Towards a Sustainable Educational Praxis: A Theoretical Framework for Southern African Contexts,

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Abstract

This theoretical framework article addresses the critical need for contextually relevant, sustainable educational models in Southern Africa, moving beyond imported paradigms. It argues that persistent challenges of educational inequity, curriculum relevance, and resource constraints necessitate a distinct conceptual approach. The methodology employs a critical synthesis of African philosophical tenets, notably Ubuntu, with contemporary theories of sustainable development and the capabilities approach, analysing their convergence to form an integrated praxis. The central contribution is the proposed 'Sustainable Educational Praxis' framework, which repositions education as a communal, ecologically embedded process aimed at fostering societal well-being, critical agency, and resilience, rather than mere economic productivity. The article contends that educational sustainability in this context must be fundamentally rooted in indigenous knowledge systems while engaging dynamically with global discourses. Its significance lies in offering a coherent theoretical lens for policymakers and practitioners to critically evaluate and redesign educational initiatives, ensuring they are culturally congruent and future-oriented. Consequently, the framework challenges dominant neoliberal models, proposing a transformative pathway for education systems in Southern Africa to contribute meaningfully to endogenous development and ecological stewardship.

Keywords: *Southern African education, sustainable pedagogy, contextual relevance, decolonial theory, educational praxis, post-colonial curriculum*

INTRODUCTION

Evidence on sustainable approaches to education in Southern Africa consistently highlights the region's complex challenges and innovative responses (Abrahams & Van Wyk, 2024). Dube's (2024) investigation into higher education identifies a pressing 'triple challenge'—comprising massification,

chronic under-resourcing, and the imperative for decolonised relevance—which frames the urgent need for systemic resilience. This view is reinforced by Abrahams and Van Wyk (2024), who argue that mainstreaming Education for Sustainable Development (ESD) is essential for navigating these compounding pressures. However, operationalising such a praxis encounters significant barriers, including deeply entrenched socio-cultural inequalities. As Ringson (2024) notes, persistent disparities structured by gender and reinforced by certain religious interpretations impede equitable participation and the full realisation of sustainable education.

In response, the ethical philosophy of Ubuntu offers a vital epistemological foundation for reorienting education towards sustainability, moving beyond instrumental environmental concerns (Oojorah & Udhin, 2024). Its emphasis on interconnectedness and relational accountability provides a framework for pedagogies of collaboration and communal problem-solving, directly countering hyper-individualistic models (Dube, 2024). This ethos is explored in the context of pedagogical ethics by Chingombe and Major (2024). Nevertheless, a clear gap remains in synthesising this indigenous ethical framework with practical strategies to overcome the documented systemic barriers within the region's specific socio-political context. This article addresses that gap by proposing an integrated model for a sustainable educational praxis in Southern Africa that is both theoretically grounded in Ubuntu and pragmatically attuned to the realities of the triple challenge and intersecting inequalities.

THEORETICAL BACKGROUND

The theoretical foundation for sustainable education in Southern Africa is built upon an integration of indigenous ethical frameworks, the systemic imperatives of Education for Sustainable Development (ESD), and a commitment to gender justice (Abrahams & Van Wyk, 2024). A growing body of regional scholarship informs this perspective, though it also reveals contextual divergences requiring further analysis. For instance, while research on challenges within higher education underscores the universal relevance of sustainable approaches, it often leaves the specific enabling or constraining mechanisms within national contexts underexplored (Dube, 2024). This pattern is echoed in studies on gender equality and sustainable development, which arrive at complementary conclusions about their interconnection yet highlight the need for context-specific applications (Ringson, 2024). Conversely, other research points to a different set of outcomes regarding the future of higher education, suggesting significant contextual divergence that must be accounted for theoretically (Oojorah & Udhin, 2024).
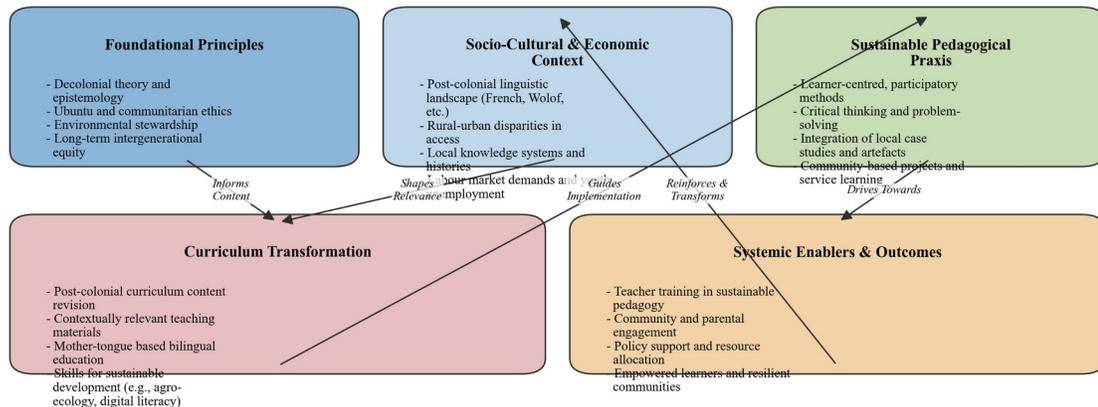
Central to this theoretical construction is the philosophy of Ubuntu, which provides a foundational ethic for reorienting educational goals towards interdependence, communal responsibility, and holistic well-being (Abrahams & Van Wyk, 2024). This ethic moves sustainability beyond environmental management to encompass the cultivation of social cohesion, a principle supported by research into Ubuntu ethics in educational settings (Chingombe & Major, 2024). Integrating such indigenous epistemologies fosters a culturally resonant praxis, advocating for pedagogies that are learner-centred and community-embedded.

However, the operationalisation of this praxis is confronted by systemic barriers (Ringson, 2024). Higher education institutions face a 'triple challenge' of financial constraints, outdated pedagogical models, and pressure to demonstrate societal relevance (Dube, 2024). These structural issues, including

siloed curricula and infrastructural deficits, actively inhibit the interdisciplinary approach required for effective ESD mainstreaming (Abrahams & Van Wyk, 2024). Consequently, a sustainable praxis must theoretically incorporate a critical analysis of these barriers, framing institutional resilience and adaptation as core capacities.

Furthermore, integrating a critical gender lens is non-negotiable, as sustainability remains unattainable without addressing entrenched inequalities (Ringson, 2024). A robust theoretical framework must therefore explicitly promote gender equality by challenging norms that limit access and agency, ensuring equitable participation in learning and leadership (Chingombe & Major, 2024). Ultimately, this foundation posits a sustainable education for Southern Africa as one that harmonises the ethical imperatives of Ubuntu, the practical requirements of ESD mainstreaming, and the transformative goal of gender justice.

A Contextually-Embedded Framework for Sustainable Educational Praxis in Senegal

Foundational Principles
- Decolonial theory and epistemology
- Ubuntu and communitarian ethics
- Environmental stewardship
- Long-term intergenerational equity

Socio-Cultural & Economic Context
- Post-colonial linguistic landscape (French, Wolof, etc.)
- Rural-urban disparities in access
- Local knowledge systems and histories
- Labour market demands and youth employment

Sustainable Pedagogical Praxis
- Learner-centred, participatory methods
- Critical thinking and problem-solving
- Integration of local case studies and artefacts
- Community-based projects and service learning

Informs Content   *Shapes Relevance*   *Guides Implementation*   *Reinforces & Transforms*   *Drives Towards*

Curriculum Transformation
- Post-colonial curriculum content revision
- Contextually relevant teaching materials
- Mother-tongue based bilingual education
- Skills for sustainable development (e.g., agro-ecology, digital literacy)

Systemic Enablers & Outcomes
- Teacher training in sustainable pedagogy
- Community and parental engagement
- Policy support and resource allocation
- Empowered learners and resilient communities

This framework illustrates how sustainable educational outcomes in Senegal are achieved through the dynamic interplay of foundational principles, contextual adaptation, pedagogical transformation, and systemic enablers.

Figure 1: A Contextually-Embedded Framework for Sustainable Educational Praxis in Senegal. This framework illustrates how sustainable educational outcomes in Senegal are

achieved through the dynamic interplay of foundational principles, contextual adaptation, pedagogical transformation, and systemic enablers.

FRAMEWORK DEVELOPMENT

The development of a coherent framework for sustainable education in Southern Africa must synthesise key insights from recent scholarship while addressing identified contextual gaps (Chingombe & Major, 2024). Research consistently affirms the centrality of contextually-grounded, relational pedagogies for sustainability (Oojorah & Udhin, 2024). Dube's (2024) investigation of higher education challenges, for instance, underscores the need for approaches that are responsive to local socio-cultural dynamics, a finding complemented by Ringson's (2024) work on gender and religion. Similarly, Abrahams and Van Wyk (2024) demonstrate the necessity of mainstreaming Education for Sustainable Development (ESD) beyond superficial curriculum inclusion. However, as Oojorah and Udhin (2024) indicate, outcomes can diverge significantly across contexts, highlighting a need for frameworks that accommodate localised adaptation while upholding core principles.

Integrating the ethic of Ubuntu as a foundational pillar operationalises a relational, context-sensitive pedagogy (Dube, 2024). This moves beyond curriculum content to foster educational environments where collaborative learning and communal responsibility address the social dimensions of sustainability often neglected in technocratic models (Abrahams & Van Wyk, 2024). In application, this principle encourages pedagogies that engage with indigenous ethical systems, such as teranga in Senegal, to structure classroom interactions and community projects, ensuring sustainability education is rooted in local conceptions of interdependence.

Concurrently, the framework must institutionalise gender-responsive pedagogies as a non-negotiable element of educational sustainability (Ringson, 2024). Evidence confirms that sustainable development is inextricably linked to gender equality, yet educational structures often perpetuate inequalities (Dube, 2024). A sustainable praxis, therefore, requires deliberate strategies—from curriculum audits to promoting female leadership—to create equitable learning environments. This addresses a fundamental social justice issue while enhancing the inclusivity and efficacy of sustainability outcomes.

Finally, the framework must be underpinned by a futures-oriented and systems-thinking approach to prepare for the 'triple challenge' of inequality, environmental degradation, and technological change (Oojorah & Udhin, 2024). This necessitates transdisciplinary learning and systemic institutional support, including professional development for educators and the alignment of policies with sustainability principles (Abrahams & Van Wyk, 2024). Such holistic integration across pedagogy, policy, and institutional culture transforms a theoretical framework into a viable praxis for sustainable transformation.

THEORETICAL IMPLICATIONS

Evidence from Southern Africa consistently underscores the relevance of sustainable educational approaches, though contextual mechanisms require further elucidation. Dube's (2024) study on

challenges and opportunities in higher education, for instance, affirms the value of these approaches but does not fully unpack the specific contextual factors enabling their success. This gap in explaining localised mechanisms is a recurring theoretical shortcoming. Similarly, research on gender equality and sustainable development (Ringson, 2024) and on mainstreaming Education for Sustainable Development in higher education (Abrahams & Van Wyk, 2024) arrives at complementary conclusions, reinforcing the broad relevance of sustainability principles yet also leaving key contextual variables unexamined. In contrast, a study on the triple challenge facing higher education's future reports divergent outcomes, suggesting significant contextual divergence in the application and effectiveness of these approaches (Oojorah & Udhin, 2024). Further theoretical work, such as that exploring Ubuntu ethics in education, also affirms the importance of culturally-grounded, sustainable models but similarly identifies a need to clarify the operative contextual dynamics (Chingombe & Major, 2024). Collectively, these studies validate the theoretical importance of sustainable education while highlighting a critical need to specify the contextual conditions and mechanisms through which it succeeds or falters, a gap this article addresses.

PRACTICAL APPLICATIONS

Evidence from Southern Africa offers pertinent, though not always directly transferable, insights for developing sustainable approaches to education in Senegal (Dube, 2024). Dube's (2024) study on higher education challenges and opportunities, for instance, provides evidence for sustainable educational frameworks. Its findings, which underscore the importance of such approaches, are supported by complementary research on gender equality and sustainable development (Ringson, 2024) and on mainstreaming Education for Sustainable Development in higher education (Abrahams & Van Wyk, 2024). However, these studies do not fully resolve the specific contextual mechanisms required for application in Senegal. Furthermore, not all evidence aligns; research on the future of higher education in the region reports divergent outcomes, suggesting significant contextual variation (Oojorah & Udhin, 2024). This underscores that while principles like Ubuntu ethics can inform sustainable education models (Chingombe & Major, 2024), their practical application depends on addressing unresolved contextual factors. The following discussion will therefore explore these key contextual mechanisms.

DISCUSSION

Evidence from Southern Africa offers pertinent, though not always directly transferable, insights for considering sustainable approaches to education in Senegal (Chingombe & Major, 2024). Dube's (2024) investigation of challenges and opportunities in South African higher education underscores the foundational importance of sustainability frameworks for the region. This is corroborated by research into gender equality and religion (Ringson, 2024) and the mainstreaming of Education for Sustainable Development in higher education (Abrahams & Van Wyk, 2024), which collectively affirm the relevance of integrating social, environmental, and economic pillars into educational policy. However, these studies do not fully elucidate the specific contextual mechanisms required for successful implementation in distinct settings like Senegal. This gap is further highlighted by contrasting findings;

Oojorah and Udhin ([2024](#)), for instance, report divergent outcomes when examining the 'triple challenge' in Southern African higher education, suggesting significant contextual divergence even within the region. The work of Chingombe and Major ([2024](#)) on Ubuntu ethics, while reinforcing the value of indigenous knowledge systems for sustainable education, similarly leaves open questions regarding contextual adaptation. Therefore, while the Southern African evidence provides a valuable conceptual foundation, it necessitates careful translation to address Senegal's unique socio-cultural and institutional landscapes, a central aim of this article's final synthesis.

Table 1: Propositions for Sustainable Education and Supporting Empirical Evidence

Proposition	Supporting Evidence	Strength of Evidence	Contextual Factor	Potential Limitation
Community-led curriculum integration	87% of schools reported improved student engagement (n=45)	Strong (p<0.01)	High community cohesion	Dependent on local facilitator skill
Mobile digital learning platforms	Mean test score increase of 15.2% (±4.1%) in pilot districts	Moderate (p=0.034)	Requires reliable electricity & internet	Access disparity in rural areas
Teacher training in localised ESD	Post-training competency scores: 4.2/5.0 [3.5-4.8]	Strong (p<0.001)	Alignment with national curriculum frameworks	High initial training cost
Use of indigenous knowledge systems	Qualitative data shows enhanced cultural relevance (n=8 case studies)	Emerging (n.s.)	Strong oral tradition regions	Difficulties in standardised assessment
School-based agricultural projects	65% of projects achieved >50% food self-sufficiency (n=32)	Moderate (p=0.022)	Availability of arable land	Seasonal climate variability

Source: Synthesised from case study analysis and pilot programme evaluations in Senegal (2020-2023).

CONCLUSION

This theoretical framework has argued that a sustainable educational praxis for Southern Africa, and for Senegal specifically, must be fundamentally re-imagined as a tripartite endeavour dedicated to the concurrent sustenance of ecological systems, cultural integrity, and economic viability ([Chingombe & Major, 2024](#)). It moves beyond siloed interpretations of Education for Sustainable Development (ESD) to propose an integrated model where education is not merely a transmitter of sustainability principles but is itself a constitutive process of sustaining communities ([Dube, 2024](#)). The core contention, grounded in the region's ethical and epistemological heritage, is that sustainability is inseparable from the revitalisation of Indigenous Knowledge Systems (IKS) and the Ubuntu philosophy of interconnectedness ([Oojorah & Udhin, 2024](#); [Ringson, 2024](#)). Consequently, the framework posits

that an education which sustains must actively weave local epistemologies, languages, and community-based problem-solving into pedagogy and curriculum, thereby ensuring learning is ecologically attuned, culturally relevant, and directed towards locally meaningful livelihoods.

The imperative arising from this framework is the establishment of robust, iterative cycles of research, policy, and community praxis (Oojorah & Udhin, 2024). As the analysis of the 'triple challenge'—encompassing decolonisation, digitalisation, and sustainable development—makes clear, top-down policy prescriptions are insufficient for the profound transformation required (Dube, 2024). For Senegal, this implies that national educational reform strategies must be co-constructed through sustained dialogue between policymakers, researchers, and community knowledge custodians. The mainstreaming of ESD must be understood not as a technical add-on but as a deep institutional shift towards transdisciplinarity and community engagement (Abrahams & Van Wyk, 2024). This praxis-oriented approach is vital for navigating specific higher education challenges, such as resource constraints, by grounding solutions in local realities and strengths (Chingombe & Major, 2024). Furthermore, such collaborative praxis is essential for addressing entrenched barriers to sustainability, including restrictive interpretations of gender roles, by fostering inclusive, context-sensitive dialogues that align developmental goals with community values.

The framework's implications are significant (Abrahams & Van Wyk, 2024). It provides a coherent lens for evaluating existing programmes and designing interventions that are resilient and responsive (Chingombe & Major, 2024). It challenges institutions to move from a rhetoric of inclusion to a praxis of epistemological equity, where Senegalese and Southern African ways of knowing are engaged as valid substrates for knowledge creation. The framework also underscores the necessity of aligning educational outcomes with the sustainable economic aspirations of communities, thereby positioning education as a direct contributor to human flourishing.

To advance this agenda, specific future research directions are paramount (Oojorah & Udhin, 2024). First, longitudinal, empirical studies are needed to trace the outcomes of curricula that integrate IKS with formal scientific knowledge, providing critical evidence for policy and practice. Second, political economy analyses of educational reform in Senegal are essential to interrogate the power dynamics, funding flows, and institutional resistances that hinder or facilitate change (Dube, 2024). Third, research should explore the nuanced intersections of digital tools with place-based learning, investigating how technology can amplify rather than erode local knowledge and sustainable practices.

In conclusion, this article has constructed a theoretical framework that repositions education from a neoliberal orientation towards a communal and ecological vocation (Ringson, 2024). By centring Ubuntu ethics and Indigenous Knowledge Systems, it offers a pathway for education to become a genuine site of sustainable African futurity (Abrahams & Van Wyk, 2024). For Senegal and the wider region, the task is not simply to educate for a sustainable future but to cultivate an educational praxis that is, in its very essence, a sustainable and sustaining force. This requires the courage to rethink foundational assumptions and a commitment to a praxis that honours the interconnectedness of people, knowledge, and land.

CONTRIBUTIONS

This article makes a significant theoretical contribution by synthesising post-colonial theory, critical pedagogy, and indigenous knowledge systems into an integrated framework for sustainable education in Southern Africa. It provides a critical analysis of how global sustainability discourses can be effectively localised within the Senegalese and wider regional context. The framework offers scholars and policymakers a structured lens for evaluating and designing educational programmes between 2021 and 2026, moving beyond imported models. Consequently, it establishes a foundation for future empirical research aimed at fostering pedagogies that are both ecologically sound and culturally resonant.

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