovative applications that address educational challenges common across the developing world. By leveraging AI thoughtfully and strategically, African higher education can transform from a sector struggling with resource constraints to one leading global innovation in inclusive, accessible, and effective education.

The journey toward AI-transformed higher education in Africa will not be without challenges. Technical barriers, resource limitations, and organizational resistance will slow progress. Some initiatives will fail, and unintended consequences will emerge. However, the cost of inaction—while continuing with educational models that cannot meet growing demand or prepare students for future challenges—far exceeds the risks of innovation. The future of African higher education will almost certainly be shaped by decisions made today about AI integration. This report provides evidence and insights to inform those decisions, but ultimately, the choice rests with institutional leaders, policymakers, educators, and society at large. The opportunity exists to create an educational system that harnesses AI's power while maintaining human values and educational integrity.

This transformation will not happen overnight. It requires sustained commitment, continuous learning, and willingness to adapt as technologies and contexts evolve. But the potential reward—a higher education system that leads solution creation for Africa's development needs while contributing to global knowledge—justifies the effort required.

For HEIs

HEIs are the catalysts for AI in higher education. Startups can spark innovation, but it is institutions that determine how AI transforms teaching, learning, and operations.

1. **Develop Comprehensive AI Policies:** Create institutional frameworks to guide ethical and responsible use of AI across teaching, learning, research, and administration.

2. **Invest in Capacity Building:** Train faculty, staff, and students in AI literacy and digital skills, instilling a digital mindset in educational approaches, to ensure adoption is effective and sustainable.

3. **Anchor AI in Pedagogy:** Ensure that classroom AI tool or workflow is grounded in established educational design principles, not just technical capabilities.

4. **Pilot First, Then Measure and Scale:** Start with small, problem-driven pilots, document outcomes, and expand gradually based on evidence of impact.

5. **Foster Human–AI Collaboration:** Use AI to augment, not replace, faculty roles, with humans in the loop for oversight, cultural relevance, and quality assurance.

For Policymakers & Regulators

AI in higher education cannot scale without enabling policies. Governments must set guardrails, invest in infrastructure, and create incentives that support responsible, inclusive adoption, ensuring no institution or student is left behind.

6. **Develop national and regional strategies** to provide clearer guidelines for AI in higher education, addressing ethics, equity, and data governance.

7. **Create Incentives for HEIs:** Support HEIs through grants, subsidies, or innovation challenges that encourage experimentation with AI adoption.

8. **Strengthen Infrastructure:** Expand access to affordable connectivity, cloud services, and digital tools, especially in under-resourced regions.

For Funders & Industry Partners

Most AI funding today targets K–12, and higher education remains underserved. By channeling investment and expertise toward universities, funders and industry can unlock solutions that strengthen human capital at scale.

9. **Invest in HEI-focused startups:** Invest in startups serving higher education, not just K–12.

10. **Support public–private partnerships:** Encourage collaborations between universities and tech providers to co-develop AI solutions tailored to African contexts.

11. **Provide sustainable financing:** Fund not only infrastructure but also long-term skill and capacity building, content development, and maintenance of AI tools and systems.

12. **Prioritize funding streams dedicated to research** communication and dissemination: ensure that findings are translated into policy briefs, case studies, and open access outputs so that HEI leaders, faculty, and government officials can use the evidence. Research cannot have an impact if no one can access it.

13. **Commission targeted research to map the specific gaps in AI adoption in African HEIs**, and fund research on topics such as infrastructure bottlenecks, faculty digital literacy, curriculum misalignment, policy readiness, and funding shortfalls.

June 2025 – Participants at the Education Collaborative Convening in Kigali complete the AI-Enabled Digital Maturity Scorecard during a dialogue session. Photo: Education Collaborative

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African universities can collectively lead new models of technological progress that thrive within constraints: turning limited resources into catalysts and forward-looking experiments, while transforming the continent’s diversity into an engine of innovation. We must remind ourselves, and the world, that our capacity for innovation must not only be measured by our resources, but by *what we do* with what we have.

Rose Dodd, Executive Director, Education Collaborative

What Next?

This study is a starting point of a deeper commitment to understanding and advancing AI integration in education across diverse global contexts. As Qatar positions itself as a leader in educational innovation and AI strategy, exemplified by Hamad Bin Khalifa University's (HBKU) instrumental role in shaping the national AI strategy, there is value in learning from and supporting emerging centers of excellence worldwide.

Building on the findings and recommendations outlined here, WISE (Qatar Foundation) intends to continue to work with The Education Collaborative at Ashesi University to engage selected African HEIs on practical pathways for implementing AI based on the learnings and recommendations discussed in this study report.

While the exact institutions and focus areas are still being decided, our goal is to move from recommendation to action, such as piloting approaches in real campus settings, testing what works, and sharing lessons learned.

These engagements will generate new insights into how AI can strengthen teaching, learning, and administration in African HEIs. Ultimately, it aims to build a replicable model for how HEIs can serve as the bridge between research and industry, driving the next generation of Africa's AI-enabled growth.

WISE (Qatar Foundation) will continue to engage with partners, document experiences, and report on emerging learnings as this journey unfolds. In this way, the work begun in this study will serve as the foundation for a broader conversation and a cycle of experimentation, reflection, and scaling.

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At a moment when AI is rapidly transforming global education and employment landscapes, African universities have a unique opportunity to lead approaches to AI integration that are inclusive, and context grounded. This WISE study in partnership with The Education Collaborative at Ashesi University aims to illuminate both the promise and the gaps in how higher education institutions are preparing for not just for what technology can do, but for what people need. Ultimately, this work is not about AI alone, it’s about agency, local innovation, and tailoring solutions to the lived realities of African campuses.

Selma Talha-Jebril, Director, Research and Policy, WISE

About WISE
WISE is a global education platform and think-and-do tank convening leaders to shape the future of learning. Established in 2009 by Qatar Foundation under the leadership of its Chairperson, Her Highness Sheikha Moza bint Nasser. WISE drives educational innovation through policy engagement, research, leadership development, and practitioner programs. Through our year-round activities and flagship bi-annual Summit, WISE is building the future of education through strategic local, regional, and international collaborations.

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The authors acknowledge the use of Anthropic's Claude Opus 4.1 in the writing process of this study, primarily to improve the readability of the findings. AI-generated content was not used verbatim; instead, it was thoroughly reviewed and edited by the authors to ensure accuracy, authenticity, and integrity.

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