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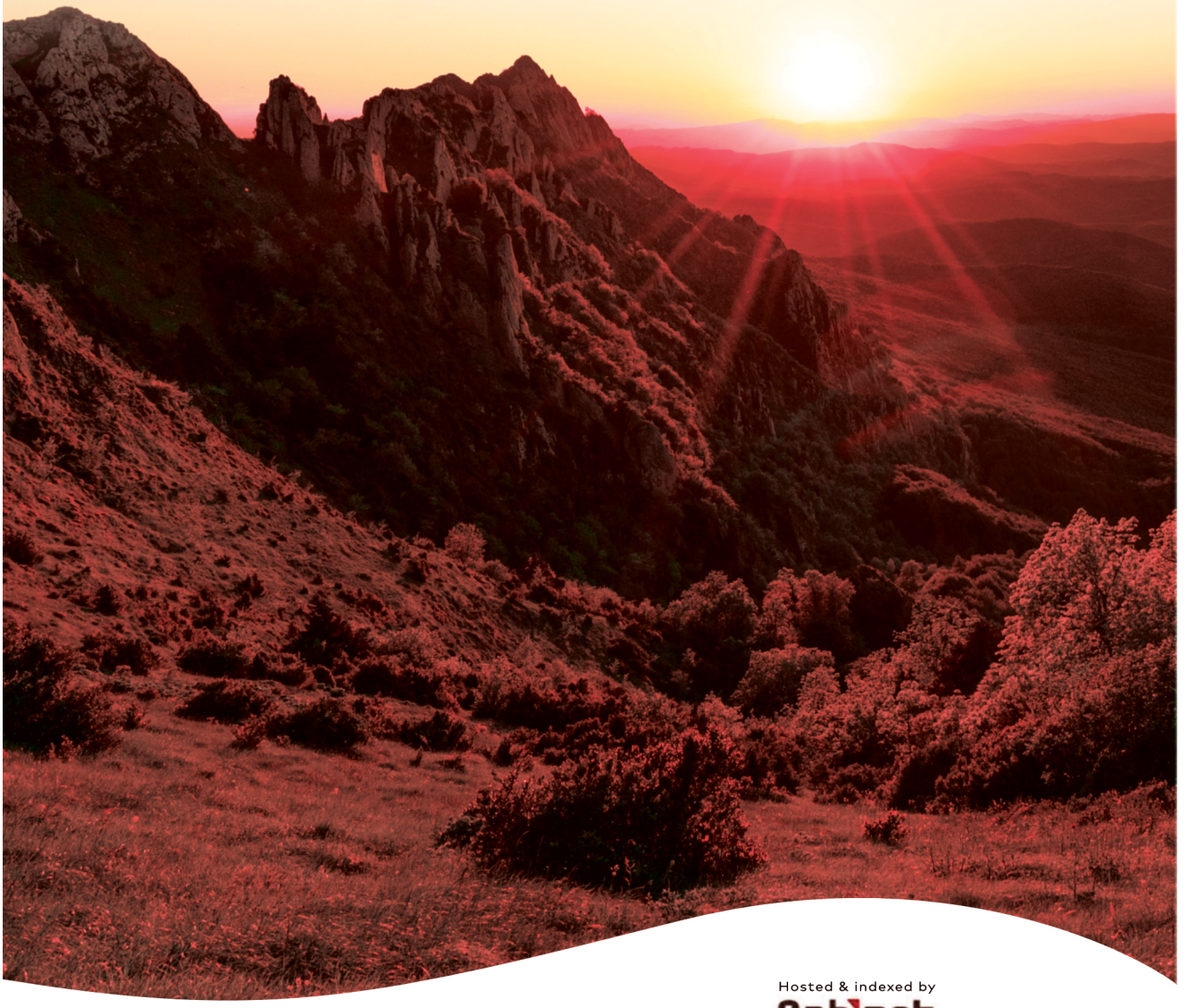

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# Re-evaluating Zimbabwe's Heritage-Based Education 5.0: Toward a transformative and emancipatory pedagogy

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## Abstract

Zimbabwe's education system has struggled to adapt sustainably to the complex demands of the twenty-first century, prompting the implementation of multiple curriculum reforms. This study examines the Heritage-Based Education 5.0, a de-colonial initiative aimed at reconfiguring the national education framework to foster creativity, critical thinking, problem-solving, and collaboration within universities and colleges. By interrogating its underlying principles, philosophical foundations, and practical applications, the research assesses its potential to support prosperity and sustainable development. Central to the analysis is the question of whether the post-independence emphasis on a romanticised, simplistic return to tradition can effectively catalyse innovation and industrialisation within contemporary institutions still operating largely within Western paradigms of knowledge production. Employing a mixed-methods approach, comprising interviews, observations, and secondary data review, the findings reveal that while Heritage-Based Education 5.0 aims to dismantle colonial legacies and embed indigenous cultural heritage, indigenous knowledge systems remain marginalised. The study concludes that indigenous values and religious cultures are insufficiently harnessed, limiting the alignment of national education, innovation, science, and technology development with broader developmental goals.

**Key words:** Education, Indigenous Knowledge Systems, Heritage, Innovation, Industrialisation

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'Insanity is to continue repeating the same things and expect different results'
*Albert Einstein*

## Introduction

Zimbabwe inherited from Rhodesia a racially segregated, dual education system explicitly designed to serve and reinforce white dominance and superiority over Black populations, while simultaneously perpetuating the subjugation of Africans. The limited reform and minimal diversification of existing provisions are residual effects of colonial legacies characterised by systemic discrimination and resource inequalities, spanning human, financial, and material spheres, between European and African education sectors. This historical context explains why Zimbabwe's education system has persistently prioritised knowledge accumulation and book-based learning at the expense of practical and applied skills (Thompson, 1981).

The dominance of rote memorisation and reliance on authoritative texts and lecturers are not mere relics of archaic pedagogical traditions but are deeply embedded practices within the system. Against this backdrop, Zimbabwe has embarked on initiatives aimed at disaffirming colonial educational paradigms and, more pertinently to this study, rekindling African heritage as an anchoring framework for Heritage-Based Education 5.0.

This study is organised along thematic lines that traverse diverse contexts and historical periods, seeking an education system that integrates experiential learning and bridges theory with practice. The first section explores elements of Paulo Freire's ([1967]1996) critical or transformative pedagogy, providing conceptual tools to interrogate, implement, and refine the Heritage-Based Education 5.0 framework. The second section examines post-independence innovative philosophies within several African countries, assessing whether initiatives rooted in Indigenous Knowledge Systems (IKS) and underpinned by African decolonial discourse possess the potential to catalyse transformative and sustainable development through Afrocentric approaches.

The analysis aims to expose the tensions and social divisions that hinder the integration of IKS with modern scientific knowledge as a foundation for innovation and industrialisation. Debates centre on the feasibility of Heritage-Based Education 5.0 in fostering a mindset revolution, what Huni (2024, p.21) describes as the "decolonisation of the mind… dismantling colonial structures…

and liberation of people's minds." Despite widespread condemnation of traditional pharmacopeia, there remains a prevalent predisposition to revert to indigenous practices either as a last resort or as the most effective remedy in times of crisis. The study contends that, if duly recognised and integrated, the 'heritage component' embedded within Education 5.0 holds significant potential to catalyse innovation and industrialisation, thereby advancing national development objectives.

## Theoretical Framework

Paulo Freire's ([1967] 1996) ideas, though profoundly radical and firmly embedded in anti-colonial discourse, have pioneered and exemplified the concept and practice of critical, transformative, and emancipatory pedagogy. Freire locates critical pedagogy within an analysis of power and how it becomes embedded in societal structures. His approach exposes the power and authority of the traditional formal educator in perpetuating domination. Regarding the political nature of education, he argues that education can "never be neutral but either creates critical, autonomous thinkers or it renders people passive and unquestioning" (Freire, 1996, p.70). The top-down pouring of facts from teachers to learners assumes an unquestioning and hegemonic power relationship that ultimately pervades entire societal structures. The educator is viewed as powerful and all-knowing, pouring information into the passive minds of learners, who are perceived as malleable and controllable objects. In such situations, the teacher initiates more interactions, speaks more, and directs while the learners remain passive. Consequently, knowledge becomes commodified, and societal inequalities are reinforced. For example, colonial schools introduced and reinforced a sense of inequality underpinned by the domination of the weak by the strong, the poor by the rich, and Africans by non-Africans. Rather than continuing the authoritarian, top-down transmission of facts, emancipatory pedagogy advocates a co-learning or co-teaching approach, where the educator also learns, and the learner also teaches. This requires critical educators prepared to transform the ideologies and structures of oppression that continue to cause suffering and subjugation. In this way, Freire's pedagogy envisages a dialectical approach to learning, where "for all their competence and authority, teachers would humble themselves to relearn what they think they already know from others and to connect, through learning… with their learners' life worlds" (Mayo, 2004, p.93).

Freire's pedagogy emphasises dialogue, critical thinking, and active participation from both teachers and students. As students strive to regain their lost humanity through dialogue, they are empowered to become critical agents of change. The colonial education system's focus on instruction and training within a formal setting fostered dependence on teachers for ideas and solutions. The 'one-way' transfer of knowledge blocked collaborative and reciprocal learning processes, which could have allowed indigenous communities to showcase their intellect and contribute to knowledge creation. To dismantle Zimbabwe's colonial educational architecture, Heritage-Based 5.0 envisions designing programmes and adopting teaching methodologies that address societal challenges through the production of high-quality goods and services.

Although Freire's emancipatory pedagogy is not explicitly focused on indigenous knowledge, it strongly values and emphasises recognising and empowering marginalised communities. The core principle of this approach is that every human being is capable of critically engaging with their world once they begin questioning the contradictions that shape their lives. In other words, each society defines education according to its worldview. This framework enables indigenous communities to engage with their realities and validate their knowledge systems. When Western education was introduced, colonial settlers largely disregarded African traditional educational practices. At independence, Zimbabwe simply adopted and maintained colonial education. If education is to be an instrument of change, colonial imbalances and injustices must be addressed. Consequently, in 2018, the President of Zimbabwe, Emmerson Mnangagwa, introduced Heritage-Based Education 5.0, described as a "decolonial project" to liberate the country's higher education system (Huni, 2024, p.6). This philosophy replaced Education 3.0 by extending higher education beyond research, teaching, and community service to include innovation and industrialisation. The Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development (MHTEISTD) advocates for a balance between theory and practice, prioritising the development of critical analytical skills over simple memorisation. Its focus on mental sovereignty encompasses the full spectrum of nationally inherited traditions, objects, natural resources, and tangible and intangible heritage, which must be harnessed to promote national development in contemporary contexts (Huni, 2024; Rukuni et al., 2024).

The call for the inclusion of indigenous knowledge systems in education is viewed as emancipatory, capable of eradicating residual colonial effects and

challenging the undervaluation of African scientific ingenuity. However, translating heritage into knowledge within the framework of Education 5.0 faces significant challenges. A study by Nyota and Mapara (2008) found that urban pre-school teachers in Zimbabwe preferred using English games and songs over traditional African songs and games, despite the latter epitomising everyday indigenous experiences. Zimbabwean educational institutions remain heavily immersed in Western culture, bodies of knowledge, and practices, making integration of indigenous methodologies difficult (Shizha, 2008). The heritage principle calls on people to remember the past, celebrate the present, and envision a bright future. Zhao and Watterson (2021, p.4) argue that to ensure innovation and industrialisation, "education should radically transform from curriculum to pedagogy, from teacher to learner, from learning to assessment." The primary challenge faced by this study is transforming 'heritage' to align with the production of qualified specialists and technicians in natural and applied sciences, among other sectors.

## Methodology

A total of 20 key informants participated in this research, selected through convenience sampling from three state universities, one teachers' college, one polytechnic, as well as staff and students from these institutions. These institutions have adopted the Heritage-Based Education 5.0 philosophy and host innovation hubs actively engaged in producing goods and services for the retail market. Data collection from lecturers and students, from whom informed consent was obtained voluntarily, took place between 2021 and 2024, ensuring participants' autonomy in choosing to participate. Field observations at selected innovation hubs, along with displays at the Zimbabwe International Trade Fair (ZITF), the Presidential Innovation Fair, and related research symposia, served to validate information gathered through interviews. Focus group discussions (FGDs) facilitated open dialogue on various themes, notably the role of heritage-based educational philosophy in driving innovation and industrialisation as catalysts for national development. Primary data were complemented by a comprehensive review of both published and unpublished secondary sources to enrich the analysis.

## Post-independence innovative philosophies

Post-independence innovative philosophies in African education emphasise the imperative for continuous adaptation to societal needs. Farrant (1991, p.45) asserts that "if education were to be mummified so that it would not change,

then society itself would die," emphasising the necessity of innovation to maintain relevance and responsiveness to contemporary challenges. Zhao and Watterson (2021, p.5) further argue that "education must be seen as a pathway to attaining lifelong learning, satisfaction, happiness, well-being, opportunity, and contribution to humanity." Progenitive and prognostic curricula can only be realised when learners are stimulated to be creative, entrepreneurial, and globally competent, cultivating new skills suited to the demands of the modern era.

Historically, periods of change have required visionary leadership to harness these opportunities. Several African leaders have pioneered alternative approaches to transforming educational environments into self-reliant social units. In Tanzania, Julius Nyerere's *Ujamaa*, meaning brotherhood or familyhood, embodied a philosophy of self-reliance, with schools serving as expressions of community-based education aligned with the policy of education for service (Morrison, 1976). Similarly, Kenya's *Harambee* schools demonstrated initiative and self-help capacities, while Village Polytechnics expanded education outside formal institutions to foster practical skills and community development. Botswana's Brigades operated as vocational enterprises, conducting practical training, community service, and research to improve traditional methods (Van Rensburg, 1974).

At independence, Zimbabwe introduced the Education with Production (EWP) programme through ZIMFEP schools, aiming to align education with socialist ideals by integrating theory and practice to develop productive citizens. Schools such as Chindunduma and Rusununguko saw students constructing their own classrooms and furniture, progressing towards food self-sufficiency; however, the initiative faltered due to the absence of a cohesive syllabus from the Curriculum Development Unit (CDU) and ineffective policy enforcement. Its conceptual fluidity and lack of a solid philosophical foundation, coupled with the perception that vocational education was meant for rural or subordinate roles, hindered its acceptance. Notably, aspects of colonial mission education shared similarities with current EWP proposals, suggesting continuity rather than novelty.

Despite the promise of these indigenous innovations, such as Mushandira Pamwe (co-operative work) in Zimbabwe, *Ujamaa* (Tanzania), *Harambee* (Kenya), *Chilimba* (Zambia), and *Letsema* (South Africa and Botswana), they have largely failed to generate transformative educational value. These community-driven, endogenous initiatives aimed to promote food security and

uphold social values but have been limited by a lack of sustained innovation. Sithole (2021) highlights the scarce scholarly exploration of their potential in conflict prevention, peacebuilding, and development, identifying seven under-researched dimensions, communal values, kinship ties, transmission of totems and taboos, social interactions, health practices, marriage customs, and human rights, as endogenous innovations with the capacity to foster social cohesion and stability.

## Managing Change through Heritage-based Education 5.0

Carlopio (1998, p.2) defines change as "the adoption of an innovation, where the ultimate goal is to improve outcomes through an alteration of practices". Nonetheless, various factors impede change, including fear of the unknown, lack of information, threats to core skills and authority, fear of failure, reluctance to experiment, and resistance to relinquishing established routines. In light of President Mnangagwa's rallying cry that "*Nyika inovakwa nevene vayo*" (a country is built by its own people) and the concept of *Chimurenga chepfungwa* (the war of minds), the Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development (MHTEISTD) advocates a paradigm shift, from research primarily aimed at academic promotion to research that delivers tangible community benefits. This philosophy challenges institutions to innovate by establishing business units capable of generating revenue, creating employment, and addressing national challenges. The goal is to scale up innovations from hubs to autonomous industries owned by universities, thereby fostering employment, revenue generation, and import substitution (Rukuni et al. (2023).

The Chimurenga Chepfungwa, or Mindset Revolution, launched by President Mnangagwa in 2022, extends beyond the traditional struggle for political dignity and social justice; it calls for higher education institutions to promote critical and creative thinking to cultivate an innovative national culture. Described as "self-liberation of the mind through understanding personal and collective stories, reclaiming language through self-articulation, and empowering individuals to define themselves" (Tavengwa, 2021, p.14), this movement underscores the importance of education as a tool for societal transformation. If education is to serve as a catalyst for development, it must empower society to overcome poverty, hunger, and disease by equipping learners with skills that contribute to societal progress.

The designation of Heritage-based Education 5.0 accentuates Zimbabwe's rich cultural heritage and creative industries as vital drivers of national growth and social development. Heritage encompasses both tangible and intangible elements, such as traditions, monuments, objects, songs, recipes, language, dances, storytelling, and proverbs, that constitute the foundation of indigenous knowledge systems. Education 5.0, as a heritage-centric framework, draws upon these cultural assets, asserting that:

> *…the full range of nationally inherited traditions… must be harnessed to contribute to contemporary national development across administrative, economic, social, and political domains (Rukuni et al., 2023, p.5).*

Colonialism's biases against industry and policies that suppressed domestic enterprise have historically stifled African scientific ingenuity, relegating indigenous knowledge and innovation to the margins. Despite this legacy, Africa's cultural, spiritual, and intellectual heritage remains resilient. Indigenous institutions, such as initiation schools, traditional agricultural systems, dances, storytelling, proverbs, and games, continue to underpin indigenous ways of knowing, which Education 5.0 aims to elevate and integrate into modern educational paradigms. The challenge for higher education institutions is to demonstrate how a community-based, heritage-informed, innovative approach can catalyse industrialisation and socio-economic development. Historically, emphasis has been placed on STEM fields as engines of technological progress (McGivney & Winthrop, 2016), yet Riley (2013) contends that science alone cannot address societal challenges. Rukuni et al. (2023) persuasively argue that societal and technological development are intertwined: where industrialisation neglects social institutions and ethics, it undermines a human-centred development paradigm. Therefore, innovations must reflect the interconnectedness of social, political, and economic institutions, recognising the linkages between material culture and intangible cultural heritage, and addressing the moral dimensions, values and ethics, in technological advancement at this pivotal juncture.

## Heritage-based Education 5.0 and the quest for epistemic freedom

Ndlovu-Gatsheni (2018) articulates that:

> *…epistemic freedom pertains to cognitive justice, emphasising the need to democratise knowledge by shifting from its singular Western-centric paradigm to recognise diverse 'knowledges'. It challenges the overrepresentation of Eurocentric thought in social theory, education, and scholarship (Ndlovu-Gatsheni, 2018, p.4).*

Fanon (1968) contends that colonialism not only subjugated populations but also aimed to distort, disfigure, and destroy their historical and cultural identities, while Ngugi wa Thiong'o (1986, p.16) underscores that colonial domination targeted the mental universe of the colonised, controlling perceptions of self and the world through culture. Colonial education systems failed to foster indigenous theory development or interpretive frameworks essential for scientific progress, instead perpetuating stereotypes of African primitiveness and cultural inferiority, which continue to influence contemporary academia. Higher education institutions inherited structures rooted in colonial values, predominantly supporting resource exploitation and Western scholarship, often positioning Africa as a peripheral subject of study.

Ndlovu-Gatsheni (2018, p.14) bluntly states that "the African academy remains a site of inculcation of Western knowledge, values, and worldviews, often falsely universalised as scientific." This Western-centric orientation fosters international linkages predominantly with Western or Eastern institutions, marginalising intra-African scholarly connections, exemplified by the prevalence of MOUs with external partners over collaborations within Africa, and within universities themselves. Colonial legacies have entrenched a preferential 'vertical exchange' with Northern scientists rather than horizontal partnerships among Southern scholars (Hountondji, 1990). Consequently, African universities struggle to elevate their global standing, with few institutions from the continent ranking in the top 500 of the Times Higher Education (THE) list (Brankovic et al., 2018).

Achieving epistemic freedom necessitates a shift in the "audience" for African researchers, prioritising the local African context as the primary target for their scholarship (Hountondji, 2002, p.139). African intellectuals, who produce knowledge rooted in African values and lived realities, often see their work validated primarily by Northern academic institutions and outlets. Freire (1985) challenges this paradigm, asserting that all human beings are inherently intellectual, continuously interpreting and assigning meaning to their worlds, thus, they are legitimate producers of knowledge (Freire, 1985, p. xxiii). Central to epistemic freedom is the demythologising of both Europe's self-perceived role as the "teacher of the world" and Africa's portrayal as a perpetual pupil (Ngugi wa Thiong'o, 1986, cited in Ndlovu-Gatsheni, 2018, p.24). This entails an Afrocentric academic revolution aimed at dismantling oppressive structures and fostering decolonial attitudes within knowledge production. Ndlovu-Gatsheni (2018) laments that, despite numerous African scholarly works addressing epistemic liberation and development, these have yet to supplant

Western theorists such as Foucault, Gramsci, Weber, and Marx within African academia. To realise a genuinely liberating education, Heritage-based Education 5.0 must promote epistemic freedom through cultivating a decolonial mindset, reclaiming African knowledge systems and asserting their rightful place in global scholarship.

## Heritage and Innovation

Despite the disarticulation and marginalisation of African heritage through colonial processes, Zimbabwe possesses significant untapped potential in IKSs for fostering sustainable community livelihoods and development, potential often overlooked by mainstream institutions. The transition from STEM to STEAM (having added Arts) offers a promising pathway, integrating cultural heritage into innovation, with Dziwa and Postma (2012) affirming that STEAM replaces ritualised limitations with wonder, critique, inquiry, creativity, imagination, and innovation. Africa's rich body of IKS, embedded within its cultural and ecological diversity, provides indigenous solutions to developmental and environmental challenges; yet, its utilisation remains constrained by perceptions of anecdotality and the marginalisation of African cultural values and languages within education systems (Walter, 2002).

Indigenous languages are often deemed inferior and non-functional as mediums of instruction and research, and decades after independence, even university examination papers in indigenous languages are written in English, with children punished for speaking vernacular at early ages. Zimbabwe's societal resilience, cohesion, and innovative capacity are deeply rooted in cultural heritage, arts, and creative industries. However, much indigenous knowledge, transmitted orally, is at risk of extinction, particularly as elders who bear this knowledge struggle to communicate their beliefs to a scientifically educated youth. Rapid environmental changes and global socio-economic shifts threaten the preservation of this knowledge, compounded by challenges such as climate change, pollution, looting, and underfunding.

Universities must assume a leadership role in documenting, studying, and adapting indigenous knowledge, fostering innovative, inclusive approaches to cultural heritage conservation and management. Recognising that IKSs inherently carry a heritage component, affirming that Africans have inherited unique methods of knowledge from ancestors, is crucial; as Parrinder (1969, p. 25) notes, "to say that African peoples have no systems of thought would be to deny their humanity." Mohamedbhai (2013) highlights that African universities'

poor research, innovation, and community engagement records, partly due to the lack of landmark indigenous research, contribute to their low global rankings. Eurocentric notions have historically equated education with Western formal schooling, fostering a neo-colonial mentality that dismisses indigenous knowledge as obsolete, thereby discouraging youth from engaging with rural or traditional contexts. Nkondo (2012) argues that all knowledge systems originate locally but have the potential for universality, with Western science itself initially rooted in local African contexts before becoming globalised through conquest and colonialism. Acknowledging this, it is vital to confront ecological challenges within indigenous knowledge frameworks, such as the contested relationship between humans, nature, and spirituality, highlighted by practices that invest natural features like mountains, rivers, and animals with spiritual and cultural significance (Tarugarira, 2009). For example, the construction of the Kariba dam in the 1950s encroached upon Tonga spiritual beliefs, notably their reverence for Nyami Nyami, the river's legendary monster, which they believe withdrew after the dam's completion in 1960.

Similarly, cultural practices such as the reluctance of the Varemba of Mwenezi to adopt Western-style voluntary medical circumcision reveal the importance of ritual and cultural continuity (Matumbu & Chimininge, 2018). Indigenous communities' kinship systems, intertwining people, animals, and the environment, are repositories of complex knowledge about the cosmos, whose preservation and study require collaboration among universities, traditional healers, and elders. Taboos, covering environmental, health, and social domains, are often dismissed in development discourses despite their moral and scientific underpinnings; it falls to researchers and policymakers to adapt and integrate these practices into modern sustainable development strategies. The use of botanical names, such as Gossypium transvaalens for wild cotton and Adansonia digitata for baobab, often strips indigenous plants of their cultural meanings, yet local names and knowledge, like the traditional use of rock rabbit urine for medicine or geometrical patterns in pottery, embody a wealth of scientific insight. Indigenous medicinal plants and practices have historically contributed to contemporary pharmaceuticals, proving that unscientific labels are misleading. Kaya and Seleti (2013) emphasise that the indigenous knowledge held by elders demonstrates the vibrant intellectual traditions that African researchers should prioritise, recognising that environmental knowledge remains central to innovation and invention. Integrating indigenous mathematical and scientific ideas into formal education can foster creativity and sustainable development.

Community engagement serves as a vital pillar for innovation. When Zambia's President Kaunda inaugurated the University of Zambia in 1966, he celebrated the contributions of ordinary citizens, fishermen, farmers, prisoners, and lepers, who saw the university as a beacon of hope for a better future (Ajayi et al., 1996). As socio-political landscapes evolve across Africa, universities must adopt new approaches to community engagement, characterised by inclusive participation and mutual respect, what Ahmed and Palermo (2010) term 'authentic partnership'.

Wabike (2023) stresses that universities should enhance learning experiences by actively involving communities, rather than merely hosting superficial visits. Heritage-based education must reflect local perspectives, languages, and customs, with indigenous knowledge systems (IKSs) providing fertile ground for research and innovation. Empowering communities to collaboratively explore and address their priorities fosters sustainable development; as Nyerere (1967, p.183) asserted, "The university in a developing society must focus on immediate issues and be committed to the people's humanistic goals". Rural industries, such as processing traditional fruits into drinks or oils, embody this paradigm, requiring sustained dialogue and cooperation that respects cultural identities. Development should not equate to abandoning rural life for urban prosperity; instead, it must embrace the cultural dimensions that form the foundation of IKSs. Zimbabwe's education system comprises interconnected sub-systems, primary, secondary, teacher training, and tertiary institutions, whose coordination is essential for continuity.

Currently, universities often operate as isolated "ivory towers," divorced from school systems and community realities. The MHTEISTD's promotion of Heritage-based Education 5.0 aims to produce teachers aligned with the *Ubuntu/Unhu*-driven competence-based curriculum, illustrating a complementary relationship rather than competition. Universities should proactively engage local communities through outreach, exhibitions, and collaborative projects, moving beyond tokenistic involvement and fostering critical, transformative engagement, what Moore (2014) describes as a process that fundamentally alters participants' beliefs and behaviours, addressing inequities and promoting social justice. Such engagement can unlock the full potential of indigenous knowledge, fostering innovation rooted in cultural authenticity and community participation.

## Community engagement as the pillar for innovation

At the inauguration of the University of Zambia in 1966, President Kaunda encapsulated the spirit of inclusive development, stating:

> *Humble folk in every corner of our nation, illiterate villagers, barefooted schoolchildren, prison inmates and even lepers, gave freely and willingly everything they could, often in the form of fish or maize or chickens. The reason for this extraordinary response was that our people see in the university the hope of a better and fuller life for their children and grandchildren" (Ajayi et al., 1996, p. 1, cited by Wabike, 2023, p. 7).*

As socio-political and economic landscapes in Africa evolve, there is a pressing need for universities to adopt new paradigms of community engagement. According to Ahmed and Palermo (2010, p. 1380), community engagement is a

> *…process of inclusive participation that supports mutual respect of values, strategies and actions for authentic partnership of people affiliated with or self-identified by geographic proximity, special interest or similar solutions to address issues affecting the well-being of the community of focus.*

The ethos of community engagement is inherently 'nothing about us, without us', emphasising that university-community relationships should "systematically or situationally enhance learning experiences to improve lives" (Wabike, 2023, p. 56).

Universities are not isolated entities; they are integral parts of their surrounding communities, which influence, and are influenced by, their activities, often involving complex interdependencies, competing interests, and sometimes conflicting priorities. Heritage-based education must prioritise communities' inherent perspectives, experiences, languages, and customs, recognising that Indigenous Knowledge Systems (IKSs) offer fertile ground for research and innovation. Empowering community members to collaboratively explore, plan, and act on their priorities can serve as a catalyst for transformational change, strengthening collective capacity to identify current and future socio-economic needs. As Nyerere (1967, p. 183) observed:

> *The university in a developing society must emphasise its works on subjects of the immediate moment to the nation in which it exists, and it must be committed to the people of that nation and their humanistic goals.*

Rural industrialisation initiatives, such as processing traditional fruits into drinks and oils, exemplified by the Marula Plant in Mwenezi or the Zumbani Tea project, highlight the importance of sustained dialogue and collaborative mechanisms that foster positive community behaviour. True development does

not entail abandoning rural life to pursue modernity or material wealth; rather, it requires integrating cultural dimensions as the foundation of development, recognising that IKSs are central to sustainable progress.

Zimbabwe's education system comprises interconnected sub-systems, primary schools, secondary schools, teacher training colleges, and tertiary institutions, including universities, whose functions are mutually constitutive. Changes in one sub-system often necessitate adjustments in others, and resource competition among these entities can cause delays. More critically, the influence of higher education on curricula and methodologies at lower levels has led to fragmentation, undermining coherence and continuity. Universities, still operating as ivory towers, remain disconnected from the realities of the school system. The MHTEISTD promotes Heritage-based Education 5.0, aiming to produce teachers aligned with the *Ubuntu*/*Unhu*-driven competence-based curriculum of the MoPSE). Rather than competing, these philosophies are complementary, and their symbiotic relationship likely accounts for overlapping initiatives and ideas between the two ministries, sometimes leading to duplication, such as schools manufacturing drinks and detergents similar to university projects. Here, community engagement should function as an interface to bridge gaps, universities must proactively reach out to local communities by organising events, exhibitions, and competitions within their own settings, sharing expertise on development issues. Moore (2014) distinguishes between instrumental engagement, focused on task completion, and critical engagement, which fosters transformative learning experiences. Most higher education activities tend to be instrumental, with students acquiring skills and knowledge within their existing worldview. Critical engagement, however, seeks to fundamentally open minds to new ways of thinking, assuming new roles and behaviours that challenge systemic inequities. Education becomes truly transformative when it results in shifts in beliefs and practices that perpetuate inequality, thus enabling meaningful social change.

## Discussion

The purpose of this study was to interrogate the extent to which the Heritage-Based Education 5.0, as a de-colonial project embraced IKS to steer innovation and industrialisation against the background of an erosion of traditional practices by western culture. Informants lamented the disorientation of youths

from their African cultural identity. Terms like 'nose brigades', 'maY2K' and 'dotcom' age groups were used to refer to the tendency by the youth to speak English with a nasal accent and their adoption of 'westernised' styles and attitudes respectively. Both lecturers and students concurred that the education system was creating cultural conflicts and contradictions where students are exposed to their African culture at home and a hybridised culture at school.

Informants advocated that the understanding of local knowledge and its dynamics be considered as an academic project to appreciate the changing patterns of local knowledge and the extent to which it can become hybridised. While some of the informants' commitment to IKS was positive, others expressed uncertainty about its effectiveness. They totally disavowed herbal remedies especially those whose knowledge is believed to be transmitted by the departed via dreams, divination and spirit mediums. They also argued that the transmission of knowledge about traditional remedies was often restricted and shrouded in secrecy. Some respondents who wished to know more about medicinal herbs could not easily gain access to this information. For this reason, informants, largely the youthful, called upon institutions to record plants with therapeutic qualities and medicinal herbs learnt through generations so that researchers do not operate with a fragmented and patchy understanding of IKSs.

Although the informants in their entirety did not deny IKS's immense potential to open new horizons for sustainable endogenous innovations, they felt that there was need for a vigorous interaction between traditional remedies with changing scientific ideas and conceptions of modernity. With the advancement of science and technology, people were now living modern lives and very few remember traditional norms and etiquette. The tendency to see a sharp distinction between tradition and modernity must be narrowed so that younger generations wish to be part of an old culture and not lose interest in inheriting traditional knowledge.

Informants appreciated the demonstration of a rich knowledge of local flora and recipes which resulted from experiments with plants and substances leading to the manufacture of juices, cosmetics, biscuits, detergents, sanitisers and traditional pharmaceutical products. Such strides are indicators of a mindset revolution unfolding in the country where indigenous knowledge is being taken to the public arena for ratification, verification and validation.

The study revealed that salvaging knowledge that has almost disappeared after decades of neglect is not an easy task. The mental attitude of downplaying

African civilisation and rejecting indigenous knowledge must be quashed by integrating traditional education into the current curriculum. Symbols of African culture like traditional games, music and dance, legends, myths and fables should be translated into knowledge and educational categories which inform industries on goods and services required to satisfy human needs. With the young now disconnected from the optimism of the past and dispossessed of any future through globalisation, Education 5.0 must bring back the lost pride and dignity which IKS offers in propelling innovation and industrialisation.

## The way forward

The approach or process by which an innovation has to be introduced may affect the ease and success with which change takes place. For more innovation and industrialisation, it is vital to integrate IKSs in the development process through a holistic and multidisciplinary approach. The Government of Zimbabwe (GoZ) has made a commitment to invest towards Research and Development (R&D) through innovation Hubs and Industrial and Technology Parks Infrastructure which drive the agenda. During the Covid-19 pandemic, for example, Higher and Tertiary education Institutions (HTEIs) responded to the sharp increase in the demand for several medical solutions: sanitizers, masks, as well as other medical attire and accessories. Government's support of the innovations through an Innovation/Venture Fund has made it possible for successful students to incubate their ideas towards a product and /or a service.

The confidence is growing among staff and students initially because of self-evidence from the production units, innovation hubs and industrial parks. The 'heritage component' of what Education 5.0 seeks to achieve is within the capacity of the educational institutions to implement. All that is needed are the guts, the vision, the disposition, and the skill to address both the existential and practical challenges of transformation. New forms of assessment based on profiles and criteria, rather than too many examination papers could be developed. The current examination system tends to be the major obstacle to change because it places a premium upon the accumulation of knowledge (Makuvaza, 1996; Thompson, 1981). The dichotomy between theory and practice, ideas and action, is a residual aspect of the colonial system which restricts the capacity of the learners and educators to experiment with varied approaches to study. The tyranny of the timetable might also need to be broken to allow academic intercourse between learners and the wider community, especially where examination processes are project-based.

## Conclusion

Colonialism downplayed the value of IKS in favour of western knowledge systems and as a result, IKSs have been underutilized and neglected as a resource for development. When people disregard their knowledge and wisdom, it slowly gets lost and misappropriated. However, higher education institutions have been challenged to re-examine curricula and pedagogy and eschew all manifestations of neo-colonial underpinnings which work against home-grown developmental initiatives. With the GoZ's unwavering support, the Heritage-based Education 5.0 offers a ray of hope toward the recognition of IKS as the biblical rock 'which builders rejected and threw away but became the chief cornerstone' of innovation and industrialisation.

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