# Oral Abstracts

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## ABSTRACT

### Advancing Sustainable Biorefinery Systems with Innovative Wood-Based Products

The sustainability of wood-based biorefinery plants is paramount in the transition towards a eco-friendlier industrial landscape. This study delves into the environmental and economic dimensions of such plants, focusing on the production of valuable products like 2,3-Butanediol (2,3-BDO), biopolymer, hydrochar, and pyrochar from wood residues.

Wood residues, abundant in Sweden due to its vast forests, hold considerable potential as resources for synthesizing value-added products. The development of bioproducts from wood residues, rather than fossil resources, can offer significant advantages in environmental sustainability.

In this study, the environmental consequences, economic feasibility, and social impacts of biorefinery scenarios where wood residues are converted into novel bioproducts were assessed from an industrial perspective. The findings demonstrated that in biochar systems, emissions abatement (avoided GHG emissions and carbon sequestered) was larger than the emissions, resulting in a negative value for the climate change impact. The economic results showed the financial feasibility and profitability of products through a payback period of 3 to 7 years. The development of biorefinery technologies like biochar, BDO, and biopolymer can also promise significant positive social impacts, such as job and business creation and economic growth.

This research contributes valuable insights into the optimization of wood-based biorefinery operations, facilitating informed decision-making for stakeholders in both the environmental conservation and industrial sectors. Moreover, it underscores the pivotal role of biorefinery technologies in fostering a transition towards a sustainable circular bioeconomy and net-zero emissions paradigms, where resource efficiency and environmental stewardship are paramount.

**Keywords:** Resource recovery, Circular bioeconomy, Climate change, Low-carbon economy, Sustainable society

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**ABSTRACT**

**Enhancing African Education Through International Student Exchanges**

This study critically evaluates the impact of the Active Citizenship and Gender Equality through International Teacher Education (CIGETE) Project's Tanzania-Norway student exchange program as a model for enhancing African education through international collaboration. By examining the experiences of Tanzanian students who participated in the exchange, the research explores how exposure to Norway's educational system and culture influenced their academic achievements, intercultural competencies, and future aspirations. Utilising a mixed-methods approach, the study combines quantitative data on academic performance with qualitative insights from student interviews to assess the overall effectiveness of the exchange. The findings reveal significant benefits, including improved critical thinking skills, broadened global perspectives, and enhanced adaptability. However, the research also identifies challenges, such as cultural adjustment difficulties and disparities in educational resources, which must be addressed to optimise the impact of future exchanges. This study underscores the potential of international student exchanges to contribute to the global competitiveness of African education while providing practical recommendations for enhancing the effectiveness of such programs.

**Keywords:** Gender equity, International teacher education, Higher education, Student exchange

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## ABSTRACT

### Trust and Attitudes Toward Artificial Intelligence – New Forms of Digital Divides?

We are amidst remarkable technological change, characterized by increasingly ubiquitous computing and significant advancements in artificial intelligence (AI) technologies. Technologically advanced countries are leading this development, and AI disruption is likely to widen the digital divide based on who has access to these technologies and who benefits from them. Globally, the AI field is currently dominated by large American corporations. While AI disruption presents opportunities for many, it may also reinforce global inequalities. This drives a need for global studies focusing on AI disruption and changes brought. This study analyzes trust and attitudes toward AI in 12 countries using Self and Technology EU-6 and Self and Technology Global Extended-6 data. Our country samples include participants aged 18 to 75 from all countries (sample size per country ca. 1500). Measures include General Attitudes Toward AI Scale, measures on generalized, particularized and institutional trust, including trust in AI and companies developing AI. We utilize also measures related to technology use. We expect to see global variance in both attitudes and trust toward technologies in different cultural regions. Results yield insights into emerging AI technologies and ways they are perceived globally. The results provide new evidence on attitudes toward digital technologies, digital divides, and trust, helping policy makers, stakeholders, and educators develop strategies to support digital technology adoption and bridge digital divides.

**Keywords**. Trust, technology, artificial intelligence, cross-national research, survey

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**ABSTRACT**

**Indigenous Knowledge Systems and Their Application in the
Sustainability of Solid Waste Management**

Indigenous communities have always used their knowledge systems to improve their quality of life. For instance, rural communities' resort to indigenous cultural practices to manage their own waste when local administration lacks coordinated ways to manage waste. In the context of indigenous knowledge systems, the idea of waste is non-existent. As indigenous knowledge is believed to provide a holistic framework for an approach that effectively promotes sustainability. Following the Preferred Reporting Items for Systematic Reviews and Meta-analyses guidelines, an extensive literature search was carried out in the field of indigenous solid waste management practices. The results revealed a significant imbalance in the amount of conclusive evidence available on the sustainability of indigenous solid waste management practices. Subsequently, in the discipline of solid waste management, this setback impedes the recognition as well as the inclusion of indigenous waste management practices into integrated waste management plans. This is an unprecedented trend, especially for a knowledge system that is supposed to promote sustainability practices. it is imperative to understand the foundational elements that contribute to the advancement of sustainability, lest the sustainability aspect associated with this knowledge system in the discipline of solid waste management remain a mere rhetoric.

**Keywords**: Indigenous communities, solid waste management, sustainability

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## ABSTRACT

### Holistic Integration of Gender Equity and Environmental Sustainability in Corporate Diversity Responsibility (CDR) Frameworks

This paper provides a rigorous analysis of the critical integration of gender equity and environmental sustainability within the Corporate Diversity Responsibility (CDR) framework, aligned with the "Global Perspectives on Gender Equity" theme. The study introduces the Integrated Model for Sustainable Development (IMSD), positioning gender diversity as a key driver for achieving comprehensive social and environmental justice globally. Extensive empirical evidence supports this, highlighting the strategic necessity of embedding gender equity into corporate governance to advance Sustainable Development Goals (SDGs). The IMSD model addresses the intersectionality of gender with environmental and corporate governance challenges, identifying systemic biases that impede progress, particularly for women and gender minorities. This research underscores the pivotal role of gender-inclusive corporate policies in enhancing organizational performance and societal well-being. Empirical findings demonstrate that gender-diverse boards correlate with higher Corporate Social Responsibility (CSR) ratings, improved ethical reputations, and stronger regulatory compliance. Additionally, companies with gender-inclusive leadership significantly contribute to charitable causes and the quality of CSR initiatives. Despite advancements in gender representation, structural biases continue to disadvantage women. This paper argues that corporations, as moral agents, must prioritize gender equity within their CSR frameworks. While often integrated into broader CSR strategies, focused efforts are needed to eradicate systemic gender biases within corporate structures. This work is groundbreaking and vital for the conference's focus on intersectionality, advocating for the explicit incorporation of gender equity into sustainable development policies and practices to ensure a just and equitable future.

**Keywords:** Economic (de)growth, sustainability, solidarity, Gender Equity, Environmental Sustainability, Corporate Governance, Sustainable Development Goals (SDGs), and Intersectionality in Economic Growth.

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## ABSTRACT

### Shaping Leadership Practices: Integrating Social and Epistemic Justice with Agency Theory in Corporate Sustainable Leadership

This study investigates the integration of social and epistemic justice, guided by agency theory, in shaping corporate sustainable leadership to promote economic sustainability and solidarity. Employing methodologies such as literature reviews, case studies, surveys, and interviews with corporate stakeholders, the research defines and operationalizes sustainable leadership within corporate contexts. It highlights the transformative potential of social and epistemic justice on leadership behaviours, proposing a theoretical framework that fosters equity and achieves enduring social sustainability.

Aligned with SANORD 2024's Theme 3: Economic (De)Growth, Sustainability, and Solidarity, this study explores the systemic barriers to equitable economic development and advocates for addressing social determinants that affect economic sustainability. It underscores the importance of sustainable leadership in promoting economic solidarity, equitable growth, and mitigating the adverse impacts of economic activities on social and environmental systems. By integrating principles of social and epistemic justice through agency theory, sustainable leadership is positioned as a catalyst for systemic change towards a more equitable and sustainable economic model.

The theoretical foundation includes works by Freeman (1984), Rawls (1971), Fraser (1997), Young (1990), and recent empirical research on corporate sustainability (Bansal & DesJardine, 2014), leadership ethics (Ciulla, 2004), and social determinants of health (Marmot, 2005). This research introduces "A Preliminary Agency Theoretical Model for Shaping Leadership Practices," advocating for enhanced organizational accountability and ethical conduct while balancing profit motives with broader societal responsibilities.

**Keywords**: Corporate sustainable leadership, social justice, agency theory, equity.

# Oral Abstracts

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## ABSTRACT

### Comparative Analysis of Interventions Addressing Child Malnutrition in South Africa and Sweden

**Introduction:**

Malnutrition, encompassing both undernutrition and overnutrition, significantly impacts child development and public health globally. This study aimed to map the interventions addressing malnutrition in children under 5 years old in South Africa and Sweden through a scoping review. By analysing the effectiveness of conducted interventions, we sought to identify common challenges and successful interventions that can inform future public health policies and practices in both contexts.

**Methods:**

A systematic search on PubMed, followed by data processing in Covidence, identified 2,592 studies, of which 40 met the inclusion criteria. The studies included randomized controlled trials, cohort studies, and cross-sectional studies focusing on interventions in South Africa and Sweden.

**Results:**

In studies conducted in South Africa (n = 17), the results showed mixed outcomes. Nutritional interventions had inconsistent impacts on growth metrics. Behavioural interventions demonstrated some positive effects on child growth but were not sustainable. In studies conducted in Sweden (n=23), nutritional interventions also yielded mixed results, with some specific growth metrics improving and others showing no significant changes. Behavioural interventions involving parental support and mobile applications showed varied outcomes, often lacking significant long-term effects on dietary intake, physical activity, or weight gain.

**Conclusion:**

The majority of interventions were ineffective in reducing childhood malnutrition. Most interventions focused either on nutritional or behavioural aspects, with little attention to the broader context in which child malnutrition occurs. A more holistic, intersectional, and systemic approach to addressing malnutrition among children in South Africa and Sweden could be more effective in reducing malnutrition and should be tested.

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## ABSTRACT

### Sustainable Development Goals (SDGs), Free Movement of Persons and Women Empowerment: Empirical Evidence from South Africa

Understanding and explaining the relationship between the free movement of persons, women empowerment and development remains a significant challenge that has raised intense scholarly debate. Several Global, Continental, Regional and National level protocols, policy frameworks and conventions are adopted to bring about social and economic development. One of these global-level instruments is the Sustainable Development Goals (SDGs). SDGs were adopted by the United Nations as a universal call to action to end poverty, protect the planet, and ensure that by 2030, all people will enjoy peace and prosperity. The SDGs are integrated, and they recognise that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability. Globally, countries have committed to prioritising progress for those who are furthest behind. The SDGs are designed to end poverty, hunger, and discrimination against women and girls. In this regard, it is believed that creativity, know-how, technology and financial resources from all of society are necessary to achieve the SDGs in every context. SDGs also emphasise migrant women in its goals and indicators and there are feminist scholarly works related to women and migration. In line with the theoretical and conceptual framework of sustainable development and rights- based approach, this research study seeks to analyse the extent to which SDGs contribute towards the free movement of persons in Africa, particularly its impact on Women Empowerment in South Africa. This research also focuses on the day-to-day challenges of migrant women from other African countries who are living in South Africa which is an area where there is a dearth of literature. Mixed methods of research will be applied throughout the study and measurement of the challenge; women empowerment will be made using different techniques in South Africa. Within the context of the abovementioned analysis, the study finally brings into focus general observations gained from the investigation and provides recommendations to policymakers and other stakeholders.

# Oral Abstracts

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## ABSTRACT

### South African Teacher Educators' Pedagogical Approaches to Examining Structural Inequalities: Disrupting Unsustainability?

Education is seen as a key enabler in achieving the Sustainable Development Goals (SDGs) by 2030. Teacher educators are as such playing a pivotal role in training teachers, and one of the indicators of SDG target 4.7 is the extent to which education for sustainable development (ESD) and global citizenship (GCED) are mainstreamed through teacher education. As argued in this article, a focus on root causes to inequality in society, such as structural racism, and how to dismantle these structures, should be central to this target. The article draws on empirical data from dialogues with ten teacher educators, at three universities in South Africa, on the topic of how to include the concept of structural racism in their praxis. The article explores which pedagogical approaches these teacher educators apply when critically examining structural inequalities, such as structural racism, in the context of South Africa, and consider these strategies in relation to relevant literature on critical pedagogy. It further reflects on how this work relates to SDG target 4.7 and its aim for education to contribute to transformation to a more equal and just world. Based on the dialogues with these teacher educators, the article argues that for education to contribute to real societal transformation it must confront structural inequalities. To address the root causes of inequalities and injustices, the article argues that it involves pedagogy of discomfort, but also pedagogy of care.

Keywords:

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## ABSTRACT

**Decolonial Justice: A Post-Colonial Analysis of Post-Apartheid Theatre Representations**

Colonialism, in South Africa, caused complete disorder to the native people of the country by disconnecting and depriving them of their natural right to their land, languages, cultural ways of life, and their histories. The dominance of colonial mindsets, knowledges, and systems often usually continue into post-independence contexts. In the South African context, there seems to be several political, economic, and social ills that threaten the concept of justice and equality. Ongoing anti-Black racism, economic inequality and extreme poverty that are largely still mapped onto race, unequal access to quality education and other opportunities, and gender- based violence, for instance, remain problems in post-apartheid South Africa. Although the government of the day is Black, the legacy of Apartheid continues to advance structural injustices in the country. Delegates to an annual international conference (2022) on social justice in South Africa unanimously acknowledged that the country had become the most unequal in the world with unconscionable levels of inequality, poverty, and unemployment, mostly along historical race and gender contours of past injustice. (Madonsela & Lourens, 2022:2) This paper is a close reading of Baxter Theatre's The Fall, which explores real protest action in post-apartheid South Africa; the goals of the protests are free, decolonised and quality education, and the removal of colonial all symbols like the Rhodes statue. The paper will deploy decolonial justice as the overarching theory to explore distributive justice as staged in the Fallist play.

**Keywords:** Decolonial Justice; Distributive Justice; Social Justice; Theatre

# Oral Abstracts

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## ABSTRACT

### Lessons Learned from Namibian Student-teachers Experience of Teaching Practice in Norway

This article draws on the experience of student-teachers from the University of Namibia (UNAM) during their teaching practice in Norwegian schools. The Namibian student-teachers were placed in a multicultural environment and paired with fellow student-teachers from Inland Norway University of Applied Science (INN) based in Norway. The study gathered students experience of a multicultural teaching practice. Hence, the focus is on global awareness defined as knowledge, interest, and engagement in global issues, local and global connections, and diverse cultures (Merryfield 2008, 363).

The study adopts qualitative methods based on semi-structured interviews and focus group discussions. The first interviews are conducted before student-teachers depart for their exchange programme and the second interviews are held after the student-teachers return from their exchange. The focus group discussions were organised in the host country with students from the host country together with international students. The findings suggest that the student-teachers had a change of outlook on teaching, and they gained international exposure and relationship from the teaching practicum in Norway. This presentation will present preliminary findings from the Namibian student- teachers' perspectives.

**Key words:** Globalisation; Sustainable Education, Sustainability, Teacher education, Intercultural, Transformative learning

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## ABSTRACT

### The Paradox of Quasi-States and the Institution of Modern Intellectual Property Laws in Africa

**Abstract:**

This paper highlights a contradiction within the concept of quasi-states when viewed through the lens of intellectual property law. The concept suggests that many African nations have failed due to the flawed legal and ideological foundations on which they gained independence in the 1950s and 60s: decolonization discarded the effectiveness principle. However, since gaining independence, many African nations have been encouraged to adopt modern intellectual property laws without having the capacity to enforce them effectively. How can quasi-states have modern intellectual property laws that are not commensurate with their level of development? The paper argues that the narrative of quasi-states (or state failure) contradicts the globalization of intellectual property norms. The same criticism of decolonization can be applied to the expansion of intellectual property norms in Africa: it does not prioritize the effectiveness principle. It was (and is) purely juridical rather than empirical. This may explain the challenges in fully enforcing intellectual property rights in Africa.

# Oral Abstracts

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## ABSTRACT

## Building Solidarity Infrastructures: Deploying Solidarity to Make Visible Systemic and Structural Disparities

This article unpacks the importance of solidarity in dealing with inequalities and uneven development through disempowering structural and systemic policy choices. The paper will grapple with the concept of solidarity and health as a cross-cutting systemic issue, particularly given the recent context of COVID-19. The article will be grounded in a feminist political economy approach which gives rise to different types of solidarity. Indeed, it can be argued that solidarity is at the centre of radical feminist praxis. The article will grapple with the questions "What is solidarity? Why is solidarity important? What is the embodiment and situated of solidarity? How can acts of solidarity begin to challenge inequality as well as systematic and structural issues? If anything, COVID-19 made visible the interrelated issues of biopolitics: which bodies and who's lives matter while highlighting the intersecting crises of public health and the importance of a social health system that needs to be holistic and public. The article will therefore provide both practical and theoretical insights on questions of local and global solidarity and inequality building upon the idea of solidarity infrastructures as alternative ways of building another world which is necessary.

**Keywords:** solidarity; health systemic and structural disparities; solidarity infrastructures; feminist political economy, solidarity economies of life

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## ABSTRACT

### Design Thinking as a Method and Process for Creating Sustainable Innovations: A Cross-Cultural Case Study

Design Thinking is an important element in business operations and innovation design, as well as in engaging users for whom specific solutions are created. The paper aims to demonstrate the potential of Design Thinking as a method for developing innovative solutions in a cross-cultural collaborative environment, which can be seen as a form of a manifestation of collective intelligence and knowledge production. The research uses a case study approach to analyze a Design Thinking workshop involving NIAGARA project members from Norway, Tanzania, Zambia, and Poland, conducted in May/June 2024.Observations from the workshop reveal two levels of results. The first pertains to the stakeholders of the NIAGARA project, highlighting similar challenges across services, defining user roles in the innovation process, and characterizing the users of institutional environments. The second level concerns the NIAGARA project members, focusing on communication, commitment, and task execution during the workshop stages. Findings underscore the relevance of Design Thinking in addressing common challenges across diverse cultural contexts, aligning with SANORD's Theme 1's emphasis on justice in knowledge production and epistemic justice. The study also advocates for the inclusion of Design Thinking methodology in educational programs, particularly concerning digital and information competencies, echoing the theme's focus on educational equity. This research, therefore, contributes significant insights into the application of Design Thinking in fostering cross-cultural collaboration, innovation, and educational equity.

**Keywords:** Design Thinking, educational equity, epistemic justice, innovations, collaboration, case study.

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## ABSTRACT

### Sustainability and EU Migration Law: What Place for Migrant's Rights

Since 2015-2016, sustainable migration is the new objective of EU migration law. The fuzzy notion of sustainability, the disconnect of the EU discourse from the UN Sustainable Development Agenda and the recent appearance of 'sustainable migration' have not led to conclusive research on the legal implications and risks of this objective.1 A preliminary question to ask before engaging with the objective of a sustainable migration would be: migration that is sustainable for who? And to this, the answer could vary: migration that is sustainable for the host states; the states of origin; the migrants; the planet; and for all of the above.

This paper will focus on how migration has historically been construed as sustainable in the EU by reference to migrants' rights and it will present the findings of my forthcoming monograph Sustainability and EU Migration Law (Cambridge University Press 2024). The presentation will show that EU law grants the maximum level of protection to EU migrants who do not negatively impact growth (economically active or self-sufficient), and to non-EU migrants who actively contribute to growth. Reflecting on the limited potentials and risks of such a utilitarian approach to migrants' rights which entrenches racial capitalism in the EU legal system, the paper asks whether degrowth can offer alternatives for a more inclusive EU migration law.

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## ABSTRACT

### Governing the Just Urban Transition

There is increasing global attention to ensuring that decarbonisation efforts and sustainability transitions also address inequality and poverty. Although cities play an important role in facilitating a just transition, the multiple and varied actors involved across various sectors make this task complex. This paper argues that focusing on technical solutions alone will not lead to a just urban transition. It is also necessary to focus on how change happens, including what processes and people govern it. We draw on recent research on private investments in alternative water and energy options, to explore the potential consequences for social justice of elite infrastructure transitions that are currently underway in South Africa. Although these investments have responded to the inability of the government to address water and electricity crises, and can be considered as supporting South Africa's decarbonisation efforts, they have the potential to deepen inequality. The reality that private households and businesses are shifting the current energy landscape in cities, raises the question of whether there are potential opportunities for municipalities to partner with residents and businesses towards co-producing the just energy transition. We propose a governance model that can be used to support hybrid governance, by bringing together diverse state and non-state stakeholders to co-produce knowledge and strategies that not only meet the needs of citizens but also further a just urban transition.

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## ABSTRACT

### Complexities of Conflict: Climate Change, Elephants and Local Livelihoods in Lupane, Zimbabwe

Human–wildlife conflict can have damaging effects on both people and wildlife and retard conservation efforts. Understanding how conflict risk is likely to shift under a changing climate as agriculture and human populations expand can better allow policymakers to allocate mitigation and conservation resources for conflict-prone species and areas. This study interrogates the drivers of human-elephant conflict in Lupane, Zimbabwe. Using an ethnographic approach, anchored on the sustainable livelihoods framework and the political ecology perspective, we explore the contribution of climate change and variability to the human-elephant conflict. We also assess the implications of this conflict on household livelihoods and how the affected communities cope with the challenge. We also explore the current institutional support systems meant to address the human-elephant conflict and the extent of its climate sensitivity. It emanates from the anecdotes that climate change and variability have forced elephants to shift and contract at unprecedented rates, exacerbating human–wildlife conflict. Water shortages, increased temperatures and diminishing grazing were mentioned as some of the implications of climate change on elephants that aggravate the human-elephant conflict. It also emanated that collapsing rain-fed agriculture and the need for diversification into forestry-based livelihoods and population expansion was increasing human intrusion into the elephant territory, further complicating the challenge. It therefore emanates that conflict risk with elephants may change in intensity and spatial distribution as human populations expand and climate change impacts intensify. The human-elephant conflict leads to death, injuries, damage to irrigation infrastructure, fences, and crops, household economic loss, food insecurity and insecurity in the affected area. Our findings suggest that as climate changes, the risk of conflict with elephants may shift and increase and policymakers should proactively mitigate that conflict to preserve these charismatic animals. To advance sustainability goals, global conservation policy must better integrate empirical evidence on the challenges of human-wildlife coexistence into longer-term strategies at transboundary scales, specifically in the context of climate change.

**Keywords:** Conflict, climate change, elephants, livelihoods, Lupane

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## ABSTRACT

### Factors that Influence Human Resource Information Systems in Health Organisations in South Africa

The awareness of Human Resource Information Systems (HRIS) as change enablers that assist organisations in achieving competitive advantage is essential. The need for effective HR practices in health organisations is often leading to several research endeavours. Interestingly, even though the benefit of HRIS in health organisations continues to gain traction among researchers and practitioners. Researchers are yet to determine how HRIS can be effectively utilised for skilled workforce retention and sustainability in health organisations. Because of this, we set out to determine the factors that influence the HRIS in health organisations in South Africa (SA). Data collected from four public hospitals were qualitatively analysed. 41 participants, recruited using purposive sampling, were interviewed. The study identified poor organisational structures, ineffective change management, lack of sophisticated Information Systems (IS) and lack of education and awareness of HRIS among health workers amongst others. Ethical clearance and approvals were obtained from the Department of Health, WC and the Cape Peninsula University of Technology, SA. These organisational structures and HRIS can be likened to aspects such as awareness, use of automated HR systems, improved technology and equipment, and sufficient funding amongst others. A core implication of these findings is the necessity to address these structural limitations linked to health organisations for effective HRIS usage and skilled workforce sustenance. We flag some recommendations.

KEYWORDS: HRIS, Human Resource Information System, Health Sustainability, health workforce, awareness

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**ABSTRACT**

**Households' Food Security Status Among Inland Fisheries
in Mopani District Municipality, South Africa**

This study investigated the food security status among inland fisheries' households in the Mopani District Municipality, South Africa. Utilizing a binary logistic regression model, key determinants such as the age of the household head, access to credit, number of household members and distance to the market were analysed for their significance. A purposive sampling method was employed, resulting in a sample size of 131 households being used for the study. The findings revealed a concerning level of food insecurity within the households of Mopani. Specifically, 58.8% of households were identified as food insecure, while 41.2% were categorized as food secure. The study therefore recommends that the government and local authorities should implement policies aimed at improving access to credit for households in the inland fisheries sector. This can empower households to invest in food production and other income-generating activities, thereby enhancing their food security. Furthermore, encouraging households to diversify their sources of income beyond fishing activities can help mitigate food insecurity. Training programs and support initiatives aimed at promoting alternative livelihoods, such as agriculture or small-scale entrepreneurship, should be implemented. Local communities and stakeholders should collaborate to develop community-based initiatives focused on improving food security. This could include community gardens, aquaculture projects, cooperative farming ventures, or food-sharing programs aimed at supporting vulnerable households. By addressing these recommendations, policymakers, stakeholders, and communities can work together to alleviate food insecurity among inland fisheries' households in the Mopani District Municipality, ultimately improving the well-being and livelihoods of its residents.

**Keywords:** Food security; inland fisheries; binary logistic model, sustainable fisheries, rural livelihoods

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## ABSTRACT

### Towards Sustainable Waste Management at the University of the Western Cape

The expansion of the global population, coupled with rapid urbanization, shifting consumer behaviours, and an increase in living standards, has precipitated a significant surge in waste generation. Challenges associated with increased waste production are the lack of suitable landfill sites, inadequate waste management and the negative environmental consequences associated with poor and ineffective waste management. While a number of waste characterization audits and studies have been conducted at a municipal and household level, there are limited studies for Higher Education Institutions (HEIs) in South Africa. The research aims to understand the factors that influence and regulate solid waste management at the University of the Western Cape (UWC). The research is guided by the Integrated Sustainable Waste Management (ISWM) approach which considers an integrated and interdisciplinary approach to account for the interactions and complexity between the physical components and the social and environmental spheres that all form part of the waste system. The research is guided by a mixed-methods approach, which entails a waste audit to understand the categories and amounts of waste generated on the main campus of UWC in Bellville. To assess the knowledge, awareness and practices towards waste management on the UWC campus, a questionnaire-based survey will be conducted, followed by semi-structured interviews with staff and students on the campus. Convenience and purposive sampling will used for this study. This study hopes to contribute to a better understanding of waste management challenges at a spatially concentrated residential university at which the spatiality and temporalities of waste- related challenges are largely influenced by waste behaviour.

**Key words**: Waste audit; Perceptions, Knowledge; Behaviour; Recycling, Interventions, Organic waste

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## ABSTRACT

### The Perceived Impact of Climate Change on the Livelihoods of Smallholder Farmers: Evidence From KwaZulu-Natal, South Africa

Smallholder farming is an important livelihood strategy for rural households in developing countries. Climate change and variability threaten the sustenance of livelihoods and hinder efforts to eradicate poverty and food insecurity. Although perception studies on climate change and coping mechanisms have been conducted in KwaZulu-Natal Province, little has been done on livelihood analysis. This study uses the Sustainable Livelihood Framework for livelihoods analysis of smallholder farmers in the uMkhanyakude district of KwaZulu-Natal Province in South Africa. Survey data were collected from a sample of 400 smallholder farmers. The study found that climate change significantly eroded livelihood assets, posing a threat to the well-being of smallholder farmers. The findings underscore the urgent need to safeguard farmers' livelihoods in the face of climate change.

**Keywords**: Smallholder farmers, climate change, sustainable livelihoods, KwaZulu-Natal

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## ABSTRACT

### The Establishment of a Smart Sustainable Campus Pharmacy at a Higher Education Institution

**Introduction**

The increasing demand for accessible and sustainable healthcare on university campuses highlights the need for integrating health with environmental and economic sustainability. Tshwane University of Technology (TUT), one of nine universities in South Africa with an accredited pharmacy school, has five campuses across three provinces but lacks an on-campus pharmacy. Current healthcare services are limited for students and staff needing affordable pharmaceutical services. Additionally, these facilities overlook sustainable practices, leading to environmental effects. The Department of Pharmaceutical Sciences at TUT aims to establish a pharmacy that meets the university healthcare needs while prioritising sustainability, economic viability, and inclusivity.

**Methodology**

The project will follow a phased approach: planning, design, construction, and operation. Initially, a needs assessment and feasibility study will define healthcare needs and sustainability goals. The design will integrate green building standards and energy-efficient technologies.

**Anticipated Results**

Enhanced access to healthcare and pharmaceutical services and medicines will improve the overall health of the TUT community in the Arcadia Campus. The integration of green technologies and sustainable practices will reduce the pharmacy's carbon footprint while minimising waste generation and promoting responsible consumption. The pharmacy is expected to benefit from sustainability grants and partnerships. Increased health awareness and community engagement will foster a culture of sustainability and wellbeing within the campus and the local community.

**Conclusion and Recommendations**

The pharmacy will meet the immediate healthcare needs of students and staff and serve as a model for sustainable healthcare practices in educational institutions. By aligning with the SDGs and focusing on sustainability, the TUT campus pharmacy will contribute to a healthier, more sustainable future for the university and its community.

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## ABSTRACT

### Can a Multilingual Pedagogical Approach in Higher Education Help Uproot Confusion on Literature Review?

Literature review, dominantly taught in English in academia, is an important part in knowledge production. Despite its significance, most scholars, write it poorly and this cripples the sector's ability to effectively produce quality research. Despite being a hallmark of academic research, writing a good and coherent literature remains mystifying and even defining the term 'literature review' can be challenging. The question is: Can multilingual pedagogical approach enhance teaching and learning literature review? Poor literature accounts for student attrition, low retention, and success, as most students, particularly for people of colour, struggle to write it accurately in English. Most researchers and lecturers from the back community also often experience the same difficulty to synthesize literature that is worthy of publication and to teach it as they are required to teach and produce knowledge in English rather than through their mother-tongue languages. A few scholars have called for the integration of decolonial and pedagogical practices that include offering multilingual academic support for both educators and students in higher education. Depending on the purpose for which literature is conducted, literature review can mean different things, such as a research methodology and a consolidative analysis of relevant studies. This article employed critical realism paradigm to critique literature and to advocate for multilingual academic support to enhance an understanding of it. From a decolonial, epistemological and multilingual pedagogical practice, what is a literature review? The study proposes redefining literature through ceaseless discourse.

**Keywords**: Academic support, knowledge production, Literature review, Multi-lingual pedagogy,

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## ABSTRACT

### Design Thinking as a Method and Process for Creating Sustainable Innovations: A Cross-Cultural Case Study

Design Thinking is an important element in business operations and innovation design, as well as in engaging users for whom specific solutions are created. The paper aims to demonstrate the potential of Design Thinking as a method for developing innovative solutions in a cross-cultural collaborative environment, which can be seen as a form of a manifestation of collective intelligence and knowledge production. The research uses a case study approach to analyze a Design Thinking workshop involving NIAGARA project members from Norway, Tanzania, Zambia, and Poland, conducted in May/June 2024.Observations from the workshop reveal two levels of results. The first pertains to the stakeholders of the NIAGARA project, highlighting similar challenges across services, defining user roles in the innovation process, and characterizing the users of institutional environments. The second level concerns the NIAGARA project members, focusing on communication, commitment, and task execution during the workshop stages. Findings underscore the relevance of Design Thinking in addressing common challenges across diverse cultural contexts, aligning with SANORD's Theme 1's emphasis on justice in knowledge production and epistemic justice. The study also advocates for the inclusion of Design Thinking methodology in educational programs, particularly concerning digital and information competencies, echoing the theme's focus on educational equity. This research, therefore, contributes significant insights into the application of Design Thinking in fostering cross-cultural collaboration, innovation, and educational equity.

**Keywords:** Design Thinking, educational equity, epistemic justice, innovations, collaboration, case study.

# Oral Abstracts

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## ABSTRACT

### Greenhouse Solar Drying as a Potential Eco-Friendly Drying Method for Tomatoes

Post-harvest sun drying has the potential to play a critical role in developing countries by reducing energy consumption and efficiently managing food waste, thereby contributing to the achievement of the United Nations Sustainable Development Goals (SDGs) 7 and 12. However, challenges such as non-enzymatic browning, nutrient loss, and poor rehydration due to prolonged drying times affect the quality of the food. Thus, the aim of this study was to design an energy-efficient drying system for managing food waste and determine the moisture, colour, and microbial quality of dried tomatoes compared to traditional drying methods.

Fresh tomato slices were dehydrated using different drying methods; conventional dryer (control), solar dryer (T1), optimized solar dryer (T2), and traditional sun drying (T3). The moisture content of the dried tomato slices was determined using a moisture analyser and oven drying method, with the samples reaching equilibrium moisture content after specific durations: Control (24 hr), T1 (48 hr), T2 (32 hr), and T3 (72 hr). The accuracy of the measurements was within ± 2 g. The dried tomato slices were also measured for colour using a chroma meter.

T2 exhibited moisture content (17% w.b.) comparable to that of the control tomato slices (15% w.b.), while T3 had a significantly higher mean value (23% w.b.). T1 maintained consistent humidity levels (25 - 45%), while T2 experienced higher humidity levels (40 - 42%) during midday. T3 showed significant microbial growth ($5.8 \times 10^2$ cfu/mL), particularly yeast and mold, before eventually declining on the 3rd week of the experiment ($2.8 \times 10^2$ cfu/mL). The presence of water was found to influence microbial proliferation, which can help in predicting spoilage and foodborne hazards. In terms of colour, initially T3 was darker compared to the control and T2 but over the extended shelf-life period, a significant change was noticed on the third week, which is considered an undesirable characteristic.

These findings imply that solar drying has a potential in retaining quality characteristics comparable to those of conventional dried tomatoes while offering energy-efficiency and waste control.

**Keywords:** Greenhouse, Solar drying, Sun drying, Tomatoes, Energy efficiency, Sustainable Development Goals

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## ABSTRACT

### Advancing Climate Justice through Legal Action: Pathways to Livability

Climate change poses an urgent threat to livability, raising complex legal challenges. This paper explores the potential of law to address climate-related pollution and promote a sustainable future, focusing on fenceline communities facing high pollution levels and climate-induced extreme weather events. Using a mixed-methods approach that includes legal research and policy analysis, it examines how legal strategies can tackle climate-related pollution, advance climate justice, and enhance livability in a changing climate. Theoretically grounded in environmental justice, the rights-based approach, and the public trust doctrine, this paper analyses three key challenges in combating climate- related pollution: establishing legal standing for lawsuits, proving causation between specific polluters and climate impacts, and ensuring courts have the authority (justiciability) to hear these complex climate cases. Conversely, it explores three emerging legal opportunities: evolving international environmental law, grassroots activism holding polluters accountable, and the recent legal developments regarding corporate domicile and jurisdiction. By addressing these challenges and capitalising on legal avenues for progress, this paper argues that law can play a critical role in promoting climate justice and enhancing livability. Significantly, this paper bridges the knowledge gap between law, climate-related pollution and livability, offering actionable pathways for policymakers, academia, and the public. Ultimately, the paper seeks to inspire hope, a crucial factor in driving climate adaptation and action.

**Keywords:** Climate Justice, Livability, Climate-Related Pollution, Legal Challenges and Opportunities, Climate Litigation, Sustainable Development

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## ABSTRACT

### Towards Digital Competent Librarians: A Cross-Country Curriculum Analysis

Emerging digital technologies have changed how library and information services are provided. Analogue services are being replaced by digital ones. For the Higher Education Institution (HEI) libraries to continue supporting education, research and their patrons, this calls for the inclusion of digital competences in Library and Information Science (LIS) curricula. The NIAGARA project focuses on librarians' and LIS students' digital competency in Tanzania, Zambia, Norway, and Poland. The study investigates digital competency gaps in Library and Information Science (LIS) curricula across universities, it aligns with theme 1's focus on "Digital technologies, training, and divides" and the call for "equitable quality education". The study employed a qualitative content analysis research methodology. A codebook was used to collect data from four undergraduate and three postgraduate LIS curricula. The DigComp 2.2 framework assumes that digital competence consists of information and data literacy, communication and collaboration, digital content creation, safety and problem-solving. Findings indicate that all LIS curricula had courses addressing most low-level digital competences but differed across universities and countries. Moreover, none of the LIS curricula had the inclusion of advanced digital competences. The project will develop several courses and modules, for example, research data management and data visualization, and user-oriented design belonging to the areas of information and data literacy and problem-solving. Strengthening digital competence among HEI library staff and LIS students and improving infrastructure in partner libraries in Zambia and Tanzania can positively impact the academic outputs, educational support and information services provision strategies that are inclusive for all patrons.

**Keywords**:

Digital competences; library and information science; Tanzania; Zambia; Poland; Norway; digcomp; information services

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## ABSTRACT

### Complementing Healthcare Education with Fiction, Poetry, and Creative Writing: A Transcultural Evaluation of Healthcare Students' Experiences of Participating in a Reflective Writing Course in South Africa and Finland

Background: Narrative competence, the ability to listen and interpret patients' stories skilfully and to respond them with proficiency, is essential for healthcare professionals. This project investigates experiences of participating in a course centered on close reading of fiction and poetry, reflective writing, and group discussion, created to foster narrative competence among healthcare students in two cultural contexts: University of the Witwatersrand in Johannesburg, South Africa, and the University of Helsinki in Finland.

Methods: Course sessions will be observed, and audio recorded. Responses to writing prompts will be collected and individual semi-structured interviews (n=30) will be conducted after the course. At baseline and after the course participants will be asked general questions about their health and life in online questionnaires. All qualitative data will be analyzed using reflexive thematic analysis to explore participants' behaviors and accounts (Field notes, audio recordings), representations of experiences and values (Written responses) and individual experiences (Interviews). Quantitative data analyses (Questionnaires) will be used descriptively to complement qualitative analyses.

Expected results: The project sheds light on how intragroup dynamics emerge during the course; how participants make sense of the course content in relation to their work; how they reflect on their experiences and values through writing; how they evaluate the relevance of the course; and what the participants' learning experiences are in two culturally different contexts.

Current stage of work: All data from Finland have been collected. Data collection in South Africa takes place in November. Preliminary results will be ready to be presented in December.

Keywords: Finland, South-Africa, narrative competence, reflective writing, narrative medicine, health humanities, reflexive thematic analysis

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## ABSTRACT

### Future Trends in Short-Term Solar Energy Along Mozambique's Zumbo-Indico Channel

Although there is a lot of solar energy available in Mozambique, not all areas of the country have access to the convectional power. By using renewable energy by 2050, efforts are being undertaken to help the world reach its 2030 sustainable development objective. The increasing need for clean and sustainable energy can be satisfied by photovoltaic power. Solar power's unpredictability can occasionally affect how well solar systems operate as a whole. The purpose of the study was to forecast future developments in small-scale solar power along Mozambique's Zumbo-Indico Channel. Solar power samples from Mozambique province stations were analyzed using the theoretical clear-sky index calculation method. The study evaluated the variability of solar energy and projected future trends with the use of artificial neural networks, Kriging, Simple Linear Regression, Random Forest, and other machine learning techniques. The findings indicate a substantial potential for solar energy, particularly for high productivity, with a strong decorrelation observed across the country, represented by a coefficient of 0.66. The study reveals an upward trend in solar energy levels and increasing fluctuations, as confirmed by machine learning regression techniques. Nonetheless, a region's high solar energy potential can be inferred from its perfect clear-sky index flux, which ensures an optimal and balanced density of no more than 1, its central maximum being close to zero on all kinds of days, and the strong correlation between the estimated and measured energies, which is in the range of 0.98.

**Keywords**: Future trends, variability, solar energy, clear-sky, machine learning.

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## ABSTRACT

### Spatial-Temporal Fluctuation of Solar Energy's Availability on a Short-Scale Measurement Along Mozambique's Eastern Channel Under Neural Variability

To meet sustainable development targets by 2050, it is necessary to construct a spatiotemporal interface for tracking solar energy availability due to variations in energy that impact photovoltaic production from solar plants. The goal of the strategy is to ensure that everyone has access to energy, especially in rural areas where 82% of people live without electricity. The main objective is to utilize machine learning models to estimate and predict the variability of solar energy availability on a short measurement scale. From 2013 to 2014, 11 locations at interprovincial distances along Mozambique's eastern channel provided solar energy samples for the study. There were two types of measurement scales: short-term and long-term, with intervals of one to ten minutes. Solar energy was forecasted in 128 places around the measuring stations using geospatial models, and the clear-sky index was computed using a theoretical model that eliminated spatial geometry variability. Artificial neural network (ANN) models and other machine learning methods were used to predict future solar energy. There are 85% clear or moderate skies in the area; days in the middle have more variation and could be more difficult. With a coefficient calculated at 0.35 and 0.93, respectively, the ANN model has a significant association with interprovincial and interdistrict stations. With an estimated value of 0.85, solar energy utilization is significantly increasing in the eastern area of Mozambique.

**Keywords:** correlation, estimate, prediction, variability, and machine learning.

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## ABSTRACT

### AI-Assisted Malaria Vaccines Pharmacovigilance and Public Health Policies in Africa: A Cohort study (ACRONYM: MaVaxTrust).

**Introduction**: Malaria, predominantly affecting vulnerable populations in low- and middle-income countries, is a significant health concern. The MaVaxTrust project aims to address this through a three-pronged approach: assessing vaccination challenges and community concerns, implementing a pharmacovigilance study in Nigeria, Ghana, Burkina Faso, and Cameroon, and building capacity for continuous malaria vaccine data collection.

**Objective**: MaVaxTrust is a prospective cohort study targeting children aged 0-5 years in four Sub-Saharan African countries. The study aims to provide data for evidence-based decision-making and public health policy enhancement related to malaria vaccines. The primary objective is to estimate the effectiveness of RTS,S and R21/Matrix-M malaria vaccines against malaria infection.

**Methods**: MaVaxTrust will conduct extensive surveys, baseline studies, and follow-up studies to evaluate the real-world performance of RTS,S and R21 vaccines. An AI-based intervention for adverse effect monitoring will also be co-created.

**Results**: The generated data will inform culturally sensitive policies by various African Ministries of Health, guide resource allocation for public health interventions, and update vaccination strategies for maximum impact.

**Conclusion:** The MaVaxTrust study aims to reduce malaria severity and mortality in the long term, aligning with WHO's Global Technical Strategy for malaria 2016-2030.

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## ABSTRACT

### Decolonising Crypto-Philanthropy With Charitable Deposits

There is a growing interest in crypto-philanthropy, the use of distributed ledger technology (DLT) in charitable giving: Total charitable donations in cryptocurrency stood at 2 billion USD in 2024 and are expected to reach 10 billion by 2034. Existing crypto-philanthropy takes two principal forms: First, donating crypto-currency to established charities, and second, pooling crypto-currency donations and using voting mechanisms to determine their recipients. Both these forms cut out payment intermediaries in comparison to traditional ways of giving, thus ensuring that a higher proportion of the donation goes to the intended beneficiaries, strengthening trust and accountability among stakeholders. Donor-advised charitable funds in addition provide donors opportunities for shaping the use of donations. However, with their beneficiaries being established charities, these forms of crypto-philanthropy are subject to the same objections as traditional forms of charity. In the domain of overseas aid, established charity has been alleged to impose Western priorities on beneficiaries, to be unsustainable and to have limited economy-wide effects. This paper proposes a new form of crypto-philanthropy to overcome these challenges: Using a DLT technology pioneered in project bank accounts, it proposes to enable donors to deposit their donations in small local financial intermediaries in developing countries. Empirical evidence is presented that deposits with such institutions increase the loans they issue, and subsequently economic output and poverty reduction. This effect lasts for as long as the deposit is held and is thus sustainable. In addition, it does not impose Western priorities as the use of funds is decided locally.

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**ABSTRACT**

**Strategies Employed by Deputy Principals in Cultivating and Sustaining
a Positive School Culture in Selected Eswatini Secondary Schools**

This study explores the concept of positive school culture in Eswatini schools in the Manzini region through the perspectives of five deputy principals. The study examined strategies employed by deputy principals in cultivating and sustaining a positive school culture. The Ecological Systems Theory (EST), developed by Urie Bronfenbrenner, was used as a lens in interrogating this study. Employing the interpretative paradigm and the qualitative case study design, five deputy principals served as participants in the study. The deputy principals were purposefully and conveniently selected to participate in the study. Semi-structured interviews were used to generate data from the participants. Data was later analyzed thematically guided by the research objectives and emerging themes. The findings revealed critical roles played by deputy principals in cultivating and sustaining a positive school culture. Challenges encountered by deputy principals while cultivating and sustaining positive school culture were revealed. The study proposes various strategies that can be employed by the Ministry of Education and Training to empower deputy principals in their roles of cultivating and sustaining a positive school culture. The strategies include professional development programs for deputy principals, allocation of resources to support deputy principals, communication, and collaboration with the school community.

**Key words:** Positive school culture, Cultivating, Sustaining, Empower, Collaboration.

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## ABSTRACT

### Diversifying the Regimes of Knowing: Enhancing Pedagogical Practices by Legally Integrating AI into Higher Education

Contemporary higher education is undergoing a profound transformation largely driven by technological advancements. These radical improvements are rapidly changing the conventional pedagogical approaches in teaching – e.g., leading to a gradual change towards student-driven classrooms and curriculums, shown to be more engaging for the involved students (Dixson, 2010) – as well as the overall paradigms of how higher learning is organized and conducted – e.g., advancing the shift from offline to digital and blended learning settings (Dziuban et al., 2018). As such, this switch has already paved the way for a consistent mutation from traditional, teacher-focused and hierarchical, historical teaching techniques towards more open, learner-centered and collaborative, modern educational practices (Laurillard, 2002). Textual generative AI technologies, first introduced on November 30, 2022, in the form of ChatGPT – having already extensively proven to be an important facilitator of more inclusive and diversified learning practices within academic education – have an important role to play within this metamorphosis. But this far-reaching conversion requires a speedy adoption of a completely new skill set that urgently needs to be integrated into university education – for a chance of true educational equity to emerge. Based on the results of a pedagogic experiment conducted during the recent runs of two bachelor's level university courses within the Swedish educational context, this presentation aims to provide a framework that could be used for the legal incorporation of AI technologies in higher education, for a rapid expansion of urgently needed AI skills and thorough development of AI literacy, leading to AI competency.

Keywords: Artificial intelligence, Higher education, pedagogy, transformation,

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**ABSTRACT**

**Black Female Entrepreneurs in STEM Navigating the Entrepreneurial Ecosystem in South Africa: Defying Gender and Racial Barriers to Access Early-Stage Capital**

The research explores black female entrepreneurs in STEM navigating the entrepreneurial ecosystem to access early-stage capital. These South African women are pioneers as the first generation of black women with higher STEM education in post-apartheid. They have cleverly utilized the opportunities of higher education, university networks, and entrepreneurial programs available to them. Furthermore, BBBEE policies, materialized in various programs, networks and organizations targeting and supporting South Africans from disadvantaged groups and especially females in tech, have been beneficial.

Yet, being female and black as a minority in the tech entrepreneurship setting, the women report of systematic discrimination, defying gender and racial biases. STEM and technology entrepreneurship sectors, where women are underrepresented inadvertently reinforces a picture of women as less capable of effectively managing a successful venture. Incubators and investor milieus, functioning as gatekeepers are still predominately male and white.

Hence, these women have continuously defied the 'system', being forced to prove their competence to be able to operate as a legitimate actor in the startup space. Besides, these women demonstrate an excellence in navigating the entrepreneurial ecosystem to learn, upgrade and build competence and credibility in the pursuit to access critical network resources and to build reputation. These women break new ground as highly educated tech entrepreneurs in South Africa and are cognizant of their unique position and opportunity to also transform and make the 'systems' more inclusive. The research builds on a unique sample of SA black female entrepreneurs (14). The research group is cross-cultural.

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**ABSTRACT**

**Exploring the Efficacy of Policy Interventions on
Inclusive Education Practices in Rural Schools**

The implementation of inclusive education practices has been sluggish since the inception of inclusive education, the White Paper 6 in 2001. This is worrisome even to other developing countries. There is a lot of literature around the challenges in relation to the implementation of inclusive education practices, and the intervention measures to mitigate those challenges. The Department of Education in South Africa introduced various policies and guidelines as intervention tools, to promote effective practices of inclusive education in schools, and to also advocate for enabling schooling environments and quality education. However, the quality of the practices of inclusive education remains questionable. It is against this background that this study explored the efficacy of the intervention policies and guidelines of inclusive education in rural schools of the in the Limpopo Province, South Africa. The study was qualitative and employed an exploratory case study design. A purposive sampling was used in selecting the participants. Five schools were selected from Capricorn South Education District, in Limpopo Province, South Africa. Twenty participants were sampled, which five participants per school participated in the study. Data was analysed thematically. The study produced the following findings: i) lack of clarity in the policies and guidelines, ii) policies being context insensitive (unconscious), iii) lack of fair teacher representation in policy designing, iv) Lack of continuous support and monitoring. The results, therefore, imply that the intervention policies and guidelines for inclusive education fail on their own merits in terms of bringing quality implementation of inclusive education practices.

**Key words**: enabling environments, inclusive education, interventions, policies and rural schools.

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## ABSTRACT

**Doctoral Graduate Attributes: Supporting the Holistic Development of PhD Graduates**

Doctoral education is a strategic focus area, for transforming the HE sector, engaging in the knowledge economy and contributing towards sustainable development. International concern for doctoral employability relates to the concerns that the doctorate is too specialised and that graduates lack relevant and transferable skills. International literature reflects that doctoral graduate attributes (DGAs) include a range of academic, soft skills and personal qualities, yet there is little literature from the global South on this topic. The recent doctoral review in South Africa flags DGAs as needing additional consideration. The aim of this study was to explore and describe multi-stakeholder understanding and subjective experiences of DGAs. Fourteen semi-structured interviews were conducted, with four doctoral students, three doctoral graduates, six doctoral supervisors, and one academic in higher education quality assurance.

Participants were from four South African universities, and represented a range of disciplines. Interviews were transcribed verbatim and analysed using thematic analysis. Findings indicate that participants had varying levels of understanding of and comfort in defining DGAs, and this was generally in relation to undergraduate attributes. There were differing foci with regards to experiences of DGAs. In general, supervisors were more focused on the academic attributes, for example, knowledge, communication, and research skills, whereas students and graduates tended to focus more of the personal growth and development that took place during their doctorate. South African higher education institutions need to consider a more comprehensive definition of DGAs, and provide developmental support for both academic and non-academic attributes.

**Keywords**: Doctoral education, Higher education, Knowledge economy, South African Universities

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## ABSTRACT

### Challenges in Achieving National Wastewater Treatment Standards in the Mangaung Metropolitan Municipality, Free State Province, South Africa: Insights from a Physicochemical Study of Effluents

**Abstract:**

The operational state of the thirteen wastewater treatment plants (WWTPs) in the Mangaung Metropolitan Municipality (MMM) showed a 46% decline over the past decade. This steep decline has been reported across the nine provinces in South Africa. Hence, this study sought to identify the primary cause of poor effluent quality being discharged into surface waters in the MMM using physicochemical analyses of influent and effluent samples from four WWTPs, i.e., Bainsvlei, Botshabelo, North-East, and Sterkwater. Monthly samples collected from the four WWTPs over a year were analysed in terms of pH, chemical oxygen demand (COD), electrical conductivity (EC), total dissolved solids (TDS), and oxygen absorbed (OA). Results showed that all four WWTPs had pH values within the national standards, i.e., 5.5 and 9.5, while both EC and TDS also meet the national standards. However, the monthly averages for COD ranged between 77.3 and 178.9 mg/l and are 3 – 82% higher than the required national standards. Further analyses also confirmed OA ranges between 7 and 57.5 mg/l, whereas a national standard of &lt;10 mg/l is required. The non-conformity to national standards is attributed to deteriorating infrastructure, inadequate trained personnel, and hydraulically overloaded systems. These problems have far-reaching environmental and health implications, ranging from the spread of infectious diseases such as Cholera, to the death of aquatic life and, most significantly, the aesthetic nuisance caused by poor effluent quality on surface waters.

**Keywords:** Chemical oxygen demand, effluent, Mangaung Metropolitan Municipality, physicochemical analysis, sustainability, wastewater.

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## ABSTRACT

### The Politics of Teaching Colonial History in Post-Colonial Societies, a Comparative Case Study of New Zealand, South Africa and Zambia

The purpose the project that is presented is to compare how colonialism has been understood and represented in three post- colonial societies, New Zealand, South Africa and Zambia. The project focus on questions related to the school subject history in the post-colonial period in order to analyse how understandings of the past have been constructed and transformed and which political implications this has had for individuals and societies, what we refer to as history politics. The project is primarily based on life story-interviews, which will reveal for example how individuals have experienced the school subject history and other forms of understandings of the past. The three societies were all part of the British Empire and are the basis for comparison.

Our main contribution to existing research is that we investigate how the decolonised themselves have perceived colonialism and the social situations that it has caused. Thus, we want to see individuals as subjects in the learning process and listen to their experiences of colonialism, understandings of the past and thoughts about their own position in the post-colonial world.

Our main theoretical staring point is the concept of alienation, since colonised peoples have been alienated from history in a number of ways. But this does not mean assumptions about identity in relation to history. Instead it is our aim to keep an open mind about interpretations about the past and explore how history politics work. Three Swedish historians are involved in the project: Jimmy Engren, Fredrik Lilja and Jonas Sjölander.

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## ABSTRACT

### Epistemic Justice in Philosophy: Three Alternative Sources to the Canon

What does epistemic justice look like in philosophy? As an academic discipline, philosophy has a reputation for being the preserve of 'dead white men'. This is changing, especially in South Africa since the #MustFall movements and its calls for decolonisation from 2015. Nevertheless, many philosophy departments and professional philosophers continue to draw primarily on conceptual resources from a largely Euro-American, male canon. This constitutes a form of epistemic injustice, understood as Fricker (2007) does both in terms of hermeneutical and testimonial injustice. In this paper, I suggest three alternative sources to the established canon which address this epistemic injustice, and which partially overlap and intersect with one another. In doing so, I argue that more deeply engaging with such sources' insights would go some way to addressing epistemic injustice in a core humanities discipline. The first source is well-known, although remains somewhat marginal to the disciplinary core, namely feminist philosophy, and more generally the historical contributions of women philosophers. Although such sources have, to an extent, been integrated into mainstream philosophy over the last half-century, it remains something of an 'add-on': often offered (if at all) as a separate course for undergraduates, rather than integrated into, for instance, core courses on ethics, political philosophy, or epistemology. As such, the history of feminist philosophy's integration into the mainstream provides instructive lessons for the two further sources. The second source is commonly referred to as 'Non-Western' philosophy; or perhaps more accurately, philosophy from the majority world. There has been increasing interest in this vast area over the last few decades, and particularly the last 10 years. However, this too has often remained somewhat adjacent to or disconnected from the mainstream. Insights from global traditions are not only interesting in their own right, but moreover offer important contributions to all existing areas of philosophical inquiry. The third source is rarely engaged with in academic philosophy, namely insights from social movements. Usually seen as too involved with 'political' and 'here-and-now' questions to be of much philosophical value, I argue that social movement intellectuals have in fact offered numerous significant contributions to our philosophical understanding. This applies not only in more obvious areas like ethics and political philosophy, but also in metaphysics and ontology, epistemology, and even in areas like the history of philosophy. Indeed, much feminist philosophy today has its roots in women's movements and the insights generated therein – and as such also offers lessons for how to ethically engage with philosophical issues raised by social movements more broadly. If philosophy is to rise to the challenges of the 21st century and beyond, we must be wary of parochialism and prejudice masquerading as universal insight. Engaging ethically with philosophical ideas from these three sources is a vital way of doing so, and of working towards epistemic justice.

**Keywords:** Epistemic Justice, Ontology, Philosophy, Social movement

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## ABSTRACT

### Mathematics Toolkit Design: A Collaboration Between South Africa and Norway

A main focus of the collaboration project between the University of South-Eastern Norway, Western Norway University of Applied Sciences and the University of the Western Cape is the design of mathematics toolkits about socio-critical issues to use in mathematics teacher education. The project is supported by the Norwegian Directorate for Higher Education and Skills (2023-2026). A mathematical toolkit for mathematics teacher education contains many elements to help preservice teachers engage with the different sides of mathematics involved in socio-critical issues. Such elements are: the literature used in the course, the lectures given by teacher educators, prompts such as videos about the issue at hand, and designed activities about mathematics in the socio- critical issue given to the preservice teacher to discuss. The first toolkit was designed around water usage as a sustainability, and a socio-critical issue, and was implemented with a cohort of master's mathematics education students in Norway. An objective of the project is to introduce the same toolkit to pre-service mathematics teachers in South Africa and to research on how the two cohorts of students engage with the tasks and the different issues around water consumption in the two countries. This paper will report on the theoretical framework of the toolkits, such as critical mathematics ideas, and on preliminary results based on the data collected from students' engagement with the toolkit.

Key words: Higher education, Mathematics, socio-critical issue, toolkits

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**ABSTRACT**

**Comparative Analysis of Rural Entrepreneurial Ecosystems:
Insights from Norway and South Africa**

This paper examines the regional economic impact of entrepreneurial ecosystems in rural areas, focusing on comparative case studies from Norway and South Africa. The research builds on existing findings from Sogndal and Førde, Norway, where early-stage, pre-revenue companies have been shown to contribute significantly to local economies. These companies, despite operating with negative cash flows, attract substantial external investment that fuels local employment and tax revenues, thereby stimulating immediate economic activity. The primary research question driving this study is: How do entrepreneurial ecosystems in rural Norway and South Africa compare in terms of their ability to attract investment, create jobs, and support sustainable regional development? To answer this, the study employs a mixed-methods approach, combining quantitative analysis of economic indicators with qualitative insights from key stakeholders, including entrepreneurs, investors, and local government officials. The findings from Norway suggest that entrepreneurial ecosystems thrive when supported by strong local networks and active involvement from universities and other anchor institutions. The paper extends this analysis to rural regions in South Africa, exploring similarities and differences in ecosystem dynamics, challenges, and opportunities. By conducting a comparative analysis, the study aims to identify best practices that can be adapted across different geographic and economic contexts, offering practical recommendations for policymakers and practitioners interested in fostering sustainable rural development through entrepreneurship. The paper contributes to the growing body of literature on entrepreneurial ecosystems by highlighting the critical role of context-specific factors in shaping economic outcomes in rural areas.

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## ABSTRACT

### Enhancing Regional Competitiveness through Flexible Education:
### A Cross-Border Collaboration in Industrial Economics

This research presentation explores the pivotal role of higher education in driving regional competitiveness through the development of flexible, industry-aligned educational programs. The study focuses on the ongoing development of a Master's program in Industrial Economics at the Western Norway University of Applied Sciences (HVL). This program is being designed in close collaboration with key regional industries, such as Hydro Årdal and Sogn Utvikling AS, with the aim of addressing both local industry needs and broader sustainability challenges. The proposed program seeks to equip professionals with specialized skills critical for the green transition and technological innovation. By adopting a flexible, decentralized structure, the program will enable professionals to pursue advanced education alongside their careers, thereby directly contributing to regional productivity and competitiveness. The research methodology includes both qualitative and quantitative analyses, focusing on the potential impact of this educational model on regional economic indicators, as well as gathering insights from stakeholders involved in the program's development. Furthermore, the research examines the possibilities for expanding this educational model through cross-border collaborations, particularly between Norway and South Africa. The goal is to explore how such partnerships can address skill gaps and promote sustainable development on a global scale. Findings from this study suggest that flexible educational programs not only meet immediate regional needs but also offer a scalable model for international cooperation in higher education, supporting long-term sustainability and economic resilience in diverse contexts.

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## ABSTRACT

### Ethnographies of Thirst: Case of Water Commodification in Lesotho

**Abstract:**

This paper delves into Lesotho at the point where she is exporting water despite her water challenges. While exporting herself into a drought, Lesotho citizens are faced with the burden of shouldering the socio-ecological brunt of being on the wrong side of development. Although harnessing millions of litres of water in the Lesotho mountains and rivers, to divert through tunnels to South Africa, Lesotho has thirsty citizens, both literally and metaphorically. Focusing on the effects of the Lesotho Highlands Water Project on commodifying water in Lesotho, this paper addresses unintended consequences brought by water commodification. The focus will also be on the changed socio-ecological landscape due to the commodification of basic human needs like water. The data presented was ethnographically collected over 18 months. The findings show that development projects do not align with Sustainable Development Goals. The paper indicates how the violation of SDGs bleeds onto the environment and human rights, leading to dismantled human-nonhuman relationships and water-on-water violence. Drawing from these findings, the study proposes that development based on the extraction of natural resources and the assumption that people and the environment are separate should be replaced with an integrated theory of habitability and wellbeing that includes, in its social theory, the relationships of people with the environment.

**Keywords**: sustainability, commodification, agency

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## ABSTRACT

### Bridging the Digital Divide in an Eastern Cape University Town

The paper seeks to explore how initiatives from local civil society organisations in creating an ecology of information and communications technology (ICT) have impacted secondary school learners from poorer communities in the town of Makhanda, Eastern Cape. The deep-seated structural inequalities in South Africa rooted in centuries of colonialism and apartheid also result in the unequal distribution and access to modern technology in the education sector. Only belatedly, with the onset of the Covid-19 pandemic and the accompanying impetus for digital learning – was this digital divide recognised as a problem in need of urgent solution by the South African government. In the province of the Eastern Cape governmental responses to increase access to ICT were often marred with mismanagement and allegations of corruption – resulting in little practical change. Through provision of open computer labs, interactive tutoring of subjects on digital devices and SD cards with educational content, civil society in Makhanda has tried to turn this situation around. In-depth interviews with school learners illuminate how these initiatives have increased both educational and digital skills. However, there are clearly also potential pitfalls with more digital resources reaching previously under-served communities, as the skewed educational and linguistic nature of these resources might replicate already existing power imbalances in knowledge production.

**Keywords**: Civil society, Information Technology, Knowledge production, Secondary schools

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## ABSTRACT

### Pepper-Bark Tree Conservation Conversations: Exploring Conservation Strategies with Local Communities

Indigenous communities are amongst the most vulnerable to the impacts of climate change and biodiversity loss, yet their ways of knowing are often excluded from climate research and policymaking. This, while they hold local knowledge relevant to understanding change from a local perspective. It is therefore that we focused in the project Indigenous Climate Change Observatories - Local Knowledge for Local Action, on the question: How can we learn together to better understand local climate change? We worked with different Indigenous communities in different places in the world on shaping Indigenous Climate Observatories: Two in Borneo, Malaysia (focused on connections to the river/forest), three in Eswatini (focused on biodiversity), and two in Lesotho (focused on weather patterns). This abstract focuses on the observatories in Eswatini. In Eswatini, Southern Africa, rural communities often rely on traditional medicine and plants, as access to other types of healthcare is difficult, due to high costs and accessibility issues. It is for this reason that the Climate Observatories in Eswatini were turned into Biodiversity Observatories as the focus became on preserving an important medicinal plant: the Pepper- bark tree, Indigenous to Southern Africa, including Eswatini. This tree is an endangered and highly sought-after species in the medicinal plant trade, particularly because of its extensive use in traditional medicine as well as its significant cultural value in ritual ceremonies. In our explorative sessions, with elders and traditional healers, we mapped out the issues that cause the endangerment of the tree. With youngsters, we held field expeditions, where we looked for the tree and aimed to understand what a healthy tree versus an (over)harvested tree looks like. We then established wishes for the project concerning the tree, which then informed later action. The tree population was mapped over 1,5 years using mobile phones. This mapping was complemented with 'walking sessions' during which we revisited the trees and reflected on their status and health. As highlighted by the communities, this problem was a problem that needed to be addressed, but that they could not solve alone. Therefore, other societal actors were involved to provide training, and education and to collaboratively reflect on whether overharvesting could be prevented by for example putting in place regulations or education.

Keywords: Conservation strategies, Climate Change, Indigenous communities, Pepper Bark Tree,

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**ABSTRACT**

**International Mobility Programme as a Transformative Learning Experience:**
**A Case Study of University of Technology.**

International mobility programmes offer students a unique opportunity for transformative learning, significantly enhancing their multicultural awareness and global understanding. This case study examines how such programmes at the University of Technology in South Africa reshape students' learning experiences and their perceptions of the host institution in Sweden. Utilizing documentary analysis and qualitative data, the study reveals that these programmes profoundly expand students' perspectives, fostering growth in areas such as cultural diversity, internationalisation, and a growth mindset. Participants in these programmes report a broadening of their learning experiences and a deepened understanding of global interconnectedness, which collectively contribute to their development as global citizens. The findings highlight the crucial role of international mobility in advancing educational experiences and promoting internationalisation efforts. To capitalize on these benefits, the study recommends that universities invest more resources into international mobility programmes to further enrich the learning environment and global engagement within higher education institutions.

**Keywords**: Internationalisation, Cultural diversity, Global, Students, educational

# Oral Abstracts

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## ABSTRACT

### Community Engaged Learning in a European University Alliance: Reflections on Equality and Reciprocity Across Europe and Africa

While Community Engaged Learning (CEL) is increasingly common in higher education, it remains rare across the Global North and South. Through an autoethnographic study on our approach to international CEL as part of a European University Alliance, we reflect on the challenges and prospects of collaborating across European countries and in engaging with Global South partners. We zoom in on the elements of equality and reciprocity, which are essential yet challenging to achieve in CEL, particularly across the Global North and South. We focus on the Capstone, a CEL thesis project in the European Joint degree Master's of the European University Alliance CHARM-EU. Based on an experiential learning cycle, we argue that achieving equality and reciprocity in CEL requires (gradual) institutional and collaborative transformations that go beyond an individual CEL exercise. While full equality is hard if not impossible to achieve in CEL, reciprocity can be fostered through an exchange of and between incentives, funding and resources, decision-making, and a balance between regulatory freedom to experiment and transparency and certainty of rules and regulations. We end with recommendations on how to achieve equality and reciprocity in international CEL, particularly within European University Alliances.

**Key words**: Community Engaged Learning; Global South; Equality; Reciprocity; European University Alliances

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## ABSTRACT

### Justice and Equity in Research: Exploring Forum Theatre as Research Method and Dissemination Tool

As humanity faces multiple interlocking crises, researchers need to develop innovative multidisciplinary research methodologies. In fact, arts and social scientists work in collaboration with biologists, engineers, environmental scientists, medical practitioners, to mention but few scientists who collaborate in the understanding of the entanglement of natural and socio-ecological factors. In the process, ethnographic method is used across disciplines. In the process, local communities witness a procession of scientists from various disciplines who ask questions from personal and community histories to people's perceptions of everyday life in the context of an ever-changing environment. This proliferation of scientists to local communities provokes some sort of fatigue and apprehension among the hosting communities. In many cases, researchers treat local communities as data, thus paying scant attention to their expectations and agency. Researchers return to their academic institutions without providing the feedback of their research to the hosting communities. Based on extensive fieldwork and Forum Theatre performances in Inhaca Island, Maputo Bay, this paper reverses this tendency by looking at Forum Theatre as both research method and research results sharing and dissemination tool. It argues that Forum Theatre with active participation of local 'non-actors' actors, provides an opportunity for a much more intimate collaboration between the researcher and local people in the co-production of knowledge directed to problem solving. It also contends that by bringing to the stage scientists, members of local community, municipal government and traditional authorities to discuss issues of common interest during and after the data collection, Forum Theatre is equitable and just method of knowledge production and dissemination. It concludes that Forum Theatre creates an enabling environment for open and deep discussion of key problems affecting community members in the research setting. Forum Theatre simplifies academic jargon for common understanding and has the power of speaking the unspeakable. It has the power of bringing to the same discussion forum people who, in normal social organization would not dialogue in equal basis. Thus, by translating complex academic papers into the language of masses, Forum Theatre contributes to an equitable and just research environment amid multiple interlocking crises affecting humanity.

**Keywords:** Forum theatre, research, dissemination, Inhaca, Mozambique

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## ABSTRACT

### Interrogating the Disconnect: A Limpopo Province Case Study of Mainstream Educators' Engagement with Inclusive Education Policies

The aim of this paper is to investigate the challenges experienced by mainstream educators in the Limpopo Province of South Africa regarding their understanding and implementation of inclusive education policies. By examining the factors contributing to the gap between policy interpretation and practical application, this study seeks to provide insights into the barriers hindering the creation of inclusive learning environments in mainstream schools. A case study design was used in the study. Purposive sampling was applied to select the research participants and ten educators were purposefully sampled from five mainstream schools in the Capricorn District of Limpopo Province, South Africa. Semi-structured interviews and open-ended questionnaires were used to collect data and were analysed using thematic content analysis. The results indicated that there is a need to revise the approach in which training is provided for Inclusive Education for educators. Educators seem to know what inclusive education is but feel they do not have adequate support through policies and interventions by the Department of Education to be able to implement inclusive education in the most effective state. The implications of the study are for the Department of Education to address the gaps in the implementation and training of Inclusive Education for educators which includes professional courses and tertiary education specific to Inclusive Education across South Africa.

**Keywords**: Education policy, inclusive education, training, South Africa

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## ABSTRACT

## The Role Of Indigenous Knowledge Systems (Iks) In Wetland Conservation Among Rural Communities: A Comparative Analysis of South Africa And Lesotho

Indigenous Knowledge Systems (IKS) refer to knowledge that has been developed through lived experiences, history, and values and is passed from one generation to another. In this paper, I argue that IKS is greatly missed in the incorporation of environmental policy and management, which leads to environmental conservation declining, including wetland conservation. Consequently, the speed at which degradation is taking place shows the need to understand the implications of IK for environmental conservation and policy. However, there is little understanding on how IKS can be incorporated into conservation methods. Therefore, a gap exists in the incorporation of IKS into wetland conservation, using citizen science as a tool to guide the involvement of the public. Exploring the role of IKS in wetland conservation, this study compares the IKS in South Africa and Lesotho to reveal the effectiveness of IKS in these communities. Adopting a socio-ecological analysis theory, the study aims to develop a wise use framework that incorporates IKS into environmental conservation to enhance wetland conservation. The comparison highlights the similarities and differences between the different Indigenous groups in these two countries. The study contributes to enhancing conservation methods in rural communities to achieve a more sustainable environment in the Indigenous communities. Probing into the different Indigenous communities, the study reveals the importance of incorporating IKS and citizen science to enhance western conservation methods to foster sustainable development in these communities.

**Keywords:** Indigenous Knowledge Systems; Wetland; Conservation; Citizen Science

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## ABSTRACT

### Enhancing Inclusive Entrepreneurship to Address Social and Economic Inequalities in South Africa

South Africa exhibits the highest income inequality globally, with a Gini coefficient of 0.67. Inclusive entrepreneurship presents a solution for generating opportunities for underrepresented and marginalized groups. This approach supports sustainable development through the intersection with multiple SDGs, aiming to create a more equitable and inclusive society. By fostering entrepreneurial ecosystems that emphasize inclusivity and align with SDGs, inclusive entrepreneurship can tackle social and economic inequalities. This ongoing study seeks to discover new methods to enhance inclusive entrepreneurship to address these inequalities. Using a systematic literature review guided by the PRISMA methodology, the study's preliminary findings suggest strategies such as integrating business development with social initiatives, implementing innovative strategies aligned with inclusive economic development, and adhering to principles of economic and social responsibility. It is recommended that by incorporating these inclusive elements into strategic goals, policymakers and businesses can significantly improve the socio-economic conditions of marginalized communities, thereby reducing inequality and poverty while promoting sustainable growth.

**Keywords:** Inclusive entrepreneurship; Sustainable development; Social and economic inequalities; Economic development

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## ABSTRACT

### Development of Sustainable Tourism Indicators Applicable to the Eastern Cape Wild Coast of South Africa.

There are undeniable facts that tourism industry is under threats derived from natural disasters and manmade, including climate change, biodiversity issue, overtourism, exploitation of resources which causes adverse impacts. The World Tourism Organisation and literature mentions that the most reliable tool of use to tackle these impacts is the use of Sustainable Tourism Indicators because they stress the effectiveness on tourism management. The challenge on the E.C Wild Coast is its unique environment which lacks specific existing indicators suitable to forecast impacts. The study aims to eliminate generalisation on indicator selection and used Dwesa, Hluleka, Mkhambathi, and Isilaka nature reserves as a Case study. Universal applicable Sustainability Tourism indicators on nature reserves were identified, categorised, and tested for applicability. Systematic review was used to identify and categorise the universal Sustainability Tourism indicators. Applicability of indicators was tested using data obtained through consultation of the stake holders. Data was analysed through python statistical tool and QGIS. The Selection of the most suitable Sustainability Tourism indicators was fulfilled. The study aided the tourism stakeholders with new knowledge and a set of indicators to address the needs, nature, and specification of the Eastern Cape Wild Coast.

**Key words:** Sustainability, Tourism, Indicators, Nature reserves, Environmental management.

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## ABSTRACT

### Perceived Personality Traits and Fields of Study Contributing Towards Employment Security Among Youth Agricultural Graduates

Despite various stakeholders'; extensive investment in education, accessing and obtaining higher education has been progressive in South Africa, yet the unemployment rate among graduates keeps escalating. The current study investigated personality traits and fields of study that could positively contribute to employment security in addition to academic achievement among agricultural graduates in the Vhembe district. The study used a purposive sampling technique to select its participants, while data was collected through an online survey. Descriptive statistics were used to gain insights into the socioeconomic characteristics of the study participants. The study used multinomial logistic regression to determine the personality traits and field of study significantly contributing to agricultural graduates'; employment security. The study findings revealed that most participants within the study sample secured their first employment between eighteen months and two years after graduating. The study findings also pinpointed that most participants had secured employment opportunities within the agricultural sector, although outside their field of specialization. Furthermore, the study findings revealed that among other contributing personality traits, independence, confidence, communication, can- do attitude, and freedom of expression were among the leading personality traits that largely dominated among graduates who had secured employment. About the field of study, it was noted that those who graduated in agricultural economics were leading in securing opportunities outside the agricultural sector. To enhance employment security among graduates, the study recommends the implementation of mandatory social programs that could supplement academic programs in capacitating students to develop certain traits that could be sought after by potential employers.

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## ABSTRACT

### Assessing The Psychological Distress And Coping Strategies Among Academic Staff Of A University During Covid-19

**Background**: The COVID-19 pandemic has been associated with stress due to its disruption to normal lifestyle. While the resilience of people was challenged, some coping strategies were adopted to maintain balance in the face of the pandemic.

**Aim**: The study assessed Psychological Distress and Coping Strategies among the academic staff.

**Setting:** Afe Babalola University, Ado-Ekiti, located in the southwest part of Nigeria.

**Method:** A descriptive-cross sectional design was used on the population of 512 academics where a sample size of 248 was drawn using Taro Yamane with a 10% non-response rate. The instruments used were a modified Kessler Psychological Distress Scale (K10) and an adapted COPE inventory for coping strategies. The scale reliability of Psychological distress was .866 while that of coping strategy was .610. Data analysis was performed using SPSS version 28. The results were presented in simple percentages, means, and standard deviations.

**Result:** The results showed most of the respondents reported 'Feel worthless' 4.8±0.59. The total means of the psychological scale was 4.6 ± 0.71 and high psychological stress indicating severe stress was seen among the majority (185, 98.9%). The coping strategy used was 'I try to lose myself for a while by drinking alcohol or taking drugs'3.8±0.60. The overall statements revealed that 2.3 ±1.02.

**Conclusion**: The study recommends teaching and training on effective coping styles for the staff of the institution.

**Keywords:** COVID-19, Psychological distress, Coping strategy, Academic staff, University.

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## ABSTRACT

### Adaptive Governance Mechanisms for Climate Resilience: Insights from eThekwini Municipality

This paper examines adaptive governance mechanisms in the context of climate change and resultant disasters in South Africa. The paper offers an analysis of the principles, strategies, and case studies that illustrate the application of adaptive governance in addressing climate- related challenges. Drawing on a synthesis of existing literature, policy documents, and empirical evidence, the paper highlights the significance of adaptive governance in enhancing resilience and promoting sustainable development in South Africa. Through descriptive analysis, the paper elucidates how adaptive governance mechanisms facilitate flexibility, collaboration, and learning, enabling effective responses to climate change impacts and associated disasters. The Case study from South Africa, the flood risk management in Durban, and community-based adaptation initiatives provide valuable insights into the implementation and outcomes of adaptive governance practices. By examining successes, challenges, and lessons learned, the paper contributes to a deeper understanding of adaptive governance mechanisms and their role in building climate resilience and disaster preparedness in South Africa. Ultimately, the findings underscore the importance of adaptive governance as a transformative approach to addressing the complex and interconnected challenges of climate change in South Africa.

# Oral Abstracts

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## ABSTRACT

### Analysis of Vulnerability to Food and Nutritional Insecurity in the Context of Floods and Survival Strategies in the Marracuene District in 2023

This study aims to analyse the vulnerability to food and nutritional insecurity and the survival strategies adopted by the population of the Marracuene district during periods of flooding. A mixed methodology was employed, combining quantitative and qualitative methods. A total of 397 households in the localities of Marracuene- Sede and Machubo were surveyed to collect quantitative data on food insecurity levels. Five government representatives were interviewed, and six focus groups were conducted to identify the survival and resilience strategies adopted by the local communities. Data analysis revealed that approximately 65% of households face food insecurity, primarily caused by the destruction of crops, agricultural infrastructure, access roads, market inflation, and forced displacements due to floods. The results indicate that most families resort to planting in highland areas, using food reserves, selling firewood, consuming wild fruits, relocating to safe places, usually with relatives and friends, and prostitution. However, these strategies are insufficient to mitigate the effects of floods on the food and nutritional security of the Marracuene population. The study also concluded that it is essential to implement public policies that strengthen community resilience through investments in climate-resilient infrastructure, adaptive agricultural training, and social security programmes to improve food and nutritional security in the region. The research also highlights the importance of integrating real-time climate data to support disaster planning and response, ensuring more effective adaptation to climate change.

**Keywords:** Floods; Survival Strategies; Food and Nutritional Insecurity; Vulnerability.

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## ABSTRACT

### Promoting Sustainable Agricultural Practices Through Student Owned Vermi-Technology Enterprise

A student enterprise offers services and products that promote sustainable agricultural practices, utilising food waste to create value through vermi-technology to produce products such as nutrient rich compost. This business also hosts worm farming trainings offered to local farmers, communities, universities, churches and non-profit organisations with an entrepreneurial objective to empowering trainees, addressing technical issues hampering food production by improving the poor soil quality with the product and in addition to promote youth engagement in owning and running their own businesses. This initiative is designed and led by ENACTUS, CUT students and staff members functioning as advisors. They are supported with entrepreneurship training by the idea-Gymnasium (i-GYM), CUT. The nutritional value of the compost was tested by the Department of Agriculture, at CUT and the laboratory tests revealed the significant contribution of worms in improving nutrient content and reducing soil toxins with a notable decrease in PH and electro conductivity.

Partnerships with three local schools were established to initiate gardening projects that would benefit the schools' feeding schemes, projects will allow for a comparison between crops grown with the compost and those without, enabling the assessment of increased nutrient content resulting from the use of the vermi compost, installing an interest in agriculture from young age. This business can be applied as urban and peri-urban agriculture contributing to food security, cultivation of organic vegetables and other vermi-technology products in demand, advancing in United Nations Sustainable Development Goals (SDGs) such 'no poverty' 'zero hunger' and life on land.

**Keywords**: organic farming, vermi compost, worm farming, food security, SDGs

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**ABSTRACT**

**Public Participation and Service Delivery:**
**A Case Study of Langa Community in Cape Town, South Africa**

This study examines the role of developmental local government in involving the community to improve service delivery. It assesses the extent to which the community has been involved in decision-making related to service delivery in Langa - Cape Town_ South Africa. The objectives are to analyze the forms of participatory structure in the community of Langa, as well as to identify the factors that affect community participation. This study is based on secondary data analysis. A people-Centred Development approach has been employed as an analytical framework. Langa located in the City of Cape Town. In the previous years, there was the absence of a ward committee which has led to an increase in the lack of access to basic service such as water, housing and sanitation. Within the current wards 51, there is partly informality and variation in access to each ward within Langa. In Ward 52 there are 52% households living in shacks and 78% of them employed in the informal sector. While, in ward 51 estimated 22% and estimated 82% are employed in formal sector. The key findings reflect the policy of access and exclusion which leads to an increase of informality and illegality of access in an unmanageable manner. Poor types of housing, illegal dumping, illegal electricity connection, increased health and environmental damage as well as increased safety and security concerns. Additionally, many of the residents fall in low-income category therefore, their power to influence policy is limited.

**Keywords:** Legislation, democracy, development, government, Langa, housing, sanitation.

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## ABSTRACT

### Polyphonic Participatory System Dynamics: An Approach Towards Recognition Justice

Achieving justice in sustainability and energy transitions is an increasingly central topic in academic and policy discussions as both a moral imperative and a path for increased public acceptance and participation. Environmental justice is commonly discussed under three tenets: distribution, procedural, and recognition justice. Recognition justice acknowledges difference and emphasises equal respect of cultures, identities, values, and ways-of-knowing. Despite scholarship pointing to its centrality, approaches to engage with and enhance recognition justice in transitions remain relatively underdeveloped. In this paper, we combine elements of Participatory System Dynamics with a dialogic perspective grounded on Mikhail Bakhtin's notion of polyphony to propose a stakeholder engagement process focusing on recognition justice for public participation in sustainability transitions.

Participatory System Dynamics allows for the representation of multiple actors' knowledge of the structure of complex socioecological systems by engaging with actors' different perspectives and values. This approach can lead to shared understanding and perspective-taking between actors but may also implicitly emphasise consensus in the development of the system representation. A dialogic perspective grounded on the notion of polyphony emphasises plurality and equality of voices and how those become (re)shaped in interaction between actors. This perspective goes beyond consensus in acknowledging the creative potential of contestation and conflict in the engagement with Others. In our approach, we take advantage of the benefits of Participatory System Dynamics and enhance those with a polyphonic perspective that explicitly engages with conflict. By fundamentally acknowledging difference and fostering dialogue between different identities, values, and ways-of-knowing, this approach aims at enhancing recognition justice in sustainability transitions.

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## ABSTRACT

### Monitoring Women Empowerment Programs for Sustainable Development: Evaluating Impact and Enhancing Effectiveness

The concept of women's empowerment is closely linked to Sustainable Development Goal 5 (SDG 5), which aims to achieve gender equality and empower all women and girls. This goal specifically seeks to eliminate barriers that restrict women's participation in the global economy. In response, governments worldwide have implemented women empowerment programs (WEPs) to enhance women's capabilities by providing access to essential information, resources, skills, and fostering collective action. Despite the initiatives of WEPs to equip women and girls with the necessary skills to compete equally with men, many women have not attained full empowerment. This literature review synthesizes existing research to identify the factors that inhibit women's complete empowerment, employing a logic model to assess the relationships between program activities and expected outcomes. The paper addresses two primary questions: what types of efforts and activities do WEPs provide to empower women, and how do these activities contribute to achieving SDG 5? Findings reveal that while WEPs facilitate some degree of empowerment, women still face substantial challenges, including discrimination from financial institutions, credit instability, and policy inequalities that hinder their economic participation. The paper recommends that governments regularly monitor the effectiveness of these programs to evaluate their impact on women's empowerment and provide financial support to enhance WEPs, thereby reinforcing policies that promote empowerment initiatives.

**Keywords**: Sustainability, Women Empowerment, Capabilities, Women Empowerment Programmes, Monitoring

# Oral Abstracts

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## ABSTRACT

### The Wastelands: Spatial Sewage Segregation as Ecological Apartheid in Cape Town, South Africa

The Wastelands" investigates the phenomenon of ecological apartheid in South Africa, focusing on the intersection of industrial and ecological sites such as sewage farms, wetlands, and rivers. These landscapes were historically planned as tools of segregation during the Apartheid era, yet have become 'forgotten wastelands' of silent segregation in our contemporary cities. They therefore hold immense potential for socio-ecological connection in our fragmented urban landscapes.

Employing a counter-mapping methodology, the research examines how these landscapes were strategically employed to reinforce racial and socio-economic divisions, contributing to enduring environmental and social injustices. By highlighting case studies across Cape Town, South Africa (including the Wildevoelvlei estuary and sewage treatment plant between Masiphumelele/Kommetjie,the Strandfontein Sewer works between Muizenberg/Grassy Park, the Raapenberg Sewage depot in Rondebosch/Athlone, and the Potsdam Water Treatment Plant (between Milnerton/Dunoon), this study reveals how apartheid-era spatial planning principles continue to impact urban environments, perpetuating ecological and social inequities.

The analysis begins with a historical overview of how natural and industrial sites were integrated into Apartheid spatial planning to create physical and symbolic barriers between communities. Case studies from areas across Cape Town illustrate the strategic placement of sewage works, rivers, and wetlands to segregate populations and limit access to resources and amenities for marginalized groups. Counter-mapping serves as a crucial tool in this research, providing an alternative representation of these landscapes to challenge traditional narratives and unveil the hidden layers of ecological apartheid.

This research contributes to the discourse on urban planning, architecture and environmental justice, offering a critical perspective on the legacy of hydrological landscapes in Apartheid spatial planning. By identifying and addressing the ecological dimensions of apartheid, the paper advocates for a transformative urban agenda that prioritizes social equity and environmental sustainability. In doing so, it aims to inspire new strategies for overcoming historical divisions and building a more just and inclusive future for South African cities.

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## ABSTRACT

### Edible Landscapes – A Socio-Spatial Study of Cape Town's Agri/Cultural Food Networks.

"Edible Landscapes" investigates the intricate urban food networks of Cape Town, South Africa, with a particular focus on the quality, nature, and origins of food within the city diverse urban landscape. At the heart of this study is the Philippi Horticultural Area (PHA), a crucial hub for providing fresh, healthy, and affordable produce to Cape Town's urban population. This area is increasingly threatened by proposed housing developments, posing significant risks to food security and urban sustainability of greater Cape Town. The study further investigates urban food networks by mapping Cape Town's urban agriculture and other food systems against hydrological patterns, urban blue-green networks and socio-political landscapes. This study aims to highlight food sources and its origins as well as Cape Town's edible landscapes in relation to arable land, ecology/hydrology and socio-spatial and socio-political urban landscapes.

Utilising a counter-mapping methodology, the research seeks to uncover "hidden" relationships between fresh food sources and their origins and shed light on the socio-spatial and socio-ecological distribution of food across Cape Town. The study highlights the entrenched inequalities and enduring effects of Apartheid spatial planning in relation to food security and delves into the complex interactions between food production, consumption, access, equity and the social and ecological factors that shape them. The findings, presented as an urban food network map, aim to inform policy decisions for a more equitable and sustainable food future in Cape Town, emphasizing the need to protect vital agricultural zones like the PHA for a more resilient urban development strategy.

This abstract aligns with SANORD's theme 5 focus on "*Food Security and Sustainable Agriculture*" and incorporates themes of Decolonisation and Decarbonisation as well as the UN SDG's (SDG 11: *Sustainable Cities and Communities*, SDG 10: *Reduced Inequalities*, SDG 6: *Clean Water and Sanitation*, SDG 13: *Climate Action*, SDG 15: *Life on Land*, SDG 9: *Industry, Innovation, and Infrastructure*) By addressing these interconnected SDGs, the paper contributes to a holistic understanding of sustainable development challenges across Cape Town's socio-ecological landscapes and offers comprehensive solutions to ecological and social issues stemming from Apartheid spatial planning. Integrating these goals into the research underscores the importance of interdisciplinary approaches to fostering just and sustainable urban environments in South Africa and beyond.

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## ABSTRACT

### Flood Risk Modelling in Mpumalanga Using Google Earth Engine and Multi-Source Spatial Data

Floods causes extensive damage to critical infrastructure globally and remain one of nature's most destructive forces associated with considerable loss of human lives. The lack of advanced flood risk modelling and real-time monitoring hamper the development of effective early warning systems. This leaves resource-constrained regions, particularly Southern African countries, ill-prepared to mitigate the impact of floods and protect communities. This study capitalizes on synthetic aperture radar (SAR) data from Sentinel-1 integrated within the Google Earth Engine cloud-computing platform to delineate areas affected by flooding during the month of February 2023 in the Mpumalanga province of South Africa. The integration of various data sources, such as satellite imagery, digital elevation models, land cover maps, and historical flood records, enabled a comprehensive and precise mapping of zones at high risk of flooding. The area under flood inundation for February 2023 was estimated to be highest at the Ehlanzeni district followed by the Gert Sibande district. The Nkangala district demonstrated a comparatively lower likelihood of experiencing flooding events. This increased vulnerability of Ehlanzeni and Gert Sibande districts was largely dictated by their low relief with elevation in the range 0 and 500 m above sea level. The results of the study indicate that rainfall contributed most to flood risk and the most flooded areas were those that received relatively high precipitation rates particularly Mbombela local municipality that 300 mm-485 mm of rainfall in just one month. Compared to other districts in the province, the Ehlanzeni district's close proximity to the coast render it susceptible to tropical storms and cyclones. The successful integration of multi-source spatial datasets in a fast cloud computing platform facilitates formulation of effective emergency response strategies, urban development planning, and disaster preparedness measures within the province.

**Keywords**: Advanced remote sensing, Google Earth Engine, Catastrophic flooding, Natural disasters, Sentinel-1 imagery, Machine learning

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## ABSTRACT

### Rethinking the Utility of IKS and Foregrounding Indigenous Knowledge Paradigms in the South African Higher Education System

South Africa has made significant progress in recognizing Indigenous Knowledge Systems (IKS) through academic research, raising awareness and advocacy. At a strategic level, these efforts are encapsulated in the IKS Policy which was adopted by Cabinet in November 2004. Thus, laying the foundation to recognise, affirm, develop, promote and protect Indigenous Knowledge Systems in South Africa. IKS represents a prosperous source of traditional wisdom, practices, and skills gathered over the centuries by the indigenous people. Despite the gains made at a strategic level, IKS has not been fully embraced in the South African higher education system, perpetuating epistemic injustices and educational inequities. This study explores different ways of knowing; what we view as knowledge, how knowledge is accumulated, and how it is transferred. The Indigenous knowledge activities are deeply rooted in the cultural and social practices of the Indigenous people and therefore passed down to generations through storytelling, proverbs, folktales, idioms, games, etc. As much as this rich knowledge may not be documented, it does not make the written word superior to the verbal. This research will help us to understand the nexus between Indigenous knowledge systems and sustainable development in areas such as sustainable agriculture, health and medicine, and social and cultural preservation. The research employs a methodological approach centered on in-depth interviews and comparative case studies.

**Key Words:** Educational Equity, Epistemic Justice, Indigenous Knowledge Systems, Knowledge Production

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## ABSTRACT

### Post-Harvest Handling Practices and Technologies Harnessed by Smallholder Fruit Crop Farmers in Vhembe District, Limpopo Province, South Africa

Post-harvest losses pose a serious challenge to smallholder fruit crop farmers especially in the rural communities of South Africa, affecting their economic livelihoods and food security. This study investigated the post-harvest handling practices and technologies harnessed by smallholder fruit crop farmers in the Vhembe district of Limpopo province, South Africa. Data were collected on a random sample of 224 smallholder fruit crop farmers selected from the four municipalities of the district using a multistage sampling technique. Analytical tools employed include descriptive statistics and tobit regression model. A descriptive analysis of farmers' socioeconomic characteristics showed that a sizeable number of these farmers are still in their active working age (mean = 52 years) with more males (63.8%) than their female (36.2%) counterparts. Respondents' distribution by educational status revealed that only a few of these had no formal education (2.2%) with majority having secondary education (48.7%).

Results of data analysis further revealed that the prominent post-harvest technologies and handling practices harnessed by these farmers include using appropriate harvesting technique (20.5%), selling at reduced price (19.6%), transportation consideration (18.3%), cleaning and disinfecting (17.9%), sorting and grading (16.5%), manual cleaning (15.6%) and packaging technique (11.6%) among others. The result of the tobit regression analysis conducted to examine the determinants of post-harvest technologies and handling practices harnessed showed that age, educational status of respondents, awareness of technology/handling practices, farm size, access to credit, extension contact, membership of association were the significant factors. The study suggests enhanced awareness creation, access to credit facility and improved access to market as important factors to consider by relevant stakeholders to assist smallholder fruit crop farmers in the study area.

**Key words:** Fruit crop farmers, Handling practices, Post harvest losses, Smallholder, Vhembe district, South Africa

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## ABSTRACT

### Protocol for a Systematic Review of Patient-Cost Studies on Self-Administered TB Treatment Compared to Facility-Based DOTS

**Background:** Many tuberculosis (TB) patients suffer from a huge economic burden even though TB services are often provided free of charge at the point of care. Costs can create significant barriers, hindering patients' access to TB treatment. These costs include direct medical costs (such as consultation fees), direct non-medical costs (such as transportation costs), and indirect costs (such as wages foregone).

**Aim:** This systematic review aims to synthesise the best available evidence on economic evaluations of patient-cost studies on self-administered TB treatment compared to facility-based DOTS globally.

**Methods:** We will conduct a systematic review following Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols guidelines and search PubMed, Scopus, CINAHL (EBSCO), MEDLINE (Ovid), Embase, Econlit and Google Scholar for articles published up to 2024, without date restrictions. Eligible studies must be full or partial economic evaluations conducted globally, comparing self-administered TB treatment to facility-based DOTS regarding TB patient costs. Exclusion criteria include non-peer-reviewed articles, studies not reporting patient costs between self- administered TB treatment and facility-based DOTS, and non-economic evaluations (non-original research). Two independent reviewers will conduct the screening, data extraction and quality assessment. A quality assessment will be performed using the Consolidated Health Economic Evaluation Reporting Standards statement, the Consensus on Health Economic Criteria checklist and the ROBINS – I tool.

**Keywords:** Economic evaluation; Access; Drug-sensitive tuberculosis; Patient costs, Demand-side; TB treatment

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## ABSTRACT

**Evaluating the Effectiveness of Flood Disaster Management Policies and the use of Remote Sensing and GIS Techniques in Flood Management: The Case of Emfuleni Local Municipality in South Africa**

Floods are the most frequent catastrophic natural disasters on Earth. Their impacts on the environment and social and economic livelihoods of communities are very destructive, thus needing effective disaster management policies and strategies. This study explores how these policies have been practiced and implemented in the Emfuleni Local Municipality in South Africa. Moreover, a flood risk map will be developed to inform policy. The study will use critical realism with a mixed-methods research design. Primary data will be collected through in-depth semi-structured interviews with community members, Sedibeng District Municipality Disaster Management Centre personnel, and town planners from Sebokeng Township and the Vanderbijlpark suburb. All Primary data will be analysed using thematic analyses. Secondary data using Remote sensing and GIS will be collected to create a flood risk map, and risk analysis in ArcGIS Pro will be used to analyze the secondary data. This will ultimately give decision-makers, policymakers, town planners, and anyone interested an overview of which areas in Emfuleni Local Municipality are at risk of flooding.

**Keywords:** Disaster Management, floods, policies, GIS, Remote Sensing, strategies, flood risk map

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## ABSTRACT

### Building Resilience: Strengthening Rural Communities in India Through Climate Action and Environmental Justice

For generations, hundreds of forest-protecting groups in eastern part of India have been the custodians of their land, preserving and managing the precious forests through a robust and sustainable rule system. Their deep connection to the environment has not only safeguarded biodiversity but also ensured the sustainability of forest-based livelihoods. However, the escalating impacts of climate change are now threatening their way of life. Unpredictable weather patterns, extreme climate events, and environmental degradation are rendering these traditional livelihoods increasingly unreliable.

To address these challenges, the Infrastructure for Climate Resilient Growth (ICRG) programme, a technical assistance initiative by the UK's Foreign, Commonwealth &amp; Development Office (FCDO), was implemented in partnership with the Ministry of Rural Development (MoRD), Government of India, from 2016 to 2024. The programme aimed to improve the abilities of poor and vulnerable communities to cope with climate change by integrating climate information services and risk management into India's social protection framework.

Through a series of activities and strategies the programme could equip approximately 5 million people in the project area to better cope with the shocks of climate change, contributing significantly to environmental justice and climate action. A key outcome of the programme was the enhancement of resilience in thousands of rural households, demonstrating its efficacy in fostering sustainable development at the grassroots level. It influenced about 16,000 rural infrastructures projects that emphasized climate-resilient planning. This approach improved the selection and design of MGNREGS assets, prioritizing community works that reduced exposure to climate risks through GIS- based planning and climate modelling forecasts.

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## ABSTRACT

### The Morphological Dimensions of a Socio-Climatic Approach: The Case of Luanda.

This paper presents a comprehensive study on the interplay between urban morphology, spatial exclusion, and thermal comfort in Luanda, Angola. Employing a multi-method approach including remote sensing, on-site observations, strip analysis, axial analysis via DepthMapX software, and thermal simulations, the research investigates representative urban pathways, considering transitions between planned and unplanned, consolidated and informal areas. The study reveals key factors contributing to both spatial exclusion and thermal discomfort in the city's diverse urban fabric. A matrix is constructed using six selected parameters (format, density, connectivity, use, public spaces, and thermal performance) to identify patterns and trends correlated with configurational causes that influence social dynamics and microclimatic conditions spatially. The research demonstrates that specific morphological trends and patterns play a significant role in determining spatial patterns of social exclusion and thermal stress within slums, with certain urban forms associated with higher levels of exclusion and poor thermal comfort. A bottom-up approach, rooted in the space syntax framework and bioclimatic design principles, is proposed to identify sources of spatial exclusion and thermal discomfort, informing progressive, integrative, and sustainable community-centred solutions. The implications of these findings extend to urban planning and policy-making, providing a foundation for addressing spatial exclusion and climate resilience within slum areas, not only in Luanda but in cities facing similar challenges globally. The study calls for a context-specific approach that integrates formal and informal urban dynamics to foster more inclusive, comfortable, and sustainable urban environments. This research contributes to the body of knowledge on slum transformations and provides insights that can inform strategies aimed at mitigating social exclusion and improving thermal comfort in Luanda and similar urban contexts in sub-Saharan Africa.

**Keywords**: urban morphology; spatial exclusion; thermal comfort; urban-form; slum-transition; climate-resilience; sub-Saharan Africa; Luanda.

# Oral Abstracts

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## ABSTRACT

### Interrogating Western Educational Paradigms in Contemporary South African Literature

This paper aims to investigate literary representations of South African educational systems and the ways in which colonial era structures and epistemologies continue to be embedded in these, as well as contemporary ways in which authors imagine the dismantling of those systems. Moreover, I am interested in thinking through the complex discussions around indigenous knowledge systems, modernity, and possibilities for creative imaginaries for social justice pedagogy generally. As such, I draw on both the seminal work of Cheik Anta Diop (1974) who was specifically concerned about the presence of African cultural systems in academic spaces, the important work of Njabulo Ndebele (2006) as well as the radical thinking of Paulo Freire (1968) and bell hooks (1994) as a means of conceptualizing my understanding of social justice pedagogy. Thus, through analysis of the literary contributions of Niq Mhlongo Dog Eat Dog (2004) and Kopano Matlwa- Spilt Milk (2010) and the seminal theoretical work of Frantz Fanon, this paper envisions these literary interrogations as important interventions in an ongoing discussion regarding the post-apartheid education.

**Keywords**: Colonial Structures, Educational paradigms, indigenous knowledge systems, Social justice

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## ABSTRACT

### Psychosocial Wellbeing of Teachers for Sustainable Early Childhood Care and Education in an Informal Settlement: A Participatory Action and Learning Research

Early Childhood Care and Education (ECCE) teachers' wellbeing impacts the young children entrusted in their care. In South Africa, despite rapid changes in the ECE sector, teachers are still struggling with diverse psychosocial factors that adversely affect their wellbeing and sustainable early learning. Given that wellbeing is seen as the key in early learning and development area (ELDA) in the National Curriculum Framework (NCF) for children from birth to four years old, this necessitates increased focus. In this paper, we explore ways of enhancing teacher wellbeing in ECCE in an informal settlement. We argue that utilising a PALAR design plays a pivotal role in transforming teachers' practices and the need to identify significant interventions for sustainable learning. Data generated were analysed collaboratively with the action learning team (ALT) from reflective drawings, group meetings and individual participant activities. The findings revealed that internal and environmental factors threaten the well-being of teachers. Despite the experiences of diverse challenges, teachers display resilience by utilising existing assets to achieve their wellbeing. Using a PALAR design, the marginalised voices in the ECCE sector become amplified. The study contributes by highlighting how personal wellbeing is intricately woven with the social wellbeing of communities and the benefits of forging relational partnerships,

**Key words:** Early childhood Care and Education, informal settlements, Participatory Action, Learning and Action Research, Resilience, Wellbeing,

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## ABSTRACT

### Transforming Teaching and Learning in the Post Fees Must Fall Period: Who Calls The Shot at Higher Education Institutions?

The outbreak of the Covid-19 pandemic immediately after the advent of the #Feesmustfall has brought an era of new normal in the teaching and learning at higher education institutions in South Africa. This paper explores the aftermath of the #Feesmustfall and Covid-19 pandemic to equitable quality teaching and learning in Universities. The paper is both conceptual and empirical in nature within the qualitative research paradigm. Interviewing and documents review methods were employed to generate data. Out of the population of 26 higher education institutions in South Africa, only three that were the Historically Disadvantaged Universities (HDUs) were conveniently sampled. From the sampled universities, Senior Management members and Representatives of Student Councils, became research participants. Altogether six research participants were interviewed on equitable quality education at their universities Results revealed that instruction undergone mutations after the #Feesmustfall and the Covid-19 pandemic. Secondly, student's voice to instruction became loudest. Thirdly, the legitimacy of the Student Representative Council at the Universities increased. Fourthly, Senior Management at Universities adapted their operational practices to benefit equitable quality education. Lastly, digitalised instruction became a new normal. The researcher recommends for the zero-rated digital platforms to enable equitable quality education at higher education institutions. In addition, a transformative pedagogy is essential to avert the second #Feesmustfall student protest from occurring.

**Keywords:** Education, Equitable, #Feesmustfall, Instruction, Quality, Transform

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## ABSTRACT

**The Effect of Integrating GeoGebra Graphing Software on Geometric Transformation Conceptual Understanding of Ordinary Level Learners in Khami District, Zimbabwe.**

It is an indisputable fact that the utilisation of digital technologies in the teaching and learning of mathematics has brought about significant changes in the understanding, beliefs, perceptions, and methodologies of mathematics. Digital technologies have revolutionised the pedagogical approach to mathematics instruction in secondary schools. This study, therefore, investigated the effect of integrating GeoGebra graphing software on the conceptual understanding of geometric transformation among Ordinary-level learners. Geometric transformation emerges as a particularly challenging topic for most learners at the Ordinary-level. The study was grounded in the APOS theory and employed a quasi-experimental design with non-equivalent control groups, encompassing pre-test and post-test assessments. Data were collected from two intact classes, with one class of 35 learners being randomly designated as the treatment group, while the other class of 40 learners served as the control group. The experimental group received instruction on geometric Transformation through the utilisation of Geogebra, whereas the control group was instructed on the same subject matter utilising traditional teaching techniques. The data was gathered through the administration of an achievement assessment and analysed by conducting an independent t-test employing SPSS version 29. The major findings indicate that the instruction of geometric transformation with Geogebra significantly improved the academic performance of the learners. It was deduced that GeoGebra serves as a proficient digital tool for instructing geometric transformation. The study recommends that teachers integrate GeoGebra into their teachings of geometric Transformation concepts.

**Keywords:** GeoGebra, Digital Technology, Geometric Transformation, Conceptual understanding, digital technologies

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## ABSTRACT

### Mainstreaming Education for Sustainable Development in the Zimbabwean Higher Education Institutions. A Systematic Literature Review.

Education for Sustainable Development (ESD) plays a vital role in the universal journey towards achievement of all seventeen Sustainable Development Goals (SGDs). The United Nations Sustainable Development Goal 4.7 (hereafter ESD 4.7) proposes that Education for Sustainable Development should be mainstreamed in all levels of education. The purpose of this study was to assess the extent to which HEIs are implementing ESD by performing a systematic literature review based on relevant articles retrieved from various databases such as ERIC, JSTOR, Scopus, and Web of Science (WoS). Keywords and search syntaxes, such as 'Sustainable Development and Education, and 'Education for Sustainable Development in Higher Education, were used for the online search. The review followed the preferred reporting items for Systematic Review and Meta-analyses (PRISMA) standard to search and report relevant articles on ESD. The review of some policies, Vision-Mission and Curriculum practices in HEIs showed that the ESD-related practices are aligned with the country's national SD framework and reflect the goals for the 2030 SDG Agenda. However, the findings highlight the gaps in the implementation of ESD in some education disciplines. In addition, the HEIs have made visible strides towards the implementation of Education for Sustainable Development in their practices.

**Keywords:** Education for Sustainable Development; Sustainable Development Goals; Higher Education Institution; 2030 Sustainable Development Agenda.

# Oral Abstracts

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### ABSTRACT

**The Evaluation of Competencies of Public Extension Officers on the Use of Climate-Smart Agriculture Strategies in Smallholder Farming in Capricorn District Municipality, Limpopo Province, South Africa.**

Globally, extension officers are crucial in promoting Climate Smart Agriculture (CSA) among small-scale farmers. This study assessed the competencies of public extension officers in implementing CSA strategies in smallholder farming within Limpopo province. The study aimed to describe the socio-economic characteristics of extension agents, determine their Knowledge, Attitude, and Perception (KAP) towards CSA, and identify factors influencing access to CSA information and technology. A quantitative research design was employed, using a structured questionnaire administered to 80 officers via convenience sampling. Descriptive statistics showed that most respondents were aged 46 and older, predominantly female (54.9%), married (50.7%), and held a degree (46.5%). The mean indicator score for knowledge was 0.6928, indicating substantial CSA knowledge among officers. Challenges included three main factors affecting access to CSA information and technology: coping and adaptation strategies, acquisition of knowledge, and computer and ICT skills. The study recommended fostering stakeholder collaboration, continuous learning, community outreach, and mentoring for extension officers. Researchers should support innovation and training programs. Educational institutions must update curricula and professional development, while the Department of Agriculture should allocate resources and advocate for CSA policies.

**Keywords**: Climate- Smart Agriculture competencies, KAP, climate-smart strategies, public extension agents.

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## ABSTRACT

### Managing Ill-Discipline in the 21st Century Classroom: Frustrations for Teachers

Teachers are challenged in managing ill-discipline in today's classrooms. To this date, teachers find it difficult to adopt alternate, peaceful forms of discipline in developing nations where corporal punishment is outlawed in schools due to human rights concerns. This has made schools more vulnerable to an increase in the number of incidents involving various sorts of ill-discipline. South African schools are no exception in this regard, leading to teachers' frustrations. Therefore, the purpose of this paper is to explore the frustrations that teachers face in managing ill-discipline in today's classrooms. To achieve this purpose, the paper followed a qualitative approach and adopted a case study design. Nine class teachers and 9 learners were chosen from three primary schools using the purposive sampling technique and were then interviewed. Data collected through focus group discussion and semi-structured interviews were transcribed and analysed thematically. Based on the findings, teachers expressed frustrations with the way they had to deal with disruptive learners in their classes. The paper discovered that the root causes of their frustrations were the discontinuation of corporal punishment and the overemphasis on learners' rights rather than their obligations. It was also revealed that support by Department of Basic Education was inadequate. To alleviate teachers' difficulties, the paper recommends that the department should take the frustrations they confront seriously and develop clearly stated policies. Also, the Department of Education should provide strengthened support through regular seminars. Teachers that are having difficulty finding solutions for their schools could find the paper useful.

**Key words:** ill-discipline, classrooms, frustrations, corporal punishment

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**ABSTRACT**

**Acceptance and Use of Online Learning by Nursing Students
Using the Technology Acceptance Model**

The digital explosion and the impact of the COVID-19 pandemic have increased online learning, access, and digital inclusion among students in low resource settings. The acceptability of online learning by students is essential for educators to plan to use these strategies effectively. To investigate the acceptance and use of online learning by nursing students using the Technology Acceptance Model. A cross-sectional survey was conducted amongst nursing students in South-West Nigeria. Valid scales were used to measure use, attitudes, ease of use, and ($\alpha$= .591, $\alpha$= .878, and $\alpha$=.652) respectively. The data was analyzed using SPSS version 29. Inferential tests were conducted to test hypotheses. A total of 462 questionnaires were administered and 434 were completed (response rate of 94%). The majority of the respondents (407, 94.4%) owned a smartphone. Most 368 (87.2%) used smartphones for online learning. Both colleges and university departments had learning management systems (363, 84.8%). Acceptance of online learning was high with perceived ease of use scores (82.82, ±18.98) and perceived usefulness (81.84,±15.67), but Attitudes towards online learning were mixed. Internet was poor with only 55.1% (241) reporting access at the education institution. Though there was high acceptance of online learning, access barriers such as poor Internet access remain a challenge. There is a need for the integration of online learning and smartphone use into clinical education in nursing.

**Keywords:** Acceptance, nursing students, online learning, Technology Acceptance Model

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## ABSTRACT

### Synthetic Data and Social Justice in Education: Promise, Panacea and/or Paradox

In the nexus of the increasing digitalisation and datafication of education and the dominance, imaginaries and effects of evidence-based policies and platformed-based restructuring of education, the collection, analysis and use of student data and the contexts in which their learning occurs has raised and continue to raise a number of ontological, epistemological, ethical and privacy concerns. While the creation and deployment of synthetic data shows promise in addressing some of the issues pertaining to students' data sovereignty and privacy, we also have to consider the ontological and epistemological basis of synthetic data (Liu et al., 2024). The imperative of social justice requires us to critically interrogate the foundations of this new era of empiricism where data (synthetic or not) are celebrated as theory and ideology-free, providing objective accounts of the world, and in education, of students' potential, risk, and learning. Understanding the potential/paradox of synthetic data to contribute to social justice in the context of Artificial Intelligence in education (AIED), we have to start by examining its ontological and epistemological enclosures informing views on students' being, becoming, and coming-to-know. In this paper we firstly introduce and map some of the ontological and epistemological assumptions underlying synthetic data in education, before providing an analysis of its promises and paradoxes in addressing concerns about student privacy, student data sovereignty and social justice. We conclude by providing a tentative fresco of cross-sectional disenclosing and enabling conditions under which synthetic data can serve social justice.

**Keywords**: Artificial intelligence, Digitalisation, Datafication, Education

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## ABSTRACT

**The Development And Implementation Of Employment And Promotional Policies For Persons With Disabilities At Selected Provincial Departments In South Africa**

Worldwide, the employment of persons with disabilities has been challenged by a slow growth of workplace-specific disability employment policies. After 1994, the South African government developed several policies and frameworks to create an inclusive workplace and implement disability-related policies effectively. However, a few departments met the target of employing 2% of persons with disabilities while others still neglect this commitment and do not involve persons with disabilities in various forums. This paper investigates the extent to which employment and promotional policies are developed and implemented for persons with disabilities at selected provincial departments in South Africa. The paper adopts an exploratory research design and a qualitative approach. Seventeen persons with disabilities and HRM officials were purposively and conveniently sampled from the two Limpopo Provincial Departments, the Department of Social Development and the Department of Agriculture and Rural Development. Semi-structured interviews were conducted using an interview guide. Content analysis was used to analyse data, and themes were induced from the interview data. Data was presented in the form of tables and percentages. The findings reveal that although approved policies exist that address the employment of persons with disabilities, not all persons with disabilities are aware of them. They played no part during the development and implementation of the employment policies. Furthermore, not all policies address the promotion of persons with disabilities. The paper recommends that government departments ensure that all employment and promotional policies are disability-inclusive to empower persons with disabilities and create an inclusive workplace.

**Keywords:** Employment Policies, Promotional Policies, Persons With Disabilities, Government Departments.

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## ABSTRACT

### Degrowth, wellbeing and indigenous perspectives – What do they have in common?

This abstract aims to identify areas of convergence between three different scholarly areas: degrowth, wellbeing and studies of indigenous perspectives, thoughts on potential areas for future research and some reflections from teaching this topic to Master level students. There are fruitful areas for inspiration and collaboration between the three areas of research. Degrowth is a field that started in the 1970s with a critique of unlimited growth. The field is closely connected to the field of Ecological Economics that infuses it with essential theoretical grounding. However, it is criticized for its weak critique of modernity and for being Euro-centric. The wellbeing research field brings a strong foundation for critiquing the mainstream focus on consumption and unlimited economic growth as a focus for economic and social policies. Research from positive psychology identifies other values that result in a higher subjective wellbeing such as strong relationships, autonomy, meaningful and fair employment, among others. However, these research areas are heavily influenced by Western European thought and could benefit from being cognizant of indigenous worldviews. Indigenous perspectives often emphasize radical interdependence that decentres humans in the greater web of life. Indigenous communities across the globe suffer from extractive and exploitative practices from corporations and repressive regimes and have developed decisions-making systems and views of social and economic life that could enrich the two research fields. The presentation explores where these three fields could converge and the potential for future research and education.

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## ABSTRACT

### Climate Justice Education in Space and Time:
### The cases of Norway and South Africa

This paper aims to explore how education in Norway and South Africa frame climate justice in curricula and textbooks.

Climate justice (and environmental justice) have gained impetus and importance in decision-making and action on climate change. Arguably, climate justice is a human right issue where equity is at the core in analysing dimensions of inequalities: structural, socioeconomic and intergenerational. It is, therefore, a crucial component of the just transition toward a (more) sustainable future, encompassing both temporal and spatial dimensions.

This would require a population that is informed and educated about climate justice. The question is then: To what extent are aspects of climate justice, across time and space, emphasized in curricula, textbooks, and classroom teaching? Moreover, how are these principles framed and taught?

The paper investigates how aspects of climate justice are represented in curricula and in textbooks at secondary school level in Norway and South Africa. Additionally, interviews are conducted with geography/history/social science teachers in both countries to provide further insights and complement the findings from the textbook analysis. The analysis will apply a comparative setup to analyse the educational policyscapes of both countries through the lenses of climate justice.

# Oral Abstracts

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## ABSTRACT

### Investigating the Instability of Coalgae Pyrolysis Oil and Stabilising it for Hydroprocessing

The use of fossil fuels has accelerated the concentration of greenhouse gas emissions (GHG) to levels not initially anticipated for the 800,000 years. This situation is compounded by global population growth and economic development in developing nations, further exacerbating the effects of GHG emissions from fossil fuels. Currently, most of South Africa's energy comes from coal, making it the most readily available and utilized primary fuel resources, accounting for 72.1% of the country's primary needs. However, the use of coal has numerous damaging consequences to the environment, including the release of methane, sulfur oxides and nitrogen oxides. Moreover, it leads to the accumulation of waste coal by-product, exacerbating environmental issues. This underscores the critical need for research that explores alternatives to fossil fuels for meeting the energy demand of a growing population. The co-conversion of coal and biomass offers a promising alternative to mitigate the reliance on fossil fuels and provide cleaner energy. This research aims to reduce the emission of gas pollutants generated during coal combustion by employing algae to capture these emissions thus lesser GHG emissions and combating climate change (SDG 13). Additionally, it aims to alleviate the environmental burden associated with waste coal disposal, thus contributing to preserving terrestrial life (SDG 15). Overall, this research introduces a cleaner approach to coal utilization and strives to make clean and affordable energy accessible to all(SDG 7).

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**ABSTRACT**

**Mamphela Aletta Ramphele: A Psychobiographical Study of a Leading Figure**

Dr Mamphela Aletta Ramphele, born on 28 December 1947, is a prominent South African figure known for her tireless efforts against apartheid. Her multifaceted roles as an activist, leader, academic, and businesswoman have left a lasting impact on the economy of South Africa. Throughout the apartheid era, Ramphele dedicated herself to fostering societal progress, striving for equality, and fighting for total liberation alongside notable figures such as Steve Biko. However, the authorities employed oppressive laws to disrupt her efforts for liberation. As a result, Ramphele's transformational leadership style was profoundly shaped by experiences of being subjected to banning orders, enduring suffering and imprisonment, and facing harassment. This study seeks to understand the personal trials and adversities confronted by Ramphele throughout her life journey, examining how they have profoundly influenced her distinctive leadership style. To explore this topic, a psychobiographical study was conducted, evaluating Ramphele's life and personal experiences. This review involved using both primary and secondary methods to collect data, such as autobiographies, biographies, books, and transcripts of interviews from diverse databases. The subject was purposefully sampled based on her notable contributions to the South African political arena, academia, and economic development. Data sourced from various communication channels were analysed using content analysis. Throughout the entire research process, measures were taken to maintain the integrity of the study, ensuring trustworthiness and ethical considerations were upheld. Consequently, the findings of this psychobiographical exploration reveal Ramphele's transformational leadership qualities, showcasing her inspirational motivation, charismatic influence, and commitment to societal liberation, ultimately fostering critical thinking and innovation among her followers.

**Keywords**: psychobiography, women leadership, transformational leadership, apartheid, post-apartheid

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## ABSTRACT

### Ubuntu as a Framework of Encounter:
### Further Considerations for Education in Africa and Beyond

Ubuntu, an indigenous African philosophy emerging from Nguni languages and traditions, has gained widespread recognition in educational discourses across Africa and beyond (see Ramose, 2002; Letseka, 2012; Waghid, 2014; Takyi-Amoako and Assié-Lumumba, 2018). As a philosophical concept, ubuntu has been extensively debated by leading scholars, contributing significantly to discussions on ontology, epistemology and general African existence. While ubuntu is commonly understood as an abstract reference to the quality of being human, it exists as a lived reality in various lingua-cultures across Africa, including isiZulu, isiSwati, isiNdebele, isiXhosa, Sotho, Swahili, and chiVenda to name a few. Building on my previous works (Simba 2020, 2021, 2024), this paper extends the conceptualisation of "ubuntu as a framework of encounter". This interpretation moves beyond the view of ubuntu as merely a philosophy or observable ethic, proposing it as multi- part deliberations that happen in the moment of encounter. These deliberations carry with them performance, gesture, language, a knowledge script, transfer of power, positionality all geared towards establishing ubuhlobo/ukama/relationality. This reading of ubuntu engages with it in its lived context as a means of engaging with the animate and inanimate.

This reading of ubuntu is informed by language as an archive of cultural knowledge and sense making. Indeed, the late Justice Mokgoro's (1998) assertion that ubuntu cannot be easily translated or translated with precision from its mother tongue underscores the complexity of rendering its full meaning into other languages, a challenge that continues to be a central task in ubuntu scholarship. It is a task that this paper takes on and sees as valuable to the decolonial epistemic project in search for equitable educational futures. The objectives of this paper are twofold: First, it seeks to deepen the understanding of ubuntu as a framework of encounter. Second, it explores the implications of this understanding for educational practices, particularly in pedagogical encounters where ubuntu can most fully be realised. This paper will delve briefly into the potential rich futures that ubuntu presents for African education and beyond, as envisioned by Takyi-Amoako and Assié-Lumumba (2018). Ultimately, this work seeks to contribute to the academic labour of translating ubuntu and realising its epistemic value in contemporary scholarship.

**Key words**: Ubuntu, Framework of encounter, African education futures, decolonisation

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## ABSTRACT

### Academic Xenophobia: African Academics' experiences at South African Universities

This presentation is drawn from a two-year study conducted across public universities in South Africa. Our study's objective was to shed light and add empirical evidence to the experiences of African academics working in the South African academy. Given the global sense of crisis around migration and the sporadic xenophobic tensions in South Africa this study is due. We introduce the concept of academic xenophobia to articulate the nuanced experiences of foreign nationals within South African universities. Unlike the violent connotations traditionally associated with xenophobia in South Africa, academic xenophobia encompasses nonviolent, yet insidious, anti-foreigner behaviours. Too often xenophobia is orientalised, relegated to the periphery as an anomaly that occurs at the edges of townships and yet other parts of society remain untouched by it. Our study challenges this view. We conceptualise academic xenophobia as encompassing both resentment towards and retaliation against African academics. Resentment manifests through hostile attitudes and exclusionary rhetoric within academic corridors, while retaliation is evident in discriminatory practices such as exclusion from job advertisements, shortlisting, promotions, and academic opportunities. Our findings point to seven primary retaliatory actions that African academics face, including biased hiring practices, limited advancement opportunities, and exclusion from permanent positions. Furthermore, we explore how different universities' policies and practices towards African academics are influenced by their institutional dispositions, ranging from urban universities' restrictive approaches to rural universities' relatively open policies, often driven by necessity rather than genuine inclusivity. Overall, our study and its findings provide a conceptual framework for understanding the experiences of foreign nationals in an academic setting. It specifically sheds light on the complex manifestations and implications within South African higher education institutions.

Key words: Academic Xenophobia; Inclusion/Exclusion, Public universities, South Africa, African Academics, Higher education

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## ABSTRACT

### Government Expenditure, Foreign Direct Investment and Economic Growth Nexus in South Africa

**Abstract:**

Low economic growth has been an occurring issue in South Africa. The government of South Africa had set the target of achieving 5, 5% of annual economic growth which is stipulated in the National Development Plan, 2030. However, South Africa has been struggling to sustain high economic growth. The aim of the study is to investigate the nexus between government expenditure, Foreign Direct Investment (FDI) and economic growth in South Africa for the period 1990 to 2023. This study employed quarterly data obtained from the South African Reserve Bank (SARB) and Quantec Easy data. The Auto Regressive Distribution Lag (ARDL) model and the granger causality test had been employed to achieve the objectives of this study. It is the intention of this study to shed light on the causal link between government expenditure, FDI and economic growth to help South African policy makers to implement appropriate policies. The unit root tests of Augmented Dickey Fuller (ADF) test and Phillips Perron (PP) had shown a mixed integration of I(0) and I(1). The findings of this study implied that both government expenditure and FDI have negative relationship with economic growth. This study concludes that there is correlation among the used variables and recommends that government should make spending on infrastructure, employment, and energy transition as the top three goals of achieving economic growth.

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## ABSTRACT

### Indigenous Weather Observatories: Merging Scientific And Local Knowledge Respectfully

Indigenous communities are amongst the most vulnerable to the impacts of climate change and biodiversity loss, yet their ways of knowing are often excluded from climate research and policymaking. This, while they hold local knowledge relevant to understanding change from a local perspective. It is therefore that we focused in the project Indigenous Climate Change Observatories - Local Knowledge for Local Action, on the question: How can we learn together to better understand local climate change? We worked with different Indigenous communities in different places in the world on shaping Indigenous Climate Observatories: Two in Borneo, Malaysia (focused on connections to the river/forest), three in Eswatini (focused on biodiversity), and two in Lesotho (focused on weather patterns). This abstract focuses on the observatories in Lesotho. Lesotho is a mountainous land-locked country in Southern Africa. Lesotho's rural population is highly dependent on subsistence farming. Due to its terrain, the weather changes quickly and is very localized. With changes in the climate, the weather becomes even harder to predict. One of the communities, for example, highlighted the recent occurrence of snow in summer, which destroys flowers, and with that kills insects that rely on those flowers. They have experienced a collapse in their ecosystem because of this – the beehives are out of service. In the Climate Observatories in Lesotho, we (the communities and researchers) therefore focused on understanding weather patterns and Indigenous weather forecasting methods. The local communities use these methods to forecast, but with climate changes, it becomes important to understand whether this knowledge is still relevant. We focused on different weather types and the indicators that could be used to forecast such weather. Each community member became in charge of recording their chosen weather indicators in a weather diary that they kept over the period of one month. This was done four times in total at different times of the year. After each period we came together to reflect on what was observed by the communities. 'Scientific' weather measures, such as rain meters and rulers to measure snow, were brought in, to understand whether the forecasts matched the actual weather, which we then used to reflect on what this means when forecasting or whether other methods to forecast are needed. We summarised our findings through a card game and are currently exploring action possibilities.

**Keywords:** Weather patterns, climate change adaptation, participatory design, Indigenous knowledge

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## ABSTRACT

### Modelling Gender Disparities to Overcome Performance Challenges of PhD Female Candidates in Zimbabwe

Elimination of gender disparities in education is among the key concerns of Sustainable Development Goal 4, Target 4.5. Despite the support and adoption of this goal by governments, female enrolment for PhD degree programmes in Zimbabwe is relatively low compared to undergraduate and taught masters. The few female candidates who enrol for such programmes do not complete in the same period as their male counterparts or in some cases, fail to complete due to the timing out factor. The current study endeavours to explore the challenges that hinder the performance of female PhD degree candidates in Zimbabwe's state universities. It also seeks to propose a model that addresses these challenges. This will be a qualitative study in which data will be gathered through semi-structured questionnaires using key informants and in-depth interviews. The research population constitutes PhD female candidates in all Zimbabwean state universities while the sample size will be composed of purposefully selected candidates from three state universities. Thematic content analysis was used to identify emerging themes from the data. Findings from the study will be used to design a model that will contribute to the body of knowledge as antecedents towards the elimination of gender disparities in higher education. The study recommends similar studies to be conducted among PhD female candidates in other African countries.

**Key words:** Challenges, gender disparities, PhD, performance

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**ABSTRACT**

**The Experience of Applying for Business Finance
as a Woman SME in South Africa**

This empirical paper explores the experience of female entrepreneurs when applying for business finance from financial institutions in South Africa. Women SMEs face various obstacles when applying for finance. Lack of collateral as one of the obstacles is one of the global problems that see women SMEs unable to obtain necessary finance to grow and sustain their businesses. This along with other obstacles has served as a hindrance for women SMEs and minimized their chances of acquiring finance. Extant literature gives voice to various factors affecting women SMEs from different countries. Most of the obstacles are known, however there is minimal literature that talks to their actual experience of the finance application process. This qualitative paper was conducted via semi-structured interviews with 10 female SMEs. They responded to the following questions; what was their experience when trying to acquire business funding and how can this experience be improved in order to address specific needs of female entrepreneurs? Findings showed that female SMEs don't have a favourable experience when applying for business finance in South Africa, specifically because of the obscure workings of some of the government institutions as far as legit operations are concerned. The study argues that female SMEs are treated differently when applying for funding, and suggests that close monitoring takes place when applications are being done at financial institutions so that women SMEs are not exploited by these institutions. The study also suggests that there should be more financial products that are specifically designed for women SMEs.

**Keywords:** Women SMEs, Finance, Funding, Application experience

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## ABSTRACT

### Reconceptualising the Student From a Human-Centred and Socio-Cultural Approach: Teaching in the African Language Studies Department

South African languages, and maybe other African languages, developed through the initiatives taken by and/or the involvement of linguists from Europe and as a result of that, almost all course units in African languages departments are taught through a Eurocentric perspective to this day. Development of the so-called south African official languages came at a cost to a majority of minoritized cultural and linguistic communities of South Africa through prescriptivism, a Eurocentric canon. That legacy is perpetual and is endorsed in our lecture rooms safe for the profiling of our teaching contexts. If we are to claim to be inclusive then these dynamics need to be acknowledged and addressed. The author uses a combination of hermeneutic phenomenology, a qualitative research method that focuses on the study of the students' lived experiences in relation to the course content that is culturally and linguistically prescriptive and oppressive to a majority of students. This paper will draw data from three sources: discussions in the iKamva Discussion Forum, students' Reflective Essays as well as feedback in the Module Evaluation of one undergraduate module and two postgraduate modules for isiXhosa. The discussion on the students' lived experiences will prove that as university teachers we need to be cognizant of our diverse teaching contexts and transform our curricula through integration of indigenous knowledge to facilitate quality education and to ensure that inequalities are reduced and graduate attributes are achieved.

**Keywords:** South African languages, prescriptivism, phenomenology, cultural and linguistic community, inclusivity, Eurocentrism, graduate attributes

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## ABSTRACT

**Investigating Patterns of School Participation in Post-Compulsory Education by Employment Status in South Africa for Effective Policy and Practice: A Repeat Cross-Sectional Analysis**

This paper focuses on the patterns of school participation in post-compulsory education by employment status. Despite the observed expansion in secondary education, a significant proportion of young people in South Africa do not complete their high school education. This challenge exacerbates the issue of NEET (not in employment, education, or training) problem, hindering a sustainable future as these individuals lack subpar accomplishments and a dearth of options for their unique needs. Literature suggests that continued school participation yields positive outcomes. There is little robust research that has been documented on the patterns and prevalence of school participation by employment status over time. Employment has many benefits beyond income, such as social interactions, recognition, and social status. Therefore, investigating these patterns is crucial for achieving sustainable development in the country. This research builds on Katerina Tomaševski's 4-A framework, which examines the accessibility, availability, acceptability, and adaptability of education. The study employs a quantitative research design using repeated cross-sectional data from South Africa's General Household Surveys (GHS) conducted between 2002 and 2023 among young people aged 16 to 19. Descriptive and inferential statistics, along with logistic regression were used to identify trends and analyse data on school participation by employment status. Preliminary findings show an increase in school participation rates among employed youth, indicating an association between school participation and employment status. Educational policies and interventions centred on transitions to post-compulsory education must prioritize addressing disengagement which is a pivotal stage that lies at the crossroads of learning, work, and life.

**Keywords:** School participation, young people, South Africa, employment, education

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## ABSTRACT

### Towards the Realisation of Sexual Rights: The Intersection of Gender and Ethnicity

The study examined the impact of ethnicity and gender on the sexual rights of Zezuru and Karanga women in Zimbabwe, focusing on their knowledge, attitudes, and practices related to sexual rights. The study was conducted in Mashonaland East and Masvingo Provinces. The research employed a qualitative approach with 18 semi-structured in-depth interviews, 23 key informant interviews, and 16 focus group discussions. Findings revealed limited progress in disseminating information on sexual rights in rural areas due to cultural values, norms, and religion. Traditional and religious leaders resisted intervention programs, leading to a lack of awareness about sexual rights. Social patriarchal norms and gender discrimination affected male perspectives on sexual health education. Early sexual debut and child marriage were prevalent among the Zezuru and Karanga sub-ethnic groups, driven by poverty, peer pressure, and cultural beliefs. Condom use was low, with men more likely to engage in multiple sexual partnerships, increasing the risk of sexually transmitted infections. Harmful traditional practices, such as womb cleansing, "kusimbisa musana" (strengthening the back), and labia elongation posed health risks to women. Practices like "runyoka," (sexual ring-fencing) widow inheritance sexual blue-toothing, sexual locking, virginity testing and "kutizira" (elopement) disproportionately affected young women and girls. An intersectional framework highlighted how gender, ethnicity, socioeconomic status, and cultural norms shape knowledge of sexual rights among Zezuru and Karanga women. The study advocates for targeted interventions that engage traditional leaders, respect local customs, and promote sexual rights. These efforts aim to develop gender and ethnic responsive strategies for sexual rights programming in Zimbabwe to achieve global health equity.

**Key Words**: Sexuality, Sexual rights, Intersectionality, Gender, Ethnicity, Equity

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## ABSTRACT

### Economic (de)growth: About Decolonial Epistemic Delinking

The economic growth paradigm, which has its roots in neoclassical economics and principles, has been the bedrock of undergraduate economics programmes across the world. It is also firmly embedded in school economics curricula in its various subject manifestations. Critics of the perpetual growth paradigm, however, point to its negative effects, namely that of overconsumption and exploitation of the planet's finite natural resources and concomitant pollution, as well as growing socioeconomic inequality on a global scale. In recent years, there has been increasing recognition of the unsustainability of unfettered growth and growing advocacy for alternatives that might consider ecological balance and social equity as priority foci. Economic degrowth is distinct in its ideological thrust as it values decommodification and redistribution beyond just material well- being. The challenge is that this economic orientation has yet to gain traction in mainstream economics courses and in the school curriculum. In this paper, we examine, using decolonial theory, the potential for epistemic delinking from the dominant economic paradigm. We explore the teacher education curriculum as a site where the economic degrowth agenda could be considered. We argue that for degrowth to gain paradigmatic status, we have to develop a critical mass of degrowth activists and that teacher education represents a powerful space for this activism.

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## ABSTRACT

### The African University and Living Heritage: Agency and Cultural Capability Formation Through the Teaching of Intangible Cultural Heritage in Zambia

Though Watene and Yap (2015) argue that SDGs sideline culture as a dimension of development, the partial inclusion of culture in the SDGs still demonstrates that culture, as Sen (2004) alluded to, matters for development. Because the SDGs were formulated in 2015 and the University of Zambia (UNZA introduced a Bachelor of Arts in Intangible Cultural Heritage (BA ICH) in 2018, adopting it could be viewed not only as a contribution towards meeting SDGs but also as a significant Afrocentric move by UNZA. However, there is insufficient scholarly data on the relevance and applicability of such a degree programme to the Zambian community. Additionally, it remains unknown how this specific programme, informed and supported by the development agency UNESCO, contributes to human development and building capabilities as well as agency of the individuals. Using the Capability Approach, this paper explores the experiences and perspectives of students and graduates of UNZA's BA ICH. I focus on how this BA ICH UNZA may contribute to students developing cultural capabilities and agency. Data analysed so far indicates that graduates of this programme have enhanced skills and knowledge about ICH, which has contributed to better working relations with communities for ICH safeguarding. Though graduates and students indicate some level of agency, the dependency on UNESCO, which was only ran for first 3 years of the programme, may derail gains made in enhancing cultural capabilities and agency of both students, graduates, and lecturers as well as agency at institutional level.

**Key words**: Intangible cultural heritage, cultural capabilities, higher education, sustainable human development, capability approach, agency.

# Oral Abstracts

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## ABSTRACT

### Rethinking Austerity: Expansionary Policies as a Path to Sustainable Growth and Solidarity in Africa

The current global economic paradigm, driven by institutions such as the World Bank and International Monetary Fund (IMF), advocates for austerity in fiscal and monetary policy as a means to stabilize economies, particularly in developing countries. However, this approach, while intended to reduce debt and control inflation, often exacerbates unemployment and poverty, deepening economic disparities and stifling long-term growth. This paper critically examines the impact of austerity measures on African economies, arguing that these policies are rooted in a hegemonic and colonial logic of extraction and exploitation, which prioritizes the needs of global capital over the well-being of local populations. Drawing on empirical evidence from African countries, this paper highlights the adverse effects of austerity on key socio-economic indicators, including employment, poverty rates, and income inequality. It argues that the imposition of austerity measures undermines the capacity of African governments to invest in critical sectors such as education, healthcare, and infrastructure, thereby perpetuating cycles of underdevelopment and social unrest. In contrast, the paper advocates for a shift towards expansionary fiscal and monetary policies tailored to the unique needs and contexts of African nations. It posits that such policies, which prioritize public investment, job creation, and social welfare, can foster more inclusive and sustainable economic growth. This approach aligns with the principles of solidarity economies and challenges the dominant narratives of economic development that have historically marginalized African voices and interests. Moreover, this paper situates its argument within the broader discourse on economic (de)growth, sustainability, and solidarity, questioning the philosophical and ideological assumptions that underpin current global economic strategies. It also underscores the importance of African higher education institutions, think tanks, and pan-African lending institutions in leading this agenda. These entities play a critical role in generating locally driven research, formulating context-specific economic policies, and providing the necessary financial resources to support expansionary initiatives, thereby empowering African nations to achieve economic sovereignty and equitable development in a pluralistic world order.

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**ABSTRACT**

**Exploring new practices to address youth unemployment in rural areas**

Youth unemployment rate in South Africa has become a pressing issue that affects young people from both urban and rural areas. However, rural youth is more vulnerable due to poor infrastructure in rural areas, limited or inaccessible bridges to labor market and restricted opportunities to fulfil aspirations. Youth unemployment not only has consequences for the individual but society. This requires innovative approaches to create sustainable employment opportunities. This literature study explores new practices aimed at addressing rural youth unemployment. It focuses on existing resources, community involvement, and the integration of technology. The paper examines the potential of entrepreneurship in agriculture to create value- added products and services, thereby generating employment. It also evaluates the role of vocational training programs tailored to the needs of rural economies, equipping young people with the skills required for local industries such as renewable energy, agro-processing, and tourism. The paper identifies the need for tertiary education to intensify efforts to produce well- rounded graduates who hold skills that are in demand in the labor market. One other practice that this paper highlights is the importance of digital literacy and access to technology to enable young entrepreneurs to influence e-commerce platforms, online marketing, and remote work opportunities. This paper examines community-driven initiatives for their capacity to foster collective action and create jobs. Additionally, it assesses the role of government policies and support systems in facilitating the new practices that contribute to the development of sustainable solutions that enhance economic opportunities and improve the livelihoods of rural youth.

**Keywords**: new practices, opportunities, rural areas, youth, youth unemployment, South Africa

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## ABSTRACT

### Exploring the Views and Roles of Nurses in Tackling Climate Change: Insights from Climate and Health Experts in South Africa

**Background**: Climate change poses escalating threats to global health, evidenced by rising temperatures, sea levels, extreme weather events, and heightened carbon dioxide levels. Impacts include compromised water and air quality, increased allergens, altered vector ecology, environmental degradation, and extreme heat, with amplified effects in Africa due to existing disease burdens. Local and international bodies urge health professionals, notably nurses, to address climate change's health impacts. Nurses, especially in LMICs, play a pivotal role in healthcare delivery. Despite global research, comprehensive studies on nurses' roles in climate change are lacking in South Africa, necessitating this research.

**Methods**: To investigate stakeholders' perspectives on climate change, roles, and eco-competencies needed for PHC nurses in addressing climate change, semi-structured interviews were conducted with 15 climate and health experts. Participants included policymakers, nurse educators, medical doctors, health services managers, and PHC facility managers from local, national, and international levels. The interviews were conducted both face-to-face and online, involving eight local, five national, and two international experts.

**Results:** Four themes emerged: climate change awareness, building climate resilience, enhancing climate action and competencies, and obstacles to climate resilience. The themes were further elaborated to clarify their specific components.

**Conclusion:** The study highlights the urgent need for South African nurse training curricula to adapt to the Anthropocene era's health challenges. This evolution is crucial for equipping nurses with the necessary knowledge, attitudes, and skills to address contemporary environmental and health issues effectively.

# Oral Abstracts

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## ABSTRACT

### Prevalence of Condom Use and Associated Factors Among Youth and Adults in South Africa: Results From the 2017 Nationally Representative Survey

In South Africa, condom use remains integral to the comprehensive HIV prevention and care programme. Condom use has proven effective in reducing the risk of heterosexually transmitted HIV infection. However, evidence shows that pattern of condom use has been on the decline in the general population. This study aimed to determine the prevalence and factors associated with condom use among adolescents and adults 15 years and older. The study used data from the 2017 South African nationally representative population-based household survey collected using a multi-stage stratified cluster randomized sampling design. Summary statistics were used to describe the study sample. Bivariate and multivariate logistic regression models were used to determine factors associated with condom use at last sexual encounter. Of 11 943 (95% CI: 37.3–40.5) youth and adults aged 15 years and older, 38.9% reported using condoms at their last sexual encounter. The odds of condom use were significantly higher among those who were never married (AOR=3.60, p-value<0.001, those who had multiple sexual partners (AOR=1.36, p-value=0.003), and those who were HIV negative (AOR=0.56, p-value=0.001). The odds were lower among females (AOR=0.60, p-value=0.001), those aged 20-24 years (AOR=0.47, p-value=0.001) and 25-45 years (AOR=0.35, p-value=0.001), those residing in rural formal/farm areas (AOR=0.73, p-value=0.002), rural Informal/farm areas (AOR=1.00, p-value=<0.00, high-risk drinkers (AOR=0.70, p-value=0.001), and hazardous alcohol drinkers (AOR=0.44, 95% CI: 1.1-1.7, p-value=0.001). The results suggest a need for interventions to improve condom use among females, those 20 years and older, those residing in rural/farm areas, alcohol users, and HIV-negative individuals.

**Keywords:** Condom use, HIV/AIDS, HIV prevention,

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## ABSTRACT

**The Mental Healthcare Needs of People with Mental Illness Attending Selected Community-Based Mental Healthcare Centres in South Africa: Progress Towards Achieving Mental Health Care Equity Amongst Vulnerable Groups.**

Despite their roles not being clearly defined in mental health care services, social workers have been and continue to be the first point of entry in several communities for mental health services. Most rural communities in South Africa are underserviced when concerning services relating to mental health, the Life Esidimeni tragedy is one practical example. Mental ill-health poses a great threat to several people with mental illness in South Africa. However, the needs of people with mental illness and related challenges are not well documented. Hence this paper sought to explore the mental healthcare needs of people with mental illness from the perspectives of their service providers (i.e., social workers) at selected centres in South Africa. The study employed a qualitative, exploratory multiple case study design. Furthermore, the purposive and convenience sampling techniques were employed to select social workers (n=13) in five community-based centres. The collected data was analysed through thematic analysis. This study found that people with mental illness are underserviced at community level. Further findings of the study revealed that there are no clear guidelines for the admission of a person with mental health-related challenges. However, the findings revealed that hospitals and clinics don't prioritise people with mental illness. It is recommended that meticulous guidelines be enacted at a community-based level for the admission of people with mental illness and their related services.

**Key Words:** Mental illness; Mental Health ; Needs; Vulnerable groups; Mental

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## ABSTRACT

**Adoption of Sustainable Agricultural Practices by Legume Smallholder Farmers to Combat Food Insecurity in Mbombela Local Municipality, Mpumalanga Province**

Climate change, rapid urbanization, and land degradation are putting a serious pressure on the world food chain while facing food insecurity, loss of profit and decline in crop yield. Therefore, it is essential to explore alternative sustainable agricultural practices (SAPs) to feed the growing population. The adoption of sustainable agriculture practices has become number one priority by government policymakers, extension agents, and agricultural experts to enhance agricultural productivity, which will contribute to food security and generate income.

The study evaluated the variables influencing adoption of sustainable farming techniques for smallholder farmers growing legumes in Mbombela Local Municipality. A structured questionnaire was administered in-person to 308 smallholder farmers who grew legumes and were selected using the convenience sampling technique. Descriptive statistics and probit model regression were used for the analysis (STATA 12).

The results showed that legume smallholder farmers were more likely to embrace sustainable agriculture practices (SAPs), 33.06 of the participants were practicing crop rotation on their farms, 23.0% of the participants were practicing crop rotation, and 27.27% of the participants were practicing intercropping. However, 23.05% of participants were practicing organic manure, and 10.39% do not practice sustainable agricultural practices and 4.22% of the participants practice soil mulching on the farm. Adoption is positively influenced by factors like gender, farm size, experience, SAPs knowledge household size, education, employment, credit and extension officer.

The paper recommends that researchers, government policy makers and other private sectors involve smallholder farmers during decision making process, and also support and encourage smallholder farmers to maintain sustainable agriculture.

**Keywords:** Extension services; food security; smallholder farmers; sustainable agricultural practices (SAPs) and probit regression model

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## ABSTRACT

### Decolonising Accounting Ethics Education in Zimbabwe:
### A Seriatim Analysis of Hunhu and IFAC Values

The paper explores the extent to which IFAC and Hunhu values are constitutive of 'munhu ane hunhu' (a well-behaved person) the corollary of an ethical accountant. Perspectives of 26 participants on Hunhu values were sought in a qualitative survey. While the IFAC code only has four values considered fundamental, participants in this study argued that a fully formed person requires much more values. The emphasis on Hunhu seems to be one is a human being before being a professional. So, under Hunhu the imperative is, 'be a fully formed person first before being a professional' to enable the discharge of the duty to the community. The communal focus comes along with a widened circle of responsibilities from the immediate family, kinsmen, clan and ultimately all humanity under Hunhu. Thus, Hunhu will imply embracing society at large among the users of financial statements. This is in stark contrast to Anglo-American capitalist accounting where financial statements users are "restricted to investors and other market participants" (IFRS Foundation, 2018: A7). That said, Hunhu values and their distinctive communitarian ethos do not sit well in accounting in its current capitalist configuration. Hunhu values can only speak to the African context when there is rupture to accounting as a discipline. Decolonising accounting ethics and consequently accounting is just but a step in the quest for epistemic justice by dominated indigenous people of Zimbabwe.

**Key words**: Hunhu, values, communitarian, decolonising, accounting

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## ABSTRACT

### Mental Illness Among Young Adults in Primary Care and Community Context

Nurses are important in primary care and community context to apply actions and interventions to the needs and interests of the young adults. This chapter aims to explore health promotive actions to young adults with mental illness and moving nursing theories into the context. The journey of recovery from substance use disorder is a complex and multifaceted process, particularly poignant in the lives of young adults. This developmental period is marked by identity formation, exploration, and navigating societal expectations. Recognizing and understanding the dynamic nature of recovery, the pivotal role of social support, and the inherent resilience of this population provides a foundation for developing targeted interventions. Another aspect is to enrich the development of skills for nurses by use of more knowledge of nursing theories. Primary prevention efforts should be tailored to meet the needs for both nurses and young adults. These thoughts are both challenging and create new possibilities. Furthermore, nurses need more knowledge which will bring the opportunity to make a difference.

**Keywords:** community, intervention, mental health, mental illness, nursing, perspectives, primary care, young adults

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## ABSTRACT

### International Science Programme (ISP): A Program For Empowering Women

The International Science Programme (ISP) is a unit at Uppsala University, Sweden, working with financial support to research groups and research networks in selected countries in Asia and Africa. After a short introduction of the working framework of ISP, the focus of this presentation will be on the special program, started in 2015 by ISP to empower women by increasing their access to education and science. Education is a human right and a recognized means of empowerment, allowing individuals to contribute with their skills to society. It will in the long run lead to sustainability in women's economic empowerment and lead to a more pluralistic world order.

Despite a long attempt to increase the gender balance at the supported institutions, ISP noted that the number of female students and graduates did not increase. A renewed effort by ISP opened up the possibility for the supported groups and networks to apply for extra and specific funds for activities aimed at improving the gender balance in classrooms, in laboratories and in general in the scientific environment at the home institutions. These special grants have been freely used by the groups and the networks for organizing events of various kinds and for different target groups, to address what they identify as the most significant local barriers for women to study and build a career as researchers after graduation. We will show how these grants have been used for a variety of activities in different countries and we will also demonstrate that these diverse activities are already yielding positive results. We hope to inspire delegates in the South and North to address gender issues at their home university.

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## ABSTRACT

### Geography Undergraduate Student Teachers and Their Transformation in Addressing Global Challenges Within a Framing of the Sustainable Development Goals

Student teachers have curricula responsibility to educate learners on an array of current challenges and achieving sustainable living: climate change, loss of biodiversity, marine plastic, in addition to xenophobia, discrimination and poverty. As university teachers we were troubled by whether they were being prepared to meet current and future SDG-related challenges? This study aimed to explore the transformation of undergraduate student teachers, from three countries, as they understood, analysed and prioritized a range of SDG-related challenges and embarked or not on interventions. Our research focus was on climate change, destruction of wetlands, and plastic pollution. Student teachers from South-Africa, Tanzania and Norway participated, and our data gathering tools were multiple: class discussions, focus group discussions, documentary videos and written narrative evidence. Our theoretical architecture comprised theories of change (Reinholz and Andrews, 2020) and transformation O'Brian &amp; Sygna (2013). Our findings indicate that systemic understanding can be seen as key competence to deal with sustainability because the problems are intertwined and complex. This study illuminated aspects of transformation: how student teachers identified the relevant stakeholders, prioritized practical solutions to the problem, reflected on the educational outcome/s of focusing on the problem, including their individual practice, collective intervention and attached values. We argue that a theory of change and transformative education is needed to underpin curriculum design to prepare undergraduate student teachers as this can facilitate understanding the complex relations between different stakeholders, and the transformation that should unfold across multiple interconnected spheres to navigate challenges and work towards sustainable futures.

**Keywords**: Geography, student teachers, undergraduate students, sustainable futures

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## ABSTRACT

### Driving Sustainable Development: The Role of Evolving Technologies in Namibia's Green Industrialization Journey

**Abstract:**

The objective of this article is to examine how Namibia's green industrialization plan intersects with trade, development, and technical breakthroughs. The article looks at how trade dynamics and economic development are affected by evolving technology in an effort to determine how Namibia may use creative solutions to support environmental stewardship and sustainable growth. The article will examine the benefits and drawbacks of incorporating green technologies into Namibia's industrialization strategy using case studies, policy analysis, and empirical article. The article's ultimate goal is to offer perceptions and suggestions to stakeholders, companies, and governments who are engaged in furthering Namibia's green economic goals.

**Keywords:** Economic transformation, economic diplomacy, international relations, trade and development, green hydrogen, changing technologies.

# Oral Abstracts

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## ABSTRACT

### Integrating Indigenous Knowledge Systems (IKS) and Climate Science to Understand Seasonal Variations and Climate Adaptation in Malamulele and Swayimane Communities

While climate science is often viewed as the main source of seasonal forecasts and climate change information, response actions at the community level also make use of indigenous and tacit knowledge. This informs knowledge of their environment, its changes, and how to cope with changes. This study explores indigenous knowledge systems in Malamulele, Limpopo Province, and Swayimane, KwaZulu-Natal on seasonal forecasts, observed changes in climate and climate adaptation. IKS are important for community-based climate change response, especially in cultures where daily life, decisions, and agency are influenced by indigenous knowledge. Traditional leaders, health practitioners, and community members engaged in this study shared their knowledge and observations of astronomical, meteorological, and ecological changes, used to prepare for planting seasons and adjust living practices. For both study sites, participants used the moon as an indicator of impending extreme events like floods, disease outbreaks, and droughts. The behaviour of insects and birds also serves as early warning signs. The South African Weather Service provides early warning information, but this is often inaccessible or presented in a language that community members struggle to understand and act upon. Integrating IKS with modern climate science therefore offers a better understanding of ecosystem dynamics, preparedness for extreme weather and seasonal variations. Practical uses of IKS provide fresh perspectives for climate adaptation whilst also promoting diversity and social inclusion.


**Keywords**: Climate adaptation, Climate science, indigenous knowledge systems, seasonal variations

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## ABSTRACT

### The Ethics of Generative Artificial Intelligence in Academia: The Urgent Need for Comprehensive Guidelines

As powerful generative AI tools like ChatGPT are introduced to academic writing, concerns have been raised over potential misuse and academic dishonesty. Standardized guidelines are urgently needed to protect academic writers. It is evident that these tools have the potential to streamline research-writing processes. However, they also present challenges that should be taken fully into consideration. Thus, universities need to guide scholars and researchers in using generative AI responsibly, and in navigating a complex regulatory landscape, that is undergoing rapid changes. While there has been a growing body of literature on the impact of AI on undergraduate academic integrity. Generative AI's impact on research integrity has received relatively little attention, and the importance of institutions in addressing those challenges. The high degree of uncertainty associated with generative AI poses a significant challenge to the research sector. Due to the complex regulatory environment for research, rapid pace of disruption and innovation resulting from AI, there is an element of uncertainty in the field. In many ways, these risks to research integrity undermine its credibility and undermine public trust and confidence in the discipline. The purpose of this comparative literature study is to propose insights to assist institutions in promoting and facilitating the responsible use of generative artificial intelligence by drawing on the experiences of selected universities in South Africa. By bringing to light relevant literature and facilitating discussion, this research project intends to assist institutions in making informed decisions regarding governance and policy implementation.

**Keywords**: Academia, Ethics, Generative Artificial Intelligence, Higher Education

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## ABSTRACT

### Artificial Intelligence: A New Global System, a Genocidal Project or the Revival of the Tokoloshe Culture?

In the context of inclusive innovation, artificial intelligence (AI), presents opportunities to address inequality and social exclusion by integrating fairness, inclusivity, and representation. Despite AI's advantages, such as being a transformative force in the global landscape, affecting our traditional labour systems, and becoming a part of our daily lives. It is important to consider the potential downsides, including deepening inequalities and enhancing the digital divide. This article explores the multifaceted nature of AI, examining whether it implies developing a new global system, risks becoming a "genocidal project", or challenging traditional African ways of being. We illustrate this by comparing AI usage and African Epistemologies to understand how both have a dual nature in their adaptability and versatility in shaping our everyday lives. Using the African Epistemological lenses of ubuntu and African folklore of the tokoloshe, we incorporate evidence from academic sources and policy, we argue that AI's replacement of human labour is a form of economic genocide, mainly impacting less advantaged people by intensifying inequalities and unemployment. This paper aims to contribute to the growing study of Inclusive Innovation by incorporating AI and African experiences; emphasising the philosophy of ubuntu by bringing to the forehumanness in the development of AI in Southern Africa. We offer policy recommendations for policy development that emphasise the challenges and influence of AI's potential for inclusive innovation. These recommendations promote equitable access to technology and prioritise ethical considerations to avoid harm and marginalisation.

**Keywords**: Artificial intelligence, Inclusive Innovation, African epistemology, Capitalism, Traditional Labour.

# Oral Abstracts

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## ABSTRACT

### Sustainable Finance: Empowering Women Through Green Investment

Sustainable finance refers to financial practices that consider environmental, social, and governance (ESG) criteria to generate long-term financial returns and positive societal impact. Green investment, a critical component of sustainable finance, focuses on projects that promote environmental sustainability. Empowering women through green investment not only addresses gender equity but also enhances economic growth and environmental sustainability. This research explores the potential of sustainable finance to empower women, examining how green investment initiatives can contribute to gender equality and economic empowerment. Despite the growing emphasis on sustainable finance, there is limited research on the intersection of green investment and women's empowerment. Women often face barriers in accessing finance and investment opportunities, which hinder their ability to participate in and benefit from green economic activities. Understanding the role of green investment in empowering women is essential to develop strategies that promote gender equality and sustainable development. This research investigates how sustainable finance, specifically green investment, can empower women. This study employs a qualitative research approach to provide a comprehensive analysis; in this regard, Case Studies will be used to examine successful green investment initiatives that have empowered women in different regions, identifying best practices and lessons learned. Preliminary findings suggest that green investment can significantly contribute to women's economic empowerment by providing access to new markets, technologies, and employment opportunities. However, several barriers persist, including limited access to capital, lack of financial literacy, and socio-cultural constraints. Case studies reveal that targeted support mechanisms, such as microfinance, capacity-building programs, and inclusive policy frameworks, effectively overcome these barriers and enhance women's participation in sustainable finance.

**Keywords:** sustainable finance, women empowerment, green investment, gender equality, economic growth