Exploring responsible AI Integration in management education: A case study of Southern African Universities

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Abstract

The integration of responsible Artificial Intelligence (AI) in higher education has emerged as a transformative yet complex process, particularly in the Global South. This study investigates the challenges and opportunities associated with responsible AI adoption in management education within selected Southern African state universities. Despite growing interest in AI-enhanced learning, these institutions face structural and institutional barriers that hinder ethical and effective integration. Guided by Institutional Theory, this research employs a qualitative multiple case study design to derive insights from 30 purposively selected participants, including academic staff, policymakers, and ICT administrators, across various public universities in Zimbabwe and South Africa. Data were collected through in-depth interviews and focus group discussions and analysed using thematic analysis. Findings reveal four major challenges: infrastructural deficits, low digital literacy, institutional resistance, and the absence of AI-specific education policies. Nonetheless, participants identified promising opportunities in curriculum innovation, faculty development, and regional collaboration. The study extends Institutional Theory by demonstrating how organisational norms and cultural inertia influence AI adoption in under-resourced educational contexts. Practically, it offers policy-level and institutional recommendations for ethical AI deployment, including the need for national frameworks, digital infrastructure investment, and structured AI training programmes. This research contributes to the growing discourse on ethical AI in African education by highlighting both systemic constraints and pathways for transformative change in management education.

Keywords: Responsible Artificial Intelligence, management education, Institutional Theory, digital transformation, higher education, Southern Africa.

Introduction

Contextual Background

The use of Artificial Intelligence (AI) in higher learning has emerged as a landmark development in global pedagogical innovation. Responsible AI, which incorporates ethical considerations such as transparency, fairness, accountability, and inclusivity, has become an urgent priority for universities globally (Fjeld et al., 2023; Binns et al., 2023). Higher education institutions in Europe, North America, and Asia are increasingly adopting artificial intelligence technologies to enhance personalised learning, automate administrative functions, and improve student outcomes (Chen et al., 2023; Zhang & Kim, 2024). However, researchers caution that AI adoption must be ethically grounded to avoid entrenching biases, invading privacy, and exacerbating digital divides (Prates et al., 2024; Asare & Boateng, 2024).

In the context of management education, responsible AI presents both a tool and a challenge. Given that management education is responsible for preparing future business leaders and policy makers, it must integrate emerging technologies in a way that aligns with values such as accountability, critical thinking, and fairness (Brewer, 2025; Hancock & Miller, 2025). Scholars like Mhlanga (2024) and Banda and Dube (2025) highlight that AI can support case-based teaching, intelligent tutoring, and real-time feedback mechanisms, all of which are particularly beneficial in resource-constrained environments. Moreover, AI-enabled curriculum design tools are increasingly employed to tailor content delivery, foster learner engagement, and align learning objectives with dynamic labour market needs (Dlamini & Sibanda, 2023; Maree et al., 2023).

Despite this global progress, Southern African state universities face unique challenges. These include inadequate digital infrastructure, inconsistent policy guidance, and institutional inertia (Lubinga et al., 2023; Ndlovu & Makoni, 2023). Limited fiscal capacity, digital illiteracy, and leadership resistance further inhibit AI adoption in management faculties (Mutanga & Chigona, 2024; Mlambo & Dube, 2025). In this context, understanding how responsible artificial intelligence can be integrated into management education necessitates a localised and institutionally grounded analysis that considers not only technical constraints but also organizational and socio-cultural factors.

Problem Statement

While significant attention was given to AI adoption in education globally, existing literature generalises the education sector without disaggregating it by discipline or institutional context. This study narrows the focus specifically to management education, as a distinct pedagogical and disciplinary field, within state-owned higher education institutions in Southern Africa. Previous studies have not adequately addressed how responsible AI practices are conceptualised and operationalised within the unique mandates of management education, particularly in public universities facing financial and administrative problems.

Furthermore, while international universities are increasingly guided by AI ethical policies and institutional AI governance frameworks (Zhao et al., 2024; Fjeld et al., 2024), state universities in Southern Africa largely lack structured guidelines for responsible AI adoption. There remains a critical knowledge gap regarding how institutional, cultural, and regulatory dynamics influence

responsible AI integration in these contexts (Mpofu & Gondo, 2024). This study, therefore, explores how responsible AI is perceived, implemented, and resisted within selected public institutions, with a particular lens on management education.

Research Gap

Although emerging literature recognises the importance of ethical AI in education (Nyathi & Dube, 2024; Zimba et al., 2024), few studies focus specifically on the institutional dynamics shaping responsible AI adoption in management education. Moreover, while Institutional Theory has been applied in studies of organisational change and innovation, its contextual application in AI adoption within African higher education institutions remains under-explored (DiMaggio & Powell, 2023; Scott & Meyer, 2024). Most empirical studies concentrate on the Global North, with limited investigation into how African universities, particularly state-owned institutions, are responding to the pressures of technological innovation amidst systemic constraints (Becker & Erasmus, 2025; Kalema & Ncube, 2024). This study addresses this lacuna by applying Institutional Theory to examine how formal structures, normative expectations, and cultural-cognitive elements shape AI integration in management education across selected Southern African state universities.

Objectives and Research Questions

This study is guided by the following research objectives:

1 To examine the challenges associated with integrating responsible AI into management education in selected state universities.
2 To explore opportunities for adopting responsible AI tools and frameworks in management education.
3 To analyse how institutional factors (e.g., policy, norms, resistance) influence the integration of responsible AI in management education.

Based on these objectives, the study seeks to answer the following research questions:

1. What are the key enablers of responsible AI integration in management education within selected Southern African state universities?
2. What are the key barriers to responsible AI integration in management education within selected Southern African state universities?
3. How do institutional structures and norms shape the adoption of responsible AI in these contexts?

Scope and Justification

This research focuses exclusively on state-owned universities in Southern Africa, specifically institutions in Zimbabwe and South Africa. These universities were selected due to their public mandates, regulatory environments, and administrative structures, which often differ significantly from those of private institutions. The selection also reflects regional diversity while allowing for comparability of institutional characteristics. The focus on management education is intentional,

given its critical role in preparing graduates to lead digital transformation and address ethical dilemmas in organisations.

The study adopts a qualitative multiple case study design, engaging 30 purposefully selected participants drawn from academic staff, policymakers, and administrators involved in AI-related education and management. While the sample size may appear limited, it aligns with the study's interpretivist paradigm and exploratory nature, prioritising depth of insight over breadth of generalisation. Small, targeted qualitative samples, as argued by Creswell and Poth (2023), enable in-depth understanding of complex social phenomena, especially in under-researched contexts like responsible AI in African tertiary education.

Literature Review

Defining Responsible AI in Higher Education

The narrative surrounding Artificial Intelligence (AI) in education is becoming more anchored in core ethical values such as transparency, accountability, justice, and fairness. Fjeld et al. (2024) define accountable AI as the use of machine learning systems under ethical and regulatory oversight that prioritise society's well-being and the integrity of institutions. This issue is particularly critical in educational environments, where decision-making processes by AI systems have immediate implications on learning outcomes and academic equity (Binns et al., 2023). Hancock and Miller (2025) argue that reliable AI systems must present explainable and auditable decision-making processes in order to be capable of maintaining trust in educational environments. Similarly, Asare and Boateng (2024) observe that culturally biased algorithms and opaque "black box" systems pose a risk to pedagogical integrity, particularly in underrepresented and diverse learning environments.

In the context of management education, ethical AI intersects with the growing demand for critical thinking, ethical decision-making, and evidence-based reasoning (Brewer, 2025; Mhlanga, 2024). Prates et al. (2024) argue that AI technologies should not only automate instructional and administrative functions but also be focused on educational values that prioritise cognitive development over the displacement of human judgment. Zimba et al. (2024) caution against the unregulated use of AI grading systems, which can unfairly disadvantage some students on socio-economic or linguistic grounds. Additionally, Fjeld et al. (2023) advocate for the implementation of mechanisms such as algorithmic audits, fairness metrics, and user-informed consent to ensure that AI implementation is within ethical and regulatory requirements.

In addition, Zhao et al. (2024) and Kim and Zhang (2024) assert that ethical AI must be embedded within institutional policies and curriculum design to prevent ethical lapses. Nyathi and Dube (2024) highlight the importance of inclusive data sets and contextually adapted algorithms to reconcile African education values with AI integration. In summary, both management and general higher education must ensure that ethical AI practices adhere to global ethical standards while remaining sensitive to local pedagogical context so that innovation does not further widen existing inequalities.

Conceptual Lens: Institutional Theory

Institutional Theory can serve as an effective framework for analysing the introduction and adoption of responsible AI in higher education. DiMaggio and Powell (1983) originally theorised that institutional action is conditioned by organisational structures, norms, and values. Within the perspective of AI adoption, Institutional Theory explains how universities conform to prevailing technology and ethical requirements through coercive, mimetic, and normative isomorphism (DiMaggio & Powell, 2023; Scott & Meyer, 2024). Coercive isomorphism reflects the influence of funding bodies and regulatory authorities, while mimetic isomorphism refers to the tendency of institutions to emulate peer organisations perceived as successful; normative pressures isomorphism arises from professional norms and accreditation standards.

Several scholars have applied Institutional Theory to digital transformation. For instance, Suchman and Edelman (2025) argue that the perceived legitimacy of AI applications determines their acceptance, regardless of whether they are functioning effectively. North (2023) criticises Institutional Theory for downplaying the role of agency and resistance, especially in situations where bureaucratic inertia obstructs decision-making on technology. Mpofu and Gondo (2024) observe that institutional resistance to AI in Southern African universities had the effect of entrenching administrative culture and anxieties about job losses.

Kalema and Ncube (2024) identify structural fragmentation and leadership inertia as key institutional hurdles to AI reform in public universities. Banda and Sibanda (2025), however, note that institutions adopt AI to keep up-to-date with global trends, yet without the internal capacity necessary for ethical governance of such systems. Mlambo and Dube (2025) add to this by demonstrating that schools of management education do not leave space for pedagogies facilitated by AI due to highly regimented academia.

In general, Institutional Theory provides a valuable framework to examine responsible AI adoption in socio-political contexts. Institutional Theory makes it possible to identify formal and informal institutional drivers that can facilitate or hinder the adoption of AI in ethics management education.

Global Trends in Responsible AI Integration

Universities globally are gradually trying out responsible AI to augment learning, personalise teaching delivery, and streamline administrative functions. European universities have been at the forefront, deploying AI tools that are General Data Protection Regulation compliant and adhere to data privacy and ethics requirements (Sánchez & Martínez, 2024; Fjeld et al., 2024). At the University of Edinburgh and University College London in the UK, the AI governance framework emphasises auditability, transparency, and algorithmic fairness (Becker & Erasmus, 2025). In the Nordic nations, universities have also introduced AI literacy training programmes for staff and students to increase institutional readiness (Lindholm et al., 2024).

In Asia, countries such as Singapore, China, and South Korea have extensively invested in AI-based education infrastructure (Chen et al., 2023; Zhang et al., 2024). Singapore's AI for Education has been praised for including ethics training modules in AI courses (Ting & Ho, 2024). Conversely, Chinese universities, despite their high technological capacity, have been criticised

for using AI monitoring systems in a way that erodes academic freedom and openness (Wei & Liu, 2023; Zhao et al., 2024). These diverse experiences reveal the importance of contextual sensitivity in AI policy application.

North American higher education institutions in the United States and Canada have established research hubs of ethical AI in education. Some universities, like Stanford University's Institute for Human-Centred AI and MIT's Schwarzman College of Computing, have established interdisciplinary frameworks that incorporate fairness, algorithmic transparency, and inclusivity in AI education (Krause et al., 2023; Black et al., 2024). Nevertheless, challenges remain. Scholars like Terranova and Gentry (2024) observe that AI adoption driven by commercial reasons tends to overshadow ethical governance in institutions where regulations are weak. Collectively, these global insights stand as both inspiration and cautionary tales for Southern African state university institutions, whose infrastructural, governmental, and moral settings are so divergent.

Regional Context and Empirical Gaps

The use of AI in higher education, especially responsible AI, is still relatively new in Southern Africa. Studies by Lubinga et al. (2023) and Hlongwane et al. (2024) reveal that while universities in South Africa and Zimbabwe are beginning to experiment with AI tools in learning management systems, their application is largely uncoordinated and ethically unregulated. Mhlanga (2024) observed that infrastructural constraints such as poor connectivity, outdated computer labs, and underfunded IT departments significantly hinder AI deployment.

Banda and Dube (2025) report that faculty resistance, lack of digital literacy, and misalignment of national ICT policies further slowdown AI adoption. Similarly, Mutanga and Chigona (2024) argue that most public universities lack the policy frameworks needed to govern the use of AI in education. Ndlovu and Makoni (2023) identify bureaucratic inertia, political interference, and resource limitations as systemic obstacles.

Empirical work by Phiri and Ngwenya (2024) confirms that there is low awareness of ethical AI principles among university administrators, and very few institutions have formally adopted AI ethics codes. Bhebhe and Moyo (2025) emphasise that institutional silos and a lack of inter-university collaboration limit scalability and shared learning. Maseko and Gumbo (2024) warn that without contextual guidelines, African universities may import AI solutions that are culturally misaligned or ethically problematic.

Despite these challenges, there are isolated cases of progress. Chisale et al. (2023) document how a partnership between a South African university and a private tech firm led to the co-development of a responsible AI training module. Similarly, Mwansa and Tembo (2024) discuss regional consortia emerging to address infrastructural and knowledge-sharing deficits.
Nonetheless, the literature reveals a profound empirical gap in understanding how public universities in Southern Africa conceptualise, implement, and regulate responsible AI, particularly in management education, a field that is critically positioned to lead digital transformation.

Empirical Studies and Conceptual Framework

Empirical studies on AI in education have grown in recent years, yet few have combined ethical AI adoption with a robust theoretical framework. Braun and Clarke (2023) emphasise the importance of thematic analysis in unpacking the lived experiences of educators navigating AI-enabled transitions. Nowell et al. (2024) and Terry et al. (2024) use qualitative methods to examine the attitudes of faculty towards AI in curriculum design, revealing fears of dehumanisation and job displacement. Meanwhile, Morse (2023) and Tracy (2024) highlight the effectiveness of purposive sampling in capturing complex institutional dynamics that influence AI adoption.

A conceptual framework is crucial for guiding research at the intersection of ethics, pedagogy, and institutional governance. This study introduces a model where Responsible AI (input) interacts with Institutional Drivers (such as leadership commitment, ethical norms, infrastructure, and faculty readiness) to shape Integration Outcomes (like pedagogical transformation, curriculum innovation, and student engagement). Conceptual frameworks are primarily based on Institutional Theory and recent empirical studies by Mlambo and Dube (2025), Nyathi et al. (2023), and Makoni and Chigumadzi (2025).

The model also incorporates feedback loops, grounded on the principle that the effective use of AI is essentially aligned to institutional commitment and moral advancement (Dlamini & Tembo, 2024). The model also accounts for peripheral enablers like collaboration within the region, external support, and regulation requirements (Matlala et al., 2023; Kamau et al., 2025). As such, the model offers an inclusive and context-specific approach to responsible AI in the management of state higher and tertiary educational institutions.

Methodology

Research Philosophy and Design

The theoretical underpinning of this research is embedded in Institutional Theory, supported by nascent empirical studies by Mlambo and Dube (2025), Nyathi et al. (2023), and Makoni and Chigumadzi (2025). The model also incorporates the application of feedback loops, recognising that effective AI incorporation sustains institutional commitment and ethical maturity (Dlamini & Tembo, 2024). It also incorporates external enablers like regional coordination, donor engagement, and regulatory framework (Matlala et al., 2023; Kamau et al., 2025). As such, the model offers a systemic and context-focused response to responsible AI in management education in public universities. This aligns with the aim of the current study to discover how academic managers, lecturers, and policymakers in Southern African state universities perceive and respond to the integration of AI in management education.

A qualitative multiple case study design was employed to provide descriptive context-specific data regarding responsible AI integration in selected state universities. Yin (2023) argues that case study design is the most appropriate when examining contemporary events in real-world settings, especially where the boundary between the phenomenon and setting is not clearly defined. Similarly, Baxter and Jack (2022) suggest using case studies to research education technology, citing that such a design facilitates cross-institutional comparisons and accommodates the heterogeneity of institutional settings. The qualitative case study design is thus amenable to

capturing the multi-layered dynamics of AI adoption in different universities in the Southern African context.

Population, Sample, and Case Selection

The study population was composed of academic staff, senior administrators, and policymakers involved in AI-related teaching, course design, or institutional management at state-owned universities. Purposive sampling was used to select 30 participants across five state universities in Zimbabwe and South Africa. Both countries were chosen due to the comparable developmental stage of their higher education systems and the presence of public universities that actively engage in digital transformation initiatives (Lubinga et al., 2023; Mhlanga, 2024).
Purposive sampling was used to ensure that the participants had relevant information and experience, which would enhance the quality and richness of data (Patton, 2024). Morse (2023) supports this approach in AI-themed education research, citing that purposive samples enable researchers to make informed conclusions from cases rich in information. Equally, Muzondo, Mashapure, and Masiiwa (2025) point out that in technology adoption research, the selection of stakeholders directly involved in the implementation process leads to more insightful findings. By collecting data from faculty leaders, department chairs, IT managers, and curriculum specialists, the research enabled triangulation of viewpoints throughout institutional hierarchies.

Data Collection Methods

Data was collected during fieldwork through one-on-one in-depth interviews and focus group discussions, both of which are consistent with interpretivist paradigms and qualitative case study research. The interviews clarified personal comprehension into participants' knowledge of accountable AI, while the focus groups provided interactive discussions emphasising patterns and institutional norms. According to King and Horrocks (2023), the dual approach optimises the richness of the data and co-construction of meaning. Nowell et al. (2024) also promote such practice in the context of AI-in-education research and describe that focus groups are well-suited to investigate attitudes at the group level toward digital transformation.

The interviews lasted 45–60 minutes and employed a semi-structured questionnaire to capture questions on ethical AI guidelines, institutional obstacles, faculty readiness, and policy alignment. The focus groups lasted about 90 minutes and were a panel of a single institution's faculty members. All sessions were video- and audio-recorded with consent and face-to-face on campus or via video conferencing technology, depending on logistics. Use of open-ended and flexible questions enabled participants to think deeply about their experience without moving away from the objectives of the study.

Data Analysis

Data was analysed using Braun and Clarke's (2023) six-step model of thematic analysis. The process began with familiarisation through repeated readings of the interview and focus group transcripts, followed by initial coding, during which recurring patterns were identified. These codes were then subsequently refined and grouped into potential themes such as infrastructural barriers, ethical awareness, curricular constraints, and institutional resistance. These themes were

then reviewed for internal coherence, refined for clarity, and finally named and defined for reporting purposes.

Castleberry and Nolen (2023) point out that thematic analysis is most appropriate for interpretivist qualitative research since it facilitates iterative theme construction and alignment with the research questions. Terry et al. (2024) successfully used thematic analysis in a faculty response to an AI usage in curriculum development study, which demonstrates its suitability in the context of educational technology. NVivo software was used to assist with coding data and organise and visualise themes, enhancing analytical transparency and rigour within this research.

Ethical Considerations

Ethical integrity guided this research. Informed consent was obtained before each of the focus group discussions or interviews, and comprehensive information sheets and consent forms were provided to all the participants. Confidentiality of the participants was maintained by anonymity and confidentiality through de-identification of the transcript and data storage in encrypted computer hard drives.

Ethics approval from the respective ethics review boards of the host universities was granted. As Wiles (2024) argues, the emphasis in qualitative research is not procedural but creates respectful researcher-participant relationships. Israel and Hay (2023) also demand constant ethical consideration during the course of conducting the research, especially in dealing with such sensitive issues as AI regulation and surveillance in universities. These moral values were strictly adhered to in the study, and the participants were handled with respect and comfort during the study.

Limitations of the Methodology

While the study offers qualitative insights on the integration of ethical AI in management education, several methodological limitations need to be recognised. Firstly, small sample sizes and case study studies restrict the generalisability of findings to the universities under study. Creswell and Poth (2023) contended that qualitative research prioritises depth over breadth and therefore is best placed to study in-depth and context-specific phenomena.

Second, despite efforts to ensure a variety of views, the research remained open to researcher bias, particularly in interpreting findings. In an effort to mitigate this, the analysis was peer-checked independently by a qualitative researcher and involved reflexive journaling throughout the research.

Finally, the rapid development of AI makes some of the results time-sensitive or context-dependent. It is recommended by Muzondo, Mashapure, and Masiiwa (2025) to have constant engagement with the field to make qualitative results timely in technologies of rapid development.

Findings

The study explored participants' perceptions of the challenges and opportunities related to the adoption of responsible AI in management education at selected Southern African state universities. Thematic analysis reveals two predominant themes: (1) Challenges of Responsible AI Integration and (2) Opportunities for Responsible AI Integration, each containing sub-themes derived from recurring patterns in interviews and focus group discussions.

Challenges of Responsible AI Integration

Infrastructural Deficits

A key challenge raised by participants was the lack of foundational digital infrastructure in many public universities. This included outdated computer labs, unreliable internet connections, and insufficient access to AI-compatible devices for both staff and students.

One participant noted:

> *"We still have lecture rooms without projectors, let alone internet access. Talking about AI is far-fetched when the basics are not in place."*

Another added:

> *"Our students depend on mobile phones and very limited data. Most of them are not able to utilise or do not have access to AI platforms that require a stable internet."*

This technological inadequacy severely limits the universities' capacity to implement AI tools in teaching, curriculum design, or administrative processes. For example, attempting to deploy AI-based learning platforms is typically a failure due to bandwidth limitations or hardware incompatibility, and this discourages the move from theoretical arguments on AI to actual deployment.

Digital Literacy Gaps

In addition to the technical limitations, both students and lecturers were also cited as having low digital literacy, which was listed as the chief obstacle. Only a minority of participants reported limited exposure to the subject matter, the tools, and AI pedagogy. One participant remarked:

> *"Most of us were never taught AI. We hear the word, but we don't actually know what it does or how to use it in teaching."*

Another participant said:

> *"Even the students, especially rural students, struggle to manage elementary ICT. It is unrealistic to expect them to work on AI platforms without pre-training."*

These lacunas not only slow the adoption of AI technology but also intelligent interaction with it. Underutilisation of even rudimentary learning technologies occurs in most instances, thanks to fear and misinformation regarding the purpose and functionality of AI. This leads to a vicious cycle where institutions fall behind international trends, not because of resistance, but because they do not have basic digital literacy.

Institutional Resistance

Institutional inertia was a major obstacle. Respondents described a general resistance to change from traditional teaching methods and institutional processes to AI-augmented systems, even where the tools were available.

One administrator commented:

> *"Individuals view AI as a threat, in the sense that it will replace lecturers or make some jobs redundant. So, there is passive resistance on the part of both academic and support staff."*

A faculty member also commented:

> *"There's a genuine culture of 'this is the way we've always done it.' Even when we introduce new systems, the take-up is very slow."*

Such resistance is usually a result of fear of change, perceived job loss, and unfamiliarity with AI as a supporting, rather than replacement, tool. For example, an attempt to digitalise examination marking through the use of AI tools was put on hold because academic staff unions protested, fearing a loss of academic control.

Policy and Leadership Gaps

Respondents reiterated again and again the absence of explicit institutional policies or leadership endorsement for the integration of AI. Although there were discussions of AI both nationally and institutionally, few universities had written strategies, regulatory frameworks, or set aside money for applying AI in instruction.

One of the policy officers remarked,

> *"We have national ICT policies, yes, but nothing specific to AI in education. There's no roadmap or budget line for it."*

Another respondent mentioned:

> *"Leadership talks about digital transformation, but without concrete policies, nothing moves. We're left improvising without guidance."*

The lack of policy clarity makes it difficult for faculties to develop AI-integrated programmes or justify investment in AI-related tools. Without formal leadership buy-in, AI remains a buzzword rather than a strategic institutional priority.

Opportunities for Responsible AI Integration
Curriculum Development

Despite all these, the participants considered curriculum development as the most important space for potential where AI can directly impact and make a revolutionary difference. They regarded AI technology as beneficial in providing adaptive learning environments, developing data-informed feedback, and tailoring content delivery.

One of the lecturers said:

> *"With AI, we could tailor assignments based on students' performance. This would keep slow learners going and bright students on their toes."*

A curriculum officer continued to say:

> *"AI can help to make course content industry-relevant based on the analysis of job market data and by suggesting what to include in our syllabus."*

Pilot projects of AI-based platforms for assessment had already commenced in a few universities, but rollout was yet to be extensive. There was the perception that, if responsibly deployed, AI had an enormous ability to increase curriculum flexibility, relevance, and accessibility for management education.

Faculty Development

Another worth mentioning was using AI to supplement staff development with IT skills training and pedagogy upskilling. Participants suggested that AI might be used to give lecturers immediate feedback and customise their career development pathways.
One participant noted:

> *"We might utilise AI software to track how lecturers interact with students on the internet and give them tips on how to improve."*

A faculty dean mentioned:

> *"Faculty training programmes could benefit from AI by identifying gaps in teaching methods and aligning training modules accordingly."*

There was also interest in AI-powered simulations for management scenarios, which could serve both teaching and training purposes. These technologies, if deployed carefully, could reduce the burden on conventional workshops and offer continuous, self-paced faculty development.

Collaborative Networks

Finally, regional collaboration was cited as a strategic enabler of responsible AI adoption. Participants highlighted the importance of pooling resources, sharing technical expertise, and co-developing ethical frameworks through regional platforms and academic networks.
One respondent noted:

> *"Why should every university struggle alone? If we work together, we can develop common tools and standards for AI in teaching."*

Another participant proposed:

> *"We need SADC-level or at least national consortia that support joint AI projects, shared infrastructure, shared training, and even shared funding."*

Some participants referenced recent pilot collaborations involving donor-funded digital learning projects as models worth expanding. These networks were viewed as essential for overcoming infrastructural disparities and promoting consistent standards for responsible AI use across institutions.
In summary, while challenges to responsible AI integration in management education are formidable, especially infrastructural and policy-related, there are promising opportunities for institutions that are willing to invest in training, curricular innovation, and inter-institutional cooperation. Participants recognised that a collective, well-coordinated, and ethically grounded approach will be key to harnessing AI's potential for educational transformation.

Discussion

The findings of this study provide a rich empirical understanding of the challenges and opportunities associated with responsible Artificial Intelligence (AI) integration in management education at state universities in Southern Africa. When critically examined alongside theoretical

expectations and international benchmarks, several points of convergence and divergence emerge. Institutional Theory proves particularly useful in framing these dynamics, particularly the observed resistance, policy inertia, and slow technological adoption.

The infrastructural and digital skills deficits reported by interviewees echo Institutional Theory's assertion that deeply embedded norms and resource limitations in institutions generally thwart innovation. DiMaggio and Powell (2023) illustrate how coercive forces such as national ICT policy or expectations of donors are insufficient to drive drastic change unless and until normative shifts emerge internally. In this context, the lack of a strong institutional culture supportive of AI reform has left most state universities lagging in adoption. The mimetic isomorphism described in Institutional Theory, where institutions copy others to appear modern, was evident but largely superficial in this study. While some universities reference global AI initiatives, few have internalised responsible AI practices through training, policy, or curriculum change.

Institutional resistance to AI, rooted in fear of job displacement, lack of familiarity, and limited exposure, aligns with what North (2023) and Scott and Meyer (2024) describe as institutional inertia. This resistance is not due to a fundamental rejection of AI but rather a consequence of weak organisational readiness, bureaucratic rigidity, and a limited capacity for adaptive change. Faculty members and administrators fear AI because it disrupts long-standing norms and practices, which are often deeply embedded in university structures.
Comparing the findings to global trends, the Southern African context presents a distinct divergence. While universities in Europe and North America are advancing ethical AI frameworks, guided by GDPR compliance, institutional AI boards, and faculty development programmes, state universities in this study are still grappling with foundational issues such as device shortages and limited internet. For example, institutions like the University of Edinburgh or Stanford have well-documented AI ethics policies and funding support, while participants in this study noted an absence of national or institutional AI roadmaps. Even in Asia, particularly in Singapore, AI-driven personalised learning portals are being deployed, enabled by extensive public investment and robust governance, conditions lacking in the study context.

Despite these variations, possibilities for localised adaptation remain. The stakeholders perceived curriculum innovation, faculty development, and regional collaboration as viable for shaping responsible AI in integration. These elements align with global best practices on paper, but would require contextual addressing. For instance, while the global world utilises AI for providing students with automated feedback, institutions locally could start with adaptive low-end tools or content alignment systems based on performance analytics. This underscores the need for ethical accountability and cultural sensitivity, especially in a region where algorithmic bias can effectively entrench differences due to a lack of African data in AI training programmes.

The results also invoke ethical issues, specifically in relation to AI surveillance, data privacy, and algorithmic bias. Participants felt discomfort with AI-driven student surveillance and decision-making transparency. These fears reflect global ethical debates but are magnified in low-resource contexts, where legal and institutional safeguards are absent or weak. The absence of a locally developed ethical framework risks the adoption of AI technologies from other countries that are not necessarily aligned with local values or pedagogic cultures.

In brief, notwithstanding infrastructural, policy, and institutional limitations, theoretical and experiential insights from this study suggest a transformational pathway forward. By rooting institutional response on normative change, context-aware policymaking, and ethical AI design, Southern African state universities can harness AI to education outcomes without compromising equity, cultural compatibility, and intellectual integrity.

Conclusion and Recommendations

Summary of Key Findings

This research investigated the adoption of responsible Artificial Intelligence (AI) in management education at selected Southern African state universities. The findings reflected a mix of existing challenges and rising opportunities. On one hand, there are considerable challenges, such as infrastructural shortfalls, a low degree of digital literacy among students and staff, institutional resistance, and a lack of AI-specific leadership direction and policy framework. On the other hand, the research recognises enormous opportunities, such as curriculum redesign to incorporate AI, reskilling of academics, and collaboration between institutions. These opportunities, if addressed strategically, could significantly enhance the responsiveness and ethical orientation of AI adoption in management education.

Theoretical Contributions

This study contributes to the contextual application of Institutional Theory by providing an overview of how institutional norms, bureaucratic structures, and inertial forces influence AI adoption timing and trajectory. Unlike the cases where coercive or mimetic forces lead to technological adoption, Southern African state universities reflect a distinctive pattern of resisting, accommodating, and improvising. The study adds to Institutional Theory by highlighting how crucial internal agency, local constraints, and normative misalignments are in shaping technology adoption in resource-constrained learning environments. The study also illustrates how institutional legitimacy pressures, without vigorous internal structures and leadership commitment support, are insufficient to facilitate large-scale adoption.

Practical Recommendations

Several practical implications arise from the research. Firstly, there are required national policy documents that have well-defined goals, ethical values, and action lines for AI in education that incorporate AI. The policies must have a logical master plan to guide universities, with room for local adaptation.

Additionally, leaders in government and institutions must prioritise investments in digital infrastructure. This includes improving internet connectivity, purchasing AI-driven hardware, and replacing legacy systems with ones that support responsible AI technology.

Third, standardised training programmes for both academic and administrative staff are required. These must go beyond basic digital literacy and include AI ethics, classroom practice applications, and system integration strategies.

Finally, there is a critical need to establish clear ethical principles specifically suited to local contexts. These principles will need to cover data privacy, fairness of algorithms, and culturally

attuned AI design, making sure that AI tools are employed to enable educational equity instead of exaggerating existing differences.

Research Limitations

The study acknowledges several limitations. The sample size was relatively small, consisting of 30 purposively selected participants drawn from a limited number of institutions. While the study yields deep and rich insights, the findings are not generalised to all universities in Southern Africa. Furthermore, the qualitative approach emphasised interpretive depth over statistical breadth, thereby limiting the ability to quantify the relationship between variables.

Areas for Future Research

Future research can expand on this research by conducting comparative studies with private universities to learn about differences in resource levels, institutional agility, and innovation potential in adopting AI. These comparisons would yield valuable insights into scalable solutions and sectoral concerns.

Furthermore, longitudinal studies tracing AI policy implementation and its effects on teaching, learning, and institutional governance would create a more dynamic image of transformation over time. This approach can help establish when resistance or failure occurs earliest as institutions react, invest, and reorganise in response to new digital spaces.

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