FACTORS AFFECTING INTEGRATION OF ARTIFICIAL INTELLIGENCE IN LEARNING AT MANAGEMENT UNIVERSITY OF AFRICA

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DECLARATION

This research project is my original work and has not been presented for a diploma in any other University

Signature..... Date .....

Clive Kimanzi

DBIT/15/0072/3/23

This research project has been submitted for examination with my approval as University Supervisor

Signature..... Date .....

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DEDICATION

I dedicate this proposal to my beloved family, Abiud and my sister Thelma whose unwavering love, encouragement and support have been my source of strength and inspiration throughout this academic journey.

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I am deeply grateful to Almighty God for His guidance and strength throughout this journey. My sincere appreciation goes to my supervisor, Alphonse Kilonzo, for his invaluable support and mentorship. I also thank my lecturers, colleagues and the students of the Management University of Africa for their encouragement, insights and contributions that made this proposal possible.

ABSTRACT

The purpose of this study is to investigate the factors influencing the integration of Artificial Intelligence (AI) in teaching and learning at the Management University of Africa. Specifically, the study aims: (i) to evaluate the effect of faculty training on the integration of AI in teaching and learning, (ii) to assess the effect of student digital literacy on AI integration, (iii) to examine the effect of institutional support on AI integration and (iv) to evaluate the effect of curriculum alignment on AI integration. This study employed a descriptive research design. The study targeted a population of 480 participants. Using a stratified random sampling technique. A sample of 144 respondents. Data was collected using closed-ended questionnaires. A pilot study involving 14 respondents was conducted beforehand to test the validity and reliability of the instrument. Data collection was carried out by administering the questionnaires physically. The collected data was processed, cleaned and analyzed using descriptive statistics, specifically frequencies and percentages, through Microsoft Excel. Presentation of results was done using tables for structured reporting and visual aids such as bar graphs and pie charts to enhance interpretation. Ethical considerations, including informed consent, voluntary participation, confidentiality, privacy and anonymity, were strictly observed. A total of 138 responses were obtained out of 144 targeted, yielding a high response rate. Descriptive findings showed that 49% of respondents agreed faculty were adequately trained, while 38% remained neutral or disagreed, suggesting gaps in faculty preparedness. On student digital literacy, 77% of respondents agreed that students could access digital information, though 24% indicated limitations. Regarding institutional support, only 46% agreed that adequate financial resources were allocated, while 43% disagreed, highlighting resource constraints. On curriculum alignment, 55% agreed AI was integrated into learning outcomes, while 36% disagreed, reflecting uneven adoption. The study concluded that faculty preparedness, student competencies, institutional commitment, and curriculum design were critical determinants of successful AI adoption. It further concluded that inconsistencies in training, financial resources, and curriculum reforms limited the full potential of AI in enhancing teaching and learning. The study recommended that the university should have strengthened faculty training programs and ensured continuous professional development, promoted structured digital literacy initiatives for students, increased financial allocations and improved ICT infrastructure, and aligned curriculum content and assessments with AI competencies relevant to the job market. It also recommended greater leadership commitment and collaboration with industry stakeholders to sustain AI adoption. The study suggested further research on government policy, cost–benefit analysis, and faculty attitudes toward AI in higher education. Overall, the findings underscored that while progress had been made, comprehensive and consistent strategies were necessary to achieve effective and sustainable integration of AI in university teaching and learning.

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ACRONYMS AND ABBREVIATIONS

AI	**:**	Artificial Intelligence
DL	**:**	Digital Literacy
HEIs	**:**	Higher Education Institutions
ICT	**:**	Information and Communication Technology
LMS	**:**	Learning Management System
MoE	**:**	Ministry of Education
MUA	**:**	Management University of Africa
PD	**:**	Professional Development

OPERATIONAL DEFINITION OF TERMS

Artificial Intelligence (AI): In this study, AI refers to computer-based systems and applications that simulate human intelligence to support teaching and learning processes, including adaptive learning platforms, automated assessments and generative tools.

Curriculum Alignment: The process of ensuring that course learning outcomes, instructional activities and assessments are designed to incorporate and reflect the effective use of AI technologies in education.

Faculty Training: Formal or informal professional development activities aimed at equipping lecturers with knowledge and skills to effectively apply AI tools in teaching and assessment.

Institutional Support: The policies, resources, infrastructure and administrative guidance provided by the Management University of Africa to enable and sustain AI integration in teaching and learning.

Integration of AI in Teaching and Learning: The extent to which AI tools and applications are adopted, embedded and utilized in the instructional process at the Management University of Africa, measured through frequency, depth and quality of use.

Student Digital Literacy: The ability of students to access, evaluate and effectively use digital and AI technologies in their learning, including technical, ethical and critical thinking competencies.

CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter discusses the background of the study, statement of the problem, objectives of the study, research questions, significance of the study and scope of the study. It presents the global, African and Kenyan perspectives on the integration of Artificial Intelligence in teaching and learning, outlining the context and rationale for the research.

1.1 Background Information

The integration of artificial intelligence (AI) in higher education reflects a transformative trend, whereby institutions seek to harness AI tools to enhance teaching and learning efficiency, scalability and personalization. However, this promise is mitigated by significant challenges such as lack of faculty readiness, concerns over academic integrity and insufficient institutional infrastructure that hinder the effective adoption of AI systems in university contexts (Tan et al., 2024; UNESCO, 2024).

Globally, the rapid introduction of AI in education has sparked both hope and apprehension. On the one hand, AI technologies offer educators novel means to design adaptive learning experiences and streamline administrative tasks; on the other hand, experts warn about risks related to inequity, ethical blind spots and policy vacuums if AI integration proceeds without strategic alignment (World Economic Forum, 2025; NAFSA, 2024).

Across African higher education, the integration of artificial intelligence (AI) is emerging as both an opportunity and a significant challenge. Experts note that although AI-powered tools like intelligent tutoring systems (ITS) and automated feedback can enhance academic engagement, personalized learning and institutional efficiency, they remain underutilized due to persistent infrastructure deficits, digital divides and lack of lecturer training (Falebita, 2024; Tshibangu, 2024). In addition, countries such as South Africa face equitable access concerns and ethical governance gaps that further hinder AI's full potential in higher education settings (Funda & Mbangeleli, 2024; Azaroual, 2024).

In Kenya, the integration of artificial intelligence (AI) into higher education remains nascent, with limited accessibility to AI tools and uneven incorporation into curricula across institutions. Studies reveal that while the use of chatbots, intelligent tutoring systems and adaptive platforms shows promise in enhancing personalized learning and administrative efficiency, widespread adoption is hindered by infrastructural disparities, insufficient training for faculty and weak policy frameworks (Matere, 2024; Wambua et al., 2023).

1.2 Statement of the Problem

Despite the growing prevalence of AI tools in higher education, their integration within Kenyan universities remains limited and uneven, undermining potential gains in personalized learning, efficiency and academic innovation. A national study found that AI tools such as intelligent tutoring systems, adaptive platforms and automated grading are only minimally accessible and adoption is patchy across disciplines due to infrastructural constraints and inadequate faculty training (Matere, 2024). This disparity is compounded by weak integration into existing curricula, with many AI tools operating in isolation from course design, undermining their pedagogical impact (Matere, 2024).

Moreover, the digital divide continues to obstruct AI adoption. Although mobile broadband covers much of sub-Saharan Africa, just around 37% of the population actively uses the internet a trend mirrored in Kenya limiting the reach of AI-based educational interventions (Björkegren et al., 2025). Furthermore, disparities in internet access and digital literacy exacerbate educational inequities: approximately 50–55% of jobs in Kenya are expected to require some level of digital skills by 2030 (IFC & World Bank, 2021), yet current readiness among students and faculty is insufficient to meet this demand.

This study is thereby necessitated to systematically investigate the factors hindering AI integration specifically faculty training, student digital literacy, institutional support and curriculum alignment within the Management University of Africa. Understanding these dynamics will enable targeted interventions to enhance AI usage, inform policy development and contribute to more inclusive, effective AI-enhanced learning environments in Kenyan higher education.

1.3 Objectives of the Study

The general objective of the study was to investigate factors affecting integration of Artificial intelligence in learning at Management University of Africa

1.3.1 Specific Objectives

i. To evaluate the effect of faculty training on the integration of Artificial Intelligence in teaching and learning at Management University of Africa.
ii. To assess the effect of student digital literacy on the integration of Artificial Intelligence in teaching and learning at Management University of Africa.
iii. To examine the effect of institutional support on the integration of Artificial Intelligence in teaching and learning at Management University of Africa.
iv. To evaluate the effect of curriculum alignment on the integration of Artificial Intelligence in teaching and learning at Management University of Africa.

1.4 Research Questions

i. How does faculty training affect the integration of Artificial Intelligence in teaching and learning at the Management University of Africa?
ii. How does student digital literacy influence the integration of Artificial Intelligence in teaching and learning at the Management University of Africa?
iii. How does institutional support affect the integration of Artificial Intelligence in teaching and learning at the Management University of Africa?
iv. How does curriculum alignment affect the integration of Artificial Intelligence in teaching and learning at the Management University of Africa?

1.5 Significance of the Study

This study will provide valuable insights to the Management University of Africa by identifying the key factors faculty training, student digital literacy, institutional support and curriculum alignment that influence the integration of Artificial Intelligence (AI) in teaching and learning. The findings will help the university improve instructional practices, build staff and student capacity and promote equitable access to AI-enhanced learning environments.

The study will generate evidence-based recommendations to guide education policy makers in Kenya in developing supportive frameworks for AI adoption in higher education. By highlighting infrastructural gaps, training needs and curriculum alignment issues, the results will help policy makers design strategies that enhance digital transformation, ensure responsible use of AI and foster competitiveness in the global knowledge economy.

The research will contribute to the growing body of literature on AI integration in higher education, particularly within the African and Kenyan context where empirical studies are still limited. It will provide a foundation for future academic inquiries and comparative studies, while also offering practical insights for educators and scholars interested in leveraging AI for pedagogical innovation.

1.6 Scope of the Study

The study will focus on investigating the factors influencing the integration of Artificial Intelligence (AI) in teaching and learning at the Management University of Africa. Specifically, the study will examine the effects of faculty training, student digital literacy, institutional support and curriculum alignment on AI adoption within the university's academic processes. The research will be conducted between July 2025 and September 2025, covering a three-month period. The study will be carried out at the Management University of Africa, located in Nairobi, Kenya. The target population will consist of approximately 480 participants, including both students and staff.

1.7 Chapter Summary

In this chapter, the background of the study, statement of the problem, objectives of the study, research questions, significance of the study and scope of the study were discussed. It provided a clear understanding of the problem, justification of the study and the boundaries within which the research was undertaken.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

Chapter two discusses the theoretical literature review by outlining relevant theories, the empirical literature review highlighting global and local studies and the summary and research gaps that justify the study. It also presents the conceptual framework to establish relationships among variables and the operationalization of variables for measurement.

2.1 Theoretical Literature Review

A theoretical literature review entails examining existing theories and frameworks to shape the conceptual foundation of a study and to justify its design and methodology. It serves to situate the research problem within established scholarly discourse, clarify underlying constructs and guide the development of research questions and methods (Snyder, 2019; Paré et al., 2017). By anchoring a study in theory, it enhances coherence, rigor and the interpretive power of findings. Moreover, a robust theoretical literature review supports theoretical validity and methodological alignment, ensuring that the research contributes meaningfully to both theory and practice in the field (Snyder, 2024; Paré et al., 2017). The Technology Acceptance Model (TAM) will serve as the anchor theory, addressing three objectives faculty training, student digital literacy and institutional support by explaining how perceived usefulness and ease of use influence AI integration in teaching and learning. To complement this, the Curriculum Alignment Theory will guide the objective on curriculum integration, while the Diffusion of Innovations (DOI) Theory will act as a supportive framework by explaining how innovations such as AI spread within the university community.

2.1.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed by Fred Davis in 1989 as an adaptation of the Theory of Reasoned Action, proposing that perceived usefulness (PU) and perceived ease of use (PEOU) significantly shape users' attitudes and behavioral intentions toward adopting technology (Davis, 1989 as cited in Lin, 2023). TAM remains highly influential in education research, with multiple studies endorsing its robustness in explaining technology acceptance among educators and learners (Lin, 2023; Zuo, 2025).

Reviews of TAM affirm its enduring relevance, but scholars note that its classic constructs may need extension to account for context-specific factors such as trust, risk and emotional support in contemporary AI-enabled learning environments (Zuo, 2025). Extending TAM with these constructs enhances its explanatory power in explaining adoption of generative AI tools by emphasizing how external perceptions mediate the PU–BI (behavioral intention) pathway (Zuo, 2025). This expanded perspective aligns well with your study's focus on faculty training and institutional support, suggesting that enhancing PU and lowering PEOU through effective training and enabling environments will more readily promote AI integration.

In the context of your three key objectives faculty training, student digital literacy and institutional support TAM provides a solid foundation. For faculty training, the model suggests that successful PD (professional development) increases perceived ease of use, which in turn boosts perceived usefulness, thereby elevating faculty's intention to integrate AI. For student digital literacy, higher literacy improves students' ability to perceive and engage with AI tools as both useful and easy to use (Linus et al., 2024 shows digital literacy influences PU and PEOU, which shape behavioral intention). For institutional support, supportive infrastructure and policies reduce perceived effort and highlight usefulness, reinforcing both PU and PEOU and thereby facilitating adoption (Zuo, 2025). By anchoring the study in TAM, you can theoretically explain how improvements in these key areas act through PU and PEOU to drive AI integration.

2.1.2 Curriculum Alignment Theory

The Curriculum Alignment Theory, rooted in the work of educational psychologist John B. Biggs, was developed to ensure that teaching activities and assessment tasks are intentionally structured to address specific learning outcomes (Biggs & Tang, 2011). Biggs defined this as the conscious alignment of intended learning outcomes, teaching-learning activities and assessment tasks grounded in constructivist principles, thus forming a cohesive educational design (Biggs, 2011).

Subsequent research has affirmed the theory's value, especially within higher education contexts where clear outcomes-based course design is vital (Zhao, 2023). For instance,

Zhao's multi-case study found that when teaching strategies and assessments are not cognitively aligned with curriculum standards, learning outcomes suffer significantly (Zhao, 2023). Other scholars note that misalignment often results from institutional inertia, insufficient teacher training and lack of curricular review mechanisms factors that directly impede curriculum coherence (Chartered College of Teaching, 2023).

Regarding AI integration, the Curriculum Alignment Theory becomes especially pertinent. Curriculum alignment ensures that if AI tools and content are embedded, they must map directly to intended learning outcomes and be properly assessed otherwise, they risk being superficial add-ons. This is echoed in a GenAI Curriculum Alignment (AI-CAM) model, which adapts Biggs' principles into a five-step module-level process: define learning outcomes, design assessments, select AI tools, create teaching activities and monitor integration (Schofield & Zhang, 2024). AI-CAM provides educators with a structured method to embed AI literacy meaningfully, rather than as an afterthought.

In this study, the theory directly informs the objective related to curriculum alignment, by suggesting that AI integration should not only be present but purposely aligned with learning outcomes, pedagogy and assessment. It also underscores the importance of institutional support in revisiting and redesigning curricula, ensuring that AI tools contribute to intended competencies rather than acting as isolated enhancements. In sum, Curriculum Alignment Theory offers the conceptual foundation for evaluating how well AI integration aligns with academic goals and outcomes, thereby solidifying its relevance for your fourth specific research objective.

2.1.3 Diffusion of Innovations (DOI) Theory

The Diffusion of Innovations (DOI) Theory was originally developed by Everett M. Rogers in 1962, proposing that innovations spread through social systems via distinct adopter categories innovators, early adopters, early majority, late majority and laggards and through stages of awareness, persuasion, decision, implementation and confirmation (Rogers, 2003). DOI's core tenets innovation characteristics, communication channels, time, social system and adopter categories provide a robust framework for understanding the diffusion of AI within university communities (Rogers, 2003).

Contemporary research extends and critiques DOI's application in higher education. Phillips (2025) applied DOI to AI adoption in a U.S. university, finding AI spread through administrators, support staff, faculty and students at over twice the rate predicted by traditional models highlighting how institutional champions and social networks accelerate diffusion (Phillips, 2025). Meanwhile, Jin et al. (2024) examined generative AI adoption across 40 global universities through a DOI lens and noted that factors such as compatibility, trialability and clear communication structures significantly impacted institutional uptake, while also exposing gaps in stakeholder engagement strategies (Jin et al., 2024).

In your study, DOI theory provides a conceptual foundation for exploring how AI adoption spreads across different groups within MUA. For example, tracking awareness and persuasion phases among students, faculty and administrators will reveal how innovations like AI tools gain momentum. The model's emphasis on adopter categories helps explain why some staff (innovators and early adopters) might lead AI integration, while others lag behind. Moreover, DOI underlines the role of communication channels (training workshops, peer networks) and social system attributes (faculty communities, leadership support) in facilitating adoption. Understanding these dynamics allows your research to map how integration varies by group and stage, thereby informing targeted strategies to accelerate diffusion. DOI thus complements TAM and Curriculum Alignment Theory by situating AI integration within the broader social and temporal processes of innovation spread at the institutional level.

2.2 Empirical Literature Review

An empirical literature review synthesizes and analyzes prior studies based on systematic observation, verifiable data and transparent methods, rather than purely theoretical discourse, thereby grounding a research problem in evidence-based findings (Imberger et al., 2016; Ohio State University, 2023). Its significance lies in aggregating empirical results to identify patterns, support evidence-informed decision-making and clarify gaps in the existing literature all of which strengthen the design and justification of new investigations (Paré et al., 2015).

2.2.1 Faculty Training and The Integration of Artificial Intelligence in Teaching and Learning.

In Ghana, Nyaaba, Zhai and colleagues (2024) conducted an exploratory mixed-methods study examining how pre-service teachers perceive and use Generative AI (GenAI) as both learning companions and teaching assistants. They surveyed 167 pre-service teachers across teacher education programs, applying exploratory factor analysis (EFA) and regression models to uncover key attitude dimensions teaching support, learning enhancement and ethical considerations. The study revealed generally positive attitudes towards GenAI, with older and more advanced students using it more frequently but no major differences in attitude based on demographic factors. While demonstrating potential for GenAI in professional preparation, the study lacks longitudinal tracking of actual classroom implementation and does not account for faculty perspectives or broader institutional training mechanisms (Nyaaba et al., 2024).

Henkel et al. (2024) executed a rigorous randomized controlled trial in Ghana to test the effectiveness of "Rori," an AI-powered conversational math tutor delivered via WhatsApp. The intervention targeted approximately 1,000 students in grades 3–9 across 11 schools, with twice-weekly 30-minute sessions over eight months. The treatment group demonstrated statistically significant improvements in math achievement (effect size = 0.37, $p < 0.001$), highlighting the feasibility and impact of AI tools in low-resource settings. Although this demonstrates AI's direct pedagogical benefits, the study did not assess how teachers were trained to integrate or support this AI tool, nor did it explore faculty readiness or institutional support mechanisms revealing a gap in understanding how faculty training mediates effective AI adoption (Henkel et al., 2024).

Fundi, Sanusi, Oyelere and Ayere (2024) conducted a quantitative study involving 308 in-service teachers, some of whom were from western Kenya, to evaluate their preparedness to integrate AI within Kenya's Competency-Based Curriculum (CBC). The researchers utilized structured questionnaires measuring AI-related confidence, attitudes, ethical understanding and perceived norms based on the Theory of Planned Behavior. They found that while teachers displayed moderate confidence and generally positive attitudes towards

AI integration, their grasp of AI ethics and the influence of peer norms were inconsistent. Importantly, the study did not disaggregate findings by geographical region or provide nuanced insights into how teachers in Western Kenya differ in preparation levels. Consequently, there remains a gap concerning regional dynamics including infrastructural support, faculty training availability and cultural adoption factors that influence AI integration in western Kenyan contexts (Fundi et al., 2024).

In 2024, Microsoft launched a comprehensive AI skilling initiative in Kenya aiming to train university faculty, including those in western Kenya's institutions, on AI tools and pedagogical integration (Microsoft, 2024). The initiative combined interactive workshops, online modules and peer learning cohorts. Although early reports indicate increased faculty engagement with AI tools and improved self-reported confidence, the evaluation relied primarily on pre-post surveys without rigorous controls or qualitative follow-up. This limits deeper understanding of long-term integration behaviors, contextual differences in adoption across regions such as Western Kenya and whether changes translate into classroom practice. Hence, there's a need for empirical studies that assess localized impacts of such training initiatives, especially among faculty in Western Kenya, to capture both behavioral outcomes and sustainable integration (Microsoft, 2024).

2.2.2 Student Digital Literacy and the Integration of Artificial Intelligence in Teaching and Learning.

Melliti and Henchiri (2024) conducted a mixed-methods study at the University of Kairouan, Tunisia, involving 102 English students and interviews with 25 educators. Utilizing questionnaires and interviews, they examined students' engagement in technology-based autonomous learning and its correlation with digital literacy and infrastructure. They found that while 80% of students practiced autonomous learning outside of class and 76% recognized technology's role in accommodating diverse learning styles, in-class technology use was markedly low, highlighting gaps in infrastructure, training and curriculum coherence. Educators cited rigid teaching methods and low autonomy in earlier levels as barriers. The study's limitations include its narrow disciplinary focus (English department) and lack of linkage to AI-specific literacies or

direct AI integration in learning. Therefore, it underscores the need for broader empirical work that bridges digital literacy with actual AI tool usage in higher education (Melliti & Henchiri, 2024).

Farley and Langendorf (2023) noted that in Tunisia only 16% of the population had advanced digital skills, while 20% possessed basic literacy; access disparities severely limited the effective use of AI tools in education. This population-wide survey embedded within a broader MENA context highlights significant digital literacy deficits that restrict AI engagement, but lacks university-level focus or empirical link to student learning behaviors (Farley & Langendorf, 2021). This gap emphasizes the urgent need for targeted empirical research examining how student digital literacy within Northern African universities influences AI integration a gap your study could directly address.

Robert and Mmbone (2025) investigated the impact of a Digital Literacy Program (DLP) on early childhood development in Kanduyi Division, Bungoma County part of Western Kenya but relevant for northern regional educational context. The study used a mixed-methods design, combining structured questionnaires and focused interviews with teachers and headteachers. They assessed infrastructure readiness, digital device availability and teacher competence. Findings highlighted that the DLP significantly improved time management, communication and literacy skills among preschoolers. However, while the programme showed early gains, the study did not address whether student digital literacy translated into effective integration of AI tools at higher education levels or long-term pedagogical outcomes. This gap limits understanding of how DLP successes at early levels might inform student digital literacy and AI adoption in tertiary education in Northern Kenya.

Oguna (2023) developed and piloted a methodological framework for community-centered digital literacy in Ndhiwa, a rural area in Homa Bay County, adjacent to Northern Kenya regions. The qualitative study involved participatory design sessions with local educators and community members to co-create a digital literacy program. The framework prioritized local needs, cultural relevance and resource availability. Though not university-focused, the methodology provides valuable insight into grassroots-level digital literacy

development. The study's limitation lies in its lack of focus on student digital literacy as related to AI and higher education; thus, it offers little empirical evidence on how such community models impact students' readiness to adopt AI in learning contexts.

2.2.3 Institutional Support and the Integration of Artificial Intelligence in Teaching and Learning.

Melo (2025) conducted a mixed-methods study across several Cameroonian universities including the University of Maroua and ICT University to explore how AI integration addresses educational inequality through institutional support. Surveys ($n \approx 500$ students) and semi-structured interviews with educators and policymakers ($n \approx 30$) were used to assess perceptions of infrastructure, support mechanisms and AI-mediated teaching tools. The study uncovered that institutions implementing AI, such as audio-based tools for visually impaired students and adaptive language platforms, significantly enhanced accessibility. However, the research highlighted major gaps: inconsistent internet connectivity in semi-urban campuses and fragmented institutional policies to guide responsible AI deployment. The absence of a cohesive institutional framework for training, resource allocation, or governance remains a barrier to broader, equitable AI integration (Melo, 2025; UNDP, 2023).

In the Democratic Republic of Congo, a recent exploratory study (Mukawa, 2023) evaluated institutional preparedness for AI in scholarly activities at three major universities in Kinshasa. Using a survey of 150 faculty members and interviews with ten university administrators, the study assessed infrastructure readiness, institutional investments, AI awareness and policy supports. While some institutions reported efforts toward AI adoption such as investments in high-speed networks and AI-oriented workshops many faculties had limited access to tools and lacked formal support mechanisms. Crucially, most universities lacked clear governance structures, ethical guidelines, or faculty training programs, limiting sustainable AI adoption. The study's gap lies in its lack of student-level data and detailed exploration of how institutional support translates into actual instructional use of AI a critical area for future research (Mukawa, 2023).

Chege and Kihara (2025) conducted a cross-sectional quantitative study at United States International University–Africa (USIU–A) in Nairobi to analyze how factors such as technical capability, trust, relative costs and institutional readiness influence AI adoption. Using structured questionnaires administered to 378 students, the researchers employed descriptive statistics, correlation and multiple regression analysis. They found that technical capability significantly explained 25.5% of the variance in AI adoption, while trust factors (privacy, reliability, ethical use) had a smaller but significant effect (10.7%). Institutional readiness (including culture and policy alignment) showed weak positive correlations, while resource readiness had a negative correlation, altogether explaining 8.4% of AI adoption variability. Though informative, the study is limited by its focus on student perceptions, leaving a knowledge gap regarding faculty perspectives, detailed institutional infrastructure dynamics and how administrative support mechanisms (training, policy structures) affect adoption at the organizational level. These areas warrant further exploration to understand comprehensive institutional support (Chege & Kihara, 2025).

Matere (2024) conducted a mixed-methods study across 15 public and private universities and technical colleges in Kenya including central region institutions like Kisii University to evaluate the effectiveness of various AI tools (Intelligent Tutoring Systems, Adaptive Learning Platforms, Virtual Learning Assistants, Automated Grading Systems, Learning Analytics Systems) in teaching and learning. Using quantitative surveys and qualitative interviews with faculty, students and administrators, the study established that AI tool access is limited and fragmented across departments. Where used, integration is still in early stages, with tools poorly embedded in curricula. Despite these constraints, respondents reported positive outcomes such as personalized learning, efficient assessment processes and improved feedback. The findings identified faculty unfamiliarity, lack of training and weak curriculum integration as key institutional gaps. However, the study did not delve into specific institutional support strategies (governance frameworks, dedicated AI units, policy development) in central Kenya settings highlighting the need for focused studies on how institutional structures enable or restrict AI adoption at different administrative levels (Matere, 2024).

2.2.4 Curriculum Alignment and the Integration of Artificial Intelligence in Teaching and Learning

Maimela et al. (2025) conducted a mixed-methods empirical study across both Historically White Universities (HWUs) and Historically Black Universities (HBUs) in South Africa to investigate how AI integration intersects with curriculum transformation and decolonisation efforts. They combined quantitative surveys of faculty and students with qualitative interviews of institutional leaders to capture how AI tools (adaptive learning systems, analytics platforms) align or conflict with epistemic justice and educational equity goals. The findings show stark disparities: HWUs often possess greater AI infrastructure and clearer policy alignment, enabling more intentional curriculum redesign; HBUs, however, struggle with resource limitations and legacy structures that hinder alignment. Notably, AI's reliance on Western epistemologies risks undermining decolonised content, pointing to misaligned incorporation of AI within curricula. The study highlights a gap in Afrocentric AI model development and suggests a need for empirical work on aligning AI tools with contextual and cultural learning outcomes (Maimela et al., 2025).

Tarisayi and Manhibi (2025) employed a qualitative research design, conducting in-depth interviews and focus groups with stakeholders including academics, administrators and policymakers across several Zimbabwean universities. The study probed how AI (intelligent tutoring systems, automated grading, predictive analytics) is strategically aligned with curriculum goals and administrative processes. Participants acknowledged AI's potential to personalize learning and optimize institutional workflows, but also flagged significant misalignment: curricula were often rigid, with AI tools implemented as peripheral add-ons rather than being integrated into learning outcomes, pedagogy, or assessment designs. The lack of cohesive policy frameworks, curriculum review cycles and educator training further undermined AI's alignment with instructional goals. Empirical gaps thus include the absence of curriculum-level interventions co-designed with faculty and students to meaningfully embed AI in course design and assessment (Tarisayi & Manhibi, 2025).

Matere (2024) conducted a mixed-methods empirical investigation at Kisii University, located in southern Kenya, examining the effectiveness of AI tools such as Intelligent Tutoring Systems (ITS), Adaptive Learning Platforms, Virtual Learning Assistants (VLAs), Automated Grading Systems and Learning Analytics Systems in higher education settings. Using structured surveys with faculty and students, alongside follow-up interviews with administrators, Matere assessed both the accessibility and practical embedding of AI tools into teaching and learning. The study found that while AI tools enhanced student engagement, adaptive feedback and personalized learning experiences, their integration into the curriculum was limited and disjointed. Institutional support such as infrastructure investment, professional development and curriculum alignment was noted as inadequate, undermining sustained usage. A key knowledge gap identified is the lack of clearly articulated alignment between AI tools and targeted learning outcomes within course design, as well as little exploration of how faculty collaborate in redesigning curricula to embed AI effectively (Matere, 2024).

Omariba (2025) conducted a mixed-methods study across universities in Murang'a County, southern Kenya, evaluating the implementation and effectiveness of AI-driven personalized learning systems. The study employed student and faculty surveys to measure AI adoption, complemented by focus group discussions to probe challenges and perceived impact on student outcomes. The findings indicated that AI-driven personalized learning led to improved student engagement and academic performance, yet participants noted that these tools were often deployed without alignment to course objectives or assessment methods. This misalignment limited their pedagogical impact: instructors struggled to integrate personalized AI content with traditional syllabi and assessment frameworks. The study also highlighted a shortage of institutional provisions namely clear guidelines, professional development and system monitoring to ensure that AI-enhanced learning is systematically embedded. A significant gap lies in the absence of co-design mechanisms between instructional designers and lecturers to ensure AI tools reinforce learning outcomes and curriculum structure (Omariba, 2025).

2.3 Summary and Research Gaps

The reviewed literature demonstrates that integration of Artificial Intelligence (AI) in teaching and learning is gaining attention globally, regionally and nationally, with multiple studies affirming its potential to enhance student engagement, adaptive learning and institutional efficiency. Theoretical insights such as the Technological Pedagogical Content Knowledge (TPACK) framework, Curriculum Alignment Theory and Diffusion of Innovations (DOI) provided grounding for examining how faculty training, student digital literacy, institutional support and curriculum alignment interact to shape AI adoption in higher education. Empirical studies from West, North, Central and Southern Africa revealed that while AI enhances personalization and engagement, challenges such as inadequate infrastructure, limited faculty expertise, insufficient curriculum alignment and weak institutional support systems persist. Similarly, Kenyan-based studies highlighted local issues, including lack of professional development, limited integration of AI tools with learning outcomes and infrastructural inequalities across regions.

Despite these contributions, several limitations remain. First, many African studies were region-specific, often confined to single institutions or counties, reducing generalizability across contexts. Second, most research emphasized either technological or infrastructural aspects, with limited attention to how institutional culture, policies and cross-faculty collaboration shape sustainable AI adoption. Third, although digital literacy was explored in Northern Kenya, the dynamic interplay between students' competencies, curriculum alignment and institutional support remains under-examined. Finally, existing studies focused primarily on the benefits of AI, while offering limited empirical evidence on barriers to adoption in Kenyan private universities such as the Management University of Africa. These gaps justify the present study, which seeks to provide a holistic analysis of factors influencing AI integration faculty training, student digital literacy, institutional support and curriculum alignment within the Management University of Africa. By addressing both structural and pedagogical dimensions, this research will generate context-specific insights to inform policy, practice and future scholarship.

Table 1: Summary and Research Gaps

Author of the study	Focus of the study	Summary of Findings	Knowledge Gaps	Focus of the current study
Nyaaba et al. (2024) – Ghana	Pre-service teachers' uses/attitudes toward GenAI	Positive attitudes; usage rises with seniority; ethics concerns noted	No faculty/institutional lens; no classroom implementation tracking	Add faculty training & institutional support variables; measure real AI integration across courses at MUA
Henkel et al. (2024) – Ghana	RCT of WhatsApp AI math tutor	Significant learning gains from AI tutor	Not higher education; no analysis of teacher PD or curriculum alignment	Examine HE context, PD quality and curriculum alignment effects on AI integration at MUA
Fundi et al. (2024) – Kenya	In-service teachers' preparedness for AI (CBC)	Moderate confidence; ethics and social-norms uneven	Limited HE focus; weak regional detail; little on institutional mechanisms	Test how PD + institutional support drive integration among university faculty at MUA
Microsoft (2024) – Kenya	National AI skilling initiative for faculty	Improved self-reported confidence post-training	Weak evaluation design; long-term classroom use unclear; no regional analysis	Use rigorous measures (usage depth, alignment) and follow-up to capture sustained integration at MUA
Melliti & Henchiri (2024) – Tunisia	Student autonomy & digital literacy in HE	High out-of-class tech use; low in-class integration; barriers in infrastructure/pedagogy	Not AI-specific; single department sample	Measure student AI literacy and link it to course-level AI integration across MUA schools
Dridi (2023) – Tunisia	Students' digital media literacy	Varied literacy; structural access issues	Not university cohort; no direct AI-use linkage	Connect digital literacy → AI use in HE; include discipline and

Author of the study	Focus of the study	Summary of Findings	Knowledge Gaps	Focus of the current study
				assessment contexts at MUA
Robert & Mmbone (2025) – Bungoma, Kenya	Digital Literacy Program (ECD) impacts	Early literacy/skills gains reported	Not higher ed or AI-specific; short-term outcomes	Focus on university learners, AI-specific literacies and degree of integration at MUA
Oguna (2023) – Ndhiwa, Kenya	Community-centered digital literacy framework	Co-designed, culturally relevant model	Not university-based; no AI learning outcomes	Adapt co-design for student AI literacy at MUA; link to learning outcomes
Melo (2025) – Cameroon	Institutional support for inclusive AI in HE	Accessibility gains; connectivity/policy gaps	Preprint; limited governance detail; not Kenya	Build an Institutional AI Support Index at MUA (policy, infra, ethics, services)
Mukawa (2023) – DRC	Institutional readiness for AI (universities)	Some investments; weak governance/training structures	No student data; limited to Kinshasa; sparse instructional metrics	Collect student & faculty data; tie support to course-level integration at MUA
Chege & Kihara (2025) – USIU-A, Kenya	Determinants of AI adoption (students)	Tech capability strongest predictor; mixed institutional effects	Student-only lens; policy/PD mechanisms under-explored	Model faculty PD, policy clarity and support services as drivers of integration at MUA
Matere (2024) – Kenya (multi-institution)	Effectiveness/uptake of AI tools in HEIs	Early-stage use; positive effects where adopted; weak alignment/training	Limited strategy detail; not MUA-specific	Provide MUA-specific evidence on alignment, PD and scaling supports

Author of the study	Focus of the study	Summary of Findings	Knowledge Gaps	Focus of the current study
Maimela et al. (2025) – South Africa	AI & curriculum transformation/decolonisation	Disparities by institution; risk of misaligned epistemologies	Limited course-level evidence; intervention designs absent	Ensure AI–outcomes–assessment alignment at MUA; include contextual ethics
Tarisayi & Manhibi (2025) – Zimbabwe	Stakeholder views on strategic AI alignment	Promise acknowledged; tools often peripheral to curriculum	Qualitative focus; no tested alignment interventions	Co-design alignment processes with MUA lecturers; test alignment metrics
Matere (2024) – Kisii University, Kenya	AI tools' effectiveness & curriculum fit	Better engagement/feedback; weak curriculum embedding	Single-site snapshot; little longitudinal evidence	Multi-school MUA study; track integration depth over July–Sept 2025
Omariba (2025) – Murang'a, Kenya	AI-driven personalized learning & alignment	Higher engagement; poor link to objectives/assessments	Regional scope; lacks co-design & formal alignment measures	Implement alignment rubrics and faculty–designer co-design at MUA

2.4 Conceptual Framework

A conceptual framework is the organized set of concepts and presumed relationships that underpins a study, aligning the research problem, questions, variables and methods into a coherent design. It clarifies how constructs are defined and linked, guides operationalization (measures and hypotheses) and strengthens validity by ensuring consistency among literature, design, data collection and analysis (Saunders, Lewis, & Thornhill, 2019; Miles, Huberman, & Saldaña, 2019).

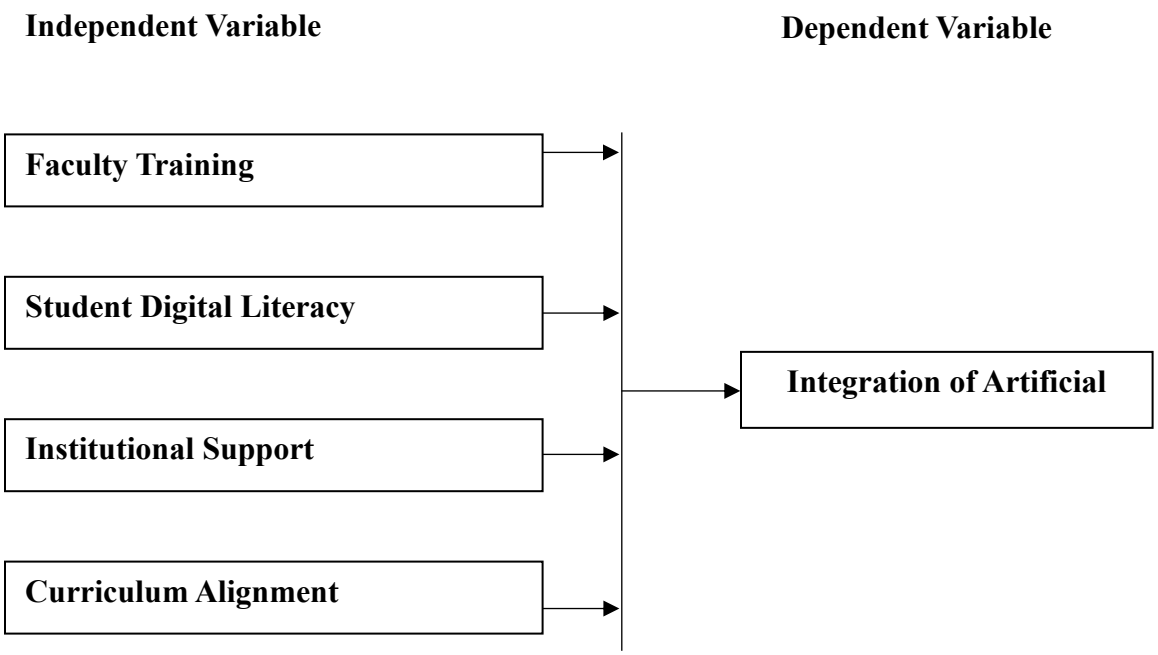

Figure 1: Conceptual Framework

2.5 Operationalization of Variables

Operationalization of variables is the process of defining abstract concepts or constructs into measurable indicators that can be empirically tested within a study. It ensures that variables are clearly translated into observable and quantifiable elements, enhancing consistency, reliability and validity in data collection and analysis (Creswell & Creswell, 2018; Saunders et al., 2019). Through operationalization, researchers bridge theory and practice by aligning conceptual definitions with research instruments, making it possible to systematically examine relationships among variables and achieve replicability in findings (Bryman, 2021).

Table 2: Operationalization of Variables

Variable	Indicators	Measurement Scale	Analysis Tool
Faculty Training	➢ Pedagogical skills ➢ AI workshops ➢ Technical competence ➢ Continuous learning ➢ Instructional support	5-Point Likert Scale Questionnaire	Percentages, Frequency Tables

Variable	Indicators	Measurement Scale	Analysis Tool
Student Digital Literacy	➢ Information access ➢ Software proficiency ➢ Online collaboration ➢ Problem-solving ➢ Critical thinking	5-Point Likert Scale Questionnaire	Percentages, Frequency Tables
Institutional Support	➢ Policy framework ➢ Financial resources ➢ ICT infrastructure ➢ Administrative commitment ➢ Technical support	5-Point Likert Scale Questionnaire	Percentages, Frequency Tables
Curriculum Alignment	➢ Learning outcomes ➢ Course relevance ➢ Assessment methods ➢ Competency mapping ➢ Content integration	5-Point Likert Scale Questionnaire	Percentages, Frequency Tables
Integration of Artificial Intelligence in Learning	➢ AI adoption ➢ Teaching enhancement ➢ Learning personalization ➢ Student engagement ➢ Academic performance	5-Point Likert Scale Questionnaire	Percentages, Frequency Tables

2.6 Chapter Summary

Chapter two discussed the theoretical literature review through selected theories, the empirical literature review covering international and local studies and the summary and research gaps that informed the study. It further provided the conceptual framework illustrating variable relationships and the operationalization of variables that guided measurement and analysis.

CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the research methodology adopted for the study, outlining the research design, target population, sample and sampling techniques, instruments, pilot testing, validity, reliability, data collection, data analysis and ethical considerations.

3.1 Research Design

This study will adopt a descriptive research design to investigate the factors affecting the integration of Artificial Intelligence in learning at the Management University of Africa. A descriptive design is appropriate because it enables the researcher to systematically collect, analyze and interpret data to describe the current state of a phenomenon without manipulating variables. According to Saunders et al. (2019), descriptive research design provides a clear understanding of relationships between variables by allowing researchers to observe and describe trends as they occur naturally. Similarly, Kothari and Garg (2020) emphasize that descriptive design is particularly useful in educational research where the objective is to obtain precise information about existing practices and perceptions. Thus, this design aligns with the study's aim of identifying and analyzing institutional, faculty, student and curriculum-related factors influencing AI integration.

3.2 Target Population

A target population refers to the entire group of individuals, events, or objects that a researcher intends to study and from which data relevant to the research problem is collected (Kumar, 2022). It provides the framework for drawing representative samples that ensure valid and reliable results. For this study, the target population will consist of 480 participants, including both students and staff at the Management University of Africa. The student participants will be drawn from different faculties and year levels, while the staff participants will include teaching faculty, administrative staff involved in academic support and policy implementers within the institution. According to Creswell and Creswell (2018), a well-defined population is essential because it ensures that the study findings are generalizable to the larger group under investigation. This population is justified as it comprehensively represents the key stakeholders directly engaged in

teaching, learning and policy implementation, thus providing holistic insights into factors affecting the integration of Artificial Intelligence in learning.

3.3 Sample and Sampling

A sample refers to a subset of the target population selected for study to draw conclusions that can be generalized to the entire population (Saunders et al., 2019). Sampling, on the other hand, is the process of systematically selecting individuals, groups, or elements from the population to represent its characteristics in a manageable way (Kumar, 2022). As Creswell and Creswell (2018) argue, the representativeness of the sample determines the validity and applicability of the research outcomes to the broader population.

This study will employ stratified random sampling technique because it ensures that subgroups within the target population, such as students and staff, are adequately represented in the final sample. According to Mugenda and Mugenda (2019), stratified sampling enhances representativeness by dividing the population into homogeneous groups before randomly selecting participants. This technique is suitable because the study's target population of 480 participants consists of diverse groups, including students from different faculties and year levels, as well as staff from various administrative and teaching roles. To ensure manageability while maintaining reliability, the study will sample 30% of the target population, amounting to 144 respondents. Stratified sampling also minimizes sampling error and provides more precise estimates compared to simple random sampling (Kumar, 2022).

3.4 Instruments

Data for this study will be collected using structured questionnaires designed on a five-point Likert scale, ranging from strongly disagree to strongly agree. The questionnaire will contain only closed-ended questions, which enhance clarity, ease of response and comparability of data. According to Creswell and Creswell (2023), questionnaires are an effective tool for collecting standardized information from a large group within a limited timeframe. The use of closed-ended questions ensures objectivity, reduces ambiguity and facilitates quantitative analysis (Sekaran & Bougie, 2020). This choice is appropriate because the study seeks to measure perceptions and attitudes of both students and staff

toward the integration of Artificial Intelligence in teaching and learning. Furthermore, the Likert scale provides a reliable means of capturing varying intensities of opinion, making the instrument suitable for addressing the study objectives.

3.5 Pilot Study

A pilot study is a small-scale preliminary test of research instruments conducted to identify potential weaknesses and refine the research design before the main study (Bryman, 2020). It allows researchers to detect flaws in questionnaires, test the reliability of tools and assess feasibility. For this study, a pilot will be conducted on 10% of the sample population (14 respondents), drawn proportionally from students and staff, but these respondents will not participate in the actual study. According to Kothari and Garg (2019), pilot testing ensures instruments are valid, reliable and clear for respondents. The pilot will therefore be conducted to refine the questionnaire, test the clarity of closed-ended questions, check the consistency of Likert scale responses and improve reliability of data collection before full-scale administration.

3.5.1 Validity

Validity refers to the extent to which a research instrument measures what it is intended to measure, ensuring accuracy and appropriateness of the results (Creswell & Creswell, 2019). In educational research, validity enhances the credibility of findings by confirming that the instruments capture the constructs under investigation (Saunders et al., 2019). In this study, validity will be achieved through expert judgment and content validity checks, where research supervisors and specialists in artificial intelligence integration will review the questionnaire to ensure alignment with the research objectives. Additionally, the pilot study will be used to refine ambiguous questions, improving construct validity. This approach will ensure that the questionnaire items comprehensively and accurately represent the variables under study.

3.5.2 Reliability

Reliability refers to the consistency, stability and repeatability of a research instrument in measuring a concept across different times and situations (Creswell & Creswell, 2019). A reliable tool ensures that results are not influenced by random errors, thereby increasing

confidence in the findings (Saunders et al., 2019). In this study, reliability will be assessed through Cronbach's alpha coefficient, which will measure the internal consistency of the questionnaire items. A threshold of 0.70 or above will be considered acceptable for reliability. Furthermore, the pilot study conducted on 10% of the sample population will provide an opportunity to refine ambiguous or inconsistent items, ensuring the instrument consistently produces dependable results in the actual study.

3.6 Data Collection Procedure

Data will be collected through the use of structured questionnaires based on a five-point Likert scale. The researcher will begin by obtaining an official authorization letter from the Management University of Africa, permitting the study to be undertaken within the institution. Subsequently, permission will be sought from the university's management to access both staff and students as respondents. Research assistants will be trained and engaged to aid in the administration of the questionnaires. The questionnaires, which will contain only closed-ended items, will then be distributed to the selected sample of respondents. Respondents will be allowed one week to complete the questionnaires, after which the research assistants will return to collect the completed instruments for analysis.

3.7 Data Analysis and Presentation

Data collected from the questionnaires will be analyzed using descriptive statistics, specifically frequencies and percentages, with the aid of Microsoft Excel. This method will allow for the summarization of responses and provide clear insights into the patterns and distribution of data across the study variables. The analyzed data will then be presented in both tabular and visual formats to enhance clarity and interpretation. Tables will be used to systematically organize the data, while bar graphs and pie charts will be employed to provide visual representation of the findings, making comparisons across categories more accessible and easier to interpret.

3.8 Ethical Considerations

Ethical considerations in research refer to the principles and guidelines that ensure the rights, dignity and well-being of participants are respected throughout the study. According to Bryman (2021), ethics in research involve safeguarding participants from harm, ensuring

confidentiality, obtaining informed consent and maintaining integrity in reporting findings. Similarly, Creswell and Creswell (2023) emphasize that ethical considerations are fundamental in building trust between the researcher and participants, while also enhancing the credibility and acceptability of the study.

3.8.1 Informed Consent

Informed consent ensures that participants are fully aware of the nature, purpose and implications of the research before agreeing to take part. According to Saunders et al. (2019), obtaining informed consent is a critical step in protecting participants' autonomy and ensuring ethical compliance. In this study, participants were provided with clear information sheets and consent forms outlining the objectives of the research, the voluntary nature of participation and the intended use of data.

3.8.2 Voluntary Participation

Voluntary participation means that respondents are free to decide whether to take part in the study without coercion. Bryman (2021) emphasizes that voluntary participation safeguards the principle of respect for persons in research. In this study, participants were assured that their involvement was entirely voluntary and that they had the right to withdraw from the research at any stage without facing any consequences.

3.8.3 Confidentiality

Confidentiality refers to the researcher's responsibility to ensure that data provided by participants is protected from unauthorized access. Creswell and Creswell (2023) highlight that confidentiality strengthens participants' trust and increases their willingness to provide honest responses. To address this, the study ensured that all completed questionnaires were securely stored and that data analysis was carried out without exposing individual responses to third parties.

3.8.4 Privacy

Privacy relates to controlling access to participants' personal information and protecting them from unnecessary intrusion. According to Sekaran and Bougie (2020), respecting privacy requires that only information relevant to the study objectives is collected. In this

research, only the necessary academic and demographic information was gathered, while avoiding overly intrusive or irrelevant questions.

3.8.5 Anonymity

Anonymity ensures that participants' identities cannot be linked to their responses. Cohen et al. (2018) note that anonymity reduces the risk of harm and enhances the reliability of responses, especially when dealing with sensitive topics. In this study, no identifying information such as names or registration numbers was recorded and data was presented in aggregated form to prevent linking responses to individual participants.

3.9 Chapter Summary

This chapter explained the research methodology, detailing the design, population, sampling, instruments, pilot testing, validity, reliability, data collection, analysis and ethical safeguards that guided the study.

CHAPTER FOUR
PRESENTATION, ANALYSIS AND INTERPRETATIONS OF FINDINGS

4.0 Introduction

This chapter presents the findings, analysis, and interpretation of data based on the study objectives. It highlights response rates, respondents' background information, and variables including faculty training, student digital literacy, institutional support, curriculum alignment, and AI integration. The chapter also identifies study limitations that influenced the scope and generalizability of results

4.1 Presentation of Research Findings

The findings collected by the study are being presented, with each objective analyzed using tables, graphs, and pie charts. The presentation highlights the effects of faculty training, student digital literacy, institutional support, and curriculum alignment on Artificial Intelligence integration. From these findings, conclusions will later be drawn to inform the study.

4.1.1 Response Rate

The study asked about the response rate because it determined the level of participation from the targeted population. It was related to the study since a high response rate enhanced the validity and reliability of the findings, while a low rate could have limited the generalizability of the results.

Table 3: Response Rate

Category	Frequency	Percentage
Response	138	95.83
Non-Response	6	4.17
Total	**144**	**100**

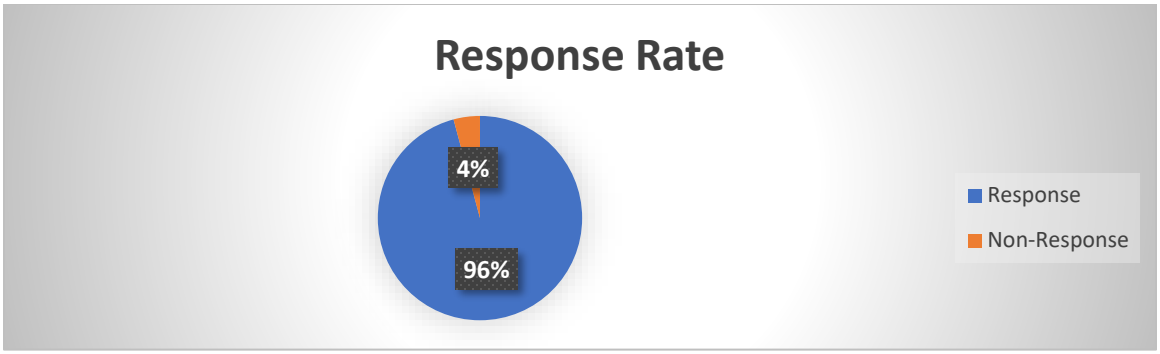

Figure 2: Response Rate

The study achieved a response rate of 138 out of 144 targeted participants, representing a very high level of participation. This strong response suggested that the findings were reliable and representative of the study population. It also indicated that the respondents were committed to providing insights on factors affecting the integration of Artificial Intelligence in learning.

4.1.2 Background Information

The study collected background information to provide context about the respondents' demographics and roles. It was related to the study because these characteristics helped explain variations in experiences, perceptions, and readiness for Artificial Intelligence integration in teaching and learning.

4.1.2.1 Gender Distribution of the Respondents

The study asked about gender distribution to understand the representation of male and female respondents. It was related to the study as gender diversity could have influenced perspectives on the integration of Artificial Intelligence in teaching and learning, ensuring that conclusions reflected a balanced view.

Table 4: Gender Distribution of the Respondents

Category	Frequency	Percentage
Male	72	52.17
Female	66	47.83
Total	**138**	**100**

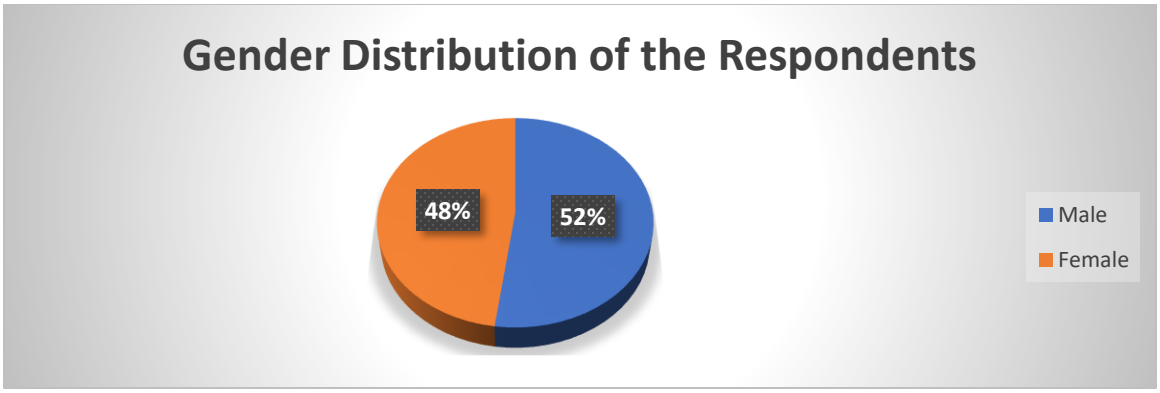

Figure 3: Gender Distribution of the Respondents

The findings showed that 72 respondents were male and 66 were female, indicating a fairly balanced gender distribution. This balance suggested that perspectives on Artificial Intelligence integration were drawn from both genders almost equally. Such representation enhanced the credibility of the study by ensuring that gender-related differences in experiences and attitudes were adequately captured.

4.1.2.2 Age Bracket Range of the Respondents

The study asked about the age bracket of respondents to capture generational differences in technology adoption. It was related to the study because age could have influenced digital literacy levels and openness to integrating Artificial Intelligence in teaching and learning.

Table 5: Age Bracket Range of the Respondents

Category	Frequency	Percentage
Below 20 years	18	13.04
21–30 years	65	47.10
31–40 years	29	21.01
41–50 years	17	12.32
Above 50 years	9	6.52
Total	**138**	**100**

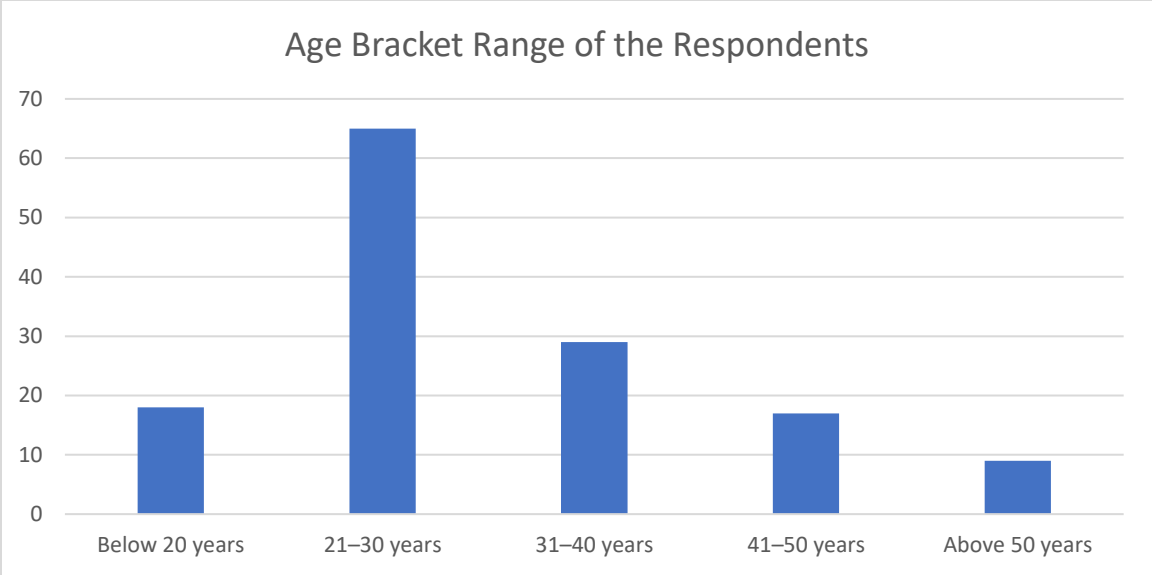

Figure 4: Age Bracket Range of the Respondents

The findings showed that most respondents (65) were aged 21–30 years, followed by 29 aged 31–40 years, while fewer were below 20 or above 50. This suggested that the majority were young adults, a group likely more exposed to digital technologies, thus influencing positive attitudes toward Artificial Intelligence integration in teaching and learning.

4.1.2.3 Role at the University

The study asked about the respondents' roles at the university to distinguish perspectives between faculty, students, and administrators. It was related to the study because each role had a different influence on, and experience with, the integration of Artificial Intelligence in teaching and learning.

Table 6: Role at the University

Category	Frequency	Percentage
Student	92	66.67
Teaching Staff	28	20.29
Administrative Staff	12	8.70
Policy Implementer	6	4.35
Total	**138**	**100**

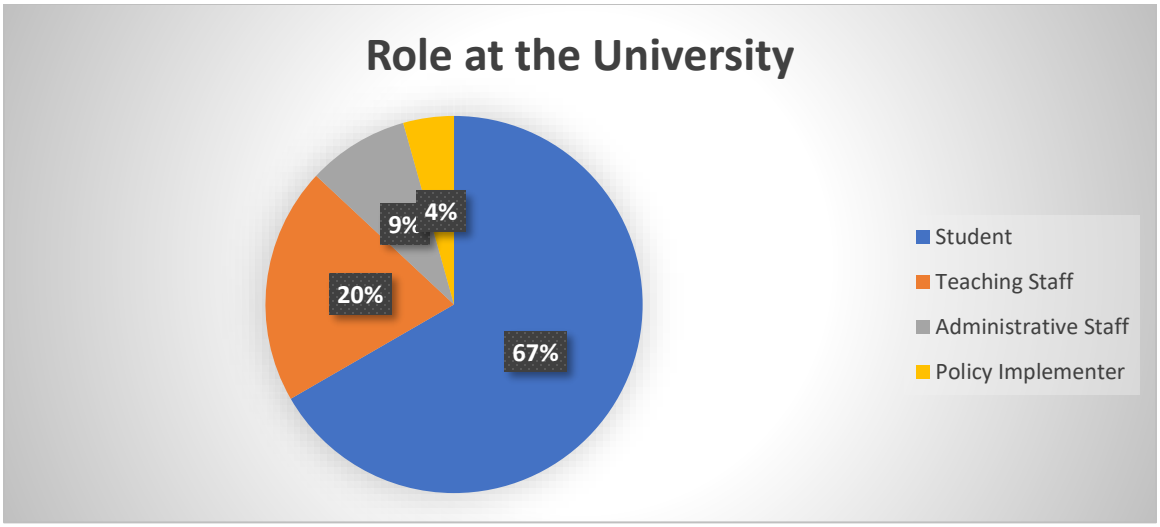

Figure 5: Role at the University

The findings showed that most respondents were students (92), followed by teaching staff (28), administrative staff (12), and policy implementers (6). This suggested that the study largely captured the views of learners while still incorporating perspectives from staff and policymakers, providing a comprehensive understanding of Artificial Intelligence integration across different university roles.

4.1.2.4 Level of Education (for staff only, if applicable)

The study asked about staff education levels to assess how academic qualifications influenced readiness and capacity to adopt Artificial Intelligence. It was related to the study because higher education levels could have affected faculty training needs and the effectiveness of AI integration in teaching and learning.

Table 7: Level of Education (for staff only, if applicable)

Category	Frequency	Percentage
Diploma	5	10.87
Bachelor's Degree	11	23.91
Master's Degree	19	41.30
Doctorate (PhD)	11	23.91
Total	**46**	**100**

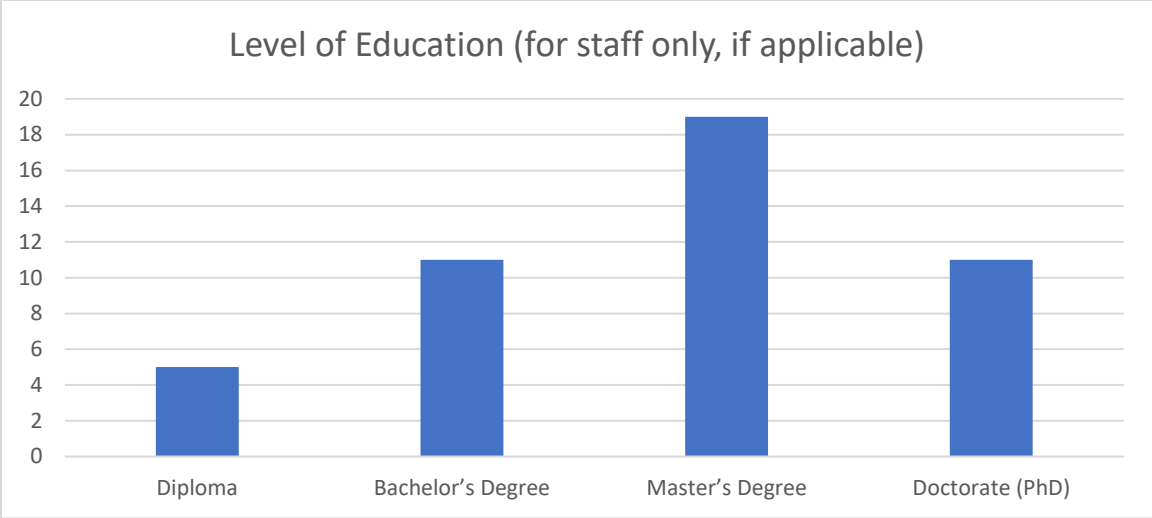

Figure 6: Level of Education (for staff only, if applicable)

The findings showed that among staff, 19 held master's degrees, 11 had doctorates, 11 held bachelor's degrees, and 5 had diplomas. This suggested that most staff were highly educated, which could positively influence the integration of Artificial Intelligence, as advanced qualifications often correlate with greater capacity to adopt and apply new technologies in teaching.

4.1.2.5 Year of Study (for students only)

The study asked about the year of study for students to determine how academic progression influenced digital literacy and exposure to technology. It was related to the study because students at different levels might have varied readiness and attitudes toward integrating Artificial Intelligence in learning.

Table 8: Year of Study (for students only)

Category	Frequency	Percentage
Year 1	26	28.26
Year 2	23	25.00
Year 3	22	23.91
Year 4	21	22.83
Total	**92**	**100**

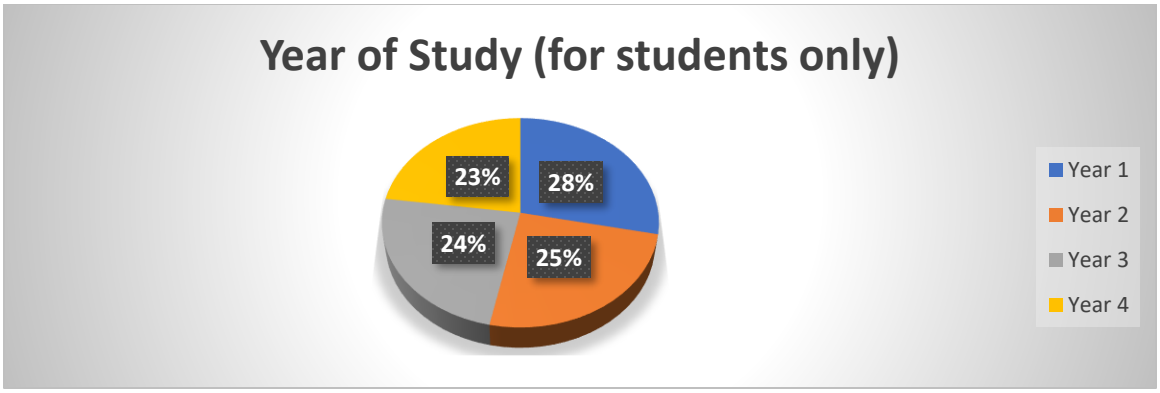

Figure 7: Year of Study (for students only)

The findings showed that the student respondents were fairly distributed across all four years, with Year 1 having 26, Year 2 with 23, Year 3 with 22, and Year 4 with 21. This suggested that the study captured diverse student perspectives, ensuring insights on Artificial Intelligence integration reflected experiences across different academic levels.

4.1.3 Study Objectives

The study focused on the four objectives because they represented key factors influencing Artificial Intelligence integration in higher education. It was related to the study since faculty training, student digital literacy, institutional support, and curriculum alignment directly shaped the success, acceptance, and sustainability of AI use in teaching and learning at the Management University of Africa.

4.1.3.1 Faculty Training

The study examined faculty training because instructors' skills and preparedness determined how effectively they could integrate Artificial Intelligence. It was related to the study since well-trained faculty were essential for adopting and applying AI tools in teaching and learning.

Table 9: Effect of Faculty Training

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Faculty members at the university are adequately trained in modern pedagogical skills necessary for AI integration.	28	40	32	26	12
The university regularly organizes workshops and seminars to enhance faculty knowledge on Artificial Intelligence.	34	38	29	25	12
Faculty have the required technical competence to effectively use AI in teaching.	30	36	31	28	13
The institution encourages continuous learning opportunities for faculty to keep pace with technological advancements.	35	37	30	24	12
Adequate instructional support is provided to faculty for integrating AI tools in teaching.	29	39	33	25	12

The findings showed that 28 strongly agreed and 40 agreed that faculty members were adequately trained in modern pedagogical skills, while 38 were neutral or disagreed. This suggested that although a fair proportion acknowledged training, there were still gaps, indicating inconsistency in equipping staff with the pedagogical skills necessary for AI integration.

The results revealed that 34 strongly agreed and 38 agreed that the university organized workshops and seminars on AI, while 37 remained neutral or disagreed. This suggested that while initiatives for faculty development were recognized, the frequency or effectiveness of these programs may not have reached all members consistently.

Findings showed that 30 strongly agreed and 36 agreed that faculty had technical competence to use AI, while 41 were neutral or disagreed. This indicated that although a portion of faculty felt confident, significant gaps still existed in technical expertise, suggesting a need for more comprehensive training in AI usage.

The findings indicated that 35 strongly agreed and 37 agreed that the institution encouraged continuous learning opportunities, while 36 were neutral or disagreed. This suggested that efforts to promote ongoing development were present but not fully consistent, highlighting the need for strengthened policies and practices to support faculty in adapting to technological change.

The results showed that 29 strongly agreed and 39 agreed that instructional support was provided, while 37 were neutral or disagreed. This suggested that while some faculty benefited from available support, others did not experience adequate assistance, reflecting uneven provision of resources critical to integrating AI tools effectively in teaching.

The findings suggested that although many faculty members recognized training opportunities, workshops, competence, continuous learning, and instructional support, significant proportions remained neutral or disagreed. This highlighted inconsistencies in faculty development and support, suggesting the need for more structured, inclusive, and comprehensive approaches to ensure effective integration of Artificial Intelligence in teaching and learning.

4.1.3.2 Student Digital Literacy

The study examined student digital literacy because learners' ability to use digital tools influenced their capacity to engage with Artificial Intelligence. It was related to the study since digital literacy was critical for effective adoption of AI in learning processes.

Table 10: Effect of Student Digital Literacy

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Students can easily access digital information necessary for AI-supported learning.	41	36	28	20	13
Students are proficient in using software applications required for AI-related learning activities.	39	37	29	21	12
Students effectively collaborate with peers and instructors through online platforms.	37	38	31	20	12
Students use AI-enabled tools to solve academic and real-world problems.	32	40	33	21	12
AI integration enhances students' critical thinking and analytical skills.	36	39	30	22	11

The findings showed that 41 strongly agreed and 36 agreed that students could easily access digital information, while 33 disagreed or strongly disagreed. This suggested that although many students had reliable access, a notable portion still faced challenges, which could hinder equitable participation in AI-supported learning.

Results indicated that 39 strongly agreed and 37 agreed that students were proficient in software applications, while 33 were neutral or disagreed. This suggested that while many students demonstrated strong digital proficiency, there remained gaps requiring additional training to ensure all learners could effectively use AI-related applications.

The findings revealed that 37 strongly agreed and 38 agreed that students effectively collaborated through online platforms, while 32 were neutral or disagreed. This indicated

that most students actively engaged in digital collaboration, though some had difficulties, suggesting uneven adoption of online tools in supporting AI integration.

Findings showed that 32 strongly agreed and 40 agreed that students used AI-enabled tools to solve problems, while 33 were neutral or disagreed. This suggested that while many students embraced practical application of AI tools, others remained less engaged, pointing to varied levels of awareness and integration into academic work.

The results indicated that 36 strongly agreed and 39 agreed that AI enhanced critical thinking and analytical skills, while 33 were neutral or disagreed. This suggested that many students perceived positive cognitive benefits from AI integration, though some skepticism or limited exposure reduced universal acceptance of these outcomes.

The findings suggested that students demonstrated relatively strong digital literacy in accessing information, using applications, collaborating online, and applying AI tools, with many perceiving benefits for critical thinking. However, consistent gaps remained among a notable portion of learners, highlighting the need for targeted support to ensure all students benefited fully from AI integration.

4.1.3.3 Institutional Support

The study examined institutional support because resources, policies, and infrastructure provided by the university influenced the success of Artificial Intelligence adoption. It was related to the study since strong institutional backing ensured sustainability and effectiveness of AI integration in teaching and learning.

Table 11: Effect of Institutional Support

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The university has clear policies that guide the integration of AI in teaching and learning.	28	35	34	27	14

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Adequate financial resources are allocated to support AI integration initiatives.	26	37	32	28	15
The university has sufficient ICT infrastructure to support AI-enabled learning.	33	38	30	23	14
University administration demonstrates strong commitment to integrating AI in education.	30	39	31	25	13
Students and faculty receive timely technical support when using AI tools.	32	40	29	25	12

The findings showed that 28 strongly agreed and 35 agreed that the university had clear AI integration policies, while 41 disagreed or strongly disagreed. This suggested that while some respondents recognized supportive policies, a lack of clarity or awareness limited their effectiveness in guiding AI adoption.

Results indicated that 26 strongly agreed and 37 agreed that adequate financial resources were allocated, while 43 disagreed or strongly disagreed. This suggested that funding for AI integration was perceived as insufficient by many, hindering the effective implementation of AI-related initiatives across the university.

The findings revealed that 33 strongly agreed and 38 agreed that ICT infrastructure was sufficient, while 37 were neutral or disagreed. This suggested that although many acknowledged the availability of infrastructure, significant portions still experienced challenges, pointing to possible gaps in accessibility, coverage, or quality.

Findings showed that 30 strongly agreed and 39 agreed that the administration demonstrated commitment to AI integration, while 38 were neutral or disagreed. This

indicated mixed perceptions, suggesting that while leadership efforts were visible, consistency and stronger involvement were needed to inspire confidence across the university community.

The results indicated that 32 strongly agreed and 40 agreed that timely technical support was provided, while 37 were neutral or disagreed. This suggested that although technical assistance was generally available, uneven delivery may have limited effective faculty and student use of AI tools.

The findings suggested that while policies, infrastructure, leadership commitment, and technical support for AI integration were recognized, financial limitations and inconsistent delivery weakened institutional support. These gaps implied that more structured policies, sustainable funding, and equitable infrastructure access were essential to strengthen AI adoption at the Management University of Africa.

4.1.3.4 Curriculum Alignment

The study examined curriculum alignment because the inclusion of Artificial Intelligence concepts within courses determined its relevance and application in learning. It was related to the study since aligning the curriculum ensured that AI integration supported academic goals and enhanced teaching and learning outcomes.

Table 12: Effect of Curriculum Alignment

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The curriculum incorporates AI to achieve relevant and measurable learning outcomes.	34	39	29	24	12
AI-related content included in the curriculum is relevant to students' future careers.	38	36	30	22	12
The university uses assessment methods that align with AI-supported teaching and learning.	31	37	34	24	12

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
AI integration is aligned with the competencies expected of graduates.	33	38	31	23	13
AI concepts and applications are well integrated across different courses in the curriculum.	30	36	32	26	14

The findings showed that 34 strongly agreed and 39 agreed that the curriculum incorporated AI for measurable outcomes, while 36 disagreed or strongly disagreed. This suggested partial alignment, with many students and staff recognizing AI relevance, though some felt its integration lacked depth.

Results indicated that 38 strongly agreed and 36 agreed that AI-related content was relevant to future careers, while 34 disagreed or strongly disagreed. This suggested that while many valued the career-oriented integration, inconsistencies in course application reduced uniform benefit.

The findings revealed that 31 strongly agreed and 37 agreed that assessment methods aligned with AI-supported learning, while 36 disagreed or remained neutral. This indicated partial progress in assessments, but highlighted gaps in fully embedding AI-based evaluation strategies across the curriculum.

Findings showed that 33 strongly agreed and 38 agreed that AI integration aligned with graduate competencies, while 36 disagreed or were neutral. This suggested that although the curriculum was generally linked to expected skills, inconsistencies remained in ensuring all graduates achieved AI-related competencies.

The results indicated that 30 strongly agreed and 36 agreed that AI concepts were well integrated across courses, while 40 disagreed or strongly disagreed. This suggested that

while AI was present in parts of the curriculum, integration across programs was uneven, limiting holistic exposure for all learners.

The findings suggested that curriculum alignment with AI was progressing, with many recognizing relevance to learning outcomes, careers, and graduate competencies. However, uneven integration across courses and partial alignment of assessment methods indicated gaps. This implied a need for more consistent, structured curriculum reform to strengthen comprehensive AI adoption at the university.

4.1.3.5 Integration of Artificial Intelligence in Learning

The study examined the integration of Artificial Intelligence in learning because it was the central focus of the research. It was related to the study since understanding the extent and effectiveness of AI adoption provided insights into how teaching and learning could be improved at the Management University of Africa.

Table 13: Integration of Artificial Intelligence in Learning

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The university has embraced Artificial Intelligence as a tool to enhance teaching and learning.	37	35	31	23	12
The use of AI has significantly improved teaching effectiveness at the university.	34	36	32	24	12
AI integration supports personalized learning experiences for students.	35	39	30	22	12
AI tools have increased students' engagement in academic activities.	38	37	29	22	12
The use of AI has positively contributed to students' academic performance.	36	38	30	23	11

The findings showed that 37 strongly agreed and 35 agreed that the university had embraced AI to enhance teaching, while 35 disagreed or remained neutral. This suggested progress in adoption, though perceptions of its extent varied.

Results indicated that 34 strongly agreed and 36 agreed that AI improved teaching effectiveness, while 36 disagreed or were neutral. This suggested that while many acknowledged AI's impact, effectiveness was not uniformly experienced across the institution.

The findings revealed that 35 strongly agreed and 39 agreed that AI supported personalized learning, while 34 disagreed or were neutral. This suggested that AI was perceived as beneficial for individualized learning, though not all students fully experienced these benefits.

Findings showed that 38 strongly agreed and 37 agreed that AI tools increased student engagement, while 34 disagreed or remained neutral. This indicated that many valued AI for enhancing participation, though its effect was not universal.

The results indicated that 36 strongly agreed and 38 agreed that AI positively contributed to academic performance, while 34 disagreed or were neutral. This suggested that AI integration was linked to improved outcomes, though its benefits may not have been equally distributed.

The findings suggested that AI integration at the university was advancing, with many respondents acknowledging improvements in teaching, engagement, personalization, and performance. However, mixed perceptions highlighted uneven adoption and impact. This implied that while AI held significant promise for enhancing learning, more consistent and inclusive strategies were needed for widespread effectiveness.

4.2 Limitations of the Study

The study encountered several limitations. First, it relied on self-reported data, which may have introduced bias in responses. Second, time and resource constraints limited the depth

of data collection. Third, the study focused only on the Management University of Africa, reducing generalizability. Lastly, varying levels of technological exposure among respondents affected consistency of feedback.

4.3 Chapter Summary

This chapter presented the findings, analysis, and interpretation of data based on the study objectives. It discussed response rates, respondents' background information, and variables including faculty training, student digital literacy, institutional support, curriculum alignment, and AI integration. The chapter also highlighted study limitations that affected the scope and generalizability of results.

CHAPTER FIVE
SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.0 Introduction

This chapter presents the summary of findings, conclusions, and recommendations based on the study objectives. It highlights how faculty training, student digital literacy, institutional support, and curriculum alignment influence Artificial Intelligence integration. The chapter also provides suggestions for further research to enhance effective adoption of AI in higher education.

5.1 Summary of Findings

The study gathered background information from 138 respondents out of a targeted 144, giving a high response rate. Gender distribution was fairly balanced, with 72 males and 66 females. In terms of age, most respondents (65) were aged 21–30 years, followed by 29 aged 31–40 years, while 18 were below 20 and only 9 were above 50. Regarding roles at the university, students formed the majority with 92, followed by teaching staff (28), administrative staff (12), and policy implementers (6). For staff education levels, 19 held master's degrees, 11 had doctorates, 11 had bachelor's degrees, and 5 had diplomas. Among students, distribution was relatively even across years, with 26 in Year 1, 23 in Year 2, 22 in Year 3, and 21 in Year 4.

The study examined the effect of faculty training on Artificial Intelligence integration. Findings showed mixed perceptions among respondents. On whether faculty were adequately trained in modern pedagogical skills, 28 strongly agreed and 40 agreed, while 38 were neutral and 38 disagreed. Regarding workshops and seminars, 34 strongly agreed and 38 agreed, but 37 respondents were neutral or disagreed. This suggested that although training initiatives existed, they were not uniformly accessed or effective for all faculty members. On technical competence, 30 strongly agreed and 36 agreed that faculty could effectively use AI, while 41 were neutral or disagreed. Concerning continuous learning opportunities, 35 strongly agreed and 37 agreed, while 36 were neutral or disagreed. Adequate instructional support was acknowledged by 29 strongly agreeing and 39 agreeing, while 37 were neutral or disagreed.

The study assessed the effect of student digital literacy on the integration of Artificial Intelligence in teaching and learning. Findings indicated that many students had strong digital literacy, though notable gaps persisted. On access to digital information, 41 strongly agreed and 36 agreed, while 33 respondents disagreed or strongly disagreed. Regarding proficiency in using software applications, 39 strongly agreed and 37 agreed, while 33 were neutral or disagreed. These results suggested that while most students were digitally competent, a considerable number still required support to effectively use AI-related software. On collaboration through online platforms, 37 strongly agreed and 38 agreed, while 32 were neutral or disagreed. Concerning the use of AI-enabled tools to solve academic and real-world problems, 32 strongly agreed and 40 agreed, while 33 were neutral or disagreed. Finally, on whether AI integration enhanced critical thinking and analytical skills, 36 strongly agreed and 39 agreed, while 33 remained neutral or disagreed.

The study examined the effect of institutional support on AI integration in teaching and learning. Findings showed that institutional policies, resources, and infrastructure were present but inconsistently experienced. On whether the university had clear policies guiding AI integration, 28 strongly agreed and 35 agreed, while 41 disagreed or strongly disagreed. Regarding financial resources, 26 strongly agreed and 37 agreed, but 43 respondents disagreed or strongly disagreed, suggesting limited funding for AI initiatives. This reflected that while some support existed, many respondents felt resources were insufficient. On ICT infrastructure, 33 strongly agreed and 38 agreed, while 37 were neutral or disagreed, showing uneven experiences in access to facilities. Concerning administrative commitment, 30 strongly agreed and 39 agreed, while 38 were neutral or disagreed, indicating mixed perceptions of leadership involvement. Lastly, on timely technical support, 32 strongly agreed and 40 agreed, while 37 were neutral or disagreed.

The study evaluated the effect of curriculum alignment on AI integration in teaching and learning. Findings revealed partial but uneven incorporation of AI in the curriculum. On whether the curriculum incorporated AI to achieve measurable outcomes, 34 strongly agreed and 39 agreed, while 36 respondents disagreed or strongly disagreed. Regarding AI-related content relevant to students' future careers, 38 strongly agreed and 36 agreed, while

34 disagreed or strongly disagreed. This indicated that while most respondents valued the relevance of AI in the curriculum, a notable proportion did not experience it consistently across courses. On assessment methods aligning with AI-supported learning, 31 strongly agreed and 37 agreed, while 36 were neutral or disagreed. Concerning AI integration with graduate competencies, 33 strongly agreed and 38 agreed, while 36 were neutral or disagreed. Finally, 30 strongly agreed and 36 agreed that AI concepts were well integrated across courses, but 40 disagreed or strongly disagreed.

5.2 Recommendations

The study recommended that the university should have enhanced faculty training programs by offering more structured and frequent professional development opportunities focused on Artificial Intelligence and modern pedagogical skills. Regular workshops and seminars should have been designed to address emerging technologies, ensuring faculty members were well-prepared to incorporate AI tools effectively into teaching and learning. Additionally, training should have been customized to meet the diverse needs of faculty across disciplines. It was also recommended that the university should have strengthened continuous learning opportunities by creating policies that encouraged and supported lifelong professional growth. Adequate instructional support should have been provided, including mentorship and access to AI resources, to ensure consistent faculty preparedness. Furthermore, technical competence could have been enhanced through collaborative partnerships with industry and technology experts.

The study recommended that the university should have strengthened digital literacy programs by integrating structured training sessions to equip students with the necessary knowledge and skills for effective use of Artificial Intelligence tools. These programs should have been embedded into the academic environment to ensure all learners acquired equal exposure to digital competencies. Additionally, the university should have promoted hands-on learning experiences to improve students' proficiency in relevant software applications. It was further recommended that collaborative online platforms should have been strengthened to encourage peer-to-peer and student-instructor engagement, thereby improving digital interaction. The university should also have encouraged the active use of

AI-enabled tools in solving academic and real-world problems. Finally, curriculum reforms should have been introduced to embed AI-driven activities that supported critical thinking and analytical skills.

The study recommended that the university should have developed and implemented clear policies to guide the systematic integration of Artificial Intelligence in teaching and learning. These policies should have been communicated widely to ensure all stakeholders understood their roles. In addition, the institution should have increased financial allocations dedicated to AI initiatives to strengthen sustainability and long-term adoption. It was further recommended that the university should have invested in improving ICT infrastructure to ensure consistent access to AI-enabled resources for both faculty and students. Stronger administrative commitment should have been demonstrated through leadership-driven initiatives promoting AI use. Finally, the institution should have enhanced timely technical support systems to address challenges efficiently and ensure smooth utilization of AI tools.

The study recommended that the university should have restructured its curriculum to ensure Artificial Intelligence was consistently incorporated across all courses and disciplines. AI-related content should have been tailored to align with relevant and measurable learning outcomes while addressing the skills required for the modern job market. Furthermore, curriculum developers should have integrated AI concepts to promote interdisciplinary learning. It was also recommended that assessment methods should have been redesigned to reflect AI-supported teaching and learning practices. The curriculum should have aligned AI integration with the core competencies expected of graduates, ensuring readiness for future careers. Additionally, collaboration with industry stakeholders should have been encouraged to continuously update AI-related content to remain relevant and practical for learners.

5.3 Conclusion

The study concluded that faculty training played a pivotal role in determining the effectiveness of Artificial Intelligence integration in teaching and learning at the Management University of Africa. Well-prepared and continuously supported faculty were

essential in ensuring that AI tools were not only adopted but also applied effectively to enhance pedagogy. The study further concluded that training needed to go beyond one-time workshops and should have been anchored in a structured framework that promoted continuous professional growth. It also emphasized that collaboration with experts and industry stakeholders would have enriched faculty skills, ensuring they kept pace with emerging technologies. Overall, the conclusion highlighted that sustained and comprehensive faculty development was indispensable for successful AI integration in higher education.

The study concluded that student digital literacy was a critical determinant in the successful integration of Artificial Intelligence in teaching and learning at the Management University of Africa. Students' ability to access, interpret, and apply digital tools was central to maximizing the benefits of AI in education. It was evident that digital literacy not only supported students' technical engagement with AI tools but also enhanced their collaboration, problem-solving, and adaptability to new learning environments. The study emphasized that without strong digital literacy skills, the potential of AI to improve learning outcomes would remain underutilized. Therefore, it was concluded that fostering digital literacy among students through structured training and curriculum reforms was essential for meaningful and sustainable AI integration.

The study concluded that institutional support was fundamental in shaping the effectiveness of Artificial Intelligence integration in teaching and learning at the Management University of Africa. Strong policies, adequate financial investment, and reliable infrastructure were necessary to create an enabling environment for AI adoption. The role of university leadership was also considered pivotal, as administrative commitment signaled the seriousness and sustainability of integration efforts. Furthermore, timely technical support was viewed as essential in addressing user challenges and ensuring smooth utilization of AI tools by both students and faculty. Overall, the study emphasized that without robust institutional support, AI integration would face significant barriers, while consistent and comprehensive support mechanisms would enhance adoption and long-term impact.

The study concluded that curriculum alignment was a crucial factor in ensuring the effective integration of Artificial Intelligence in teaching and learning at the Management University of Africa. A curriculum that intentionally embedded AI concepts across courses created opportunities for students to acquire relevant skills applicable to their future careers. Aligning AI with measurable learning outcomes and graduate competencies ensured that learners were better prepared for the demands of the modern workforce. Furthermore, curriculum design that incorporated AI-enabled assessments enhanced both teaching effectiveness and student learning experiences. The study emphasized that without deliberate alignment, AI integration would remain fragmented and inconsistent. Therefore, curriculum reforms were necessary to embed AI comprehensively across disciplines and foster holistic student development.

5.4 Suggestions for Further Study

The study suggested that future research should focus on comparative studies between public and private universities to examine differences in Artificial Intelligence integration. Further studies could also investigate the long-term impact of AI on student performance and employability. Additionally, research should explore the role of government policy in supporting AI adoption in higher education. Another area recommended was assessing faculty attitudes and resistance to AI, as this could influence adoption rates.

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APPENDIX I
QUESTIONNAIRE COVER LETTER

Dear Participant,

I am a diploma student at the Management University of Africa conducting a study entitled ***Factors Affecting Integration of Artificial Intelligence in Learning at the Management University of Africa***. The purpose of this study is to examine institutional, curriculum, digital literacy and technological factors influencing the integration of Artificial Intelligence in teaching and learning.

You have been selected to participate in this study and your honest responses are vital. The questionnaire contains only closed-ended questions and will take a short time to complete. Kindly note that your participation is voluntary and the information provided will be kept strictly confidential, used only for academic purposes.

Your cooperation will be highly appreciated.

Thank you in advance.

Sincerely,

Clive Kimanzi
DBIT/15/0072/3/23
Management University of Africa

APPENDIX II
QUESTIONNAIRE

This questionnaire is designed to gather information for the study titled ***Factors Affecting Integration of Artificial Intelligence in Learning at the Management University of Africa***. Your responses will be kept strictly confidential and used only for academic purposes. Kindly answer all questions honestly and to the best of your knowledge.

Section A: Demographic Information

Please provide the following information by ticking (✓) the option that appropriately matches your profile in each category. Your responses will be treated with strict confidentiality and used solely for academic purposes.

1. **Gender**
   - Male { }
   - Female { }
2. **Age Bracket**
   - Below 20 years { }
   - 21–30 years { }
   - 31–40 years { }
   - 41–50 years { }
   - Above 50 years { }
3. **Role at the University**
   - Student { }
   - Teaching Staff { }
   - Administrative Staff { }
   - Policy Implementer { }

4. **Level of Education (for staff only, if applicable)**

   - Diploma { }
   - Bachelor's Degree { }
   - Master's Degree { }
   - Doctorate (PhD) { }

5. **Year of Study (for students only)**

   - Year 1 { }
   - Year 2 { }
   - Year 3 { }
   - Year 4 { }

Section B: Study Objectives

1: Faculty Training

Kindly respond on this section based on the above objective by ticking on the appropriate box that best matches your opinion on a scale of 5 to 1 where 5= Strongly Agree, 4= Agree, 3= Neutral, 2 = Disagree and 1= Strongly Disagree.

Statement	5	4	3	2	1
Faculty members at the university are adequately trained in modern pedagogical skills necessary for AI integration.					
The university regularly organizes workshops and seminars to enhance faculty knowledge on Artificial Intelligence.					
Faculty have the required technical competence to effectively use AI in teaching.					
The institution encourages continuous learning opportunities for faculty to keep pace with technological advancements.					
Adequate instructional support is provided to faculty for integrating AI tools in teaching.					

2: Student Digital Literacy

Kindly respond on this section based on the above objective by ticking on the appropriate box that best matches your opinion on a scale of 5 to 1 where 5= Strongly Agree, 4= Agree, 3= Neutral, 2 = Disagree and 1= Strongly Disagree.

Statement	5	4	3	2	1
Students can easily access digital information necessary for AI-supported learning.					
Students are proficient in using software applications required for AI-related learning activities.					
Students effectively collaborate with peers and instructors through online platforms.					
Students use AI-enabled tools to solve academic and real-world problems.					
AI integration enhances students' critical thinking and analytical skills.					

3: Institutional Support

Kindly respond on this section based on the above objective by ticking on the appropriate box that best matches your opinion on a scale of 5 to 1 where 5= Strongly Agree, 4= Agree, 3= Neutral, 2 = Disagree and 1= Strongly Disagree.

Statement	5	4	3	2	1
The university has clear policies that guide the integration of AI in teaching and learning.					
Adequate financial resources are allocated to support AI integration initiatives.					
The university has sufficient ICT infrastructure to support AI-enabled learning.					
University administration demonstrates strong commitment to integrating AI in education.					
Students and faculty receive timely technical support when using AI tools.					

4: Curriculum Alignment

Kindly respond on this section based on the above objective by ticking on the appropriate box that best matches your opinion on a scale of 5 to 1 where 5= Strongly Agree, 4= Agree, 3= Neutral, 2 = Disagree and 1= Strongly Disagree.

Statement	5	4	3	2	1
The curriculum incorporates AI to achieve relevant and measurable learning outcomes.					
AI-related content included in the curriculum is relevant to students' future careers.					
The university uses assessment methods that align with AI-supported teaching and learning.					
AI integration is aligned with the competencies expected of graduates.					
AI concepts and applications are well integrated across different courses in the curriculum.					

5: Integration of Artificial Intelligence in Learning

Kindly respond on this section based on the above objective by ticking on the appropriate box that best matches your opinion on a scale of 5 to 1 where 5= Strongly Agree, 4= Agree, 3= Neutral, 2 = Disagree and 1= Strongly Disagree.

Statement	5	4	3	2	1
The university has embraced Artificial Intelligence as a tool to enhance teaching and learning.					
The use of AI has significantly improved teaching effectiveness at the university.					
AI integration supports personalized learning experiences for students.					
AI tools have increased students' engagement in academic activities.					
The use of AI has positively contributed to students' academic performance.					

THANK YOU FOR YOUR PARTICIPATION

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