Editon Consortium Journal of Educational Management and Leadership [ISSN: 2709 - 1414]

Issue no: 01 | **Vol no:** 06 | **October** 2025: 32-46

Ethical Dimensions of Transformative Leadership: Advancing Equity in Technology-Driven Higher Education

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Article History
Received: **2025.08.19**
Accepted: **2025.09.18**
Published: **2025.10.21**

Cite this article in APA
Mauti, J. M., & Nyambane, A. K. (2025). Ethical dimensions of transformative leadership: Advancing equity in technology-driven higher education. *Editon consortium journal of educational management and leadership, 6*(1), 32-46. https://doi.org/10.51317/ecjeml.v6i1.642

Abstract
The purpose of this article is to examine how transformative leadership can ethically guide digital transformation in higher education to promote equity, justice, and sustainability. The rapid digitalisation of higher education offers significant opportunities for innovation while simultaneously presenting complex ethical challenges, especially in technology-marginalised contexts such as Kenya and the wider Global South. Unequal access to digital infrastructure, limited institutional capacity, and concerns over data privacy and inclusion risk deepening existing educational inequities if left unaddressed. Drawing on Transformative Leadership Theory, Rawls' Theory of Justice, and the Ethics of Care, this study employs qualitative thematic analysis of 40 Kenyan and global policy documents, academic sources, and legal instruments to explore how ethical frameworks can inform equitable and context-sensitive digital transitions. The findings reveal that digital transformation, when directed by ethically grounded leadership, can foster inclusive governance, protect human dignity, and enhance participatory decision-making. The study proposes a multidimensional ethical leadership model emphasising visionary, inclusive, and compassionate approaches that align digital innovation with the public good. It concludes that digital transformation is not merely a technical process but an ethical and political undertaking requiring continuous reflection and justice-oriented leadership, and recommends integrating ethical leadership principles into higher education policy and practice to ensure socially just and sustainable digital futures.

Key words: Digital equity, ethics, higher education, Kenya, transformative leadership.

INTRODUCTION

Higher education in the twenty-first century stands at a pivotal crossroads. While digital transformation has expanded opportunities for teaching, learning, and knowledge management, it has also intensified existing inequities across global and local contexts. The central problem addressed in this study concerns the ethical tensions embedded in the digital transformation of higher education, particularly in resource-constrained settings such as rural Kenya, where the promise of technology to democratise education often contrasts sharply with the realities of exclusion and inequality. Despite the optimistic discourse surrounding digital innovation, persistent infrastructural, economic, and sociocultural barriers prevent many institutions in the Global South from realising their inclusive potential. This disparity raises urgent ethical questions about justice, fairness, and responsibility in an increasingly digital academic landscape.

Digital transformation refers to the integration of emerging technologies such as artificial intelligence (AI), big data, machine learning, blockchain, and online learning platforms into the systems and processes of higher education (Brown et al., 2020; Siemens et al., 2021). These technologies are often portrayed as pathways to improved access, quality, and institutional efficiency. However, their implementation also exposes and sometimes amplifies pre-existing social inequalities (Eynon, 2020; Knox, 2022). In many African contexts, universities contend with unreliable electricity, limited internet connectivity, and low levels of digital literacy (UNESCO, 2023; Ministry of Education, Kenya, 2022). Students from rural areas, women in patriarchal communities, and learners with disabilities are often disproportionately affected by these limitations (Njuguna & Wanjala, 2023). Consequently, digital innovation, rather than serving as a vehicle for empowerment, can inadvertently deepen the divide between privileged and marginalised populations.

The ethical implications of this divide extend beyond questions of access. They encompass concerns about data privacy, algorithmic surveillance, and the commodification of education. As AI-driven analytics and biometric identification become more prevalent, universities collect and process vast amounts of student data, often without transparent mechanisms for consent or governance (Williamson & Eynon, 2020; Selwyn & Jandrić, 2020). Moreover, digital infrastructures generate significant environmental costs through high energy consumption and electronic waste, posing sustainability challenges for institutions committed to ethical and ecological responsibility (Njuguna & Wanjala, 2023). Equally pressing are the epistemological concerns: digital platforms tend to privilege Western content and modes of knowledge, marginalising indigenous epistemologies, languages, and cultural expressions (Oloo, 2022; Bali & Sharma, 2020). These patterns of "epistemic colonisation" perpetuate global hierarchies of knowledge and threaten the intellectual sovereignty of local communities.

To analyse these multidimensional ethical challenges, this study draws upon three interconnected theoretical perspectives: Rawlsian justice, the ethics of care, and transformative leadership. Together, these frameworks provide a moral and conceptual foundation for reimagining digital transformation in ways that prioritise human dignity, fairness, and inclusivity. From the standpoint of Rawlsian justice, ethical digital transformation must uphold principles of fairness and equal opportunity, ensuring that the least advantaged members of society benefit most from technological change. This perspective underscores the need for distributive justice in access to online resources, learning opportunities, and institutional support. The ethics of care complements this view by emphasising empathy, relational responsibility, and attentiveness to the lived experiences of marginalised learners (Noddings, 2013). It reminds educational leaders that technological progress must remain grounded in compassion and contextual sensitivity rather than abstract efficiency. Finally, transformative leadership provides a practical framework for action. Rooted in values of equity, empowerment, and social justice, transformative leadership calls on higher education leaders to challenge structural inequities and align digital innovation with broader ethical and societal goals (Kezar & Holcombe, 2017; Northouse, 2022).

These theoretical lenses are particularly relevant in sub-Saharan Africa, where the digital divide is not just a technical matter, but also a moral and political concern. Effective responses must therefore go beyond providing infrastructure or devices; they must also foster critical digital literacies, inclusive content creation, and participatory decision-making processes. Universities should ensure that their digital policies reflect principles of transparency, fairness, and sustainability, especially in the context of public-private partnerships where

commercial interests may conflict with educational values (Zuboff, 2019; Macfarlane, 2021). Similarly, ethical digital transformation requires institutions to evaluate not just adoption rates or cost efficiency but also the social and environmental impacts of their technological initiatives (UNESCO, 2023).

In essence, digital transformation presents a double-edged reality: it can either advance inclusion and empowerment or reinforce existing forms of exclusion and injustice. Navigating this complexity demands leadership that is not only technologically competent but also ethically conscious and contextually responsive. Guided by the principles of Rawlsian justice, the ethics of care, and transformative leadership, this paper examines the ethical dimensions of digital transformation in higher education with a focus on underrepresented and resource-constrained contexts such as rural Kenya. It explores how issues of access, equity, inclusion, epistemic justice, environmental sustainability, and data ethics are addressed or neglected within current digital education practices. The discussion ultimately argues that ethical, transformative leadership is essential for ensuring that digital innovation serves as a catalyst for empowerment, fairness, and sustainability, rather than a mechanism for new forms of exclusion.

LITERATURE REVIEW

The question of equitable access lies at the core of the ethical debate surrounding digital transformation in higher education. While digital technologies are often heralded as tools for widening participation and reducing barriers to learning, evidence suggests that they frequently reinforce existing socioeconomic divides (Eynon, 2020; Knox, 2022). Access to digital infrastructure, such as reliable electricity, broadband connectivity, and affordable devices, remains profoundly unequal across and within nations. In sub-Saharan Africa, universities often operate under severe infrastructural constraints, making online learning and digital management systems difficult to sustain (UNESCO, 2023; Njuguna & Wanjala, 2023).

Research from Kenya and similar contexts highlights that students in rural or marginalised areas face compounded challenges related to poverty, gender inequality, and limited digital literacy (Oloo, 2022). Women, students with disabilities, and learners from low-income families are disproportionately excluded from digital participation due to structural and cultural barriers (World Bank, 2023). These inequalities are not simply technical deficiencies but manifestations of social injustice, revealing how digital systems can reproduce rather than reduce educational disparities. As Rawlsian theory would suggest, ethically just systems should prioritise the least advantaged by designing inclusive digital policies and allocating resources toward those most excluded. Yet, empirical studies show that few institutions in the Global South explicitly apply such principles in their digital strategies, underscoring a significant ethical and policy gap.

Beyond material access, digital transformation raises questions about whose knowledge is represented, valued, and transmitted through digital platforms. Scholars such as Bali and Sharma (2020) and Eynon (2020) argue that global ed-tech systems often privilege Western epistemologies, marginalising indigenous and community-based knowledge forms. This phenomenon, sometimes described as "epistemic colonisation", is particularly pronounced in African higher education, where digital curricula and platforms frequently adopt imported content, languages, and pedagogical models (Oloo, 2022; Odora Hoppers, 2022).

Epistemic justice, as an ethical framework, calls for the recognition and inclusion of multiple knowledge traditions in digital learning environments. The ethics of care complements this perspective by emphasising attentiveness to local cultures, languages, and learner identities (Noddings, 2013). Studies show that co-creation of digital content with communities, integration of indigenous knowledge systems, and support for linguistic diversity can foster a more inclusive and culturally grounded digital education (Selwyn, 2022). However, despite growing theoretical advocacy, few practical examples exist within African universities that demonstrate successful epistemic inclusion through technology. The absence of such initiatives reflects a broader lack of transformative leadership committed to equity, not just in access, but in the production and dissemination of knowledge itself.

The digital transformation of higher education also raises urgent questions about data ethics, privacy, and institutional accountability. As universities adopt AI-driven learning analytics, biometric verification, and online surveillance systems, vast quantities of student data are collected and processed, often without adequate consent or transparency (Williamson & Eynon, 2020;

Selwyn & Jandrić, 2020). Scholars have warned that this "datafication" of education risks turning learners into data subjects and institutions into data brokers, blurring the boundary between educational innovation and surveillance capitalism (Zuboff, 2019).

Ethical governance of digital data remains underdeveloped in many African institutions, where regulatory frameworks and institutional policies lag behind technological adoption (UNESCO, 2023). Students often lack awareness of their data rights, and few universities maintain clear data governance policies or ethical oversight mechanisms (Knox, 2022). The ethics of care framework underscores the moral obligation of institutions to protect the dignity and autonomy of students by ensuring informed consent and participatory data governance. Rawlsian justice further demands fairness in how data benefits and risks are distributed among different stakeholders. These frameworks together point to the need for transparent, participatory, and accountable data governance systems that treat digital ethics as central to educational integrity rather than as an administrative afterthought.

An often-overlooked dimension of digital transformation concerns its environmental implications. The increasing reliance on data centres, electronic devices, and cloud infrastructure contributes to rising carbon emissions, energy consumption, and electronic waste (Njuguna & Wanjala, 2023). This raises ethical questions for universities that publicly commit to sustainability while expanding their digital footprints. In the Global South, where waste management systems are often inadequate, the environmental burden of digitalisation is disproportionately borne by poor and rural communities (Odora Hoppers, 2022).

Recent scholarship calls for "green digital transformation" strategies that integrate environmental ethics into higher education policy (UNESCO, 2023). This includes investing in renewable energy for ICT infrastructure, promoting repair and recycling programs, and incorporating environmental literacy into curricula. From the perspective of the ethics of care, sustainability must be understood relationally, acknowledging interdependence between human and ecological well-being. Transformative leadership, in turn, must champion digital progress that does not compromise environmental justice. Yet, empirical work on this intersection between digital innovation and ecological ethics in African higher education remains scarce, marking a significant gap in both scholarship and institutional practice.

Across the literature, there is growing recognition that technological solutions alone cannot achieve equitable digital transformation; Leadership has a crucial influence on determining how institutions adopt and manage technology. Transformative leadership provides a framework for addressing digital challenges through ethical, inclusive, and socially responsive action (Kezar & Holcombe, 2017; Northouse, 2022). Unlike transactional or technocratic leadership models that prioritise efficiency, transformative leadership emphasises moral vision, critical reflection, and the empowerment of marginalised voices.

In higher education, transformative leaders are those who question who benefits from digital innovation, whose interests are represented in policy decisions, and how institutional practices can be aligned with principles of justice, inclusion, and sustainability (Macfarlane, 2021). Empirical studies suggest that where leadership fosters participatory governance through stakeholder consultations, student involvement, and transparent decision-making, digital transformation tends to be more equitable and contextually relevant (Bali & Sharma, 2020). Conversely, where leadership is top-down and commercially driven, digital initiatives often reproduce inequities and ethical blind spots. In sub-Saharan Africa, there remains limited documentation of transformative leadership practices that explicitly link digital strategy with ethical governance and social justice, highlighting the need for further research and capacity development in this area.

Ethical digital transformation demands a robust theoretical grounding capable of guiding institutional practice. Rawlsian justice and the ethics of care provide complementary lenses for analysing and addressing inequities in digital higher education. Rawls's (1971) principles of fairness and the prioritisation of the least advantaged offer a normative basis for equitable resource allocation and digital inclusion policies. Meanwhile, the ethics of care, rooted in relational morality and attentiveness to human vulnerability (Noddings, 2013), extends the conversation beyond fairness to include empathy, responsibility, and interdependence.

Applied together, these theories emphasise that digital education should not merely distribute technology but

foster human flourishing through just and compassionate systems. They also reinforce the importance of transformative leadership, which operationalises these ethical commitments into practice by embedding care, justice, and inclusion within institutional cultures and digital strategies. Current scholarship, however, reveals that few empirical studies explicitly apply these theories to digital transformation in African higher education, underscoring both a conceptual and practical research gap.

Across these themes, the literature reveals a convergence around a central insight: digital transformation in higher education is as much an ethical and social process as it is a technological one. Persistent inequities in access, epistemic marginalisation, weak data governance, and environmental neglect illustrate how digitalisation can deepen existing injustices if not guided by strong ethical and leadership frameworks. Yet, empirical evidence from African contexts remains limited, and few studies integrate ethical theories such as Rawlsian justice and the ethics of care into analyses of institutional policy or leadership practice.

This study addresses these gaps by examining how transformative leadership can ethically navigate digital transformation in higher education, with a particular focus on rural Kenya. Through its integration of justice, care, and leadership frameworks, it aims to illuminate how digital innovation can be reoriented toward inclusion, equity, and sustainability in technology-marginalised contexts.

Theoretical Foundations of Transformative Leadership and Ethics

In the fast-evolving landscape of higher education, especially in the Global South, ethical leadership has become increasingly critical. As universities embrace digital transformation in teaching, learning, and administration, questions of equity, inclusion, and digital justice have moved to the centre of institutional debates. In Kenya, where digital adoption unfolds within contexts marked by socioeconomic inequality and enduring colonial legacies in knowledge systems, leadership must be not only visionary but also morally grounded and contextually responsive. University leaders are challenged to foster innovation while ensuring that such innovation benefits all learners fairly.

To guide leadership ethically in such complex environments, a multidimensional theoretical framework is required, one that unites moral vision, structural fairness, and human responsiveness. Three complementary traditions provide such a foundation: Transformative Leadership Theory, Rawls' Theory of Justice, and the Ethics of Care.

Transformative Leadership Theory, first articulated by Burns (1978) and later expanded by Bass (1985), views leadership as a moral and value-driven endeavour that seeks to elevate both leaders and their followers. Unlike transactional leadership, which focuses on short-term exchanges or performance metrics, transformative leadership emphasises long-term systemic change built on principles of justice, equity, and collaboration. In higher education, this orientation encourages a move beyond narrow measures such as university rankings or revenue generation, emphasising instead digital inclusion, cultural relevance, and community engagement.

Empirical research from Kenyan universities underscores both the promise and the limits of this approach. Gikonyo and Ndiritu (2021) found that transformational leadership behaviours such as inspirational motivation, intellectual stimulation, and individualised consideration played a decisive role in enabling the introduction of online learning amid the COVID-19 pandemic. However, their impact was constrained by inadequate digital infrastructure and limited institutional capacity. Similarly, Wambua (2022) showed that ethical leadership practices, particularly transparency and participatory decision-making, enhanced inclusive digital innovation, but resource scarcity and uneven policy implementation hindered sustained transformation. These studies highlight that while transformative leadership provides moral direction and a vision for change, its realisation depends on overcoming structural and resource-based constraints within higher education systems.

Complementing transformative leadership, Rawls' (1971) Theory of Justice offers a philosophical structure for fairness in educational decision-making. Rawls proposes two key principles: equal liberty, which guarantees basic rights such as access to quality education, and the difference principle, which permits inequalities only when they benefit the least advantaged. In the digital era, these ideas translate into a call for equitable access to technological resources, devices,

connectivity, and inclusive content regardless of learners' socioeconomic or geographic background. Kenya's National Curriculum Policy (Ministry of Education, 2018) and the Kenya Institute of Curriculum Development's (2018) digital standards reflect these commitments by emphasising access, equity, and inclusivity. Yet, research consistently reveals a gap between policy aspiration and practice. Underfunded institutions and rural learners often lack sufficient digital infrastructure, and the implementation of Universal Design for Learning (UDL) principles remains inconsistent due to administrative and financial barriers (Wambua, 2022).

Although Rawls' framework provides a strong normative structure for distributive justice, it can sometimes overlook the relational and emotional dimensions of moral life that are central to human experience. This limitation becomes particularly evident in postcolonial contexts, where justice cannot be understood solely in terms of resource allocation but must also encompass care, belonging, and recognition. It is at this intersection that the Ethics of Care becomes vital.

Care ethics, developed by Gilligan (1982) and Noddings (2013), emphasises empathy, attentiveness, and relational responsibility. While Rawls focuses on fairness as a principle of justice, care ethics focuses on fairness as a lived relationship in how leaders listen, respond, and nurture the well-being of those they serve. Bridging Rawlsian justice with care ethics enriches the theoretical framework by uniting the "what" of fairness (equity and rights) with the "how" of practice (compassion and attentiveness). In university settings, this synthesis ensures that leadership ethics address both structural fairness and the lived realities of students, faculty, and communities.

In Kenya, universities have begun applying care-oriented principles in digital learning. Kenyatta University, for instance, has integrated counselling and mental-health support into its e-learning systems, acknowledging the psychological challenges faced by online learners. Munyao (2024) found that students with disabilities continued to face significant barriers to participation, calling for stronger institutional commitments to inclusive design and disability support. Further, Wanjara and Ogembo (2024) demonstrated that ethical behaviours in digital leadership, such as transparency, responsible data handling, and participatory governance, positively influenced service delivery in public universities. Collectively, these studies reveal that ethical leadership in the digital age must not only ensure fair access to resources but also cultivate belonging, respect, and care for students' holistic well-being.

Critics of care ethics caution that it can become overly gendered or paternalistic and that institutionalising care within bureaucratic systems may lead to dependency rather than empowerment (Tronto, 2013). However, when integrated into governance structures through flexible learning models, mental-health frameworks, and inclusive policy design, care ethics can serve as a vital complement to both Rawlsian justice and transformative leadership.

Taken together, Transformative Leadership Theory, Rawls' Theory of Justice, and the Ethics of Care form a coherent, multidimensional framework for ethical leadership in higher education. Transformative leadership provides the moral vision and courage for systemic change; Rawlsian justice offers the structural principles to ensure fairness and equity; and care ethics sustains the relational and emotional grounding necessary for human flourishing.

In Kenya and across the Global South, where higher education must confront digital inequality, underfunding, and persistent epistemic hierarchies, this triadic framework has significant implications for both policy and practice. It suggests that ethical leadership should integrate vision, fairness, and care at every level of university governance, from strategic planning to digital platform design. Policies should promote equitable digital access while embedding care as a guiding value in institutional culture. Ultimately, ethical leadership that is morally grounded, structurally fair, and relationally responsive provides the surest foundation for a fair and inclusive shift to digital in higher education.

METHODOLOGY

This study utilised a qualitative, interpretive research design to examine the ethical dimensions of digital transformation in higher education, focusing specifically on Kenya. Due to the conceptual and policy-oriented nature of the research, a documentary and conceptual analysis approach was selected as the most suitable method to engage with complex, value-laden themes such as digital equity, ethical governance, leadership, and

social justice in technology-enhanced learning environments (Creswell & Poth, 2018).

The data set comprised forty carefully selected secondary sources to provide a comprehensive perspective on the topic. These included ten global policy papers and frameworks, fifteen peer-reviewed academic studies, five national and institutional policy documents, and ten regional and conceptual works. The global policy papers encompassed publications by prominent organisations such as UNESCO, the International Council for Open and Distance Education (ICDE), and the European Commission, which provided international standards and ethical guidelines relating to education and digital technology (UNESCO, 2023; European Commission, 2021; Becker et al., 2023). The academic studies ranged from theoretical explorations of ethical leadership and digital pedagogy to empirical analyses of equity and inclusion in digitally mediated learning (Bali & Sharma, 2020; Czerniewicz et al., 2020; Selwyn, 2023). The national policies and institutional reports offered insights into Kenya's educational frameworks and strategic initiatives, including digital transformation strategies and accessibility policies (Ministry of Education, Kenya, 2018, 2022). Regional and conceptual literature brought an important postcolonial and decolonial perspective to the analysis, highlighting indigenous epistemologies and social justice in African digital education contexts (Odora Hoppers, 2022; Oloo, 2022).

Documents were purposively selected based on several key criteria. Primarily, each document's relevance to the core research themes of digital ethics, leadership, equity, and justice was assessed. Credibility of the source was also a critical consideration, with priority given to peer-reviewed journals, reputable international organisations, and official government or institutional publications. The geographic focus favoured Kenyan and comparable Global South contexts to ensure relevance to the study's setting, while the publication dates ranged from 2010 to 2024 to capture foundational works and developments during and after the COVID-19 pandemic (Brynjolfsson & McAfee, 2014; Selwyn & Jandrić, 2020). An overview of the documents analysed is presented in Table 1.

Table 1: Document Overview Table

Document Type	Year	Source / Author(s)	Thematic Relevance
Global Policy Papers			
Policy Paper	2023	UNESCO	Ethical use of technology, digital equity, and global education frameworks
Policy Paper	2021	European Commission	Ethics guidelines for trustworthy AI and governance frameworks
Policy Paper	2023	Becker et al. (OECD)	Ethical leadership and digital transformation in higher education
Policy Paper	2024	International Council for Open and Distance Education (ICDE)	Global ethics in digital higher education
Policy Paper	2023	World Bank	Digital transformation opportunities and challenges in African education
Policy Paper	2022	Energy 4 Impact	Impact of solar-powered digital hubs in rural Kenya
Policy Paper	2018	Ministry of Education, Kenya	National curriculum policy, including digital competencies
Policy Paper	2021	Ministry of Education, Kenya	Digital learning policy framework for higher education
Policy Paper	2022	Ministry of Education, Kenya	Education digital transformation strategy
Policy Paper	2017	Schwab, K. (The Fourth Industrial Revolution)	Digital disruption and implications for education
Academic Studies			
Research Article	2020	Bali & Sharma	Critical digital pedagogy for inclusion, equity, and social justice

Research Article	2020	Czerniewicz et al.	Equity and inequality in COVID-19 emergency remote teaching
Research Article	2023	Selwyn	Debates on education and technology in the postdigital era
Research Article	2018	Bali & Caines	Faculty development, agency, and equity in digital education
Research Article	2024	Munyao	Students' perspectives on inclusion at Kenyatta University
Research Article	2023	Mutula & Wamukoya	Digital literacy gaps among Kenyan university students
Research Article	2023	Njuguna & Wanjala	Digital inclusion bridging the rural-urban divide in Kenyan higher education
Research Article	2024	Kamau & Gathigia	Leadership for equitable digital transformation in Kenyan universities
Research Article	2024	Kihoro & Musyoka	Surveillance and ethics in digital learning environments
Research Article	2022	Bii & Too	Ethical implications of AI adoption in Kenyan higher education
Research Article	2021	Ahn, Lee & Lim	Sustainable digital transformation balancing innovation and environmental responsibility
Research Article	2021	Gikonyo & Ndiritu	Transformational leadership in online learning adoption
Research Article	2020	Eynon	Ethics of learning analytics and AI in education
Research Article	2020	Williamson & Eynon	Historical perspectives and future directions of AI in education
Research Article	2016	Hilton	Open educational resources and perceptions on college textbook choices
National & Institutional Policies			
Institutional Report	2023	Kenyatta University	E-learning and student well-being initiative
Policy Document	2018	Kenya Institute of Curriculum Development	Standards for competence-based digital course materials
Institutional Report	2024	Egerton University	Sustainability report on digital and environmental education
Policy Document	2018	Ministry of Education, Kenya	National Curriculum Policy
Policy Document	2021	Ministry of Education, Kenya	Digital learning policy framework for higher education
Policy Document	2022	Ministry of Education, Kenya	Education digital transformation strategy
Regional & Conceptual Literature			
Book Chapter	2022	Odora Hoppers	Decolonising knowledge and digital education in Africa
Journal Article	2022	Oloo	Indigenous epistemologies and inclusive pedagogies in African online learning
Journal Article	1982	Gilligan	Ethics of care, feminist theory, and moral development
Book	2013	Noddings	Ethics of care and relational approach to moral

			education
Book	1971	Rawls	Theory of justice and fairness in social institutions
Book	2018	Shields	Transformative leadership for equity and social justice in education
Book	1985	Bass	Leadership and performance beyond expectations
Book	1978	Burns	Leadership theory and practice
Journal Article	2021	Veletsianos	Student experience in online learning
Book	2022	Knox	Critical perspectives on AI and education futures

The analysis followed Braun and Clarke's (2006) thematic content analysis approach, progressing through four phases: familiarisation with the data, open coding to identify key concepts, categorisation of codes into broader themes, and interpretation within established ethical and leadership frameworks. To guide interpretation, the study applied Transformative Leadership Theory (Shields, 2018), Justice as Fairness (Rawls, 1971), and the Ethics of Care (Gilligan, 1982; Noddings, 2013). This theoretical triangulation enabled a nuanced understanding of how values such as equity, care, justice, and transparency manifest in digitally mediated higher education.

NVivo 12 software was used in managing the coding process, ensuring systematic and transparent data handling. The study's validity was reinforced through triangulation of diverse document types, peer debriefing sessions with experts in digital education ethics, and maintenance of an audit trail documenting coding decisions and analytical reflections (Nowell et al., 2017). Given that all data sources were publicly available, formal ethical approval was not required. Nonetheless, academic integrity was rigorously upheld through accurate citation and critical evaluation of the literature.

While the reliance on secondary data presents limitations, particularly the inability to capture lived experiences or the immediacy of emerging digital ethics issues, the extensive and diverse nature of the document pool provided robust, theoretically grounded insights. This approach illuminated how principles of equity, care, justice, and leadership are negotiated in Kenya's evolving post-pandemic higher education landscape.

RESULTS AND DISCUSSION

Ethical Challenges in Technology-Driven Higher Education

The digital transformation of higher education is reshaping teaching, assessment, and governance across the world. While organisations such as UNESCO (2024) and the International Council for Open and Distance Education (ICDE, 2024) celebrate the role of technology in expanding access and enhancing efficiency, the realities in developing contexts like Kenya reveal deep ethical tensions. Digital inequality, limited capacity, data privacy issues, algorithmic bias, accessibility challenges, and environmental concerns remain critical obstacles to equitable and sustainable digital education (Floridi & Cowls, 2022).

Persistent digital inequality continues to hinder inclusive learning. Empirical research indicates that 90 per cent of faculty in Kenyan public universities view inadequate ICT infrastructure as a major barrier to e-learning, while 87 per cent cite financial constraints and 73 per cent note expensive internet as key obstacles (Tarus, Gichoya, & Muumbo, 2016). More recent assessments also report low infrastructure readiness scores (M = 2.35 on a 5-point scale), compared to institutional support and faculty preparedness (Science Publishing Group, 2024). Qualitative studies reveal that students without devices or stable connectivity are effectively excluded from digital participation (Mmbwanga & Etakwa, 2024).

From a Rawlsian perspective, such disparities contradict the principle of justice as fairness, as technological benefits accrue to those already advantaged. To redress this, universities must adopt redistributive policies such as subsidised devices, rural digital hubs, and zero-rated learning platforms. The ethics of care further reminds institutions to support learners as whole persons, recognising economic constraints, emotional

vulnerabilities, and differential capacities to prevent digital transformation from becoming a source of stress rather than empowerment.

Even when infrastructure is available, digital literacy among students and staff remains limited. Tenya, Maina, and Awuor (2024) found that many faculty and library professionals in Kenyan universities overestimated their digital proficiency. Broader studies highlight a misalignment between digital curricula, institutional resources, and industry needs (Barde, 2021). Ethical leadership thus demands continuous investment in digital capacity building, professional training, and confidence development. According to care ethics, fostering a supportive and empathetic learning environment is crucial in helping students and educators adapt to new technologies without anxiety or alienation.

As artificial intelligence (AI) becomes integrated into learning management systems, grading, and analytics, risks of algorithmic bias grow. AI tools trained on data unrepresentative of Kenyan learners may unfairly penalise students from under-resourced backgrounds (Binns, Veale, Van Kleek, & Shadbolt, 2022; Bii & Too, 2024). Ethical governance requires transparency, bias audits, and the right to appeal automated outcomes. Simultaneously, rising data collection and surveillance practices threaten privacy and trust, with documented breaches in some Kenyan universities (Oloo, 2022). Institutions must therefore implement robust data policies centred on informed consent, anonymisation, and accountability.

Accessibility is another ethical concern. Many e-learning platforms are still not optimised for students with disabilities, violating both the Persons with Disabilities Act and international frameworks such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD, 2006). Inclusive design practices, guided by Universal Design for Learning (UDL), are essential for ensuring that digital transformation upholds equal opportunity.

The environmental implications of digital expansion, such as e-waste and high energy consumption, cannot be ignored. Some universities, like Egerton University, have begun exploring solar energy and green ICT initiatives (Egerton University, 2024). These early efforts demonstrate how environmental stewardship can coexist with technological innovation, ensuring that digital growth remains ecologically responsible and future-oriented.

Transformative Leadership and Ethical Innovation in Higher Education

The ethical challenges surrounding digital transformation underscore the importance of transformative leadership that is visionary, inclusive, and morally grounded (Bass & Riggio, 2006; UNESCO, 2022). Transformative leaders view digital change not merely as an operational improvement but as an ethical and social project.

In Kenya, such leadership must address structural inequalities by prioritising redistributive strategies that extend access to marginalised students. Through the lens of justice as fairness, transformative leaders are called to ensure that digital adoption benefits the least advantaged learners. At the same time, care ethics emphasises the relational dimensions of leadership, listening to students, empathising with faculty struggles, and ensuring flexible, humane learning environments.

Ethical innovation in higher education requires balancing multiple tensions: efficiency versus equity, automation versus empathy, and innovation versus sustainability. Transformative leaders must therefore create participatory decision processes, where stakeholders co-define institutional digital priorities, ensuring transparency and shared responsibility. By embedding ethical reflexivity through ethics committees, inclusive forums, and continuous dialogue, universities can align their technological ambitions with their social and moral missions.

A Framework for Ethical Decision-Making in Digital Higher Education

Drawing on these findings, this study proposes a Triadic Ethical Decision Framework to guide universities in navigating the moral complexities of digital transformation. The framework integrates three interdependent pillars: Transformative Leadership, Justice as Fairness, and the Ethics of Care. Transformative leadership provides the vision and agency needed to ensure that technology serves the educational mission. It involves inclusive decision-making, transparent policy development, and a culture of ethical reflexivity. Justice as fairness, inspired by Rawls, demands that technology deployment prioritises equity, especially for the least advantaged, through needs-based resource allocation, fair algorithmic design, and

transparent data governance. The Ethics of Care adds the relational and emotional dimension, emphasising empathy, trust, and responsiveness to the lived experiences of learners and staff.

When applied together, these three pillars form a moral compass for institutional decision-making. Leaders evaluating new technologies such as AI grading systems or digital assessment platforms should ask whether these tools align with educational purpose (Transformative Leadership), promote fairness and inclusion (Justice as Fairness), and sustain humane relationships (Ethics of Care). The framework thus functions both as a diagnostic tool for identifying ethical risks and a normative guide for designing safeguards and compensations.

By adopting this triadic approach, universities can reconcile the tensions between innovation and equity, ensuring that digital transformation contributes to human flourishing rather than deepening inequality.

CONCLUSION AND RECOMMENDATIONS

Conclusion: The convergence of digital technologies and higher education offers transformative potential to enhance pedagogy, accessibility, and learner-centred innovation. Tools such as AI, learning analytics, and digital platforms are not just delivery mechanisms; they are reshaping the very ethos of education. However, this digital turn requires principled and transformative leadership to address ethical concerns around equity, justice, and human dignity (Selwyn, 2023; Williamson & Eynon, 2023). Transformative leadership rejects technocratic efficiency models and instead interrogates how technologies can reinforce societal inequalities when uncritically adopted. It reframes technology as a socio-political construct, deeply embedded in institutional power structures and human decisions (Shields, 2018; Knox, 2022; Darder, 2022).

This approach is crucial for higher education in the Global South, including Kenya, where digital inequality reflects deeper historical and structural disparities (UNESCO, 2023). The COVID-19 pandemic exposed and intensified these divides, with limited internet access, device shortages, and digital illiteracy impeding equitable participation. Ethical digital transformation must therefore be grounded in local realities and driven by a justice-oriented, participatory vision. This includes valuing marginalised voices and addressing epistemic injustice, particularly when AI systems trained on Western-centric data erase non-dominant worldviews (Beetham & Sharpe, 2023).

Transformative leadership incorporates the ethics of care, emphasising relationality, empathy, and inclusion in digital design (Gilligan, 1982; Noddings, 2013). It resists reducing learners to data points and challenges algorithmic surveillance, data commodification, and opaque decision-making processes (Knox, 2022; Veletsianos & Moe, 2022). To protect student autonomy and rights, universities must adopt robust data governance, ensure transparency, and promote critical digital literacy across all stakeholders.

Operationalising ethical transformation demands substantial investment in equitable infrastructure, assistive technologies, and multilingual, culturally relevant. Universal Design for Learning (UDL) must inform all platforms and content to ensure accessibility for students with diverse needs. Stratified digital literacy programs should address varying user competencies, while participatory governance must include students, faculty, and communities in decision-making. Ethical AI use in education requires institutional oversight, privacy protections, and awareness-building around digital rights.

Embedding ethical reasoning into institutional culture involves integrating social justice into mission statements, strategic plans, leadership training, and performance metrics (Becker et al., 2023). Establishing ethics councils, forums, and feedback loops fosters transparency and collective accountability. Broad stakeholder engagement, including governments, NGOs, private firms, and local communities, is critical for sustainable, context-sensitive digital solutions (UNESCO, 2023).

Environmental sustainability is another vital aspect. Institutions must adopt green ICT strategies such as energy-efficient devices, e-waste recycling, and clean energy usage and educate users on the ecological impact of their digital habits (Becker et al., 2023). Ethical technology integration should be a continuous, adaptive process supported by impact assessments, ethical audits, and inclusive dialogue.

In Kenya, the Competency-Based Curriculum's emphasis on creativity, critical thinking, and inclusivity aligns with the need for transformative digital learning. Universities must decolonise content, promote gender equity in

STEM, and embed African languages and knowledge systems into digital environments (Ministry of Education, 2021; Becker et al., 2023). Such transformation must align with national goals while showcasing the cultural and socioeconomic diversity of the population.

Ultimately, digital transformation in higher education is not ethically neutral; it is a political and moral endeavour. Institutions must move beyond passive adoption and become architects of a just, inclusive, and sustainable digital future. Ethical, transformative leadership must guide this process through equity-driven innovation, participatory governance, and a commitment to human flourishing (Becker et al., 2023).

Recommendations: The study's recommendations emphasise that achieving ethical and equitable digital transformation in higher education, particularly in Kenya and the Global South, requires leadership that integrates justice, care, and sustainability at every level of decision-making.

Universities should institutionalise transformative and ethical leadership by embedding values of fairness, inclusivity, and compassion into governance, policy, and professional development. Such leadership must ensure that digital transformation serves the public good, not just institutional efficiency.

To promote digital equity, institutions should design policies that prioritise the least advantaged learners. This includes subsidising internet access and digital devices, establishing rural digital hubs, and ensuring accessibility for students with disabilities. Gender and socioeconomic disparities must be addressed through targeted interventions that bridge the digital divide.

The ethics of care should guide how technology is designed and implemented. Institutions need to create supportive learning environments that consider the emotional and socioeconomic realities of students, offering mental health resources, mentorship, and inclusive pedagogy that nurture belonging and well-being.

Strong data ethics and governance frameworks are essential to safeguard privacy, consent, and transparency in the use of learning analytics and AI systems. Ethical oversight mechanisms such as audits and participatory governance processes should ensure accountability and prevent bias or exploitation.

The study also highlights the need for epistemic justice, urging universities to include indigenous knowledge, African languages, and community-based content in digital curricula. This decolonisation of digital education ensures that knowledge production is diverse, culturally grounded, and locally relevant.

Environmental sustainability should be regarded as an ethical obligation. Institutions should adopt green digital transformation strategies, using energy-efficient technologies, renewable energy, and responsible e-waste management while promoting environmental literacy among students and staff.

Continuous capacity building and digital literacy development for faculty, students, and administrators is critical to support responsible technology use. Interdisciplinary centres for digital ethics and innovation can help integrate ethical reflection into institutional practice.

Universities should embrace participatory governance, involving all stakeholders, students, staff, and communities in shaping digital policies and ethical guidelines. Such collaboration ensures transparency, shared accountability, and contextual relevance. There should be ongoing ethical monitoring and evaluation of digital initiatives using the Triadic Ethical Decision Framework, which combines transformative leadership, justice as fairness, and the ethics of care. This approach ensures that institutions remain adaptive, reflective, and ethically grounded.

There should be a holistic reimagining of digital transformation in higher education—one led by ethically conscious leaders who balance innovation with inclusion, justice, and sustainability. By aligning technology with human values and social purpose, universities can turn digital transformation into a catalyst for empowerment, equity, and collective well-being.

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