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Transforming organizational culture in higher education: a strategic change management case study for higher learning institutions using the IRACE framework

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Higher education institutions (HEIs) worldwide face mounting pressures to transform their organizational cultures in response to the Fourth Industrial Revolution (4IR), socio-political imperatives, and evolving expectations from diverse stakeholders. This transformation process is especially critical in African contexts, where universities must simultaneously pursue global competitiveness and address historical inequities through decolonization, Africanisation, and inclusive governance. This paper presents the IRACE Framework: Initiate, Reflect, Act, Consolidate, Evaluate, as a strategically aligned and context-sensitive model for cultural transformation in HEIs. By synthesizing established change management models (Lewin's Three-Step Model, Kotter's Eight-Step Model, Prosci's ADKAR, the PREXSU model, and the TIPSTM Managerial Leadership Framework) with governance principles from King IV, the IRACE Framework integrates human and systemic dimensions of change. The University of South Africa (UNISA) serves as the focal case to illustrate the framework's design and application, providing insight into stakeholder engagement, governance alignment, and the embedding of transformation in institutional priorities. Findings indicate that successful culture transformation in HEIs requires structured yet adaptive processes, participatory design, robust governance integration, and capacity building. The paper concludes with recommendations for HEI leaders, policy-makers, and researchers seeking sustainable and ethically grounded change strategies.

KEYWORDS

organizational culture, change management, higher education, IRACE Framework, governance

1 Introduction

The need for organizational culture transformation in higher education institutions (HEIs) has intensified in recent decades due to rapid technological change, socio-political transformation, and increasing demands for inclusive, equitable, and responsive governance (Khalilova, 2025; Vettriselvan et al., 2025). Globally, HEIs are navigating the dual imperatives of remaining competitive in an increasingly knowledge-driven economy while responding to calls for social justice, diversity, and decolonization (Areepattamannil, 2024; UNISA, 2025b). Organizational culture: the shared values, beliefs, norms, and behaviors within an institution fundamentally shape how staff and students experience higher education and how effectively the institution achieves its strategic goals (Schein, 2010).

Organizational culture in higher education institutions (HEIs) can be defined as the constellation of shared values, beliefs, rituals, and behavioral norms that shape how institutional members interact, make decisions, and pursue academic and administrative goals (Schein, 2010). In the context of HEIs, this culture is particularly complex, as it is mediated by historical legacies, disciplinary traditions, and the principles of academic freedom and collegiality. Organizational culture manifests not only through formal governance processes and policy frameworks but also in the everyday practices of teaching, research, and student engagement (Carey, 2018). Unlike corporate organizations, universities often exhibit decentralized and contested cultural landscapes, where multiple stakeholders, faculty, students, administrators, and external actors, actively shape institutional direction (Lewis et al., 2005). Recognizing and defining these unique manifestations of culture provides a crucial foundation for any framework seeking to transform HEIs.

In the African context, culture transformation is not solely a managerial priority but a moral and historical necessity. Universities are expected to dismantle colonial legacies, integrate indigenous knowledge systems, and ensure that governance and policy frameworks reflect the lived realities of their communities (National Planning Commission, 2012). These shifts must occur while HEIs adapt to emerging technologies associated with the Fourth and Fifth Industrial Revolutions (4IR/5IR), including artificial intelligence, blockchain, and advanced analytics.

The University of South Africa (UNISA), Africa's largest open distance e-learning institution, exemplifies these challenges. Its Transformation Charter (UNISA, 2025b) outlines commitments to Africanisation, inclusivity, and innovation, but the implementation of these values requires deliberate change management processes that balance strategic imperatives with the realities of a diverse and distributed stakeholder base. This paper proposes the IRACE Framework as a strategic, adaptive, and contextually grounded approach to cultural change, designed for HEIs navigating complex, multi-layered transformation agendas.

2 Background

Efforts to transform organizational culture in HEIs often fail due to gaps between strategic intent and operational execution, insufficient stakeholder engagement, and inadequate integration

of governance principles into change processes (Kotter, 1995; Institute of Directors in Southern Africa, 2016). In South Africa, these challenges are compounded by socio-economic disparities, resource constraints, and a history of institutional inequality that demands redress. Organizational change within HEIs is further complicated by their unique governance structures, which typically combine academic autonomy with bureaucratic oversight. Decision-making involves multiple layers: governing councils, senates, executive committees, and faculty boards, each with distinct roles and interests. This makes alignment, communication, and accountability critical yet challenging (Saukkonen, 2024).

Technological transformation adds another layer of complexity. The rapid adoption of digital learning platforms, AI-assisted assessment systems, and blockchain-based certification requires not only infrastructure investment but also changes in mindset, skills, and workflows (Farrukh et al., 2024). Without a structured and participatory change process, such initiatives risk encountering resistance from staff and students who may feel excluded from decision-making or overwhelmed by new demands (Singun, 2025). Against this backdrop, the IRACE Framework is designed to integrate governance, stakeholder engagement, capacity building, and iterative learning into a coherent change management approach. UNISA provides a focal example for demonstrating the framework's application, but its principles and processes are generalizable to HEIs across diverse contexts.

Organizational culture within HEIs is shaped by a set of distinctive manifestations that differ from those of corporate or public-sector organizations (Ramachandran et al., 2011). Governance practices such as collegial decision-making, academic freedom, and senate deliberations form a central part of university culture. Academic traditions, including disciplinary silos, peer-review rituals, and curriculum continuity, create additional layers of cultural complexity. Pedagogical philosophies, particularly commitments to Africanisation, inclusivity, and digital innovation, reflect both intellectual traditions and institutional priorities (Ncube and Tawanda, 2025). Student and staff activism further influences culture, often accelerating or contesting institutional transformation efforts (Altbach, 2006). These manifestations highlight the multi-layered nature of HEI culture, which is simultaneously intellectual, political, historical, and operational. Addressing cultural transformation in universities, therefore, requires models that account for these overlapping dimensions.

3 Literature review

The study of organizational change in higher education institutions (HEIs) draws on a rich body of theoretical and applied frameworks that provide both conceptual clarity and practical guidance for transformation (Rieg et al., 2021). While the contexts of corporate and public-sector change differ, the principles underlying effective cultural transformation, particularly in complex, multi-stakeholder environments such as universities, remain broadly applicable. Foundational models such as Lewin's (1951) Three-Step Model and Kotter's (1995) Eight-Step Model establish structured pathways for initiating, implementing, and sustaining change, while contemporary approaches like Hiatt's (2006) ADKAR model and Rynearson et al.'s (2024) PREXSU

model emphasize individual readiness, iterative processes, and sustainability. Complementary to these are integrative frameworks such as the TIPSTM Managerial Leadership model (Da Vinci Institute, 2024), which bridges technology, innovation, people, and systems, and governance-oriented principles like King IV (Institute of Directors in Southern Africa, 2016), which anchor transformation in ethical leadership, stakeholder inclusivity, and integrated thinking. Emerging methodologies, including design thinking (Brown, 2009) and Africanisation-led approaches, further extend the conversation by positioning cultural and contextual relevance at the heart of change initiatives. The following sections expand on the foundational models, starting with the rationale of the framework selection.

3.1 Framework selection rationale

Lewin's Three-Step Model, Kotter's Eight-Step Model, Hiatt's ADKAR, the PREXSU model, and the TIPSTM Framework into the IRACE design were guided by specific criteria. First, these models are widely recognized in both organizational change theory and applied practice, ensuring scholarly robustness. Second, they were selected for their relevance to HEI contexts, particularly their capacity to balance systemic processes with individual readiness for change. Third, they collectively bring complementary strengths: Lewin and Kotter offer structured sequencing, ADKAR emphasizes human adoption processes, PREXSU stresses sustainability, and TIPSTM integrates governance, technology, and innovation. Finally, these models are consistent with the ethical and inclusive leadership principles articulated in King IV, making them particularly suitable for governance-driven HEI environments. Alternative models, such as the McKinsey 7-S or Bridges' Transition Framework, were considered but excluded due to their stronger alignment with corporate restructuring or psychological transitions rather than higher education's multi-stakeholder and governance-centered realities.

3.2 Lewin's three-step model

Kurt Lewin's (1951) Three-Step Model: Unfreeze, Change, Refreeze, remains one of the most influential contributions to organizational change theory. The model conceptualizes change as a linear process where organizations first "unfreeze" entrenched behaviors and mindsets, then transition through a "change" phase involving new behaviors, processes, or structures, and finally "refreeze" to stabilize and institutionalize the changes. In the HEI context, the Unfreeze stage may involve open forums, climate surveys, and the use of institutional performance data to challenge complacency and stimulate dialogue about the necessity of transformation (Lewin, 1951). The Change phase in universities often includes revising curricula, implementing new teaching technologies, or restructuring administrative processes to improve efficiency and inclusivity. The Refreeze phase embeds these changes into academic regulations, performance frameworks, and governance processes to ensure they are sustained beyond leadership or policy cycles. Critics, however, argue that Lewin's model is too rigid for today's volatile, uncertain, complex, and

ambiguous (VUCA) environment (Burnes, 2020). Nevertheless, its clarity in sequencing and its emphasis on consolidation remain valuable for cultural transformation in HEIs where stability and tradition are highly valued.

3.3 Kotter's eight-step model

John Kotter's (1995) Eight-Step Model builds upon Lewin's foundational thinking but offers greater granularity and a stronger emphasis on leadership and communication. The steps: establishing urgency, forming a guiding coalition, developing and communicating a vision, empowering broad-based action, generating short-term wins, consolidating gains, and anchoring change in the culture, map well onto the complex governance and stakeholder dynamics of HEIs. Forming a guiding coalition may involve aligning senior leadership, faculty representatives, and student bodies to co-own the change agenda (Kotter, 1995). Kotter's focus on communication is particularly pertinent in HEIs, where decision-making processes can be slow and consensus-driven, requiring tailored messages for diverse academic, administrative, and student audiences (Gill, 2002). Furthermore, the emphasis on "short-term wins" resonates with the need to demonstrate visible progress in long-term transformation projects, such as implementing Africanisation initiatives or digital learning platforms, which may otherwise face skepticism without early demonstrable outcomes.

3.4 ADKAR model

Hiatt's (2006) ADKAR model shifts the lens of change from organizational systems to individual actors. The acronym: Awareness, Desire, Knowledge, Ability, and Reinforcement, frames the psychological and skill-based progression that individuals undergo during change. In HEIs, this is especially relevant because transformation success often depends on the adoption of new practices by diverse groups, from senior professors to junior administrative staff. In transitioning to AI-enabled grading systems, Awareness might be fostered through workshops explaining the rationale and benefits of the technology, Desire through incentives or workload relief, Knowledge via formal training, Ability through supervised practice, and Reinforcement through recognition programs and integration into performance evaluations. The model's strength lies in its capacity to personalize change journeys, an essential factor in academic environments where professional autonomy is deeply valued (Hiatt, 2006; Vakola, 2014).

3.5 PREXSU model

The PREXSU model: Preparation, Execution, Sustainability, developed by Ryneearson et al. (2024) reflects the iterative and participatory nature of change in higher education. The Preparation phase stresses stakeholder mapping, co-creation of objectives, and readiness assessments, aligning with participatory governance principles common in universities. The Execution

phase emphasizes iterative implementation and feedback loops, enabling adjustments based on stakeholder responses. The Sustainability phase directly addresses a common weakness in HEI change projects: the loss of momentum once initial milestones are achieved (Fullan, 2007). By embedding sustainability into the model, PREXSU ensures that gains are protected through continuous monitoring, capacity building, and policy integration, elements critical to embedding cultural change in institutions where tenure and tradition can easily revert reforms.

3.6 TIPS™ managerial leadership framework

The TIPS™ Framework (Da Vinci Institute, 2024) integrates four strategic levers, Technology, Innovation, People, and Systems, into a holistic approach to leadership and organizational development. In HEIs, Technology relates to digital learning platforms, research infrastructure, and administrative systems; Innovation encompasses pedagogical advances, new research methods, and service delivery models; People emphasizes faculty and staff development, diversity, and inclusion; and Systems covers governance processes, funding mechanisms, and policy frameworks. The TIPS™ approach acknowledges that these levers are interdependent and that sustainable change requires their simultaneous optimization (Da Vinci Institute, 2024). For instance, introducing a blended learning platform without corresponding staff training (People) or integration into assessment frameworks (Systems) risks failure despite technological readiness.

3.7 Governance and ethics: King IV principles

The King IV Report on Corporate Governance (Institute of Directors in Southern Africa, 2016) offers a governance framework built around ethical leadership, stakeholder inclusivity, and integrated thinking. In HEIs, these principles manifest in the roles of councils, senates, and executive committees, which must collectively oversee cultural transformation while ensuring accountability to both internal and external stakeholders. King IV's emphasis on transparency and performance outcomes is critical in public universities, which must demonstrate responsiveness to national policy goals, efficient use of resources, and equitable treatment of staff and students (Segal, 2018). Furthermore, the principle of stakeholder inclusivity aligns with the collaborative ethos of academic governance, where faculty, students, and administrators are partners in shaping institutional futures.

3.8 Design thinking and Africanisation

Design thinking, as articulated by Brown (2009), introduces a human-centered methodology for solving complex problems through empathy, ideation, prototyping, and iteration. In African HEIs, these principles align closely with the goals of Africanisation and decolonization, which call for inclusive pedagogy and the integration of indigenous knowledge systems into curricula

(Mdletshe, 2025). Design thinking workshops can provide structured spaces for diverse stakeholders to articulate needs, co-create solutions, and test innovations in a low-risk environment. Reimagining a course syllabus to reflect African epistemologies could involve prototyping lesson plans, gathering student feedback, and iterating until both academic rigor and cultural relevance are achieved. This participatory approach ensures that transformation efforts are not only technically sound but also culturally resonant, enhancing their legitimacy and long-term sustainability (Brown, 2009; Tschimmel, 2012).

Figure 1 illustrates how established change management models, Lewin's Three-Step Model, Kotter's Eight-Step Model, ADKAR, PREXSU, and the TIPS™ Framework, serve as the conceptual scaffolding for the IRACE Framework. Each contributes complementary strengths: Lewin and Kotter emphasize structured sequencing and leadership-driven momentum; ADKAR focuses on individual readiness and reinforcement; PREXSU embeds sustainability through iterative adaptation; and TIPS™ integrates systemic levers of governance, people, technology, and innovation. Together, these models provide a multifaceted foundation that makes IRACE both theoretically robust and practically adaptable to the cultural and governance realities of higher education institutions.

This synthesis is further reinforced by comparative insights and governance principles. Vodacom's digital transformation (Vodacom, 2024) demonstrates how aligning organizational identity with strategic purpose can drive change, even though its corporate orientation contrasts with UNISA's socio-political mission. Likewise, King IV (Institute of Directors in Southern Africa, 2016) anchors IRACE in ethical leadership, stakeholder inclusivity, and integrated thinking, principles essential for cultural transformation in HEIs. By blending these models with governance frameworks and contextual imperatives, IRACE offers a systematic yet flexible approach tailored to the African higher education environment.

4 Framework design: the IRACE model

The IRACE Framework: Initiate, Reflect, Act, Consolidate, Evaluate, is designed as an adaptive, cyclical model that synthesizes the key insights from Lewin's (1951) Three-Step Model, Kotter's (1995) Eight-Step Model, Hiatt's (2006) ADKAR methodology, the PREXSU model (Rynearson et al., 2024), and the TIPS™ Managerial Leadership Framework (Da Vinci Institute, 2024). While these foundational models have been widely applied in various organizational contexts, their direct implementation in higher education institutions (HEIs) in Africa often requires contextual adaptation that accounts for governance structures, socio-political history, and the push for Africanisation and inclusivity (Mdletshe, 2025; Institute of Directors in Southern Africa, 2016). The IRACE Framework adapts these models into a five-phase process specifically suited for HEIs, with each phase underpinned by evidence-based strategies and aligned with strategic priorities such as institutional transformation goals, national policy directives, and global frameworks like the Sustainable Development Goals (United Nations, 2015).

Change models range from linear to iterative approaches.

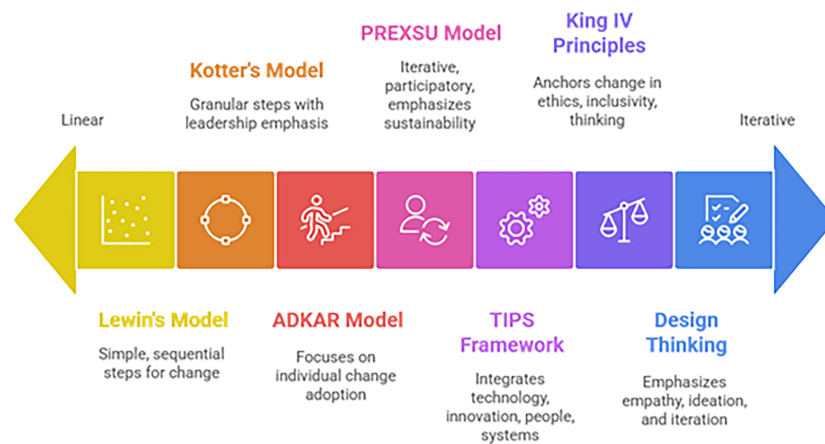


FIGURE 1

Change models feeding into IRACE. Design by Napkin AI.

The IRACE Framework synthesizes the above models into a contextually adapted, five-phase process

4.1 Initiate

The initiation phase aligns with Lewin's "Unfreeze" stage, Kotter's creation of urgency, and the PREXSU preparation phase, involving readiness assessments to diagnose existing cultural norms, strengths, and resistance points (Kotter, 1995; Schein, 2010). The initiation phase begins with comprehensive environmental scans to map institutional strengths, weaknesses, opportunities, and threats (SWOT) in relation to internal culture and external demands (Kotter, 1995). This includes stakeholder mapping to identify key influencers, decision-makers, and affected groups, alongside readiness assessments to gauge institutional capacity for change (Hiatt, 2006). Establishing urgency, an idea central to Kotter's (1995) model, is achieved by presenting real-world data such as student success metrics, graduate employability rates, and technology readiness indicators. At UNISA, this step requires integrating transformation imperatives, such as decolonization of curricula and adoption of emerging technologies, into the rationale for change. King IV's emphasis on ethical leadership and stakeholder inclusivity (Institute of Directors in Southern Africa, 2016) is operationalized here by engaging Council, Senate, labor unions, and student leadership in early visioning dialogues. This urgency is explicitly aligned with institutional strategies, ensuring that the call for transformation resonates with both governance bodies and operational units (Lewin, 1951; UNISA, 2025b).

4.2 Reflect

Reflection is often underrepresented in change management literature but is critical in higher education contexts where

shared governance and academic freedom necessitate dialogue and co-creation (Du Toit, 2020). The reflection phase centers on structured dialogue and participatory design, creating formal and informal spaces for co-creation between leadership, staff, students, and external partners (Brown, 2009). This approach draws from Kolb's (1984) experiential learning cycle, encouraging iterative reflection and feedback to refine the change agenda. In African HEIs, integrating diverse voices, particularly those from historically marginalized groups, ensures that change initiatives are inclusive and contextually relevant (Ajani, 2024). Reflection also serves as a safeguard against top-down imposition, embedding principles of transparency and mutual accountability in line with King IV's governance ethos (Institute of Directors in Southern Africa, 2016). This phase draws on Kolb's (1984) experiential learning theory and the TIPS™ "People" lens, creating structured platforms for collective sense-making. At UNISA, faculty and staff transformation forums can serve as spaces to interrogate proposed changes, surface hidden concerns, and collaboratively frame challenges. This process not only builds legitimacy but also nurtures the "Desire" stage in ADKAR, transforming passive stakeholders into active change participants.

4.3 Act

The action phase corresponds to Lewin's "Change" stage, Kotter's implementation steps, and PREXSU's execution phase. It focuses on piloting initiatives in targeted units to generate quick wins and build momentum. Drawing from ADKAR's (Hiatt, 2006) Knowledge and Ability stages, capacity building is a central focus, equipping stakeholders with both technical skills, such as digital literacy, data analytics and soft skills like collaboration, adaptive problem-solving. Capacity-building interventions, grounded in Hiatt's (2006) ADKAR framework, call for soft and technical skill development, are embedded here to ensure that stakeholders possess the competencies required for change adoption. The action

phase operationalizes the vision through pilot projects that allow for incremental testing and adaptation before large-scale rollouts. Kotter's (1995) emphasis on generating short-term wins is applied here, using early successes to build institutional confidence, counter resistance, and sustain momentum. These pilots often align with catalytic niche areas, such as 4IR adoption, curriculum renewal, or multilingual learning platforms, to ensure relevance and strategic coherence (UNISA, 2025a).

4.4 Consolidate

Consolidation bridges Kotter's "Consolidate Gains" and Lewin's "Refreeze" stages, involving embedding the successful elements of change into institutional policy, governance processes, and structural frameworks (Lewin, 1951). This phase aligns with Kotter's (1995) "anchor change in the culture" step, ensuring that new practices become routine rather than episodic. Change agents, individuals or teams who champion and model desired behaviors, are formally recognized, reinforcing positive role modeling and signaling organizational commitment (Overton et al., 2009). Recognition programs for "change champions" reinforce desired behaviors, while institutional dashboards track both quantitative and qualitative indicators of progress (Overton et al., 2009). At the governance level, this phase may involve integrating transformation milestones into performance management systems and annual institutional reports, further institutionalizing change through formal accountability mechanisms (Institute of Directors in Southern Africa, 2016).

4.5 Evaluate

The final phase: evaluation, is both summative and formative, measuring the impact of change initiatives across five ROI dimensions: financial, human development, innovation output, technology alignment, and strategic alignment (Mahwela, 2024). Evaluation draws from participatory monitoring practices, combining quantitative data such as key performance indicators, financial returns, with qualitative insights such as narratives of change, stakeholder satisfaction. This aligns with PREXSU's sustainability focus, ensuring that lessons learned feed back into the Initiate phase, thereby maintaining the cyclical and adaptive nature of the framework (Rynearson et al., 2024).

4.6 Integration with UNISA's catalytic niche areas

A core innovation in the IRACE Framework is its explicit alignment with UNISA's catalytic niche areas, ranging from African Intellectual and Cultural Renaissance to 4IR and Emerging Technologies (UNISA, 2025a). By mapping change initiatives directly to these priority areas, the framework ensures that cultural transformation is not a standalone effort but a strategic enabler of institutional vision. For instance, embedding the Africanisation agenda into digital transformation projects ensures

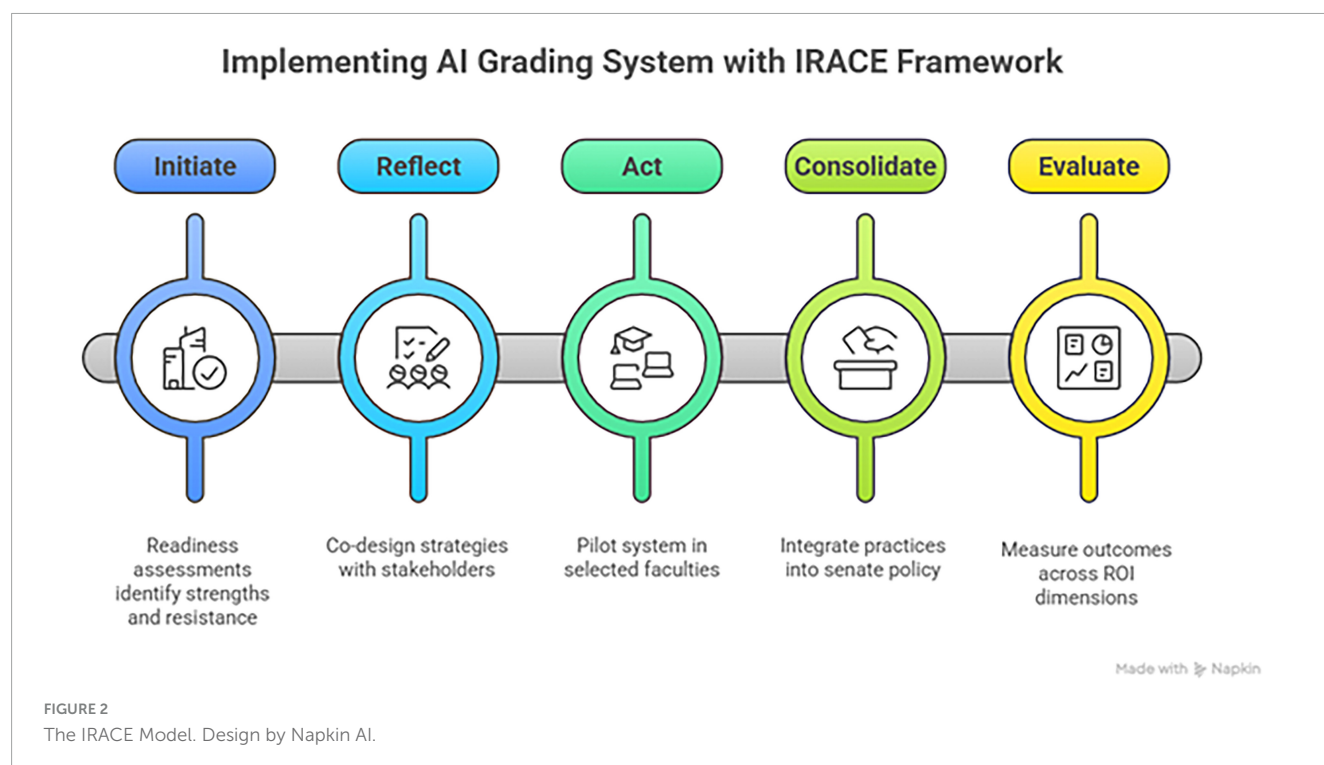
coherence between pedagogy, research, and societal engagement. In sum, the IRACE Framework's design responds to the governance, cultural, and strategic realities of African higher education institutions. By synthesizing established models with context-specific adaptations, it offers a practical, ethical, and participatory approach to embedding sustainable organizational culture change.

Figure 2 presents the IRACE Framework as a cyclical, five-phase model, Initiate, Reflect, Act, Consolidate, and Evaluate, arranged in a circular design to emphasize transformation as an iterative and ongoing process rather than a one-off event. At the center of the cycle are the institution's transformation goals, ensuring that each phase remains strategically aligned with priorities such as Africanisation, inclusivity, and digital innovation. Surrounding the wheel are three continuous enablers, Governance, Capacity Building, and Stakeholder Engagement, which interact dynamically with all phases rather than operating in isolation. Arrows between phases highlight the iterative movement of change, while the outer enablers reinforce that sustainable cultural transformation in HEIs depends on ethical leadership, systemic capability development, and inclusive participation (Institute of Directors in Southern Africa, 2016; Du Toit, 2020).

5 Methodology and application in higher education institutions

This study employs a conceptual framework development approach situated within qualitative research traditions, drawing on secondary data to synthesize theory, policy, and practice in the context of higher education transformation. As Creswell (2014) explains, conceptual studies in education often integrate multiple data sources to build theoretical models that can guide practice. Following McMillan and Schumacher's (2010) assertion that conceptual work benefits from triangulation, the research draws upon a combination of institutional policy documents, such as UNISA's Transformation Charter and Strategic Plan, national policy frameworks like the National Development Plan 2030, and peer-reviewed scholarly literature on change management. These sources are supplemented by corporate transformation case studies, which provide comparative insight into strategic alignment, stakeholder engagement, and governance integration in complex organizations.

A case study orientation (Yin, 2018) was adopted to anchor the discussion in the specific context of a higher education institution (HEI) while keeping the model generalizable to similar settings. Yin's case study methodology supports the integration of rich contextual detail with theory development, allowing for the adaptation of established change models to HEI realities. In this case, UNISA serves as the primary illustrative example due to its scale, complexity, and explicit commitment to transformation goals such as Africanisation, inclusivity, and digitalization. To strengthen methodological clarity, the contextual mapping, stakeholder analysis, and scenario simulation processes were further elaborated through visual and tabular outputs. The methodological process followed four interconnected steps:



5.1 Model integration and adaptation

Existing change management models, including Lewin's (1951) Three-Step Model, Kotter's (1995) Eight-Step Model, Hiatt's (2006) ADKAR framework, the PREXSU model (Rynearson et al., 2024), and the TIPSTM Managerial Leadership Framework (Da Vinci Institute, 2024), were reviewed systematically. The review process followed Creswell's (2014) guidance on identifying converging and diverging theoretical propositions across multiple sources. From this synthesis, the five-phase IRACE Framework was constructed to retain the theoretical robustness of established models while embedding adaptability for the HEI sector.

5.2 Contextual mapping

In line with Yin's (2018) embedded case study logic, UNISA's transformation imperatives were mapped against each phase of the IRACE Framework to identify points of alignment, areas of tension, and potential opportunities. This involved analyzing governance structures, cultural priorities, such as Africanisation and decolonization, and technological transformation initiatives like AI-supported grading systems and digital learning platforms. McMillan and Schumacher's (2010) recommendations for contextual analysis guided the identification of environmental factors shaping institutional readiness and capacity for change.

To demonstrate the practical application of the IRACE Framework, each phase of the model was mapped to its generic task and then illustrated with an example from UNISA's transformation agenda. This dual structure shows both the general actions required at each stage of the cycle (e.g., environmental scanning, stakeholder engagement, piloting initiatives) and how these can be translated into specific applications such as curriculum decolonization,

inclusivity, and 4IR adoption. Table 1 presents this alignment by distinguishing between the universal tasks of each IRACE phase and their goal-specific applications. Using UNISA as an example, the table illustrates how broad transformation priorities can be systematically mapped to measurable actions and indicators, making the framework adaptable and transferable to other higher education institutions.

As shown in Table 1, the IRACE cycle provides a structured pathway that links broad change goals with concrete operational processes that can be tested, adapted, and institutionalized. For example, in the Initiate phase, the generic task of scanning the environment is applied to curriculum decolonization by auditing course content for colonial bias and gathering baseline feedback from students and staff. In the Act phase, the generic task of piloting initiatives is demonstrated through AI-based grading tools and blended learning platforms. The Evaluate phase highlights how multi-dimensional ROI can be used to assess progress, tracking not only financial efficiency but also human readiness, innovation uptake, and strategic alignment.

This dual structure of generic and goal-specific tasks makes the framework more transferable: HEIs can retain the IRACE cycle as a guiding process while adapting the specific applications to their own strategic imperatives.

5.3 Stakeholder analysis

Using stakeholder theory as outlined in Bryson (2018), a hypothetical stakeholder mapping exercise was conducted based on UNISA's governance and operational model. Stakeholder groups, including the governing council, senate, executive leadership, academic staff, student representative councils, unions, government agencies, funders, and external partners, were

TABLE 1 Alignment of UNISA's transformation imperatives with the IRACE Framework phases.

IRACE phase	Generic task	Example change goal (UNISA)	Specific application/indicators
Initiate	Conduct environmental scan; establish urgency	Decolonization of curriculum	Audit curricula for colonial bias; gather baseline student/staff feedback
Reflect	Engage stakeholders; co-create vision	Inclusivity & diversity	Dialogue forums with student unions, staff, and leadership; develop inclusivity charter
Act	Implement pilots and change initiatives	4IR adoption	Pilot AI-based grading tools; introduce blended learning platforms; track adoption rates
Consolidate	Institutionalize successful practices	Governance integration	Embed pilots into senate-approved policies; align HR development plans; recognize "change champions"
Evaluate	Assess outcomes and refine	Multi-dimensional ROI	Track financial savings, staff readiness, student success, and innovation outputs linked to transformation goals

categorized according to their levels of influence and interest. High-influence/high-interest stakeholders, such as Council, Senate, and Executive Leadership, require intensive engagement and coalition-building, while high-influence/low-interest stakeholders, such as government and funders, need targeted communication. Low-influence/high-interest groups, such as student unions and academic staff, benefit from participatory forums, whereas low-influence/low-interest stakeholders, such as some external partners, can be engaged selectively. Figure 3 illustrates this influence-interest matrix, clarifying how engagement strategies can be tailored to different stakeholder categories, consistent with Kotter's (1995) coalition-building approach and King IV's (Institute of Directors in Southern Africa, 2016) principle of inclusivity.

As illustrated in Figure 3, this mapping highlights the necessity of engaging high-influence/high-interest stakeholders, such as the Council and Senate, while simultaneously creating inclusive participation mechanisms for staff and students whose interests are high but their formal influence is limited. This visual highlights IRACE's emphasis on governance inclusivity, illustrating how tailored engagement strategies can effectively manage the diverse power dynamics within higher education institutions.

5.4 Scenario simulation

To test the applicability of the IRACE Framework, change management scenarios were simulated, such as the phased implementation of an AI-based grading platform. Each phase of the framework was applied to explore its utility in managing stakeholder engagement, developing communication strategies, building capacity, and ensuring governance alignment. Scenario simulation draws from Creswell's (2014) concept of "thought experiments" in conceptual research, enabling theoretical constructs to be assessed against plausible organizational challenges without the constraints of immediate empirical application. A simulated rollout of an AI-based grading system is applied as a scenario simulation approach to demonstrate the utility of the IRACE cycle. Beginning with readiness assessments (Initiate), the process moved through participatory co-design (Reflect), targeted pilots (Act), integration into senate policy (Consolidate), and

evaluation across ROI dimensions (Evaluate). To make the process more tangible, the phased introduction of an AI-based grading system was simulated using the IRACE cycle, with each stage tested against likely stakeholder responses and governance requirements. Figure 4 below illustrates the simulation's representation.

As depicted in Figure 4, the cyclical design of IRACE ensures that the simulation does not end at implementation but loops back through evaluation, generating feedback for future cycles of change. This highlights the framework's adaptability to complex, technology-driven reforms in higher education, as well as clarifies how IRACE can manage complex technological transformations in higher education while maintaining stakeholder inclusivity and governance alignment.

5.5 Application of the IRACE Framework to HEIs

The IRACE Framework was then applied conceptually to the higher education context in a phased narrative:

- **Initiate:** HEIs begin with a thorough environmental scan and readiness assessment. UNISA could analyze student performance data, benchmark against peer institutions, and assess legislative or funding changes from the Department of Higher Education and Training (DHET). Establishing urgency, through both quantitative metrics and qualitative narratives, would be essential to gain buy-in at the council and senate levels (Kotter, 1995).
- **Reflect:** This phase prioritizes participatory dialogue using formal mechanisms such as transformation committees, faculty boards, and student representative councils, alongside informal engagement spaces. Design thinking principles (Brown, 2009) would be employed to co-create solutions, ensuring cultural resonance with Africanisation and decolonization imperatives.
- **Act:** Pilot projects serve as testbeds for innovation, allowing HEIs to demonstrate the feasibility of change. For instance, AI-based grading could be introduced in select faculties while staff participate in targeted digital literacy training. This

Implementing the IRACE Framework

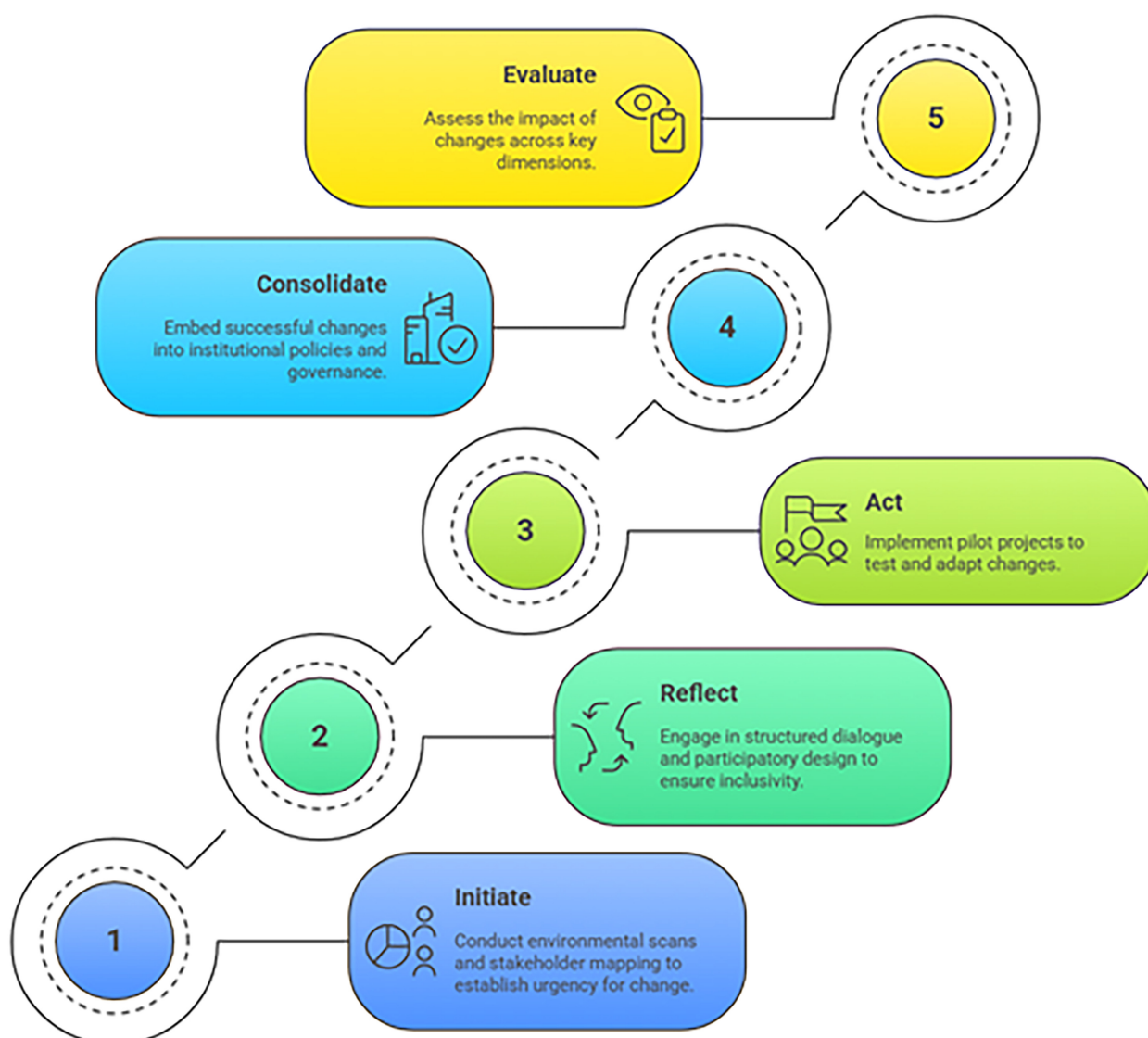


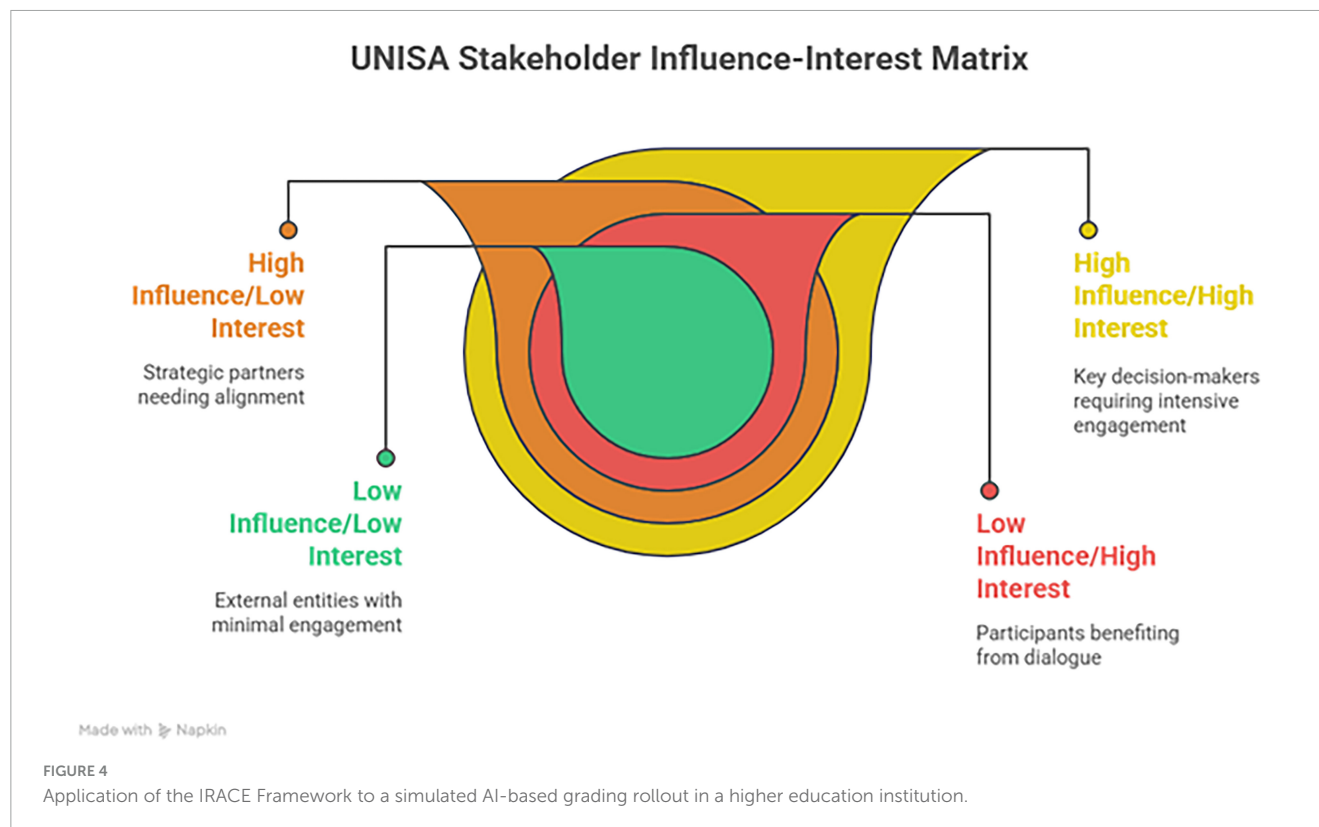
FIGURE 3
Stakeholder influence–interest matrix for UNISA.

reflects [Hiatt's \(2006\)](#) emphasis on building both knowledge and ability before scaling change.

- **Consolidate:** Successful pilots are formalized into policy and embedded in operational processes. At UNISA, this might involve incorporating AI grading into official assessment regulations, aligning with academic quality assurance processes, and recognizing staff who championed the change.
- **Evaluate:** Continuous evaluation against a multi-dimensional ROI framework, including financial impact, human development, innovation output, technological integration, and strategic alignment, is essential. This mirrors PREXSU's sustainability phase, ensuring lessons learned are looped back into the next cycle of change ([Rynearson et al., 2024](#)).

5.6 Methodological rigor and limitations

The approach ensures methodological triangulation ([Creswell, 2014](#)) by integrating theoretical models, policy documents, and case-based reasoning. However, as the study is conceptual and draws exclusively on secondary data, findings remain illustrative rather than empirically verified. [Yin \(2018\)](#) notes that while case-informed conceptual models provide valuable guidance, they require empirical testing through longitudinal or multiple-case designs to confirm their transferability. Additionally, while UNISA provides a rich contextual example, the diversity of HEI governance, funding, and cultural contexts means that local adaptation of the IRACE Framework is both necessary and expected.



6 Discussion

6.1 Strengths of the IRACE Framework

The IRACE Framework offers a comprehensive, phased structure for managing organizational culture change in higher education institutions (HEIs), addressing a gap in existing literature where change models are often applied without sufficient contextual adaptation (Lewin, 1951; Kotter, 1995; Hiatt, 2006). The contextual mapping presented in Table 1 reinforces this strength by demonstrating how abstract institutional imperatives can be operationalized within each phase of the IRACE cycle. This translation of strategy into process illustrates IRACE's practical utility in higher education settings. Unlike traditional models, IRACE explicitly integrates governance, capacity building, participatory engagement, and cyclical evaluation, making it responsive to the complex interplay of academic autonomy, collegial governance, and socio-political imperatives in HEIs. Its five phases: Initiate, Reflect, Act, Consolidate, Evaluate, map directly to critical change processes identified in higher education research (Vettriselvan et al., 2025). The model's built-in feedback loop ensures that change is not a linear, one-off event but a continuous improvement cycle, which is crucial in environments where policy, technology, and stakeholder expectations evolve rapidly. The stakeholder dynamics visualized in Figure 3 align with Kotter's (1995) emphasis on coalition-building and King IV's governance principles, underscoring that cultural change in HEIs must balance power, influence, and inclusivity to achieve legitimacy.

6.2 Alignment with existing literature

The framework aligns with Lewin's Three-Step Model by incorporating explicit "unfreezing" activities in the Initiate and Reflect phases, active transformation in the Act phase, and "refreezing" during Consolidate, where new practices are embedded in policy and culture (Lewin, 1951). This adaptation is particularly relevant for HEIs where cultural inertia can be a significant barrier to change. IRACE also complements Kotter's Eight-Step Model by embedding urgency creation, coalition building, visioning, and anchoring into each phase (Kotter, 1995). Similarly, ADKAR's focus on individual change readiness is addressed through capacity-building initiatives and reinforcement mechanisms in Consolidate and Evaluate (Hiatt, 2006). The PREXSU model's emphasis on sustainability is embedded in the cyclical design, ensuring ongoing alignment with institutional missions and external mandates (Rynearson et al., 2024). Incorporating the TIPSTM Managerial Leadership Framework strengthens IRACE's systemic approach, balancing the human, technological, and strategic dimensions of transformation (Da Vinci Institute, 2024). This is particularly critical in African HEIs, where transformation often involves simultaneous shifts in pedagogy, governance, and infrastructure.

6.3 Implications for change leaders in HEIs

For institutional leaders, IRACE provides a practical roadmap that balances strategic intent with human-centered execution. It underscores the importance of framing change initiatives within

the context of the institution's mission, governance structures, and socio-political commitments. With UNISA's case, aligning the change process with Africanisation, decolonization, and its ten Catalytic Niche Areas ensured cultural relevance and strategic coherence. From a governance perspective, the model operationalizes King IV principles by ensuring that stakeholder inclusivity, ethical leadership, and integrated thinking are not peripheral but embedded into each phase ([Institute of Directors in Southern Africa, 2016](#)). This can help HEIs avoid the “policy–practice gap” that often undermines reform efforts. From a technological adoption perspective, IRACE's cyclical structure supports iterative rollouts, which mitigate the risks of large-scale, “big bang” digital implementations that can overwhelm staff and students. By embedding technology alignment as a core ROI dimension, the framework ensures that digital initiatives, such as AI grading or blockchain credentialing, are integrated thoughtfully, with capacity-building support to sustain adoption. The simulated application illustrated in [Figure 4](#) demonstrates how this iterative design can be applied to complex reforms such as AI-based grading. By embedding pilots, evaluation loops, and governance integration, IRACE provides a roadmap for minimizing risk while maximizing institutional learning.

6.4 Potential limitations

While the IRACE Framework offers a robust and adaptive approach to cultural transformation, several limitations must be acknowledged. Its success relies heavily on sustained leadership commitment and sufficient resources for stakeholder engagement, training, and evaluation, elements that may be underfunded in resource-constrained HEIs, leading to partial or symbolic implementation. The cyclical nature of the model also demands patience and long-term commitment, which can conflict with short-term performance pressures from funders, accreditation bodies, or political stakeholders. Furthermore, although adaptability is one of IRACE's strengths, it carries the risk that institutions without strong governance anchors might dilute or misinterpret its core principles during local adaptation.

Additional conceptual limitations emerge from the study design itself. As a conceptual, theory-driven article, the framework is built on secondary sources and simulated scenarios, without empirical testing, which reduces the rigor of its claims. The single-case focus on UNISA provides valuable insights but limits generalizability to other types of HEIs, including residential universities or those in non-African contexts. Methodologically, some processes, such as contextual mapping and scenario simulation, remain abstract until supported by visuals or empirical application, limiting replicability. Conceptually, while the IRACE Framework integrates multiple models, the criteria for selecting these frameworks and weighing their relative strengths and weaknesses are only briefly discussed, leaving scope for further clarification. Coupled with an optimistic assumption of strong leadership buy-in, these issues highlight the importance of anticipating failure modes, resource trade-offs, and institutional resistance. Future research will therefore empirically test the IRACE Framework across diverse HEI contexts, using longitudinal designs to evaluate outcomes such as stakeholder satisfaction, ROI metrics, and governance alignment.

6.5 Opportunities for further development

Future research could empirically test the IRACE Framework across diverse HEI contexts, examining how variations in governance models, resource levels, and cultural settings influence outcomes. There is also scope for developing digital tools, such as ROI dashboards or stakeholder engagement trackers, to operationalize the framework at scale. Additionally, embedding design thinking more deeply into the Reflect and Act phases could foster greater innovation by ensuring that solutions are co-created and iteratively tested with the end-user in mind ([Brown, 2009](#)). This would further bridge the gap between strategic planning and lived experience on campus. Further research could explore longitudinal applications of the IRACE Framework in diverse HEI contexts to assess its adaptability and sustainability over time. Comparative studies across different governance models and resource settings could provide deeper insights into the conditions under which the framework is most effective. Additionally, developing digital tools: such as real-time change dashboards or stakeholder mapping software, could enhance the operationalization and monitoring of the framework at scale.

7 Recommendations

HEIs should operationalize governance principles, such as those articulated in King IV, into each phase of cultural transformation. Ethical leadership, integrated thinking, and stakeholder inclusivity should be treated as foundational, not supplementary, elements of change. Change readiness depends on both technical competence and soft skills. HEIs should invest in targeted training, mentorship, and peer learning programs to ensure staff and students are equipped to adapt to new cultural and operational norms. Cultural change efforts should be mapped to existing strategic priorities, whether they are national education plans, institutional catalytic niche areas, or global development frameworks such as the SDGs. This alignment enhances coherence, resource justification, and stakeholder buy-in. Avoiding the risks of “big bang” transformations, HEIs should deploy cultural change initiatives in phased, testable stages, incorporating continuous feedback loops. This reduces resistance, enhances adaptability, and supports measurable ROI tracking. Embedding co-creation and design thinking into change processes ensures that solutions are responsive to the lived experiences of staff, students, and other stakeholders. This participatory ethos builds trust, ownership, and relevance.

8 Conclusion

This study has conceptualized and applied the IRACE Framework: Initiate, Reflect, Act, Consolidate, Evaluate, as a strategic, adaptive, and context-sensitive model for organizational culture transformation in higher education institutions (HEIs). By synthesizing established change management models such as Lewin's Three-Step, Kotter's Eight-Step, ADKAR, and PREXSU, alongside the TIPS™ Managerial Leadership Framework,

IRACE addresses the dual imperatives of strategic alignment and human-centered execution.

The discussion demonstrates that successful cultural transformation in HEIs demands more than structural reforms or technology adoption; it requires a sustained commitment to governance integrity, stakeholder inclusivity, capacity building, and iterative evaluation. The IRACE Framework's cyclical design ensures that cultural change is not a finite event but an ongoing process of adaptation and renewal, critical for institutions operating within volatile, uncertain, complex, and ambiguous (VUCA) environments.

The case application in the context of UNISA illustrates the framework's potential to bridge strategic priorities such as Africanisation, digital transformation, and the pursuit of equity with operational realities. However, its principles and processes are broadly transferable to HEIs globally, provided they are adapted to local governance structures, socio-political contexts, and institutional missions. The application examples shown in Figures 3, 4 and Table 1 emphasize that IRACE is not purely theoretical but adaptable to practical HEI challenges. These illustrations reinforce the framework's potential to bridge high-level transformation agendas with the day-to-day operational realities of governance, stakeholder engagement, and technological change.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

Author contributions

KT: Conceptualization, Investigation, Writing – original draft, Writing – review & editing.

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