Journal of
Education and Practice
(JEP)

Internal Determinants of AI Readiness in Public Universities in Kenya

CARI Journals

Journal of Education and Practice
ISSN 2520-467X (Online)
Vol. 10, Issue No. 4, pp. 33 - 49, 2026
www.carijournals.org

Internal Determinants of AI Readiness in Public Universities in Kenya

Joseph Nguru Gachanja
Murang'a University of Technology
https://orcid.org/0000-0001-5536-8062

Accepted: 10th April, 2026, Received in Revised Form: 18th April, 2026, Published: 21st April, 2026

Abstract

Purpose: This study examined the internal determinants influencing Artificial Intelligence (AI) readiness in Kenyan public universities. Specifically, it explored how organizational culture, technological infrastructure, funding mechanisms, and leadership support interact to shape the extent of AI adoption in teaching, research, and administration.

Methodology: A systematic review of recent empirical studies and comparative analyses was conducted, focusing on higher education institutions in Kenya and related contexts across Africa and beyond. The review synthesized evidence from multiple sources to identify patterns, contradictions, and implications for AI readiness.

Findings: The findings reveal that AI readiness is strongly influenced by the alignment of internal determinants. Universities with innovative cultures, strong leadership, adequate funding, and robust infrastructure are better positioned to integrate AI. Conversely, institutions with resistant cultures, weak leadership, insufficient budgets, and inadequate ICT systems face systemic barriers that slow adoption. The interplay between these factors demonstrates that readiness is not determined by a single variable but by their collective reinforcement.

Unique Contribution to Theory, Practice, and Policy: The study contributes to theory by reinforcing institutional and resource-based perspectives, showing that organizational norms and assets are critical enablers of technological adoption. For practice, it highlights the need for universities to cultivate AI-friendly cultures, strengthen leadership commitment, invest in staff training, and modernize infrastructure. For policy, it underscores the importance of a national AI strategy that prioritizes funding, equitable access, and leadership development to accelerate readiness in public universities.

Keywords: *Artificial Intelligence Readiness, Organizational Culture, Technological Infrastructure, Funding Mechanisms, Leadership Support, Kenyan Public Universities, Higher Education Transformation*

JEL Codes: *O33, I23, M14, H52*

INTRODUCTION

Background of the Study

The integration of Artificial Intelligence (AI) into higher education has become an essential element in modernizing teaching, learning, and administrative processes worldwide. AI technologies offer transformative potential in improving research capabilities, enhancing student outcomes, and optimizing institutional management (Gutiérrez-Leefmans et al., 2025). However, the readiness of universities to adopt AI is heavily influenced by internal determinants such as organizational culture, technological infrastructure, funding mechanisms, and leadership support. While much attention has been given to global and regional trends of AI adoption, there is a critical need to understand the specific internal factors that affect AI readiness within Kenyan public universities, especially as they strive to integrate AI into their educational frameworks (Ogembo, 2025). These determinants, ranging from the availability of infrastructure, the strength of leadership, the adequacy of funding, and the prevailing organizational culture, collectively shape the pace and scale of AI integration. As Kenyan universities focus on fostering an AI-driven educational environment, it becomes crucial to examine how these factors play out within the local context to successfully enable AI adoption (Ngaine, 2025).

Globally, the adoption of AI in universities is growing rapidly, particularly in developed economies. In the United States, AI adoption in higher education is seen as an essential component of university modernization. A recent report found that over 75% of universities in the U.S. have incorporated AI into their curricula and research departments, aiming to foster a future-ready workforce (Karimi & Khawaja, 2023). The United Kingdom has also embraced AI across its public universities, with AI driving changes in student assessment, academic innovation, and institutional processes (Fragouli, 2025). In Japan, universities such as the University of Tokyo have been at the forefront of AI research, benefiting from significant government support and investment in AI infrastructure (Saito, 2024). These countries demonstrate that AI adoption is highly dependent on robust internal factors such as strong leadership support, adequate funding, a supportive organizational culture, and sufficient technological infrastructure.

In developing economies, while AI adoption is on the rise, the integration of AI in public universities faces several challenges. India and Brazil have made notable strides, with prestigious universities like the Indian Institutes of Technology (IITs) introducing AI-focused programs and research initiatives (Kumar & Shobana, 2025). However, these countries face challenges such as insufficient infrastructure and limited funding, which hinder broader AI adoption. In Sub-Saharan Africa, Kenya is one of the countries beginning to explore the potential of AI in public universities. According to a report by the Kenya National Commission for Science, Technology, and Innovation (NACOSTI, 2021), 50% of Kenyan public universities have started offering AI-related courses. Despite this progress, challenges such as limited funding, inadequate technological infrastructure, and weak leadership support remain significant barriers to further integration.

In Kenya, the government has initiated programs to foster AI adoption, such as the Kenya AI and Robotics Research Centre, aimed at improving AI literacy and research capabilities (Ngaine, 2025). However, the integration of AI in Kenyan universities is slow and uneven. According to Ogembo (2025), only 40% of Kenyan public universities have adequate access to AI-related resources, highlighting significant gaps in infrastructure, funding, and leadership support. Organizational culture also plays a crucial role in determining how universities approach AI adoption, as a supportive culture can drive faculty and staff engagement with AI initiatives, while resistance to change can hinder progress. Leadership support is particularly critical, not only in setting strategic vision and policies but also in mobilizing resources and facilitating staff training to build institutional capacity (Obura & Emoit, 2024). Funding mechanisms remain equally important, as sustainable financial resources are necessary to maintain infrastructure and support long-term AI initiatives.

Therefore, understanding the internal determinants that contribute to AI readiness in Kenyan universities is critical to overcoming these challenges and ensuring that AI is fully integrated into the academic and administrative spheres. By examining organizational culture, technological infrastructure, funding mechanisms, and leadership support, this study seeks to provide insights into how these internal factors can facilitate or hinder AI adoption in public universities. This research aims to contribute to the broader conversation on how developing economies can better leverage AI to improve their higher education systems.

Statement of the Problem

Public universities in Kenya play a pivotal role in shaping the future workforce, especially in sectors driven by technology and innovation. As the world increasingly relies on Artificial Intelligence (AI) to drive economic growth and technological advancement, AI adoption within Kenyan public universities is crucial. However, despite significant efforts from the government and stakeholders, the readiness of these institutions to integrate AI remains limited. According to the Kenya AI Strategy 2025-2030, only 40% of public universities have incorporated AI-related courses into their curricula, while 45% lack the required infrastructure, such as high-speed internet and AI tools, to fully support AI initiatives. Further compounding this challenge, NACOSTI (2021) reports that 30% of universities in Kenya have not implemented formal AI policies, and 25% of faculty members lack the necessary training to teach AI effectively. These statistics reveal significant gaps in AI readiness, ranging from curriculum development to resource availability, leadership support, and organizational culture.

The consequences of these gaps affect a wide range of stakeholders, particularly students, faculty, and university administrators. Students, who are the primary beneficiaries of AI education, risk graduating without the essential skills needed in an AI-driven job market, which hampers their career prospects. Faculty members struggle to integrate AI into their teaching and research due to inadequate training and resources, limiting their ability to foster innovation. University

administrators face difficulties in developing and implementing AI strategies without clear policies, sufficient funding, and infrastructure to support these initiatives. As a result, Kenyan universities may fall behind in global rankings, research outputs, and technological innovations, undermining the country's competitiveness in the global digital economy.

While several studies have explored the challenges of AI adoption in Kenyan universities, there is limited research on the internal factors that contribute to AI readiness. Ogembo (2025) discusses AI challenges in Kenyan universities but does not examine the role of leadership support and organizational culture in AI adoption. Ngaine (2025) addresses the digital divide but overlooks the specific internal determinants such as infrastructure and funding. Obura and Emoit (2024) focus on AI in academic writing but fail to address broader institutional barriers like resource allocation and strategic leadership that hinder AI integration. This study aims to fill these gaps by exploring the internal determinants, organizational culture, leadership support, infrastructure, and funding mechanisms, that directly affect AI readiness in Kenyan public universities.

Objective of the Study

General Objective

To examine the internal determinants of AI readiness in public universities in Kenya.

Specific Objectives

i. To analyze the influence of organizational culture on AI readiness in public universities in Kenya.
ii. To assess the adequacy of technological infrastructure as a determinant of AI readiness in public universities in Kenya.
iii. To evaluate the role of internal funding mechanisms in supporting AI readiness within public universities in Kenya.
iv. To examine the extent to which leadership support shape AI readiness in public universities in Kenya.

Research Questions

i. How does organizational culture influence AI readiness in public universities in Kenya?
ii. To what extent is the existing technological infrastructure adequate for supporting AI readiness in public universities in Kenya?
iii. How do internal funding mechanisms contribute to AI readiness in public universities in Kenya?
iv. How does leadership support influence AI readiness in public universities in Kenya?

LITERATURE REVIEW

Theoretical Literature Review

Schein's Organizational Culture Theory

Edgar Schein's Organizational Culture Theory (2010) provides a framework for understanding how organizational culture shapes behavior, decision-making, and responses to technological change. Schein identifies three levels of culture: artifacts, espoused values, and underlying assumptions. In universities, these cultural layers determine whether faculty and administrators embrace or resist AI adoption. A culture that values innovation and collaboration encourage openness to integrating AI into teaching, research, and administration. Conversely, a culture rooted in traditional practices may hinder adoption, even when infrastructure and funding are available. The theory anchors organizational culture by showing that culture is not a passive background factor but an active determinant of readiness. It influences how resources are mobilized, how leadership initiatives are received, and how staff training is embraced. Without a supportive culture, universities may struggle to achieve AI readiness despite having adequate infrastructure or funding. Thus, organizational culture becomes a critical lens for understanding institutional capacity to adopt AI.

Resource-Based View (RBV) Theory

Barney's Resource-Based View (RBV) Theory (1991) emphasizes that organizations achieve competitive advantage through internal resources that are valuable, rare, inimitable, and non-substitutable. In the context of AI readiness, technological infrastructure including ICT facilities, internet connectivity, and digital platforms, represents such strategic resources. Universities with robust infrastructure are better positioned to integrate AI into teaching, research, and administration, while those lacking these resources face significant barriers. The theory anchors technological infrastructure by framing it as more than a technical necessity; it is a strategic asset that determines whether institutions can adopt and sustain AI initiatives. For Kenyan public universities, inadequate infrastructure such as poor bandwidth or outdated hardware undermines readiness, even when leadership and funding exist. Conversely, institutions that invest in advanced infrastructure create a foundation for innovation and long-term competitiveness. RBV explains why infrastructure adequacy is central to AI readiness and why disparities in resource availability directly translate into uneven adoption outcomes.

Diffusion of Innovations (DOI) Theory

Everett Rogers' Diffusion of Innovations (DOI) Theory (1962) explains how new ideas and technologies spread within a social system. Adoption occurs in stages innovators, early adopters, early majority, late majority, and laggards and is influenced by relative advantage, compatibility, complexity, and trialability. In universities, funding mechanisms play a decisive role in determining whether AI initiatives move beyond innovators to wider institutional acceptance.

Adequate and sustainable funding ensures that AI tools can be piloted, scaled, and sustained across departments, while insufficient funding stalls adoption at early stages. The theory anchors funding mechanisms by showing that financial resources are not just enablers but catalysts for diffusion. For Kenyan universities, limited budgets often restrict AI projects to small-scale pilots, preventing broader integration. Conversely, institutions with sustainable funding can support training, infrastructure upgrades, and policy development, accelerating diffusion. DOI highlights how funding mechanisms shape the pace and scale of AI adoption, making them central to readiness.

Technology Acceptance Model (TAM)

Fred Davis' Technology Acceptance Model (TAM, 1989) is a widely used framework for understanding how individuals accept and use new technologies. TAM identifies two key determinants: perceived usefulness and perceived ease of use. In universities, leadership support directly influences these perceptions by providing staff training, clear policies, and strategic vision. Faculty members are more likely to adopt AI tools if they believe the technology enhances their teaching and research and if they feel confident in using it. Leadership-driven initiatives, such as professional development programs, reduce complexity and increase perceived usefulness, thereby fostering acceptance. The theory anchors leadership support by linking it to staff attitudes and behaviors. Without strong leadership, faculty may view AI as burdensome or irrelevant, limiting readiness. Conversely, supportive leadership that invests in training and communicates AI's value creates an environment where staff willingly integrate AI into academic practices. TAM thus explains how leadership support shapes institutional readiness for AI adoption.

Institutional Theory

Institutional Theory, advanced by DiMaggio and Powell (1983), explains how organizations adopt practices to gain legitimacy, conform to external pressures, and enhance efficiency. In the context of AI readiness, this theory anchors the dependent variable by showing why universities formalize AI strategies, integrate AI into teaching and research, and adopt tools across departments. Institutional pressures from government policies, accreditation bodies, and global competitiveness drive universities to align with technological standards. For Kenyan public universities, adopting AI is not only about internal determinants but also about meeting external expectations and maintaining legitimacy in the global academic community. Institutional Theory highlights that readiness outcomes, such as formal AI policies and widespread tool usage, often emerge from the need to conform to best practices and demonstrate modernity. Thus, this theory explains why universities pursue AI readiness as part of broader institutional survival and competitiveness in the digital era.

Empirical Literature Review

The integration of Artificial Intelligence (AI) in education is transforming teaching, research, and administration globally. In Kenyan public universities, however, adoption remains slow, shaped

by internal determinants such as organizational culture, technological infrastructure, funding mechanisms, and leadership support. These factors influence whether institutions can mobilize resources, foster innovation, and build capacity for AI integration. This review examines how these determinants affect AI readiness, focusing on challenges and opportunities. Understanding them is essential for enabling universities to establish strategies, adopt AI tools, and prepare students for an AI-driven workforce.

How Does Organizational Culture Influence AI Readiness in Public Universities in Kenya?

Organizational culture plays a central role in shaping the readiness of universities to adopt Artificial Intelligence (AI). Chege and Kihara (2025) examined determinants of AI adoption in Kenyan universities and found that institutions with innovative and adaptive cultures were more likely to embrace AI technologies. Similarly, Felemban et al. (2024) emphasized that supportive organizational cultures are critical for overcoming barriers to AI integration, as they foster openness to change and reduce resistance among staff. Huma et al. (2025) conducted a comparative study across higher education institutions and revealed that collaborative cultures, which encourage knowledge sharing and experimentation, were strongly associated with higher adoption rates. In contrast, Obura and Emoit (2024) highlighted those entrenched traditions in academic writing and research practices within Kenyan universities often hindered AI readiness, as faculty members resisted altering established routines. Malatji (2026) further noted that resistant cultures across Sub-Saharan Africa slowed AI integration, even in institutions with adequate resources, underscoring the importance of cultural transformation.

Taken together, these studies demonstrate that organizational culture is not a passive background factor but an active determinant of AI readiness. A culture that values innovation, collaboration, and adaptability create an enabling environment where leadership initiatives, funding, and infrastructure can be effectively mobilized. Conversely, resistant or rigid cultures undermine readiness by fostering skepticism and reluctance to adopt new technologies. The literature consistently points to the need for universities to cultivate cultures that embrace technological change, encourage experimentation, and reward innovation. For Kenyan public universities, this means moving beyond traditional academic practices and embedding values that support digital transformation. By aligning organizational culture with broader institutional goals, universities can accelerate AI adoption and strengthen their readiness for the demands of the future workforce.

To What Extent is the Existing Technological Infrastructure Adequate for Supporting AI Readiness in Public Universities?

The availability and quality of technological infrastructure form the backbone of any institution's ability to adopt and sustain Artificial Intelligence (AI) initiatives. Infrastructure encompasses ICT facilities, internet connectivity, digital platforms, and hardware systems that collectively enable universities to integrate AI into teaching, research, and administration. Nyamwange (2025) assessed AI integration in Kenyan universities and found that limited ICT facilities and poor

connectivity were major barriers, slowing down adoption and reducing faculty engagement. Ali (2023), in a comparative study of Egyptian universities, similarly highlighted that infrastructure gaps hindered faculty readiness and limited the effective use of AI tools. Shikokoti and Reuben (2024) examined AI adoption at the University of Nairobi and revealed that inadequate infrastructure, particularly in teaching and learning environments, restricted the quality of AI integration. Okumu and Kenei (2024) extended this discussion to technical and vocational institutions in Kenya, noting that insufficient digital platforms and unreliable connectivity were significant obstacles. Adu (2024) explored ICT diffusion in Africa and emphasized that infrastructure gaps in both Ghana and Kenya slowed the reinvention and scaling of AI technologies, underscoring the importance of robust digital systems.

Taken together, these studies demonstrate that technological infrastructure is not merely a technical requirement but a strategic enabler of AI readiness. Universities with strong ICT systems, reliable internet, and modern digital platforms are better positioned to integrate AI into academic processes, while those with weak infrastructure face systemic barriers that undermine readiness even when leadership and funding are present. The literature highlights a consistent pattern: infrastructure inadequacy translates directly into limited adoption, reduced faculty engagement, and poor student exposure to AI tools. For Kenyan public universities, addressing infrastructure gaps is therefore essential to achieving readiness. Investment in ICT facilities, bandwidth expansion, and digital platforms will not only support AI integration but also enhance competitiveness in the global higher education landscape.

How Do Internal Funding Mechanisms Contribute to AI Readiness in Public Universities?

Funding mechanisms are a decisive factor in determining whether universities can successfully adopt and sustain Artificial Intelligence (AI) initiatives. Adequate and sustainable financial resources enable institutions to invest in infrastructure, training, and policy development, while funding shortages stall adoption. Bukhari and Akhtar (2025) examined digital transformation in public universities and emphasized that financial backing is essential for sustaining AI initiatives, as institutions without stable funding struggled to maintain momentum. Malatji (2026) highlighted that inadequate funding remains a major barrier across Sub-Saharan Africa, preventing universities from bridging the AI divide despite growing interest. Kumar and Shobana (2025) reported similar findings in India, where limited budgets restricted universities from scaling AI programs beyond pilot projects. Boison (2025) studied Ghanaian universities and revealed that funding constraints hindered AI integration in administrative functions, limiting efficiency gains. Too (2025) further demonstrated that government policy and funding gaps in Kenyan public institutions slowed productivity and delayed AI adoption, underscoring the importance of financial prioritization.

Taken together, these studies show that funding mechanisms are not simply supportive but catalytic in shaping AI readiness. Institutions with adequate funding can invest in infrastructure, faculty training, and leadership initiatives, creating a foundation for sustainable adoption. Conversely,

universities with insufficient budgets face systemic barriers that undermine readiness, even when leadership and culture are supportive. The literature consistently highlights that funding shortages translate into limited infrastructure development, poor staff preparedness, and stalled diffusion of AI technologies. For Kenyan public universities, addressing funding gaps is therefore critical to achieving readiness. Strategic investment, diversified funding sources, and government prioritization will not only enable AI integration but also ensure that universities remain competitive in the global higher education landscape.

How Does Leadership Support Influence AI Readiness in Public Universities?

Leadership support is widely recognized as a pivotal determinant of Artificial Intelligence (AI) readiness in higher education institutions. Effective leadership provides vision, mobilizes resources, and creates policies that encourage faculty and staff to embrace technological change. Bukhari and Akhtar (2025) examined digital transformation in public universities and found that strong leadership was instrumental in mobilizing resources and sustaining AI initiatives. Felemban et al. (2024) similarly emphasized that leadership vision is critical for overcoming organizational barriers, as leaders set the tone for innovation and guide institutions through change. Shikokoti and Reuben (2024) highlighted the role of leadership-driven training at the University of Nairobi, showing that faculty readiness improved significantly when leaders prioritized professional development. Juma (2025) reinforced this finding, noting that faculty adoption of AI tools was higher in universities where leadership actively supported integration. Kabanda (2025) further explored leadership dynamics in AI integration, concluding that supportive leadership enhanced adoption by aligning institutional priorities with technological innovation.

Taken together, these studies demonstrate that leadership support is not simply an administrative function but a strategic driver of AI readiness. Leaders who articulate a clear vision, allocate resources, and invest in training create an enabling environment where faculty and staff perceive AI as useful and manageable. Conversely, weak or indifferent leadership undermines readiness by fostering uncertainty, resistance, and lack of direction. The literature consistently shows that leadership support shapes staff attitudes, influences organizational culture, and determines whether funding and infrastructure are effectively utilized. For Kenyan public universities, strengthening leadership commitment is therefore essential to accelerating AI adoption. By embedding AI into strategic plans, prioritizing faculty development, and championing innovation, university leaders can ensure that institutions are well-prepared for the demands of an AI-driven academic landscape.

Conceptual Framework

The conceptual framework illustrates the relationship between key internal determinants influencing AI readiness in public universities in Kenya. It highlights four main factors: organizational culture, technological infrastructure, funding mechanisms, and leadership support. These elements interact to shape the extent of AI adoption, including integration of AI in teaching and research, the establishment of AI-related policies, and the effective use of AI tools across

departments. The framework emphasizes that a supportive culture fosters openness to innovation, robust infrastructure provides the technical foundation, adequate funding ensures sustainability, and committed leadership drives vision and staff engagement. Together, these determinants collectively influence the level of AI readiness in Kenyan public universities, positioning institutions to prepare students for the demands of an AI-driven workforce.

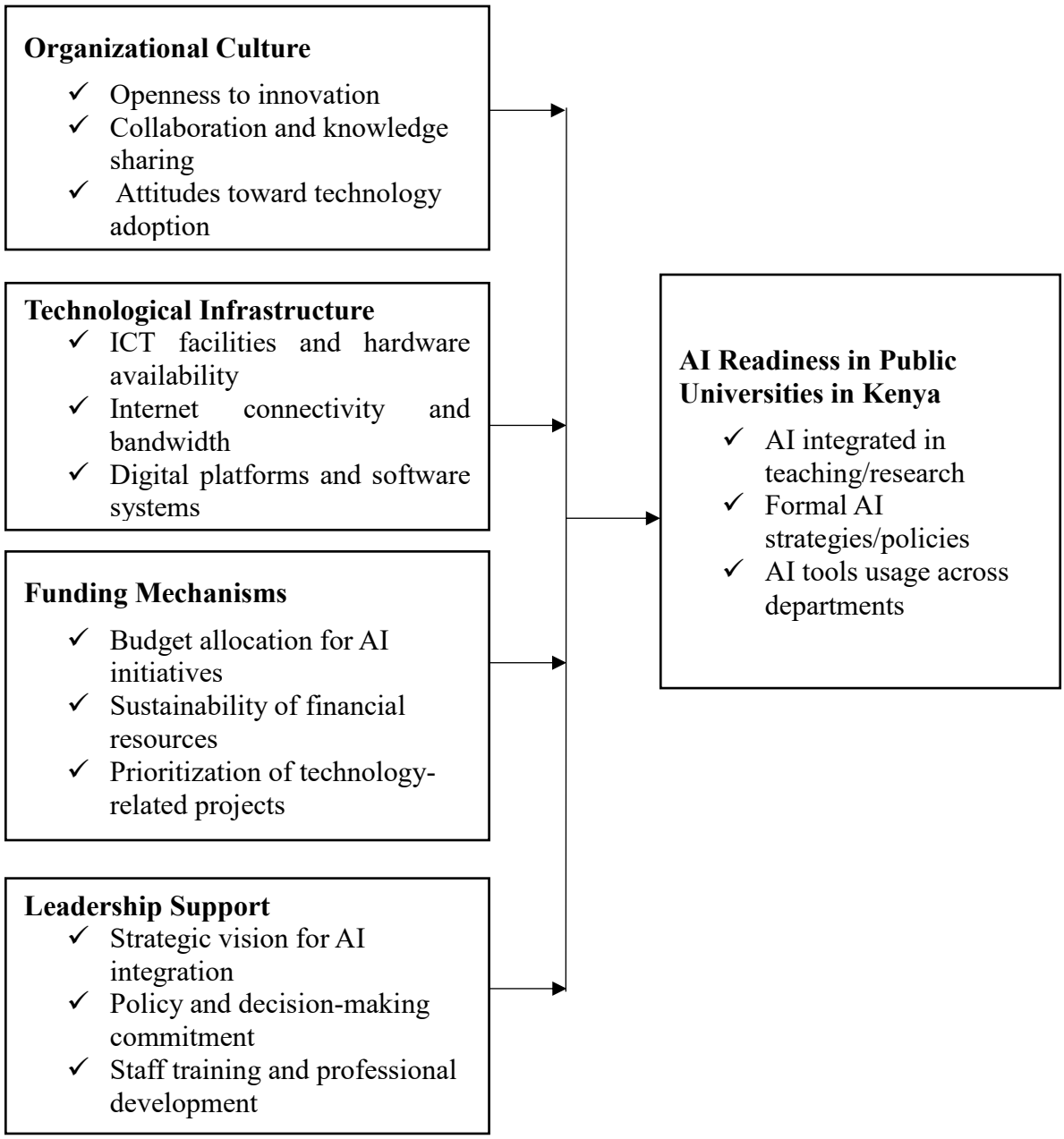

Figure 1: Conceptual Framework

METHODOLOGY

The study adopts a systematic literature review approach, focusing on AI readiness in Kenyan public universities. A comprehensive search was conducted across databases like Google Scholar, Scopus, and JSTOR. Studies published between 2019 and 2025 were included, with criteria based on relevance and empirical data. Data from selected studies were analyzed thematically, identifying key determinants like staff readiness, leadership support, and organizational culture affecting AI adoption.

FINDINGS

Influence of Organizational Culture on AI Readiness in Public Universities

The findings reveal that organizational culture is a decisive factor shaping AI readiness in Kenyan public universities. Institutions with cultures that value innovation, collaboration, and adaptability are consistently more successful in adopting AI, as such environments foster openness to change, encourage experimentation, and reduce resistance among staff. In contrast, universities characterized by entrenched traditions and rigid practices face significant barriers, with faculty and administrators less willing to alter established routines. This cultural resistance slows down adoption even when resources and leadership support are available, underscoring the importance of cultural transformation as a prerequisite for readiness. From a theoretical perspective, these findings reinforce institutional theory, which posits that organizational norms and values strongly influence the adoption of new technologies.

These results are consistent with Chege and Kihara (2025), who found that adaptive and innovative cultures in Kenyan universities were more likely to embrace AI technologies. Huma et al. (2025) similarly demonstrated that collaborative cultures, which encourage knowledge sharing and experimentation, were strongly associated with higher adoption rates, reinforcing the present study's observation that collaboration accelerates readiness. Felemban et al. (2024) emphasized that supportive organizational cultures reduce barriers to AI integration, echoing the role of openness and adaptability identified here. Conversely, the resistance observed in universities with entrenched traditions mirrors the findings of Obura and Emoit (2024), who noted that established academic routines hindered AI readiness, and Malatji (2026), who reported that resistant cultures across Sub-Saharan Africa slowed integration even in resource-rich institutions.

Taken together, the evidence underscores that culture is not a passive background condition but an active determinant that either accelerates or stalls readiness. A supportive culture amplifies the impact of leadership initiatives, funding, and infrastructure, while a resistant culture undermines them. For policy, this implies that national and institutional strategies must go beyond infrastructure investment to include cultural change programs that promote openness to innovation. In practice, universities should embed digital transformation into their organizational values, reward experimentation, and design faculty development initiatives that normalize AI use.

Without such cultural alignment, investments in infrastructure or leadership efforts risk being ineffective, making cultural transformation a critical pathway for strengthening readiness and preparing universities for the demands of the future workforce.

The Adequacy of Technological Infrastructure as a Determinant of AI Readiness in Public Universities

The findings reveal that technological infrastructure is a foundational determinant of AI readiness in Kenyan public universities. Institutions with reliable ICT facilities, strong internet connectivity, and modern digital platforms are better positioned to integrate AI into teaching, research, and administration. Conversely, universities with weak infrastructure face systemic barriers that undermine readiness, even when leadership and funding are present. Inadequate infrastructure translates into limited adoption, reduced faculty engagement, and poor student exposure to AI tools. This highlights that infrastructure is not merely a technical requirement but a strategic enabler of readiness. From a theoretical standpoint, these findings reinforce resource-based theory, which argues that organizational capabilities and assets such as ICT systems are critical for sustaining competitive advantage and innovation.

These results are consistent with Nyamwange (2025), who found that limited ICT facilities and poor connectivity slowed AI adoption in Kenyan universities, reducing faculty engagement. Shikokoti and Reuben (2024) similarly reported that inadequate infrastructure at the University of Nairobi restricted the quality of AI integration, particularly in teaching and learning environments. At a broader level, Adu (2024) emphasized that infrastructure gaps across Africa slowed the reinvention and scaling of AI technologies, underscoring the regional relevance of the present findings.

Taken together, the evidence demonstrates that technological infrastructure is not a passive backdrop but a critical enabler of AI readiness. Leadership support and funding can only be effective if the technological backbone exists to operationalize them. Policy implications point to the need for government and institutional strategies that prioritize infrastructure investment alongside cultural and leadership reforms. In practice, universities should expand bandwidth, modernize ICT facilities, and ensure equitable access to digital platforms. Without such measures, AI adoption risks remaining fragmented and unsustainable. Addressing infrastructure gaps therefore emerges as a critical pathway for strengthening readiness and positioning Kenyan public universities to compete in the global higher education landscape.

The Role of Internal Funding Mechanisms in Supporting AI Readiness within Public Universities

The findings reveal that funding mechanisms are a catalytic determinant of AI readiness in Kenyan public universities. Institutions with adequate and sustainable financial resources are able to invest in infrastructure, faculty training, and policy development, thereby creating a foundation for

successful adoption. Conversely, universities with insufficient budgets face systemic barriers that undermine readiness, even when leadership and culture are supportive. Funding shortages translate into stalled infrastructure projects, limited staff preparedness, and fragmented diffusion of AI technologies. This pattern underscores that financial resources are not simply supportive but central to sustaining AI initiatives. From a theoretical perspective, these findings align with resource dependency theory, which emphasizes that organizations rely on external and internal resources to achieve strategic goals. Without sufficient funding, universities remain constrained in their ability to innovate and adapt.

These results are consistent with Bukhari and Akhtar (2025), who emphasized that financial backing is essential for sustaining digital transformation in public universities, as institutions without stable funding struggled to maintain momentum. Malatji (2026) similarly noted that inadequate funding remains a major barrier across Sub-Saharan Africa, preventing universities from bridging the AI divide despite growing interest. In the Kenyan context, Too (2025) highlighted that government policy and funding gaps slowed productivity and delayed AI adoption, echoing the systemic challenges identified in this study.

Taken together, the evidence demonstrates that funding is not a peripheral factor but a central enabler of readiness. Leadership vision and cultural openness cannot translate into practice if financial backing is absent, while infrastructure development is directly tied to the availability of funds. Policy implications point to the need for government prioritization of AI in higher education budgets, alongside diversified funding sources such as public-private partnerships and donor support. In practice, universities should adopt strategic financial planning that allocates resources to infrastructure, training, and research, ensuring that AI adoption is not treated as a one-off project but as a sustained institutional priority. Addressing funding gaps therefore emerges as a critical pathway for strengthening readiness and positioning Kenyan public universities to remain competitive in the global higher education landscape.

The Extent to which Leadership Support Shape AI Readiness in Public Universities

The findings reveal that leadership support is a pivotal determinant of AI readiness in Kenyan public universities. Effective leadership provides vision, mobilizes resources, and creates policies that encourage faculty and staff to embrace technological change. Institutions with strong leadership are more successful in integrating AI, as leaders set the tone for innovation and guide universities through change. Conversely, weak or indifferent leadership undermines readiness by fostering uncertainty, resistance, and lack of direction. Leadership support also directly influences staff attitudes, shaping whether faculty perceive AI as useful and manageable. From a theoretical perspective, these findings reinforce transformational leadership theory, which emphasizes that leaders who inspire, motivate, and provide vision are critical in driving organizational change and innovation.

These results are in line with Bukhari and Akhtar (2025), who found that strong leadership was instrumental in mobilizing resources and sustaining digital transformation in public universities. Felemban et al. (2024) likewise stressed that leadership vision is essential for overcoming organizational barriers, as leaders set the tone for innovation and guide institutions through change. Shikokoti and Reuben (2024) further demonstrated that leadership-driven training at the University of Nairobi significantly improved faculty readiness, echoing the present study's observation that leadership directly shapes staff attitudes toward AI adoption.

Taken together, the evidence highlights that leadership is not simply an administrative function but a strategic driver of readiness. Leadership vision amplifies the impact of funding, infrastructure, and organizational culture, while its absence renders these factors less effective. Policy implications suggest that government and institutional frameworks should embed leadership development programs that equip university leaders with digital transformation competencies. In practice, universities should integrate AI into strategic plans, prioritize faculty development, and establish leadership structures that champion innovation. Strengthening leadership commitment therefore emerges as a critical pathway for accelerating AI adoption and positioning Kenyan public universities to thrive in an AI-driven academic landscape.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The findings underscore the central role of internal determinants in shaping AI readiness in Kenyan public universities. Organizational culture, leadership support, funding mechanisms, staff preparedness, and infrastructure collectively influence how quickly and effectively AI is integrated into teaching, research, and administration. While some institutions have made progress, challenges such as weak leadership, cultural resistance, inadequate training, and insufficient infrastructure continue to hinder adoption. The evidence suggests that readiness is not determined by a single factor but by the alignment of these determinants. Addressing internal barriers is therefore essential for enhancing AI readiness and enabling universities to harness the full benefits of AI for educational transformation and administrative efficiency.

Recommendations

Theory

Future research should deepen understanding of how organizational culture, leadership, funding, and staff readiness interact to influence AI adoption. Expanding the use of frameworks such as Technology-Organization-Environment (TOE) and Diffusion of Innovation (DOI) can provide richer insights into barriers and drivers. Incorporating transformational leadership theory will further clarify how leadership vision and support facilitate or hinder adoption.

Practice

Kenyan universities should prioritize leadership commitment and cultivate cultures of innovation to create enabling environments for AI. Faculty development programs focusing on AI tools and digital pedagogy are essential to build knowledge, skills, and positive attitudes. Institutions should also strengthen collaborations with industry partners to access funding, training, and technical resources, while investing in ICT infrastructure to support sustainable integration.

Policy

The Kenyan government should establish a national AI strategy with clear provisions for funding, training, and policy guidelines to accelerate adoption in public universities. Financial incentives and grants can support infrastructure development, while policies should ensure equitable access to AI resources across institutions. Strengthening support systems will enhance readiness and position universities to compete in the global higher education landscape.

REFERENCES

Ali, A. (2023). Assessing artificial intelligence readiness of faculty in higher education: Comparative case study of Egypt. *Master's thesis, The American University in Cairo*.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, *17*(1), 99-120.

Bukhari, S. M. S., & Rehman Akhtar, M. I. H. (2025). Digital transformation and AI readiness in higher education: A case study in public sector universities. *International Journal of Research and Innovation in Social Science*, *10*(1).

Chege, A. M., & Kihara, A. (2025). Determinants of artificial intelligence technologies adoption in Kenyan universities: A case of United States International-Africa. *Journal of Technology and Systems*, *7*(4), 16-35.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, *13*(3), 319-340.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review*, *48*(2), 147-160.

Felemban, H., Sohail, M., & Ruikar, K. (2024). Exploring the readiness of organizations to adopt artificial intelligence. *Buildings*, *14*(8), 2460.

Fragouli, E. (2025). Artificial intelligence in UK Higher Education: Transforming institutional processes, student assessment, and academic innovation. International Journal of Higher Education Management, 11(01).

Gutiérrez-Leefmans, M., Picazo-Vela, S., & Kareem, O. (2025). Adoption of artificial intelligence in higher education: A diffusion of innovation approach. The TQM Journal.

Huma, T., Ahmed, S., Mahmood, W., & Afridi, A. K. (2025). AI adoption in higher education: A comparative study of institutional readiness and challenges. *Social Science Review Archives*, *3*(4), 304-312.

Juma, M. (2025). Faculty artificial intelligence readiness in Adventist higher institutions of learning in Sub-Saharan Africa. *Pan-African Journal of Education and Social Sciences*, *6*(2), 130-148.

Karimi, H., & Khawaja, S. (2023). The impact of artificial intelligence on higher education in England. *Creative Education*, *14*(12), 2405-2415.

Kenya AI Strategy 2025-2030. (2026). *Kenya's AI Readiness Assessment*.

Kenya National Commission for Science, Technology, and Innovation (NACOSTI). (2021). *Report on AI adoption in Kenyan public universities*. Nairobi, Kenya.

Kumar, J. S., & Shobana, D. (2025). Artificial Intelligence Research in Indian Universities: Opportunities and Challenges.

Malatji, M. (2026). Bridging the AI divide in Sub-Saharan Africa: Challenges and opportunities for inclusivity. *arXiv preprint arXiv:2601.06145*.

Ngaine, L. K. (2025). Bridging the Digital Divide in Kenyan Public Universities: An Appraisal of ICT and Artificial Intelligence Readiness for Fostering Inclusive Pedagogy and Sustainable Development in Education. International Journal of Research and Innovation in Social Science (IJRISS), 9(11).

Nyamwange, C. (2025). Assessing the extent of integration of artificial intelligence in teaching and learning at Kenyan universities. *Pan-African Journal of Education and Social Sciences*, *6*(1), 76-87.

Obura, E. A., & Emoit, P. I. (2024). Artificial intelligence in academic writing and research skills in Kenyan universities: Opportunities and challenges. Africa Education Review, 20(6), 58-80.

Ogembo, P. O. (2025). Use Of Artificial Intelligence In The Implementation Of Public Higher Educational Academic Programs In Kenya: Challenges And Opportunities. Indonesian Journal of Education (INJOE), 4(2), 125-135.

Rogers, E. M. (1962). Diffusion of Innovation (DOI) Theory.

Saito, N. (2024). The comparative analysis of National Policies for research and education regarding usage of generative AI in Japan, the USA and the UK.

Schein, E. H. (2010). *Organizational culture and leadership* (Vol. 2). John Wiley & Sons.

Shikokoti, D. H., & Reuben, M. (2024). Influence of artificial intelligence on the quality of education in higher learning: A case study of the Faculty of Education, University of Nairobi, Kenya. *Journal of Education and Practice*, *15*(11).

Soko, J. (2026). Faculty and students' preparedness for artificial intelligence integration in higher education institutions across Sub-Saharan Africa. *Asian Journal of Distance Education*.