



3RD ANNUAL

MASTER'S

CONFERENCE 2025

17th - 21st November

Abstract Booklet

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Welcome



Dear Esteemed Colleagues, Students, and Participants,

It is with great pleasure and enthusiasm that I extend a warm welcome to you all to the third Unicaf Master's Conference, a testament to the pursuit of knowledge, and collaboration within our academic community.

This abstract booklet serves as a guide to the diverse array of presentations, discussions, and research findings that will be shared throughout the event. Each abstract included here represents not only a culmination of months, and sometimes years, of rigorous work but also the forward-thinking ideas and approaches that drive the advancement of knowledge in our field. The conference has attracted contributions from a wide range of disciplines, fostering a dynamic, interdisciplinary environment where novel perspectives can thrive. This year's conference includes 65 presentations by master's students.

It is with great pleasure to see that the abstracts featured in this publication, are accompanied by five plenary discussions. Our panellists are at the forefront of current research trends, and we are excited to showcase their insights alongside the groundbreaking research featured in these pages. We encourage all participants to engage fully in the sessions, workshops, and networking opportunities available, as these interactions are what truly bring this conference to life.

I extend my heartfelt appreciation to all the authors, reviewers, and all who have contributed to the successful preparation of this abstract booklet. Their dedication to the advancement of knowledge is truly commendable, and their efforts are integral to the progress of academia.

I would also like to express my gratitude to the organising committee, reviewers, and all those who have tirelessly worked to curate and assemble this booklet. Their hard work and dedication have ensured that this year's conference will be an enriching and rewarding experience for all involved.

Whether you are a first-time attendee or a long-time participant, we hope that this conference will inspire new ideas, foster collaborative relationships.

On my behalf, as well as all colleagues who have worked towards the preparation and delivery of the conference, we wish you a productive and enjoyable conference

Best regards,

Dr Elena Papadopoulou
Pro Vice-Chancellor Teaching and Learning, Federal
Unicaf Online Journal, Principal Editor

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Information

Access to the conference

In order to attend the conference, follow the link:

Zoom link:

https://us06web.zoom.us/webinar/register/WN_pb7qS2fSQMWHW1OSQ2CPnw

We are looking forward to meeting you at the Third Annual Online Unicaf Master's Conference!

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**Programme of the
Third Annual Online Unicaf Master's Conference (UMC)
November 17th- 21st, 2025**

Day 1: School of Business Monday, November 17th, 2025		
08:50	Session Opens	
9:00 – 09:20	Opening Ceremony Dr Kevin Andrews, Chief Academic Officer, Unicaf, Federal Chair: Dr Elena Papadopoulou, Pro Vice-Chancellor Teaching & Learning, Unicaf, Federal	
09:20 – 09:30	Opening Remarks: School of Business Dr Lucie Pocinkova, Deputy Dean, School of Business, Unicaf, Federal	
09:30 – 11:10	Session 1: Project & Operations Management Chair: Dr Konstantinos Vrahimis, Programme Leader, School of Business, Unicaf, Federal	
09:30 – 09:50	Elsa Araya	Advancing SME growth through strategic project management in Sub-Saharan Africa
09:50 – 10:10	Serwadda Moses	Evaluating the effectiveness of the fast-tracking project management approach in reinforced foundation construction projects
10:10 – 10:30	Daniel Lodinya Stephen	Enhancing project quality management practices to improve project delivery performance: A comparative study of best practices in selected NGOs in Juba, South Sudan
10:30 – 10:50	Aimable Niyonkuru	A project management perspective on optimising supply chain resilience in global trade
10:50 – 11:10	Erick Kipkurui Keter	Impact of global disruptions on global supply chains: Evaluating post-pandemic recovery strategies and resilience measures adopted in the manufacturing and service sectors
11:10 – 11:20	Break	

11:20 – 12:10	Session 2: Finance, Economics & Revenue Mobilization Chair: Dr Costas Photiou, Associate Dean, School of Business, Unicaf, Federal	
11:20 – 11:30	Alex Mutale	The effect of corruption on financial management in the public sector
11:30 – 11:50	Franklin Owusu-Sekyere	The Impact of Brokerage Channel on the Growth of Ghana Insurance Industry
11:50 – 12:10	Emmanuel Meduwa	The impact of the introduction of a late payment interest on taxpayer behavior and revenue mobilisation in Kenya Customs
12:20 – 13:00	Break	
13:00 – 13:30	Plenary Presentation 1	Speaker: Diana Abwooli Kobumanzi, Programme Leader, School of Business, Unicaf University in Zambia Title: Investor behavior in the age of instant news Chair: Dr Costas Photiou, Associate Dean, School of Business, Unicaf, Federal
13:30 – 15:10	Session 3: Human Resource Management & Organisational Behavior Chair: Dr Wilfred Masebo, Associate Professor & Dean, School of Business & Management, Unicaf University in Malawi	
13:30 – 13:50	Ann-Marie Lambert	An investigation into the recruitment and selection process of the education sector in the Cayman Islands
13:50 – 14:10	Loice Hawa Charles Bathuel	Secondary analysis of the impact of flexible working policies on employee performance and organisational productivity in the UK corporate sector
14:10 – 14:30	Edla Kaumbi	The role of spiritual intelligence in ethical and effective decision-making: A public sector leadership framework for Namibia
14:30 – 14:50	Justine Mawunya Dzansi	Relationship between succession planning strategies and employee retention
14:50 – 15:10	Asaolu Ajoke Mobolaji	The effect of leadership pattern on organisational performance: A case study of selected banks in Nigeria

Day 2: School of Business Tuesday, November 18th, 2025		
08:50	Session Opens	
09:00 – 10:00	Session 4: Ethics, CSR & Sustainability Chair: Dr Lucie Pocinkova, Deputy Dean, School of Business, Unicaf, Federal	
09:00 – 09:20	Anne Saruni	Mental wealth measurement: A case study of Kenya
09:20 – 09:40	Omotola Akande	Use of sustainable materials in the construction of healthcare facilities: Cost-effectiveness and environmental impact
09:40 – 10:00	Puleng Mpete	The impact of sustainable international business practices by multinational enterprises in developing economies
10:00 – 10:10	Break	
10:10 – 10:50	Invited Speaker	Speaker: Mrs Barbara Maluszynska, Learning Manager / PM / AI Education Manager, Merito Universities Title: Embracing AI for an effective workplace - a case study based on the Merito Universities Group (Poland) Chair: Mrs Malwina Janik, Academic Coordinator and Programme Leader, School of Business, Unicaf, Federal
10:50 – 12:10	Session 5: Technology, Innovation & Digital Transformation Chair: Mrs Malwina Janik, Academic Coordinator and Programme Leader, School of Business, Unicaf, Federal	
10:50 – 11:10	Monica Kethu	Evaluating the effects of service digitisation on customer service quality at Equity Bank: A systematic review
11:10 – 11:30	Rodina Shash	Women, AI, and the future of the market
11:30 – 11:50	Anisha Alinda	Post-harvest practices and value realization in Uganda's coffee sector: A study of technological gaps, gendered labor dynamics, and the paradox of low domestic consumption

11:50 – 12:10	Tamunofiniarisa Brown	The impact of AI, Digital Twin, and IIoT in oil, gas, and energy management
12:10 – 12:30	Break	
12:30 – 13:30	Interactive Session	How to Become a Unicaf Doctoral Student – An introduction to the School of Doctoral Studies and Faculty, followed by Q&A
13:30 – 15:10	Session 6: French University Chair: Mrs Lamia Loubany, French Coordinator & Programme Leader, School of Business, Unicaf, Federal	
13:30 – 13:50	Nahomie Bellegarde	Transformation numérique et performance des PME en home care : Enjeux stratégiques à port Sainte Lucie
13:50 – 14:10	Djibril Diatta	Le rôle de Pétersen dans la gestion des revenus pétroliers et gaziers du Sénégal
14:10 – 14:30	Kabene Ciranvu James	Stratégies de gouvernance des PME congolaises de transformation agro-alimentaire face aux opportunités de la ZLECAF
14:30 – 14:50	Ouantchi Honoré	Productivité, motivation du personnel et développement de l'entreprise
14:50 – 15:10	Billy Bologo	Approche sur l'amélioration du modèle « Pay-as-You-Go » dans le secteur des énergies renouvelables en Afrique
15:10 – 15:20	Closing Remarks: School of Business Dr Lucie Pocinkova, Deputy Dean, School of Business, Unicaf, Federal	

Day 3: School of Sciences, Health Sciences, Technology and Engineering		
Wednesday, November 19 th , 2025		
08:50	Session Opens	
09:00 – 09:10	Opening Remarks: School of Sciences, Health Sciences, Technology and Engineering Dr Yiota Christou, Associate Dean, School of Sciences, Health Sciences, Technology and Engineering, Unicaf, Federal	
09:10 – 11:10	Session 7: Technology, AI & Data Science Chair: Benjamin Juma Nkowane, Programme Leader, School of Sciences, Health Sciences, Technology and Engineering, Unicaf, Federal	
09:10 – 09:30	Maurice Gitonga Ndwiga	Sentiment analysis of Netflix company using YouTube API and Python-based NLP automation
09:30 – 09:50	Shadrack Oyaya Wattai	Development of an LLM-based e-learning system to enhance personalised education for universities in Tanzania
09:50 – 10:10	Sunday Paul Agboola	Fairness and bias in machine learning algorithms: A case study in lending practices
10:10 – 10:30	Sunday Ndubuisi Okonkwo	Algorithmic myth busting: A data science framework for detecting and correcting cultural bias in AI systems
10:30 – 10:50	Thato Charles Massa	Transforming healthcare delivery in Lesotho through big data and machine learning: A predictive analytics framework
10:50 – 11:10	Julius Peter Torach	Big data analytics in criminal prosecution in Uganda
11:10 – 11:30	Break	
11:30 – 12:10	Plenary Presentation 2	Speaker: Dr Reginald Denis Gwuisai, Programme Leader, School of Sciences, Health Sciences, Technology and Engineering, Unicaf, Federal Title: Accelerating the Transition to Net Zero Alignment, Energy and Carbon Management, Standards Development and Circularity in Developing Economies. Chair: Benjamin Juma Nkowane, Programme Leader, School of Sciences, Health Sciences, Technology and Engineering, Unicaf, Federal

12:10 – 16:00	Session 8: Governance, Policy & Infrastructure Chair: Dr Stephanía Herodotou, Programme Leader, School of Sciences, Health Sciences, Technology and Engineering, Unicaf, Federal	
12:10 – 12:30	Irene Wangechi Munene	Attainment of Sustainable Development Goal 6 (SDG 6) in Kenya
12:50 – 13:10	Philimon Gundani	Evaluating the Gwayi-Shangani dam's role in mitigating water scarcity in Bulawayo's metropolitan area
13:10 – 13:30	Nhial Mawien Nhial Bol	Dissertation on analysing the influence of data-driven decisions in disaster response in South Sudan
13:30 – 13:50	Kefa Bisarara Moses	Investigating the challenges of digital evidence collection in cloud-based cryptocurrency crimes
13:50 – 14:10	Collins Owuor Alando	The role of the board in the cyber resilience of public sector critical national infrastructure: A case study of the Kenya Revenue Authority (KRA)
14:10 – 14:30	Break	
14:30 – 14:50	George Gatheca Njoroge	Optimising blockchain node performance and security in hybrid cloud and bare-metal environments
15:10 – 15:30	Onalenna Mpape	Enhancing cybersecurity in the healthcare sector: Protecting electronic health records (EHRs) in Botswana and South Africa
15:30 – 15:50	Christine Ewoi Eloto	Risk factors for unsafe abortion and their contribution to maternal mortality among key populations in the southern African region

Day 4: School of Sciences, Health Sciences, Technology and Engineering & School of Education, Humanities and Social Sciences Thursday, November 20th, 2025		
08:50	Session Opens	
09:00 – 10:50	Session 9: Health and Medicine Chair: Dr John Balidawa, Programme Leader, School of Sciences, Health Sciences, Technology and Engineering, Unicaf, Federal	
09:00 – 09:20	Ezéchias Kumumbeya Mira Sasa	Resilience of health professionals in responding to malaria in fragile zones of the Democratic Republic of Congo
09:20 – 09:40	Omolara Abosede Olayemi	Evaluating the effectiveness of surgical site infection prevention protocols in operating theatres: A systematic review of evidence-based practices
09:40 – 10:00	Eden Yirdachew Tefera	Impact of low and inequitable childhood vaccination coverage on under-five mortality in Ethiopia: retrospective cohort study
10:00 – 10:20	Lawrence Ifeanyi Eze	Design and implementation of a convolutional neural network for malaria diagnosis: Image-based classification of uninfected and infected blood cells
10:20 – 10:40	Kyeyune Ashiraf	A deep learning based image multi-class classifier for eye diseases
10:40 – 11:00	Fatima Omowumi Lawal-lah	Treatment outcomes for tuberculosis in TB/HIV co-infected patients in low and middle-income countries: A scoping review
11:00 – 11:20	Lapologang Motladiile	Evaluating the role of deep learning in early cancer detection: enhancing diagnostic
11:20 – 11:40	Forget Mupfunya	A scoping review of the health risks associated with the use of electronic nicotine dispensing systems (vapes) used as a harm reduction method in the United Kingdom
11:40 – 12:10	Plenary Presentation 3	Speaker: Dr Ioanna Koliandri, Academic Coordinator and Programme Leader, School of Education, Humanities & Social Sciences, Unicaf, Federal Title: Perinatal mental health: A public health approach Chair: Dr John Balidawa, Programme Leader, School of Sciences, Health Sciences, Technology and Engineering, Unicaf, Federal

12:10 – 12:30	Closing Remarks: School of Sciences, Health Sciences, Technology and Engineering Dr Yiota Christou, Dean, School of Sciences, Health Sciences, Technology and Engineering, Unicaf, Federal	
12:30 – 12:40	Break	
12:30 – 12:40	Opening Remarks: School of Education, Humanities and Social Sciences Dr Anastasia Datsogianni, Associate Dean, School of Education, Humanities and Social Sciences, Unicaf, Federal	
12:40 – 13:40	Session 10: Leadership in Education Chair: Ms Zoe Magou, Programme Leader, School of Education, Humanities & Social Sciences, Unicaf, Federal	
12:40 – 13:00	Lars Arvid Archer Lorimer Olsson	Brain monitoring technologies in educational leadership
13:00 – 13:20	Juliet Efemena Edugbo	A literature-based analysis of pension reform and retirement security for educators in Nigeria: focus on the contributory pension scheme and its implementation in Delta State
13:20 – 13:40	Noha Bayoumi Hassan Ahmed	Leading STEAM innovation in Egypt's British primary schools: Strategies aligned with Vision 2030
13:40 – 15:40	Session 11: International Relations and Politics Chair: Dr Kalliopi Kyriakopoulou, Programme Leader, School of Education, Humanities & Social Sciences, Unicaf, Federal	
13:40 – 14:00	Jacqueline Cochrane	Post-2020 coup resurgence, the role of western and non-western actors, and the fracturing of democracy in Africa
14:00 – 15:20	Janet Agaba	Aid or Dependency? Rethinking global North approaches to development in the global South
15:20 – 15:40	Joette Crystal Simon	Bridging migration and education through international relations: A policy-oriented study

Day 5: School of Education, Humanities and Social Sciences

Friday, November 21st, 2025

08:50	Session Opens	
09:10 – 11:30	Session 12: Education and English Literature Chair: Mr Costas Antoniou, Programme Leader, School of Education, Humanities & Social Sciences, Unicaf, Federal	
09:10 – 09:30	Nardia Campbell-Chambers	The impact of the school principal on fostering collective efficacy to enhance teachers' professional growth and students' academic achievement
09:30 – 09:50	Rania Khaled	The impact of quality teaching and teacher training on student performance, notably SEN and low-achieving students
09:50 – 10:10	Wilscot Waliki	Investigating the effectiveness of inclusive education in secondary schools in Blantyre District in Malawi
10:10 – 10:30	Mashata Ruth	Experiencing and processing trauma among female protagonists in Alice Walker's The Color Purple and Toni Morrison's Beloved
10:30 – 11:30	Plenary Presentation 4	Dr David James, Associate professor in Sociology, Head of Law and Social Sciences, School of Social Sciences and Humanities, University of Suffolk, UK Screentoria: Rethinking learning in screen-saturated classrooms Chair: Dr Anastasia Datsogianni, Associate Dean, School of Education, Humanities and Social Sciences, Unicaf, Federal
11:30 – 11:50	Break	
11:50 – 13:30	Session 13: Psychology and Mental Health Chair: Dr Veronica Hadjipanayi, Programme Leader, School of Education, Humanities & Social Sciences, Unicaf, Federal	
11:50 – 12:10	Esther Chidinma Otuyemi	A systematic review of psychological interventions for insomnia in prisoners

12:10 – 12:30	Nehal Ibrahim Ibrahim Abdelbary	The hidden burden of caring: mental health challenges and global disparities in support of healthcare professionals caring for critically ill patients
12:30 – 12:50	Yomna Abobakr Ahmed Abdelmoety	The influence of societal structures and personal psychological needs on conceptions of the divine: A multidisciplinary exploration
12:50 – 13:10	Neo Selato	Assessing sociocultural drivers of gender-based killings in Sub-Saharan Africa: a five-year analysis (2019–2024)
13:10 – 13:30	Khaled Jabsheh	How socioeconomic status affects emotional development during infancy with a highlight on poverty
13:30 – 14:30	Session 14: Law, CSR and Human Rights Chair: Mr Christos Konstantis, Programme Leader, School of Education, Humanities & Social Sciences, Unicaf, Federal	
13:30 – 13:50	Asala Helal Saleh Al-Abadi	Responsibility and accountability for human rights violations in Quasi-States: A case study of Hay'at Tahrir al-Sham-Controlled Idlib (2017–2024)
13:50 – 14:10	Henry Opiyo Opondo	Corporate responsibility for sustainable development: Legal frameworks for aligning corporate governance with the United Nations Sustainable Development Goals
14:10 – 14:30	Sonia Yvonne Davis	Corporate social responsibility: A path to sustainable business
14:30 – 14:40	Closing Remarks School Education, Humanities and Social Sciences Dr Anastasia Datsogianni, Associate Dean, School of Education, Humanities and Social Sciences, Unicaf, Federal	
14:40 – 15:00	Closing Ceremony Dr Elena Papadopoulou, Pro Vice-Chancellor Teaching & Learning, Unicaf, Federal Chair: Dr Athanasia - Eleni Kavadia, Research Officer, Unicaf, Federal	

Abstracts**Plenary Presentations****Investor behaviour in the age of instant news**

Mrs Diana Abwooli Kobumanzi
Programme Leader, School of Business
Unicaf University in Zambia

The proliferation of digital media and real-time information dissemination has transformed the landscape of financial decision-making. Investors are exposed to a constant stream of instant financial news and social media updates that can significantly shape their perceptions, expectations, and decisions. This presentation explores a study on investor behaviour in the era of instant news, with a specific focus on how cognitive and social biases shape individual investment decisions in response to financial news and social media content. The primary objective is to investigate the extent to which instant information flows influence investor sentiment, perception of risk, and decision outcomes.

Drawing on a systematic literature review, the study synthesises findings from journal articles, empirical studies, and behavioral finance frameworks published over the past decade. Some of the key themes examined include the impact of information overload, herd behaviour, confirmation bias, and overconfidence on investment strategies and risk tolerance. The review also evaluates the role of social media platforms such as X, Reddit, and financial forums in amplifying emotional reactions and shaping collective market movements, as seen in events like the GameStop short squeeze and cryptocurrency volatility.

By integrating behavioral finance theory with emerging insights from digital communication research, this presentation underscores the growing need for investor education and critical media literacy in financial decision-making. It concludes that understanding the link between instant information, cognitive biases, and social influence is vital for developing optimal investment strategies in an age defined by real-time news and digital connectivity.

Embracing AI for an effective workplace - a case study based on the Merito Universities Group (Poland)

Mrs Barbara Maluszynska

Learning Manager, Project Manager, AI Education Manager

Merito Universities Poland

In the changing landscape of higher education, embracing Artificial Intelligence (AI) has become both an opportunity and a challenge. This presentation shows the journey of the Merito Universities Group from Poland as it integrates AI-driven practices into academic workflows. The study plans to show how attitudes, learning processes, and institutional strategies shape the path toward an AI-empowered workplace.

The first part addresses the problem: human and cultural dimensions of AI adoption. Common barriers include employees' fear of the unknown, technology anxiety, and concerns over job relevance. Faculty often perceive AI as a mere technical tool rather than a transformative force that inclines us to ask ourselves the why, what, how questions about teaching students. This mindset shows the necessary shift: from defensive attitudes to open curiosity and from tool-based understanding to reshaping educational processes.

The second part presents the developmental process for faculty prepared by Merito Universities. By designing tailored learning programs for faculty and lecturers, Merito emphasised AI literacy, ethical awareness, and hands-on experimentation, as well as the right to fail and make mistakes. The process unfolded across distinct stages—defensiveness, awareness, exploration, experimentation, and transformation—each accompanied by institutional support and peer mentoring.

The case study section illustrates concrete steps taken to build confidence and competence: workshops on generative AI, interdisciplinary pilot projects, and communities of practice where educators co-create AI-informed teaching materials. Through these initiatives, Merito Universities hoped to transform initial skepticism into engagement, empowering staff to reimagine pedagogical design.

**Accelerating the transition to net zero alignment, energy and carbon management,
standards development and circularity in developing economies**

Dr Reginald Dennis Gwisai

Pro Vice - Chancellor, Unicaf, Zimbabwe

While developing economies such as Zimbabwe are ambitiously targeting global warming limits of 1.5°C by the year 2050 through curtailing climate change impacts. Most economies still focus on technology as the main accelerator, due to impact materiality for sustainability reporting. However, there is lack of implementation evidence in Circular Economy (CE) ecosystems, Net Zero organisational alignments, Energy and Carbon Management (Carbon Neutrality) infrastructure, Circularity, behavioural/practice aspects and financing. From a scoping review approach, there is a need to advance wholesome strategies for decision making across sectors. Furthermore, several case studies highlight the application of Net Zero, Carbon Neutrality, Standards Development and CE principles at micro, meso and macro (national, regional and global) levels with dominance from the industrial sector. In contrast, agriculture, water and energy exhibit infancy levels with regard to implementation. Key to the transition agenda is standards development which offers a strategic approach through harmonisation, reducing technical barriers trade (AfCFTA), advancing common practices in business, sustainability, resilience and best practices. Hence, there is a need for a paradigm shift in order to develop coordinated policies with an influence on innovation and behaviour change towards circularity.

Perinatal mental health: A public health approach

Dr Ioanna Koliandri
Academic Coordinator and Programme Leader
School of Education, Humanities and Social Sciences
Unicaf, Federal

Perinatal mental health; most commonly depression, anxiety and post-traumatic stress, are prevalent and consequential for mothers, infants and families. Globally it is indicated that 10–20% of women experience a clinically significant condition during pregnancy or the first postnatal year, with higher rates in low- and middle-income settings (WHO, 2022; Howard et al., 2020). Suicide is still the most common cause of late mother death in high-income countries, and untreated illness can lead to poor caregiving, unfavorable child outcomes, and in certain situations, maternal fatality (Dossett et al., 2024).

Using Cyprus data from the INTERSECT programme (N=238; ≤ 2 years postpartum), mean Birth Satisfaction Scale–Revised (BSS-R) score was 25.45 (SD=6.69). Mode of birth was 45% vaginal and 55% caesarean (20.2% emergency). Perceived traumatic birth (0–10) averaged 3.14 and correlated strongly and negatively with overall satisfaction. In multivariable models, emergency caesarean ($\beta \approx -4.0$), maternal complications ($\beta \approx -2.3$), and neonatal complications ($\beta \approx -3.0$) independently predicted lower satisfaction (adjusted $R^2 \approx 0.13$). Partner presence and non-clinical support were associated with higher satisfaction. Qualitative accounts highlighted modifiable care points: respectful communication, informed consent and shared decision-making, clear information in the preferred language and facilitated partner presence.

These findings align with international evidence and point to pragmatic levers for Cyprus: safeguard informed choice and continuity, strengthen referral integrity with named next steps and timeframes, expand midwifery-led and community supports, and routinely track coverage, timeliness, continuity, and outcomes. Placing perinatal mental health at the centre of maternity services is both feasible and necessary for equitable family wellbeing.

Screentoria: Rethinking Learning in Screen-Saturated Classrooms

Dr David James, Associate professor in Sociology, Head of Law and Social Sciences

School of Social Sciences and Humanities

University of Suffolk

This presentation introduces the concept of screentoria—screen-mediated learning spaces inspired by Latour’s (2014) analogy to medieval scriptoria—to explore how screens shape attention and cognition in higher education. The presentation will examine the tension between the cognitive costs of multitasking and the benefits of distributed cognition enabled by digital tools. Rather than advocating screen bans, we propose a framework focused on classroom design, metacognitive strategies, and student self-efficacy. By viewing classrooms as screentoria, we can better navigate the challenges and opportunities of screen-rich learning environments.

Abstracts are presented in the running order of the programme.

**Day 1: School of Business
Monday, November 17th, 2025**

Session 1: Project & Operations Management

Advancing SME growth through strategic project management in Sub-Saharan Africa

Elsa Araya

Unicaf in collaboration with the University of Suffolk

This study investigates how Small and Medium-sized Enterprises (SMEs) in Sub-Saharan Africa realistically integrate Strategic Project Management (SPM) while operating under resource limitations. SMEs across SSA commonly face financial, institutional support, and organisational capacity, all of which hinder long-term resilience and growth (Igwe, Onjewu and Nwibo, 2018). Resource Orchestration Theory (ROT) explains how these enterprises create value by resource structuring, bundling and leveraging (Sirmon et al., 2011). Building on this, the study explores how firms may shift from reactive informal business models to more strategic and project-aligned practices. Employing a qualitative design and applying inductive thematic analysis of secondary sources, the research identifies five major barriers, financial constraints, infrastructural/technological deficits, human capital gaps, organisational inefficiencies and fragmented institutional support systems.

Findings indicate many SMEs navigate challenges by partial or improvised strategic responses such as informal innovation, digital adaptation and basic planning tools. This highlights the relevance of ROT, which suggests that access to resources alone is insufficient without internal capabilities to coordinate and strategically align these resources. However, in these contexts, SPM is rarely institutionalised and, rather than being a quick fix, SPM adoption is a long-term capability development process that demands broader changes. These changes include institutional reform, distributed leadership, improved access to finance and financial literacy and enhanced digital integration.

This dissertation, therefore, offers insights for SME owners, policymakers and financial institutions by proposing pathways as a foundational approach to integrate SPM in firms' operations. It acknowledges key limitations, particularly the dependence on secondary data and the broad approach across various industries (cross-sector generalisation). Future research should explore the evolution of SPM within specific sectors and over longer timeframes. In essence, this study contributes to practice by illustrating how SMEs in SSA might gradually formalise operations and transition to strategic, structured project models while functioning under resource constraints.

Evaluating the effectiveness of the fast-tracking project management approach in reinforced foundation construction projects

Serwadda Moses

Unicaf in collaboration with Liverpool John Moores University

The study focused on evaluating the effectiveness of fast-tracking project management approach in reinforced foundation construction projects. Specifically, the study set out to investigate the feasibility and effectiveness of fast tracking in reinforced foundation construction projects, identify the critical success factors (CSFs) for fast-tracking reinforced foundation construction, evaluate the impact of fast tracking on project schedule, cost and quality and to develop a framework for effective fast-tracking implementation. Fast-track construction projects have become more common in recent years as a response to increased demand. The sector was known for its high-risk and high-complexity features. Regardless of the degree of difficulty in construction projects, the construction industry has responded to requirements for faster project delivery deadlines to meet standards, emergency/disaster preservation, and time-to-market constraints.

To achieve this, the paper undergone a comprehensive literature review on several papers that have been published. The researcher reviewed the literature for several studies, such as articles, journals and books in this field from 2015 to 2024. This study employed a secondary data analysis and relevant data was collected from existing literature, including peer-reviewed journal articles, industry reports, project case studies, and government publications. Key sources include databases such as Google Scholar, ScienceDirect, and ASCE Library, as well as project reports from construction firms that have implemented fast-tracking. Data on project schedules, costs, quality assessments, and success factors was extracted and analysed to identify trends, patterns, and correlations related to fast-tracking effectiveness. A systematic review was conducted to assess the feasibility, challenges, and benefits of fast-tracking in reinforced foundation projects, ensuring that only high-quality and relevant studies are included. The analysis involved a comparative approach, evaluating projects that have utilised fast-tracking versus those that followed traditional project management methods. Metrics such as project duration, cost overruns, and defect rates were examined to determine the impact of fast-tracking on construction efficiency and quality. Thematic analysis was applied to identify critical success factors (CSFs) from previous studies, ensuring a comprehensive understanding of the conditions necessary for effective fast-tracking implementation. The analysis of secondary data indicated that the fast-tracking project management approach can significantly enhance the efficiency of reinforced foundation construction projects by reducing project duration and optimising resource utilisation. However, the effectiveness of this approach is highly dependent on key factors such as early contractor involvement, effective coordination among stakeholders, and the use of advanced construction technologies. While fast-tracking has been shown to minimise delays and improve overall project delivery, challenges such as increased risk of rework, higher upfront costs, and potential quality compromises must be carefully managed. The findings highlight that successful fast-tracking implementation requires a strategic balance between speed, cost, and quality to ensure project success. Based on these insights, it is recommended that construction firms adopt a structured framework for fast-tracking, incorporating risk mitigation strategies such as enhanced communication, real-time monitoring systems, and phased approvals to minimise errors. Project managers should prioritise early stakeholder engagement and invest in skilled workforce training to manage the complexities of fast-tracked projects.

Enhancing project quality management practices to improve project delivery performance: A comparative study of best practices in selected NGOs in Juba, South Sudan

Daniel Lodinya Stephen

Unicaf in collaboration with Liverpool John Moores University

This study explores how Project Quality Management (PQM) practices can enhance the delivery of NGO projects in Juba, South Sudan, a region characterised by political instability, limited resources, and weak governance structures. Given these complexities, traditional PQM models such as ISO 9001 and Total Quality Management (TQM) are often too rigid to be effectively applied. The research study underscores the necessity of developing adaptive and context-specific PQM frameworks customised to the operational realities of fragile environments.

The study critically examines key Project Quality Management (PQM) theories and empirical findings to identify the specific challenges faced by NGOs in fragile environments. Classical models such as ISO 9001, Total Quality Management (TQM), Lean Six Sigma, and the PMBOK Guide often struggle to adapt to the unpredictability of such contexts. The research advocates for adaptive PQM approaches that emphasise stakeholder engagement and continuous quality improvement as important for enhancing project effectiveness in conflict-affected settings.

The research applied a qualitative research design and conducted a systematic review of secondary data, including peer-reviewed journal articles, organisational reports, and relevant case studies. This methodological selection was shown by the need to explore complex contextual factors influencing PQM in fragile environments. Thematic analysis was employed to identify recurring patterns across diverse sources, enhancing the credibility and trustworthiness of the findings (Creswell & Poth, 2018; Braun & Clarke, 2006).

The thematic analysis of secondary data discovered that PQM execution barriers in Juba-based NGOs are often rooted in weak institutional leadership, limited resource allocation, and stringent donor-imposed requirements. However, key components of PQM, like quality planning, assurance, and control, are acknowledged conceptually; their practical execution remains limited due to operational inefficiencies and contextual constraints. These findings underscore the gap between theoretical frameworks and applied practices in fragile environments (Braun & Clarke, 2006; Creswell & Poth, 2018).

The analysis discloses that PQM execution in Juba is delayed by weak institutional leadership, constrained resources, and rigid donor frameworks. While core PQM components are conceptually recognised, practical execution remains limited. The study recommends a flexible PQM model customised to local contexts, stressing adaptability, community participation, and risk management.

Finally, Chapter Six concludes with strategic recommendations for strengthening PQM in NGOs: investing in capacity building, institutional governance, and adaptive frameworks. It emphasises the need for continual research to improve PQM effectiveness in fragile environments.

A project management perspective on optimising supply chain resilience in global trade

Aimable Niyonkuru

Unicaf in collaboration with University of Suffolk

The research investigates the integration of agile and lean project management approaches to support supply chain efforts of landlocked developing countries (LLDCs), focusing on Rwanda. Because of a lack of proper infrastructure and poor internet connectivity, along with depending largely on main trade routes, LLDCs face risks to their supply chains. Because the world of global trade is changing fast and countries rely more on each other, LLDCs like Rwanda must improve supply chain stability. The study examined how agile methods and lean management can help companies handle supply chain problems.

Reviewing existing literature, it is clear that the agile way of managing supply chains gives them the quick flexibility to overcome problems like delayed customs, traffic obstacles, and market shifts. In contrast, organisations following lean practices are more concerned with doing things efficiently, reducing waste, and keeping costs down when things are stable. According to the review, Rwanda's supply chains would benefit most from combining agile and lean practices.

Data from case studies of Rwandan coffee companies were incorporated in addition to secondary data to study how agile and lean methods are used to overcome supply chain issues. Through secondary data analysis, the research assesses the effectiveness of these methodologies in responding to supply chain disruptions and optimising operational costs. The findings indicate that agile methods are crucial for managing disruptions, providing the flexibility to swiftly adapt to changing market and supply conditions, especially transportation delays and border inefficiencies, thereby maintaining supply chain continuity. In contrast, lean methodologies facilitated process streamlining, inventory cost reduction, and waste elimination. Notwithstanding, the research noted the limitations of lean practices in disruption-prone environments, particularly regarding the need for rapid adaptability.

This study emphasises the need for agile and lean approaches for LLDC supply chain resiliency, the importance of digital infrastructure, stakeholder participation, and supportive policy frameworks in implementing these techniques. It recommends investing in digital solutions, including real-time tracking systems and automated customs processing, to improve supply chain agility and efficiency. The study also suggests capacity building, localised sourcing, and local supply network investment to reduce dependency on global trade channels and increase resilience to disruptions. The research recommends data-driven decision-making and cross-supply chain collaboration for supply chain management. It promotes project management standards in trade agreements, high points supply chain resilience funding, and incentives.

This study shows how context-specific agile and lean adaptation can help inform LLDC supply chain resilience. It advocates merging project management and supply chain resilience theories, previously studied separately, into a resilience optimisation framework. The study enhances the Resource-Based View and Dynamic Capabilities Theory by analysing how project management capabilities improve resilience and Contingency Theory by comparing project management approaches under different disruptions.

Impact of global disruptions on global supply chains: Evaluating post-pandemic recovery strategies and resilience measures adopted in the manufacturing and service sectors

Erick Kipkurui Keter

Unicaf in collaboration with the University of East London

The COVID-19 pandemic exposed critical weaknesses in global supply chains, severely disrupting manufacturing and service industries. This paper examines how organisations rebuilt resilience between 2020 and 2025 through recovery strategies and technological adaptation. Using secondary data from academic studies, industry reports, and policy analyses, the study applies a comparative framework to assess sectoral vulnerabilities and response effectiveness.

Findings reveal distinct impact patterns: manufacturing faced raw material and production disruptions (78% and 71%), while service industries experienced workforce and demand shocks (82% and 75%). Digital transformation proved pivotal, delivering 35% faster recovery and 42% higher resilience scores. Supply base diversification showed 89% success compared to 34% for single sourcing, while supplier collaboration and geographic diversification significantly reduced recovery times.

The study concludes that resilience depends on integrated strategies rather than isolated measures. It proposes a framework centered on digital transformation, supplier collaboration, and global sourcing diversification to enhance preparedness for future disruptions.

Session 2: Finance, Economics & Revenue Mobilization**The effect of corruption on financial management in the public sector****Alex Mutale****Unicaf University in Zambia**

The main aim of this study is to bring out the effects of corruption in the financial management of the public sector. Corruption impedes development as funds meant for improving service delivery for the stakeholders end up being misdirected to the unintended purposes.

This secondary data on the matter of corruption has indicated that corruption affects the public sector financial management negatively. It has also indicated that the people occupying public offices abuse their authority by using resources meant for community development and service delivery for their own benefit. Corruption has different definitions, but the World Bank has defined corruption as "the abuse of public funds for private gain" (World Bank, 1997).

Corruption has different categories such as administrative (bureaucratic) and political. Under administration the processes and procedures that are bureaucratic in nature attract bribes, nepotism, theft and other corrupt practices to reduce the normal waiting time for the delivery of services and products. On the other hand, political corruption in nature is where senior officials abuse authority in awarding contracts to friends and relatives as well as companies where they have an interest.

Regardless of efforts being put in place by the government(s), the Corruption Perception Index (CPI) shows that corruption in the public sector keeps on increasing.

The study also shows that there is a link between the moral decay and the increase of corruption cases. Although there is need for further research to determine how the morals of public officers affect the rise in corruption cases.

There is a need to fight corruption by everyone both in the private and public sector so that resources being misdirected through corruption can bring development as well improve service delivery to the citizenry.

The Impact of Brokerage Channel on the Growth of Ghana Insurance Industry

Franklin Owusu-Sekyere

Unicaf in collaboration with University of East London

The role played by distribution channels in insurance industries cannot be overemphasised. The Ghana insurance industry employs distribution channels that are independent of the insurance companies, and others that are linked to the insurance companies. The broker channel, which is an independent channel, has been noted for its impact it makes to the insurance value chain in terms of its service delivery. But how does its service impact on the revenue growth of the industry?

This research determines the impact that the brokerage channel has on the growth of the Ghana insurance industry and also ascertains the relationship between the brokerage channel and other channels of the industry. This is to provide an empirical basis for industry stakeholders' policy formulation regarding industry growth.

The research employed multivariate time series analysis, specifically OLS regression analysis on a balanced revenue data of the industry and all the distribution channels from the Ghana National Insurance Commission.

The test results conclude that the broker channel is a dependable channel that the market has confidence in, and that its growth impacts positively the industry revenue growth. The results also reveal the strong relationship between the telecom companies' channels and the industry growth. It is recommended that the telecom companies' channel is reviewed and positioned as an independent channel to enhance its legitimacy in the industry, like the broker channel has, and to leverage its digital penetration to increase insurance accessibility.

This research establishes a strong foundation for leveraging the broker channel as a reliable segment within the insurance sector. Effective management of distribution channels in the insurance industry should encompass the formation of strategic partnerships with telecommunications companies to enhance digital insurance offerings and increase accessibility. Given that the Telecom Companies Channel has demonstrated a positive influence on industry growth, it is recommended that regulators further research this channel to identify key drivers of its expansion and support its promotion through informed policy measures.

The impact of the introduction of a late payment interest on taxpayer behaviour and revenue mobilisation in Kenya Customs

Emmanuel Meduwa

Unicaf in collaboration with University of East London

This study presents original research stemming from a Master's dissertation, offering the first empirical analysis of late payment interest implementation within Kenya's customs operations. It addresses a significant policy gap in a context where the Kenya Revenue Authority (KRA) missed customs revenue targets by KSh 43 billion between 2018 and 2023, partly due to delayed payments (KRA, 2024).

Contrary to being a literature review or replication study, this investigation adopts a mixed-method approach grounded in the Economic Theory of Compliance (Obongo, 2020) and Rational Choice Theory (Ngang'a & Ouma, 2023). The methodology involves a secondary qualitative analysis of taxpayer behavior and compliance psychology, as well as original quantitative modeling of customs data. International frameworks from Muthoni (2018) and Skov (2023) are contextually adapted—not replicated—to create Kenya-specific simulations. These models assess the impact of a proposed 2% late payment interest regime on compliance and revenue outcomes.

Findings suggest that the penalty system could lead to a 15% increase in early payers and a 29% reduction in late payers. Additionally, the timing of payments may improve from 163 days late to 50 days early, yielding KSh 124.7 billion in improved cash flow and an annual revenue boost of KSh 22 billion (Muthoni, 2018; Skov, 2023).

This research contributes an original, context-specific framework for customs enforcement, offering practical insights for Kenya and other developing countries. It validates the role of late payment interest as both a deterrent and a revenue mobilisation tool, when supported by automated systems and compliance education.

Session 3: Human Resource Management & Organisational Behavior**An investigation into the recruitment and selection process of the education sector
in the Cayman Islands****Ann-Marie Lambert****Unicaf in collaboration with Liverpool John Moores University**

Education is and continues to be a significant constituent of human society. It plays a pivotal role in helping to shape the lives of individuals and aids in the progress of nation building (Snatika.com, 2024). The individuals who are tasked with the responsibility - that of shaping and developing lives and nations through academic capacities - are the repositories from which pupils are equipped and cultivated with the necessary skills and competences suitable for national development (Otoo, I.C., Assuming, J. and Mensah Agyei, P., 2018). According to Otoo et.al. (2018), it is therefore critical that educational institutions and agencies ensure that they recruit and select qualified professionals. Recruitment and selection are essential qualities of human resource management (HRM), more specifically, within the education sector. This is so particularly because human resource management is responsible to recruit and select the most competent teachers as they have a direct influence on the quality of education that is given to students. This study investigates the recruitment and selection process of the education sector in the Cayman Islands, specifically examining its structure and procedures, importance, and effectiveness. The study looks at how these procedures are put into operation, the function they play in learning outcomes and the challenges met. This study uses a secondary data analysis approach. Key findings show that Caymanians are least represented in the education sector due to a lack of trained local talents, thus making expatriate educators heavily reliant on. These findings are indicative of the need to motivate, train and develop more Caymanians to serve the education sector. Policymakers, HR professionals, and educational administrators looking to enhance recruitment and selection strategies in the Cayman Islands' education sector, will benefit significantly, improving the quality of education provided to students.

Secondary analysis of the impact of flexible working policies on employee performance and organisational productivity in the UK corporate sector

Loice Hawa Charles Bathuel

Unicaf in collaboration with Liverpool John Moores University

Using a secondary research methodology, this study explores the impact of flexible working arrangements on employee performance and organisational productivity within the UK corporate sector. In response to the growing adoption of flexible working policies, accelerated by technological advancements and shifts in workforce expectations. This research addresses a critical gap in understanding how such arrangements influence individual and organisational outcomes in a post-pandemic context. While existing literature highlights both benefits and challenges of flexible working, findings remain fragmented, with limited integration of insights specific to the UK corporate environment.

The primary objectives of this study are to critically evaluate existing academic and industry research to determine whether flexible working enhances or hinders employee performance and organisational productivity. The research systematically reviews and synthesises peer-reviewed articles, government reports, and credible industry publications to uncover prevailing patterns, contradictions, and implications.

Key findings suggest that flexible working can significantly boost employee motivation, job satisfaction, and work-life balance, improving performance. At the organisational level, enhanced productivity, reduced absenteeism, and improved talent retention are frequently observed. However, the effectiveness of flexible working is highly contingent on organisational culture, leadership support, communication infrastructure, and the nature of job roles. Challenges such as reduced collaboration, managerial resistance, and blurred work-life boundaries may hinder these benefits if not adequately addressed.

The study concludes that when strategically implemented, flexible working is a valuable tool for enhancing employee and organisational outcomes. Its success depends on a tailored approach that aligns with company goals and employee needs.

This research contributes to the academic field by consolidating disparate findings and providing a nuanced understanding of flexible working's dual impact. Practically, it offers evidence-based insights for HR professionals and corporate leaders aiming to design effective flexible policies that foster high performance and sustained productivity in the evolving UK workplace.

The role of spiritual intelligence in ethical and effective decision-making: A public sector leadership framework for Namibia

Edla Kaumbi

Unicaf in collaboration with University of Suffolk

This dissertation investigates the role of spiritual intelligence (SI) in shaping ethical and effective decision-making among senior leaders in the public sector, using Namibia as a case study. The research responds to a critical gap in governance reform discourse, which tends to emphasise structural and procedural solutions while overlooking the internal capacities of leaders. Framing SI as a higher-order intelligence concerned with moral clarity, purpose, and compassion, the study explores whether and how this dimension can strengthen public leadership in contexts marked by complexity and institutional fragility.

Using a qualitative, desk-based research design, the study draws on secondary sources including academic literature, governance reports, policy documents, and case analyses of leadership failures in Namibia. Particular attention is paid to the Fishrot corruption scandal, the closure of the SME Bank, and the liquidation of Air Namibia. These are all illustrative of decision-making divorced from long-term public value. Comparative insights from Indonesia and Malaysia, where SI has been integrated into leadership development programmes, offer practical models of implementation.

Findings indicate that SI is not only conceptually sound but also necessary in public leadership. It enables decision-makers to act with ethical foresight, resilience, and service orientation. These are traits that are underdeveloped in technocratic or compliance-driven leadership models. The research identifies both enablers (e.g., values-based organisational cultures) and barriers (e.g., political interference, lack of SI training) to integration within public institutions.

The study concludes by proposing a context-sensitive framework for embedding SI into Namibia's public sector leadership development architecture. It recommends reforms in recruitment, training, and performance evaluation to institutionalise ethical leadership grounded in reflection, integrity, and public accountability. By centring inner capacities alongside structural reform, the dissertation contributes to a more holistic and values-based model of governance.

Relationship between Succession Planning Strategies and Employee Retention

Justine Mawunya Dzansi

Unicaf in collaboration with Liverpool John Moores University

Observations made in Ghana and within some African Countries show that many organisations have little interest in developing and implementing succession planning (Louisa, 2022). Thus, when there is sudden departure of managers or key staff, organisations are found in difficult situations to find suitable successors (Rothwell, 2005). This has been a true state observed in my organisation. Nonetheless, succession planning as a management function is critical for an organisation's growth and success. Succession planning scheme helps to drive retention of competent employees within an organisation and ensure an organisation has a pool of talent within the organisation in order to fill a vacancy created by sudden departure of employees. In spite of this established importance of succession planning, Seniwoliba (2015) claimed that the effect(s) of succession planning in an organisation has not been fully explored. This research seeks to help management of organisations to understand the need to have an effective succession planning strategy in place. The result of this research helps to stimulate academic interest in the area of succession planning strategy and its association with employee retention to either affirm the conclusion drawn or otherwise. The primary aim of this study is to examine the association between succession planning strategies and employee retention. This research used Bayer Company as a case study. A significant aspect of this research was to review existing literature as a way of framework and develop the methodology. This research relies on secondary sources (literature research) and the researcher seeks to gather enough data which helped analysed qualitatively. The study revealed that succession planning strategy helps to improve performance and enable organisations to fill key positions without recruiting from external sources. Thus, when employees recognise that the organisation plans to invest in their career development, they feel more valued and become more loyal to stay in the organisation.

**The effect of leadership pattern on organisational performance: A case study of
selected banks in Nigeria**

Asaolu Ajoke Mobolaji

Unicaf in collaboration with University of East London

This study investigates the impact of various leadership styles on organisational performance within the Nigerian banking sector, which is currently experiencing rapid technological advancements, regulatory challenges, and heightened customer expectations. Utilising a quantitative correlation research design, the research draws upon data from annual reports, performance indicators, and employee perception surveys obtained from the Central Bank of Nigeria and various commercial banks.

The analysis explores the connections between transformational, transactional, and laissez-faire leadership styles and key performance metrics such as profitability, employee productivity, operational efficiency, and customer satisfaction. The findings reveal that transformational leadership is significantly associated with increased employee motivation and positive organisational outcomes, leading to improvements in innovation, staff morale, service delivery, and corporate culture. Conversely, while transactional leadership can achieve short-term goals, its effectiveness is highly contextual and influenced by external factors. In contrast, laissez-faire leadership is found to have a detrimental effect on performance, indicating that a lack of direction can impede organisational effectiveness.

The study underscores the necessity for adaptive and visionary leadership to navigate the complexities of the Nigerian banking landscape. It emphasises the need for strategic investments in leadership development initiatives, such as targeted training programs and mentorship opportunities, to strengthen leadership capabilities and promote sustained organisational performance. These measures are vital for ensuring the competitiveness and long-term success of the Nigerian banking industry.

This study highlights both similarities and differences with existing research on leadership styles in the Nigerian banking sector. It finds that transformational and democratic leadership positively impact organisational performance, supporting earlier work by Bass (1990) and Avolio & Bass (2004) on employee motivation. Echoing Nigerian studies (e.g., Ojokuku, Odetayo & Sajuyigbe, 2012), it confirms that effective leadership enhances productivity and customer satisfaction. While some studies suggest authoritarian leadership may yield short-term compliance (e.g., Adeyemi-Bello, 2001), this research indicates that it negatively affects long-term performance.

By focusing on the Nigerian banking sector, this study addresses a gap in empirical research regarding indigenous leadership patterns, offering bank-specific insights in a complex financial environment where decision-making and customer service are crucial.

Day 2: School of Business
Tuesday, November 18th, 2025

Session 4: Ethics, CSR & Sustainability

Mental wealth measurement: A case study of Kenya

Anne Saruni

Unicaf in collaboration with University of East London

Mental wealth is a concept comprising a stock of emotional assets embedded within a population that collectively drive creativity, resilience, productivity and social cohesion (Occhipinti, Hynes, Geli, Eyre et al., 2023)

Measurement of mental wealth, therefore, becomes significant in assessing national prosperity. Occhipinti, Buchanan, Hynes, Eyre et al., (2023) observed that mental wealth measurement expands the lens through which national prosperity is assessed, providing an alternative to Gross Domestic Product (GDP), as it aggregates the value of a population's cognitive, emotional and social capital that form mental wealth. This research was undertaken with the intent of establishing the status and significance of mental wealth measurement between 2019 and 2024 in Kenya, and whether there were barriers, if any, to its measurement and how they had been overcome. Additionally, the study sought to confirm whether the measurement of mental wealth was relevant to national development and policy development and whether the two were correlated. The study sought to explore global best practices in mental wealth measurement and propose how the same could be adapted to the Kenyan situation

The study adopted a multi-method qualitative approach for the research, with qualitative secondary data sourced.

The research revealed that, while Kenya's policy was increasingly focused on mental health issues, structured mental wealth measurement remained limited because of insufficient funding, data collection gaps and siloed governance structures.

Arguably, however, Kenya has an opportunity to adopt existing mental wealth measurement frameworks or localise a metric that expands its view beyond GDP by appreciating the contribution that mental assets make to national productivity.

Time constraints resulting in reduced depth of study, and the use of secondary data that limited primary data collection, were some of the limitations experienced while undertaking the study.

Use of sustainable materials in the construction of healthcare facilities: Cost-effectiveness and environmental impact

Omotola Akande

Unicaf University in Zambia

The construction of healthcare facilities traditionally relies on materials that are capital-intensive and environmentally hazardous, contributing to climate change, resource depletion, and increased operational costs (Corvalan et al., 2020; Nasereddin & Price, 2021). This dissertation investigates the use of sustainable materials in healthcare construction, focusing on their cost-effectiveness and environmental impact (As & Bilir, 2023). The study aims to provide a comprehensive analysis of how sustainable materials can address these challenges and promote a shift towards eco-friendly construction practices.

Through an extensive literature review and evaluation of secondary data, the research examines the environmental benefits of sustainable materials, such as reduced carbon emissions, conservation of natural resources, and improved energy efficiency. The study also explores the long-term cost savings associated with sustainable materials, despite their higher initial costs. Key barriers to the adoption of sustainable practices are identified, including limited availability, high upfront expenses, and lack of awareness among stakeholders.

The findings highlight the significant potential for healthcare facilities to reduce their environmental footprint and achieve long-term cost savings by adopting sustainable construction practices. Recommendations include the implementation of government policies and financial incentives to encourage the use of sustainable materials, strengthening supply chains through global partnerships and local production, investing in research and development to create innovative and cost-effective materials, and promoting education and awareness through industry-focused training programs and public campaigns.

By integrating sustainable materials into healthcare construction, facilities can enhance their environmental sustainability, reduce operational costs, and contribute to a healthier and more sustainable future (Anderson et al., 2021). This research provides valuable insights for policymakers, industry stakeholders, and healthcare administrators, offering practical frameworks and strategies for the effective implementation of sustainable construction practices in the healthcare sector.

**The impact of sustainable international business practices by multinational enterprises in
developing economies**

Puleng Mpete

Unicaf in collaboration with University of East London

In an increasingly interconnected global economy, multinational enterprises (MNEs) play a pivotal role in shaping international business practices, particularly in developing economies. While MNEs bring opportunities for economic growth, technological transfer, and employment, their operations also raise concerns regarding environmental sustainability, social equity, and long-term developmental impacts. This research investigates the impact of sustainable international business practices by MNEs in developing economies, focusing on their dual roles as agents of economic progress and potential contributors to environmental and social challenges.

The study employs a secondary data analysis approach, drawing on academic literature, corporate sustainability reports, and international organisation data to explore the economic, social, and environmental impacts of MNE activities. Key findings reveal that MNEs significantly contribute to economic growth through foreign direct investment (FDI) and job creation, but their operations can also exacerbate income inequality, environmental degradation, and social disparities. Corporate social responsibility (CSR) initiatives, while beneficial, often lack long-term sustainability due to their project-based nature. Additionally, existing sustainability evaluation frameworks, such as Environmental, Social, and Governance (ESG) scores, are not fully suited to the unique conditions of developing economies.

The research concludes that MNEs must adopt a more inclusive and stakeholder-centric approach to sustainability, aligning their operations with the developmental goals of host nations. Policymakers and industry practitioners should strengthen regulatory frameworks and promote long-term, context-specific sustainability strategies. These findings offer valuable insights for integrating sustainable business practices into long-term development strategies, ensuring equitable and sustainable growth in developing economies.

Session 5: Technology, Innovation & Digital Transformation**Evaluating the effects of service digitisation on customer service quality at Equity Bank:****A systematic review****Monica Kethu****Unicaf in collaboration with University of East London****Introduction**

Digitisation has reshaped the banking industry, transforming customer experiences, especially in the developing countries like Uganda, where access to digital services has resulted in financial inclusion (Jameaba, 2022). This study explores how the digitization of services at Equity Banks has impacted customer service quality, with a focus on customer satisfaction and service performance.

Methods:

A systematic review was done, using secondary data, including customer surveys, institutional reports and peer reviewed literature. The SERVQUAL model, comprising of reliability, responsiveness, assurance, empathy and tangibles, the service quality dimensions, was central to this analysis (Parasuraman et al., 1988). The Innovation Diffusion Theory (Oliver et al., 1997) and Disconfirmation Theory (Rogers and Williams, 1983) informed the theoretical framework for interpreting the adoption behaviors and satisfaction levels of customers at Equity banks.

Results

Digitisation significantly improved customer service quality across all SERVQUAL dimensions. Enhanced reliability and responsiveness were observed through 24/7 access and faster transaction speeds. Tangibles such as mobile banking interfaces and ATM networks also improved. The widespread adoption of digital banking platforms in Uganda, Kenya, and Rwanda indicates increased customer trust and satisfaction. However, barriers such as limited digital literacy and cybersecurity concerns persist (Kabagambe, 2024; Muthoni et al., 2019; Semmo, 2023).

Discussion:

The findings highlight that digitisation has contributed positively to service delivery, operational efficiency, and customer satisfaction at Equity Banks. The results suggest that continuous investment in user-friendly digital infrastructure and customer education is vital to mitigate challenges. While risks remain, digitisation presents a transformative opportunity for inclusive financial services in sub-Saharan Africa.

Conclusion

Digitisation enhances customer service quality, operational efficiency and financial inclusion. However, to fully realise its potential, sustained investments are needed in digital literacy, cybersecurity measures, and inclusive infrastructure to address existing barriers and ensure equitable access.

Women, AI, and the future of the market

Rodina Shash

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The role of women in shaping the future is becoming increasingly vital as the financial environment evolves due to rapid technological advancements, especially artificial intelligence (AI). Women's influence on AI-driven innovation in financial markets, particularly in trading and market analysis, is the main focus of this presentation, "Women, AI, and the Future of the Market." This study examines women's contributions, challenges, and impacts in AI and finance through a mixed-methods approach that combines quantitative analysis of gender representation and market participation data with qualitative case studies and interviews with female leaders.

Preliminary research indicates that women's unique perspectives foster innovative and ethical AI applications. However, structural barriers such as bias and lack of mentorship continue to limit their representation. Additionally, while AI has the potential to democratise market access, its development and use must be inclusive to ensure fair rewards. This presentation emphasises the critical importance of gender diversity in driving technological progress and creating a more inclusive financial market by addressing specific issues and supporting findings with empirical research (Johnson,2023; Patel,2023; Smith & Lee, 2022).

Post-harvest practices and value realisation in Uganda's coffee sector: A study of technological gaps, gendered labor dynamics, and the paradox of low domestic consumption

Anisha Alinda

Unicaf in collaboration with University of East London

Uganda is Africa's leading exporter of coffee, a crop that sustains over 1.7 million farming households and contributes significantly to the nation's foreign exchange earnings. Despite its strategic importance, the sector continues to suffer from persistent post-harvest handling challenges that hinder value realisation at the farm level. This study investigates the extent to which recommended post-harvest practices mandated by government policy are adopted by coffee producers in Uganda, with a focus on the Greater Masaka region. It examines how socio-economic factors and access to public extension services and private sector support influence the implementation of these practices.

The research highlights a disconnect between policy intentions and actual practice on the ground. Despite the introduction of quality assurance frameworks aimed at improving coffee grades and boosting farm gate prices, adoption remains inconsistent. The study also explores gender dynamics within the post-harvest process, noting that while women are primarily responsible for labor-intensive activities such as sorting and drying, they remain economically marginalised in the value chain.

Additionally, Uganda's low domestic coffee consumption estimated at less than 6% further limits opportunities for local value addition and exposes producers to volatile global market prices. Using a mixed-methods approach, the study draws from both primary and secondary data to assess the technical, social, and institutional barriers that hinder effective post-harvest management. The findings reveal that without enhanced training, equitable access to technology, and targeted policy implementation, efforts to upgrade coffee quality will remain limited.

This research contributes to the broader discourse on agricultural transformation by offering policy-relevant insights into how Uganda can strengthen its coffee value chain. By addressing gaps in post-harvest practice adoption and promoting inclusive participation, especially for women, the study recommends a more integrated and stakeholder-responsive approach to coffee sector reform that supports sustainable livelihoods and improved competitiveness.

The impact of AI, Digital Twin, and IIoT in oil, gas, and energy management

Tamunofiniarisa Brown

Unicaf University in Zambia

This paper, presented by Engr Tamunofiniarisa Brown—an industry veteran with over 26 years of experience in Nigeria's Oil and Gas sector—explores the transformative impact of Artificial Intelligence (AI), Digital Twin technology, and the Industrial Internet of Things (IIoT) on energy management and operational efficiency. As global energy demand continues to evolve alongside the push for sustainability and decarbonisation, the integration of these advanced technologies presents a significant opportunity for innovation and value creation across upstream, midstream, and downstream operations.

AI facilitates predictive analytics, intelligent automation, and real-time decision-making, driving smarter asset management and reduced downtime. Digital Twin technology enables dynamic simulation and real-time monitoring of physical assets and processes, allowing operators to model scenarios, forecast failures, and optimise maintenance schedules. Meanwhile, IIoT fosters seamless connectivity between devices, sensors, and control systems, enhancing visibility, safety, and operational reliability.

In Nigeria, where infrastructure challenges and fluctuating production dynamics persist, the deployment of AI-driven solutions, digital twins, and IIoT frameworks can significantly improve asset utilisation, minimise losses, and ensure compliance with environmental and safety standards. Drawing on real-world insights and case studies from the Niger Delta region, this presentation highlights how local operators can harness these technologies to transition from reactive to proactive management strategies.

The paper further discusses implementation barriers such as data silos, cybersecurity risks, and skills gaps, proposing strategic pathways to overcome these hurdles through policy alignment, capacity development, and stakeholder collaboration. Ultimately, it positions AI, Digital Twin, and IIoT integration as a critical enabler of resilience, sustainability, and competitive advantage in Nigeria's evolving energy landscape.

This session aims to stimulate dialogue among engineers, policymakers, and digital innovators on accelerating technology adoption for a more efficient, transparent, and sustainable oil, gas, and energy future.

Session 6: French University

**Transformation numérique et performance des PME en home care : Enjeux stratégiques
à port Sainte Lucie****Nahomie Bellegarde
Unicaf Université**

Dans un contexte de vieillissement démographique et de transition technologique accélérée, Les PME intervenant dans les soins à domicile doivent composer avec des défis complexes d'adaptation structurelle et opérationnelle. Cette étude examine les dynamiques de transformation numérique de ces structures à Port Sainte Lucie (Floride), en identifiant les leviers, freins et opportunités favorisant une digitalisation réussie.

Cette étude mobilise une méthodologie qualitative fondée sur une analyse documentaire structurée à partir d'une grille thématique articulée en cinq axes : obstacles à la digitalisation, leviers internes et externes, cadre réglementaire, stratégies numériques, et spécificités territoriales. Le corpus exploité comprend des sources scientifiques (Raimo et al., 2023 ; Zhang et al., 2020), institutionnelles (ANS, 2025) et professionnelles récentes, analysées au prisme d'un cadre théorique pluriel permettant une lecture systémique des dynamiques de transformation numérique.

Les résultats mettent en évidence des freins structurels persistants — limitations budgétaires, faible maturité numérique, complexité des normes — contrebalancés par des leviers organisationnels tels qu'un leadership transformationnel (Spitzer et al., 2015), une culture d'apprentissage, et le recours à des partenariats territoriaux. L'analyse intègre notamment sur les apports du modèle de changement organisationnel de Kotter (1996) et du cadre d'alignement stratégique de Henderson et Venkatraman (1993), afin de croiser les dimensions humaine, technologique, institutionnelle et locale.

En se concentrant sur les PME du secteur Home Care à Port Sainte Lucie, cette étude vise à combler un déficit notable dans une littérature encore peu développée à cette échelle territoriale. Elle propose un cadre d'analyse structurant à destination des acteurs publics et privés pour orienter leurs choix stratégiques en matière de digitalisation. Fondée sur des sources secondaires, cette contribution offre un ancrage pertinent pour initier une réflexion localisée sur la transformation numérique des soins de proximité, tout en appelant à des approfondissements empiriques, notamment comparatifs ou longitudinaux.

Le rôle de Pétrosen dans la gestion des revenus pétroliers et gaziers du Sénégal

Djibril Diatta

Unicaf Université

Dans le cadre de la 3ème conférence des masters de l'unicaf 2025, nous avons l'opportunité de présenter un bref résumé des résultats de notre de recherche notre étude concerne le secteur des hydrocarbures au Sénégal et porte sur le rôle Pétrosen dans la gestion des revenus pétroliers et gaziers du Sénégal les objectifs de cette recherche sont entre autres de comprendre le rôle de Pétrosen dans la gestion ressources pétrolières et gazières, d'évaluer son système de gouvernance et de mesurer l'impact des projets pétroliers et gaziers l'accent sera mis sur l'implication de Pétrosen ainsi que sur la gestion et la redistribution des revenus la méthode choisie dans notre étude est la recherche documentaire les données secondaires sont collectées à partir de sources en accès libre trouvées sur internet la pertinence de la documentation consultée nous a permis d'aboutir aux résultats suivants les projets majeurs du Sénégal sont Sangomar Grand Tortue Ahmeyim (GTA) Yakaar Téranga avec des participations respectives de 18%, 20% et 10% les revenus issus de l'exploitation pétrolière et gazière sont encore en phase de montée en puissance car les projets d'exploitation sont récents ou en cours de démarrage les recettes issues de l'exploitation des hydrocarbures sont réparties entre le budget général de l'Etat le fonds de stabilisation pour se prémunir des risques de volatilité des recettes et le fonds intergénérationnel destiné aux générations futures Pétrosen joue un rôle central dans la gestion et la répartition des revenus pétroliers et gaziers en participant aux projets en contribuant au financement et à la mise en place d'un cadre de gestion transparent et responsable il faudra renforcer le contrôle et la supervision au sein de Pétrosen et profiter pleinement des autres filiales pour atteindre ses objectifs de production, de transformation, de raffinage et d'industrialisation

Stratégies de gouvernance des PME congolaises de transformation agroalimentaire face aux opportunités de la zone de libre échange du continent Africain (ZLECAF)

Kabene Ciranvu James

Unicaf Université

A l'ère où la mondialisation intègre complètement le système économique mondiale, des initiatives ne cessent de naître pour une intégration régionale, certaines économies croissent fortement et d'autres disparaissent progressivement, en fonction du succès du positionnement stratégique des entreprises y apprenantes. En Afrique l'une de plus grande initiative sur ce chemin est la pensée d'une Zone de Libre échange pour le continent Africa conduisant la fusion de 54 économies (Alexander & Hod, 2025).

La présente recherche analyse et propose des stratégies de gouvernance pour les PME congolaises de transformation agroalimentaire afin de renforcer leur compétitivité et leur capacité à exploiter pleinement les opportunités offertes par cette ZLECAF.

D'une manière plus spécifique, ce travail identifie les opportunités et les défis majeurs que représente la ZLECAF pour les PME congolaises. Il analyse les modèles actuels de gouvernance pratiqués par ces Petites et Moyennes Entreprises ; évalue les limites de ces modèles dans une portée régionale et propose des formes de gouvernance et des leviers stratégiques susceptibles de renforcer à la fois la conformité aux exigences d'intégration régionale et la performance sur le marché régional et local.

Adoptant une démarche qualitative exploratoire fondée sur l'analyse thématique de données secondaires (rapports institutionnels, articles académiques et documents officiels) tout en s'appuyant sur le réalisme critique comme philosophie et le constructivisme modéré comme épistémologie, ce travail révèle que la ZLECAF offre aux PME congolaises « un marché potentiel de plus de 1,3 milliard de consommateurs » (Maïga, 2025), un accès accru à plusieurs formes de financements pour stimuler leurs activités économiques et la possibilité de se spécialiser sur des segments à valeur ajoutée (manioc, plantain, etc.). En revanche, ces entreprises peinent à atteindre les seuils de valeur ajoutée exigés, à se conformer aux normes de traçabilité, de qualité, de transparence et à structurer leur gouvernance

Pour pallier ces insuffisances, ce travail propose quatre modèles de gouvernance adaptés au contexte congolais : la gouvernance familiale encadrée via des instances consultatives et des comités d'audit, la gouvernance au conseil d'administration restreint regroupant experts agricoles, juristes et autres spécialistes, La gouvernance contractuelle et des partenariats public-privés pour mutualiser les efforts techniques et financiers dans le développement des infrastructures et la gouvernance hybride associant le contrôle familial et la nomination de cadres professionnels. Selon la recommandation de cette recherche ces modèles doivent s'appuyer sur des stratégies clés comme la course à la certification qualité et traçabilité des produits, le renforcement et la restructuration de la fonction finance, les alliances stratégiques régionales, la transformation digitale et le développement des compétences techniques.

Productivité, motivation du personnel et développement de l'entreprise

Quantchi Honoré

Unicaf Université

L'objectif de la recherche est d'analyser les formes actuelles et particulières des motivations qui impulsent significativement le succès, la productivité et le développement de l'entreprise. A partir de la question principale de recherche « quels sont les facteurs motivationnels actuels qui influencent la productivité en entreprise ? », le choix du mode d'investigation, orientée vers l'approche qualitative a consisté à collecter des données secondaires issues des sources documentaires de choix, sur la motivation du personnel contribuant au succès de l'entreprise. Une analyse de contenu a été faite. Il ressort de cette investigation, les principaux résultats suivants : i) les facteurs classiques de la motivation capables de déclencher la productivité sont le salaire, (Herzberg F. 1950), les autres rémunérations et l'environnement de travail (politique salarial & climat social), ii) pour comprendre l'engagement, la motivation des agents, 3 grandes théories se présentent: théories des « besoins-mobiles-valeurs » ; les théories du choix cognitif et les théories de l'autorégulation-métacognition (Roussel P. 2000) ;iii) les formes actuelles de la motivation contribuant au succès de l'entreprise sont liées à la nouvelle configuration du travail (télétravail, TIC, IA...) à l'environnement physique et au contexte social dans lequel évolue l'entreprise. En conclusion, les sources de motivation actuelles, influençant la productivité en entreprise dépendent de plus en plus du cadre du travail, de l'autonomisation et la valorisation du travail pour l'employé, de son système de croyances et de valeurs, du style de management du leader, de la reconnaissance du mérite, du système de contribution-rétribution (Adams J.S. 1960) et de la sécurité sociale.

**Approche sur l'amélioration du modèle « Pay-as-You-Go » dans le secteur des énergies
renouvelables en Afrique**

Billy Bologo

Unicaf Université

L'objectif de ce travail est d'identifier l'impact du modèle de la facturation PAYG en Afrique spécialement dans le secteur des énergies renouvelables et en particulier dans le solaire.

Il a été également question de proposer les pistes d'amélioration de ce dernier. Cette étude vise à rechercher et à découvrir les difficultés que rencontre le modèle PAYG en RD Congo qui a conduit plusieurs compagnies commerciales à faire faillite à cause des difficultés liées aux non-respects des contrats et la misère dont les consommateurs semble être le seul bénéficiaire de ce modèle selon le témoignages des plusieurs compagnies.

Pour ce faire nous avons au préalable effectué un état de lieux des systèmes PAYG en Afrique ensuite nous avons analysé et identifier quelques compagnies évoluant dans ce secteur dont NovoMoto nous a servi de repère en république démocratique du Congo.

Nous avons également pu analyser les données de (Default Management) qui nous a permis de comprendre le nombre des clients en défauts des paiements et ensuite par une méthode comparative des produits vendu reparti en trois périodes différentes ainsi qu'au différentes stratégies des ventes utilisé par l'entreprises nous avons pu décelé les différents problèmes liés au non-respect du contrat avec l'appui des quelques témoignages des clients souscrit aux différentes offres des produits vendu par l'entreprise qui a également mise en lumière tous les 9 problèmes lié au défauts des paiements dont la stratégie de vente utiliser en B2C a été cité permis les 4 causes majeures repris dans ce travail . Cette étape cruciale nous a permis des proposer des pistes des solutions de ce modèle en vue de remédier aux différents problèmes des non-respect des contrats notamment la concentration des ventes en B2B dans des milieu rural a été répertorié parmi les 8 solutions formulé en terme de recommandation dans ce travail.

Day 3: School of Sciences, Health Sciences, Technology and Engineering
Wednesday, November 19th, 2025**Session 7: Technology, AI & Data Science****Netflix's sentiment analysis using fetched YouTube comments and python****Maurice Gitonga Ndwiga****Unicaf in partnership with Liverpool John Moores University****Introduction**

This project studies and analyses public opinion on Netflix by examining YouTube comments that either concern, mention or tag to Netflix. It automated sentiment analysis by using Python-based natural language processing (NLP). The study explored the need for productive tools to measure customer feedback in the entertainment industry and provide opportunities for making data-driven decisions (Ahmed et al., 2022).

Methods

YouTube API was used to collect the data from 6,000 YouTube comments with the help of Python programs. The code performed the sentiment analysis in such steps as fetching the comments from comment sections, pre-processing, filtering the collected comments, storing the filtered comments in a text file, analysing, determining the polarity, and drawing graphical charts such as pie charts and bar charts. The code facilitated the execution and pre-process of video comment sections to reduce bias. Pre-processing extracted the URLs, symbols, unnecessary Emojis, and stop words through NLTK libraries. Lemmatisation standardised words to their root forms (for example, "watched" to "watch"). VADER lexicon classified sentiments as positive, negative, or neutral. This calculated polarity scores (Singh and Tiwari, 2021). Visual tools like Matplotlib created charts to display the results. The program code visualised the results using bar graphs and pie charts (Figures 1 and 2). Filtered comments were stored in a text file for transparency (Figure 5).

Results

Positive sentiments dominated at 43.2% (2,338 comments). These comments validated Netflix's original content and its user-friendly interface. Negative sentiments were 30.1% (1,630 comments). These comments provided insights on increased pricing and regional content limitations or restrictions. Neutral comments accounted for 26.7% (1,448). It indicated mixed opinions or disengagement. These findings supported the review of previous studies to prove YouTube's value in audience sentiment analysis (Mehta and Deshmukh, 2022).

Discussion

The study confirms Netflix's content strengths but identifies pricing as a critical issue. Neutral sentiments suggest unidentified opportunities to engage undecided users through targeted marketing. Python-NLP automation demonstrated scalability for large-scale analysis. This helped to address and fill the gaps in Netflix production and marketing (Hilario et al., 2021). Limitations included reliance on text data. This might ignore insights from visual or audio context. Future research could integrate deep learning models like Bi-LSTM to interpret sarcasm or informal language (Halawani et al., 2023). This approach would help in the future to understand informal language in sentiment analysis. Ethical adherence ensured anonymised data handling. This helped to comply with YouTube's policies.

Conclusion

Automated sentiment analysis provides projective insights for streaming platforms. The methodology used enabled real-time feedback analysis. This would help companies like Netflix refine user experiences and maintain competitiveness. Implementing these findings would enhance customer satisfaction and strategic decision-making.

Development of an LLM-based e-learning system to enhance personalised education for universities in Tanzania

Shadrack Oyaya Wattai

Unicaf in partnership with University of East London

In Tanzanian universities, traditional teaching methods often make it difficult to meet the needs of all students. This situation leads to inconsistent educational outcomes and reduced student engagement (Ndume et al., 2008; Sife et al., 2007; Ambele et al., 2022). To tackle these problems, this study creates and assesses a learning system that relies on AI. The system combines large language models (LLMs). Our main goal is to transform rigorous school systems into dynamic, adaptive learning environments. The system tries to help students achieve their goals. This makes a major contribution to the growth of personalised learning.

The Design Science Research (DSR) methodology guided this project. It was used to organise and build a successful artifact. To make development user-friendly and flexible, we used the Evolutionary Prototyping Model. The system includes LLM-driven tutoring, offering real-time academic guidance. It also provides adaptive content delivery tailored to student progress and automated feedback. Its technical base uses SvelteKit for the frontend, Node.js runs the backend, PostgreSQL handles the data, and GPT-4o as an integrated LLM. During development, we identified and considered key challenges to AI adoption in Tanzania. These challenges include infrastructure limits, faculty readiness, and current policy gaps.

The potential performance and user acceptance of this system are evaluated by synthesising findings from existing literature on similar AIED implementations in comparable contexts. The study concludes that LLMs can significantly enhance personalised learning, with positive user experiences reported even in resource-constrained settings. The functional prototype designed in this study demonstrates the potential of AI to support more effective and engaging learning. The insights derived from this analysis provide valuable guidance for policymakers and educators in Tanzania, contributing to the digital transformation of higher education in the region.

Fairness and bias in machine learning algorithms: A case study in lending practices**Sunday Paul Agboola****Unicaf in partnership with University of East London**

Machine Learning (ML) algorithms are transforming lending practices globally, including in Nigeria, by improving efficiency and predictive accuracy in credit scoring and loan approval processes. However, research shows that these systems can perpetuate and even exacerbate historical biases embedded within training data, potentially disadvantaging marginalised groups such as rural dwellers and female entrepreneurs (Barocas & Selbst, 2016; Hurley & Adebayo, 2016).

This study examines algorithmic fairness and bias mitigation through a case study in Nigerian automated lending, focusing on two classification models Logistic Regression and Random Forest and three mitigation strategies: pre-processing (re-weighting), in-processing (adversarial debiasing), and post-processing (threshold adjustments) (Kamiran & Calders, 2012; Hardt, Price, & Srebro, 2016). A mixed-methods approach was adopted, combining quantitative analysis of fairness metrics Demographic Parity Difference (DPD), Equalised Odds (EO), and Disparate Impact (DI) with qualitative interviews involving compliance officers, underwriters, and data scientists.

Results indicate that all three mitigation strategies reduce bias, though they differ in complexity, performance trade-offs, and organisational feasibility. Post-processing achieved the greatest fairness improvement without reducing the Area Under the Curve (AUC), but stakeholders expressed concerns about perceptions of preferential treatment. The study highlights the interplay between technical interventions and regulatory constraints, noting that the absence of explicit Central Bank of Nigeria (CBN) guidelines limits the adoption of fairness-aware systems.

It concludes that achieving equitable ML lending in Nigeria requires continuous fairness audits, transparent communication, and socio-technical frameworks that align ethical principles, regulatory requirements, and institutional capacity (Okon, 2018; Lee & Floridi, 2021). These findings contribute to the broader discourse on AI ethics in the Global South and offer practical guidance for responsible AI deployment in financial services.

**Algorithmic myth busting: A data science framework for detecting
and correcting cultural bias in AI systems**

Sunday Ndubuisi Okonkwo

Unicaf in partnership with University of East London

As artificial intelligence (AI) systems become increasingly embedded in education, policy, healthcare, and business, ensuring their integrity and fairness is crucial. Yet, most AI models are trained on data that reflect the dominant cultures and perspectives of the Global North, often overlooking African voices, languages, and cultural narratives (Birhane, 2021; Benjamin, 2019). This research presents an original data science framework, “Algorithmic Mythbusting,” designed to detect and mitigate cultural bias in language-based AI systems, with a specific focus on African datasets.

Using a combination of natural language processing (NLP), sentiment analysis, and fairness metrics, this study investigates how African folktales, proverbs, and indigenous expressions are represented within major pre-trained language models. The methodology involves collecting African literary and oral corpora, conducting topic modeling and entity recognition, and comparing results with outputs from AI systems such as ChatGPT and Google Bard (Bender et al., 2021). Bias auditing tools, including IBM AI Fairness 360, are applied to quantify underrepresentation and distortion (Bellamy et al., 2019).

Expected findings include evidence of bias, omission, or stereotyping of African content within mainstream AI models, alongside proposed corrections through culturally rich data augmentation. The study aims to contribute a reproducible pipeline for inclusive AI development that prioritises cultural equity and ethical design (Jobin, Ienca, & Vayena, 2019).

By bridging data science and cultural ethics, this research not only enriches global AI fairness discourse but also empowers African students and researchers to shape a future where technology reflects diverse worldviews. The work aligns with the UMC 2025 theme of Inspire, Connect, Evolve, offering a student-led innovation that inspires responsible AI, connects cross-cultural insights, and evolves current approaches to machine learning fairness.

Transforming healthcare delivery in Lesotho through big data and machine learning:

A predictive analytics framework

Thato Charles Massa

Unicaf in partnership with University of East London

This study explores how big data and machine learning (ML) can be leveraged to create a smarter, more responsive health system in Lesotho one that not only improves patient outcomes but also serves as a model for other low - and middle-income countries (LMICs) facing similar challenges.

Lesotho's healthcare system faces significant challenges, including high rates of HIV and tuberculosis, delayed detection of disease outbreaks, and inefficient allocation of medical resources. These issues are worsened by fragmented data systems and a lack of advanced tools for predictive analysis. However, the rise of digital health initiatives presents an opportunity to revolutionise healthcare delivery. The core of this research is the development of a data-driven framework that integrates multiple sources of health information, such as national health databases (DHIS2), climate records, and geospatial data. By applying advanced ML techniques including Long Short-Term Memory (LSTM) networks for outbreak prediction and clustering algorithms for resource optimisation this study aims to provide actionable insights for healthcare planners. For example, predictive models could forecast disease trends, allowing health officials to allocate vaccines and medical supplies more effectively. Meanwhile, interactive dashboards would visualise real-time data, helping decision-makers identify high-risk areas and respond faster to emerging health threats.

What makes this study groundbreaking is its focus on Lesotho, where such ML applications in public health remain untested. By bridging the gap between data science and healthcare policy, this initiative supports the country's efforts to achieve Sustainable Development Goal 3 (Good Health and Well-being). Beyond immediate benefits, the framework could be adapted by other LMICs with limited infrastructure, demonstrating how technology can overcome geographical and logistical barriers. Ultimately, this research is about saving lives. Faster outbreak detection, optimised resource distribution, and data-backed decision-making can transform how healthcare is delivered in Lesotho ensuring that no patient is left behind in the digital health revolution.

Big data analytics in criminal prosecution in Uganda

Julius Peter Torach

Unicaf in partnership with University of East London

Introduction

The study was intended to discover the trends and patterns to ultimately facilitate decision making, improve case management and operational efficiency in prosecution, save costs, enhance productivity of prosecutors and satisfaction of the stakeholders, including enhanced trust and confidence in the criminal justice system. It will act as an input in the development of data-driven strategies, knowledge management and the optimisation of data management processes in ODPP.

Methods

The study focused on data mining and predictive data analytics including using pre-collected data on criminal cases that were handled by the Office of the Director of Public Prosecutions (ODPP) in Uganda. The study covered a 5-year dataset which had hitherto not been effectively analysed and utilised. Data science lifecycle was used which included understanding the business problem, data collection, data cleaning and processing, exploratory data analysis (EDA), building and evaluation of model, communicating the model result, deployment and maintenance of the model (Kumar & Garg, 2018). The data mining life cycle adopted was the Cross Industry Standard Process for Data Mining (CRISP-DM) framework, which covered the full data mining lifecycle process. Random forest and logistic regression algorithms were used as suggested by Mandalapu (2023).

Results

The various analyses that were conducted showed consistent results that thefts and assaults were the most prevalent cases handled from 2018/2019 to 2022/2023 financial years. An interactive crime analysis dashboard for newly registered cases was also created.

Discussion

There was a general decrease in crime rate from 2018, but there was a marked increase from 2020, especially for offences of theft. This was likely caused by the effect of Covid19, as was corroborated by the Uganda Police Force Crime Report of 2021. Lumping of offences under category "Others" however did not give a clear picture of the performance of the individual offences thereunder. Policy directive should therefore be given to staff to provide the detail of each category of crime. Other challenges discovered included poor data quality such as incomplete data and errors. It can therefore be argued that this study made a contribution to criminal justice policy, crime management and to the body of knowledge on the application of artificial intelligence, machine learning and big data analytics in criminal prosecution.

Session 8: Governance, Policy & Infrastructure**Attainment of Sustainable Development Goal 6 (SDG 6) in Kenya****Irene Wangechi Munene****Unicaf in partnership with Liverpool John Moores University**

According to Kenya's Constitution (2010) and the Kenya Vision 2030, access to adequate sanitation and clean, safe water is a fundamental human right. This commitment aligns with Sustainable Development Goal 6, which advocates for universal access to clean water and sustainable sanitation management (MoWSI,2023). Water is a vital natural resource essential for sustaining life and driving socio-economic development, making it a critical component for national development as stated by report on sessional paper No.1 of 2021 on National Water policy.

Kenya continues to face water crisis, exacerbated by climate change, poor management of water resources and services, poor management of water resources and services by water institutional framework, environmental degradation, population growth, and rapid urbanisation (Ondigo, Kavoo and Kebwaro,2018; Kilingo, Bernard and Bin,2021; Mulwa et al.,2021). This explanatory research investigates the progress made toward achieving SDG 6 in Kenya, the challenges encountered, and potential future solutions amid ongoing water scarcity.

The objectives of the research include assessing the impact of financial gaps in the water sector, examining the implications of data integrity issues within the water institutions, and analysing the influence of climate change on the attainment of SDG 6. A quantitative methodology will be applied to address the following research questions: What are the impacts of financial gap on the development and management of climate-resilient and environmentally sustainable water sector investments? What are the implications of data integrity issues within water governance institutions?

Quantitative data will be sourced from secondary data and analysed using appropriate quantitative techniques. The findings reveal a significant financial gap hindering progress toward achieving SDG 6, as well as inconsistencies in data reporting and monitoring. To address these challenges, water sector institutions must strengthen their data management systems to ensure consistency and reliability. Innovative financing approaches such as blended financing, cost recovery through water tariff reforms, increased government funding, and concessional financing from development partners are recommended to bridge the financial gap and support sustainable water sector development in Kenya.

Evaluating the Gwayi-Shangani dam's role in mitigating water scarcity in Bulawayo's metropolitan

Philimon Gundani

Unicaf in partnership with University of East London

Introduction

Severe water shortages have plagued Bulawayo Metropolitan for many decades (Mukhlani et al., 2014). The water crisis has eroded the industrial & economic base (Dube & Nhapi, 2022). The leading causes, a lack of infrastructure upgrades and rapid urbanisation, contribute to poor service provision (Gentry et al., 1997). There is a belief that the Gwayi-Shangani Dam is a beacon of hope in alleviating water scarcity (GSDDR, 1992). The study aims to evaluate the dam's adequacy in mitigating water scarcity in Bulawayo's Metropolitan Area.

Why the study: to address Water Scarcity, inform water management, and evidence-based decision-making.

On Methodology: This study employed a mixed-methods approach, combining quantitative and qualitative methods to enhance the validity and reliability of the findings. Selected because it is a proven and tested method (Kothari 2004). The study integrated qualitative and quantitative data through a triangulation approach. The study results revealed that the current supply is far less than demand. The infrastructure's treatment capacity and storage facilities need upgrades to accommodate the supply from the Gwayi-Shangani dam. The total net supply from the Gwayi-Shangani dam to Bulawayo metropolitan is 344,000 m³/d, well above the current demand of 230,847 m³/d. The study has its limitations, including reliance on secondary data, which limited the study's depth due to a lack of control. The data was already integrated, findings were based on suppressed demand figures, and data quality was compromised due to inconsistencies in figures and sampling bias.

In conclusion, the Gwayi-Shangani Dam (GSD) adequately alleviates water scarcity in Bulawayo Metropolitan beyond 2052. The study recommends exploring the Water-Energy Nexus theory in the context of water management. Future research can investigate infrastructure adequacy, taking into account the increased supply from GSD.

Dissertation on analysing the influence of data-driven decisions in disaster response in South Sudan

Nhial Mawien Nhial Bol

Unicaf in partnership with University of East London

Disasters, whether natural or human-induced, pose significant threats to lives, infrastructure, and national stability, especially in fragile contexts like South Sudan. Effective disaster response requires timely and informed decision-making; however, the integration of data-driven methodologies within South Sudan's disaster management framework remains limited.

This study examines how data-driven decision-making (DDD) can enhance disaster preparedness, response and recovery efforts. Using a mixed-methods approach, the research includes secondary data analysis, qualitative interviews, quantitative surveys, and case studies from similar context, such as the Philippines and Nepal.

The findings highlight several challenges that hinder the implementation of data-driven decision-making (DDD) in South Sudan, including fragmented data systems, inadequate technological infrastructure, political and institutional barriers, and lack of capacity among disaster management professionals. Despite these obstacles, the study demonstrates that improved data integration, real-time analytics, and the use of Geographic Information System (GIS) and remote sensing can significantly enhance the effectiveness of disaster response.

The study concludes that investing in technology, capacity-building, and inter-agency collaboration is essential for overcoming these barriers. Key recommendations include establishing a centralised disaster management database, strengthening data-sharing policies, and enhancing community-based disaster preparedness. By addressing these gaps, South Sudan can develop a more resilient disaster response system that utilises data for timely and effective decision-making.

Investigating the challenges of digital evidence collection in cloud-based cryptocurrency crimes

Kefa Bisarara Moses

Unicaf in partnership with University of East London

The growing adoption of cloud services and cryptocurrency platforms has revolutionised the digital landscape but also introduced new complexities for forensic investigations. Criminals are increasingly leveraging these technologies to store, conceal, or transfer digital assets linked to illicit activities, making the process of collecting admissible digital evidence both technically and legally challenging.

This research explores the intersection of cloud computing and cryptocurrency in the context of cybercrime investigations. It aims to identify and analyse the key obstacles faced by forensic professionals when attempting to acquire, preserve, and interpret digital evidence stored across cloud-based environments and decentralised blockchain networks.

Using a qualitative approach, the study will involve simulated environments to replicate common scenarios in cryptocurrency-related cybercrimes. Tools such as blockchain explorers, cloud audit logs, and open-source forensic platforms will be tested to evaluate their effectiveness in retrieving traceable data. Legal and ethical frameworks will also be assessed to understand how jurisdiction and data sovereignty impact evidence collection in cross-border investigations.

The expected outcome of this research is a clearer understanding of current forensic limitations, as well as practical recommendations to improve readiness for handling hybrid digital crimes. This work contributes to the evolving field of digital forensics by addressing a gap in investigative strategies for cloud-integrated, crypto-enabled criminal activities.

The role of the board in the cyber resilience of public sector critical national infrastructure:

A case study of the Kenya Revenue Authority (KRA)

Collins Owuor Alando

Unicaf in partnership with University of East London

As cyber threats intensify in scale and sophistication (World Economic Forum, 2025), public-sector institutions, particularly those managing critical national infrastructure (CNI), face escalating risks to service continuity, data integrity, and public trust (Lehto, 2022). This study investigates how board-level governance influences organisational cyber resilience (Dupont et.al, 2023), using the Kenya Revenue Authority (KRA) as a case study. Based on a qualitative, interpretivist methodology (Thanh & Thanh, 2015), the research employs document analysis of KRA's strategic, audit, and regulatory records (Bowen, 2009), thematically coded and triangulated with international frameworks and academic literature (Braun & Clarke, 2006; Renz, Carrington, & Badger, 2018). Findings reveal that whereas KRA's board has progressively embedded cybersecurity into strategic planning through formal policies and oversight structures (OECD, 2021), critical gaps persist in specialised cyber expertise, metrics, and training (World Economic Forum, 2021; Clinton et.al, 2023). The study identifies key board actions that enhance cyber resilience, such as treating cyber risk as an enterprise-wide priority, integrating it into committee mandates, and demanding actionable cyber resilience indicators (PwC, 2024). However, selective adoption of global standards (ISO/IEC 27001 and COBIT) and contextual limitations emphasise the need for tailored cyber governance frameworks in developing-country settings (Katuruza, 2021). The study contributes to cyber governance theory by contextualising cyber oversight within Kenyan public institutions. It also provides practical insights for policymakers, regulators, researchers, and board practitioners seeking to strengthen digital resilience in critical national infrastructure.

Optimising blockchain node performance and security in hybrid cloud and bare-metal environments

George Gatheca Njoroge

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Blockchain infrastructure forms the foundational layer of decentralised networks necessitating highly available secure and performant environments for blockchain node deployment and maintenance. These networks are among the most computationally intensive applications globally, with a single Bitcoin transaction estimated to consume approximately 1130.40 kilowatt-hours (kWh) of electricity, equivalent to the power usage of an average US household over 38.74 days. The escalating energy consumption particularly associated with Proof of Work (PoW) consensus mechanisms which is used by networks like Bitcoin has drawn significant criticism due to its environmental impact, with Bitcoins global energy consumption often equaling or exceeding that of some industrialised economies. While alternative consensus mechanisms like Proof of Stake (PoS) adopted by Ethereum significantly reduce hardware requirements and energy consumption, the dominant market share of PoW based cryptocurrencies like Bitcoin underscores the continued relevance of optimising their underlying infrastructure.

This research aims to thoroughly analyse and optimise blockchain node performance and security within hybrid cloud and bare metal environments. Due to the cost prohibitive nature of directly running extensive node deployments for an independent researcher this study will leverage publicly available records concerning node requirements, real world experiences from established blockchain infrastructure providers, insights from industry forums, and my personal four years of professional experience in managing blockchain nodes for a company. Through a detailed comparative analysis and synthesis of data driven insights, this study proposes an optimised deployment strategy designed to maximise efficiency while concurrently minimising operational costs and mitigating prevalent security risks. The work addresses a critical gap in existing literature by offering a holistic examination of performance, security and cost factors in hybrid blockchain infrastructure, which current studies often address in isolation. The findings are intended to serve as a valuable resource for blockchain validators, node operators, infrastructure providers and decentralised application developers, aiding in informed decision-making that supports network decentralisation operational resilience and profitability.

Enhancing cybersecurity in the healthcare sector: Protecting electronic health records (EHRs) in Botswana and South Africa

Onalenna Mpape
Unicaf in partnership with University of East London

The digitisation of healthcare services has led to the adoption of Electronic Health Records (EHRs), enhancing patient care, operational efficiency, and data accessibility for both healthcare providers and patients (Chuma & Ngoepe, 2022). However, this shift has also introduced significant cybersecurity challenges because EHRs contain sensitive and confidential data (Alasmary et al., 2022). The foregoing is the research problem that provides motivation for the proposed study. Based on this research problem, the overarching aim of the study is to explore the current cybersecurity landscape within the healthcare sector, with a specific focus on the protection of EHRs. A key finding from the literature review shows that while EHRs contribute positively to the quality and continuity of care, their implementation often lacks adequate security controls, making them vulnerable to exploitation (Akanbi, Olagunju, & Adepoju, 2023). This is the gap in the literature that this study will address. Hence, this paper aims to present a customised cybersecurity framework designed to protect EHRs against current and emerging cyber threats. The framework will serve as a strategic guide for healthcare providers, policymakers, and IT professionals seeking to build more secure and resilient healthcare systems. The research will adopt a mixed-methods design approach, combining qualitative and quantitative data collection and analysis. Case studies in South Africa will be employed to contextualise findings. Data will be collected through semi-structured interviews, surveys, literature review, and analysis of recent cyber incidents. The study is expected to produce a context-specific cybersecurity framework that will provide a strategic reference for healthcare providers, policymakers, and IT professionals in enhancing the security and resilience of healthcare systems.

**Risk factors for unsafe abortion and their contribution to maternal mortality among
key populations in the southern African region**

Christine Ewoi Eloto

Unicaf in partnership with Liverpool John Moores University

In Southern Africa, unsafe abortion practices continue to be a major cause of maternal death. Even with current regulations, dangerous practices persist, especially among vulnerable communities, due to societal stigma, limited access to healthcare, and restrictive laws. This review aimed to evaluate the existing evidence about populations at risk, key risk factors, and effectiveness of current legal and policy frameworks. A scoping review approach was used, following the PRISMA-ScR criteria. A computerised search was carried out in the following databases: PubMed, Google Scholar, Scopus, WHO Global Health Library, and African Journals Online. Secondary sources like the WHO website and Google were used to find grey literature and additional data. A total of twenty-two peer-reviewed papers from 2010 to 2024 were considered. Through the use of thematic analysis, data was synthesised. Analysis of 22 papers that satisfied the inclusion requirements identified four major themes: policy efficacy, risk factors, maternal mortality, and populations at risk. Among the identified vulnerable categories are low-income women, adolescents, those living in rural areas, and marginalised populations. The lack of access to contraception, financial difficulties, and inadequate healthcare systems are major causes of unsafe abortion. Mainly as a result of infection and bleeding, maternal mortality is still high. Restrictive laws are associated with greater rates of unsafe abortions and deaths, while liberal legislation has decreased mortality in South Africa and Mozambique, but stigma and poor implementation still exist. The implication of this study is that there is a need for targeted community education, investment in healthcare, and policy reforms. Multi-level interventions are necessary to address unsafe abortion and resultant maternal mortality.

**Day 4: School of Sciences, Health Sciences, Technology and Engineering &
School of Education, Humanities and Social Sciences
Thursday, November 20th, 2025**

Session 9: Health and Medicine

**Resilience of health professionals in responding to malaria in fragile zones
of the Democratic Republic of Congo**

Ezéchias Kumumbeya Mira Sasa

Unicaf Université (or Unicaf University in Malawi, FR)

Introduction

Malaria remains a major health burden in the Democratic Republic of Congo (DRC). Despite fragile conditions and conflict, interventions in Ituri and North-Kivu provinces have shown positive results (PNLP RDC, 2022; Amnesty International, 2023). This study examined how health professionals developed resilience in delivering malaria prevention and treatment in these provinces.

Methods

An exploratory qualitative approach was adopted using secondary data collected from May to August 2024. Case studies included mixed cross-sectional studies and non-randomised controlled trials conducted in Ituri and North-Kivu between 2016 and 2024. Fragility levels were classified according to Health Provincial Divisions and OCHA standards. The conceptual framework defined resilience as the capacity to sustain operations in crises (Sagan et al., 2022; WHO, 2021). Data were managed with Mendeley, coded with Taguette, and summarised in Excel. Ethical approval was granted by UNICAF, following the Declaration of Helsinki and the Code of Human Research Ethics.

Results

Resilience was demonstrated in low- and medium-fragility zones. Key strategies included community involvement, regular revision of plans, stakeholder collaboration, support from government and NGOs for logistics, regular field visits, NGO incentives, and reliance on national malaria policies not tailored to fragile settings.

Discussion

Health professionals showed resilience, but mostly through unplanned, reactive measures. Their robustness was not the result of systematic preparation. Building resilience in fragile contexts requires adapting national malaria policies and advancing research tailored to instability in the DRC.

**Evaluating the effectiveness of surgical site infection prevention protocols in operating theatres:
A systematic review of evidence-based practices**

Omolara Abosede Olayemi
Unicaf in partnership with Liverpool John Moores University

Surgical Site Infections (SSIs) are among the most common healthcare-associated infections and significantly contribute to postoperative morbidity, prolonged hospital stays, and increased healthcare costs. Despite the availability of international guidelines, adherence and implementation of SSI prevention protocols vary widely across healthcare settings, particularly in low- and middle-income countries (LMICs).

Aim: This systematic review evaluated the effectiveness of various surgical site infection prevention protocols implemented in operating theatres, with a focus on preoperative, intraoperative, and postoperative strategies.

Methods: A systematic search of PubMed, CINAHL, Scopus, and the Cochrane Library was conducted for peer-reviewed articles published between 2015 and 2025. Studies were selected based on predefined inclusion and exclusion criteria using the PICO framework. The PRISMA guidelines were followed throughout the review process. Data were extracted, appraised for quality, and thematically synthesised.

Results: Thirty-eight studies met the inclusion criteria. Key interventions associated with significant reductions in SSI rates included timely administration of prophylactic antibiotics, use of chlorhexidine alcohol for skin preparation, avoidance of break in the sterile techniques while donning gloves and gowns, sterile instrumentation, adherence to surgical hand antisepsis protocols, maintenance of intraoperative normothermia, the use of sterile draping techniques, and effective wound care postoperatively. The review also identified institutional factors such as staff training, monitoring, and resource availability as critical to successful protocol implementation.

Conclusion: Evidence supports that multifaceted SSI prevention protocols particularly those combining preoperative antibiotics, antiseptic skin prep, and intraoperative sterile techniques and effective postoperative wound care are effective in reducing SSIs. Consistency in protocol adherence, coupled with institutional support and training, enhances outcomes. These findings can inform best practices and policy updates for surgical environments.

Impact of low and inequitable childhood vaccination coverage on under-five mortality in Ethiopia: retrospective cohort study

Eden Yirdachew Tefera
Unicaf in partnership with University of Suffolk

Background

Vaccination is a critical public health intervention that significantly reduces morbidity and mortality rates among under-five children. In Ethiopia, immunisation coverage is suboptimal, exhibiting significant disparities among regions and socioeconomic groups. A recent systematic review highlights this evidence. The review points out a significant evidence gap: although numerous studies investigate vaccine-specific disease burden, there is a scarcity of research directly assessing the relationship between low and inequitable childhood immunisation and overall under-five mortality in Ethiopia.

Aims

The proposed study will evaluate the impact of low and inequitable childhood immunisation coverage on under-five mortality in Ethiopia. It aims to address a critical gap in the literature and to contribute evidence for national health policy and planning.

Methods

A retrospective cohort study design will be employed. This study will utilise secondary data from the 2019 Mini Ethiopian Demographic and Health Survey. The study will analyse immunisation status and mortality outcomes in under five children. A modified Poisson regression model will be utilised to assess the association between immunisation status and under-five mortality, adjusting for potential confounders.

Expected outcome

The study anticipated to show whether low and inequitable vaccination coverage is significantly associated with increased under-five mortality in Ethiopia. A substantial mortality burden is expected among high-risk populations with inadequate immunisation coverage and access. The anticipated results are expected to provide evidence for targeted and equity-oriented immunisation strategies and interventions, particularly in underserved communities.

Impacts

By generating robust, data-driven evidence, this study will support the national effort in attaining Sustainable Development Goal (SDG) 3.2, which focuses on the eradication of preventable under-five mortality by the year 2030. The findings of this research will be disseminated to key stakeholders including the Ethiopian public health institution and the Ethiopian Minister of Health, and shared through academic conferences and peer-reviewed journals.

Design and implementation of a convolutional neural network for malaria diagnosis: Image-based classification of uninfected and infected blood cells

Lawrence Ifeanyi Eze

Unicaf in partnership with University of East London

Malaria remains a major global health challenge, particularly in tropical and subtropical regions, where it contributes significantly to morbidity and mortality. Early and accurate diagnosis is critical for effective treatment, disease control, and the prevention of severe complications. However, conventional diagnostic methods such as manual microscopic examination of blood smears are time-consuming, prone to human error, and resource-intensive, while Rapid Diagnostic Tests (RDTs) often lack sufficient sensitivity and specificity. To address these limitations, this study proposes a custom Convolutional Neural Network (CNN)-based model for automated malaria diagnosis via image classification of blood smear slides into parasitised and uninfected categories.

The model was trained on the publicly available National Institutes of Health (NIH) Malaria Dataset, consisting of 27,558 microscopic images. Preprocessing steps included resizing images to 130×130 pixels, normalising pixel values, and applying data augmentation techniques such as rotation, shifting, shearing, zooming, and horizontal flipping to improve model robustness and generalisation. The proposed CNN architecture integrates multiple convolutional layers with ReLU activations, Batch Normalisation, MaxPooling layers, Dropout, and L2 regularisation to mitigate overfitting. The model was compiled with the Adam optimiser and binary cross-entropy loss, and training utilised callbacks such as EarlyStopping and ModelCheckpoint to optimise performance.

The model achieved a test accuracy of 94.43%. Evaluation using a classification report revealed a precision of 0.95 for uninfected and 0.94 for parasitised cells, with corresponding recall values of 0.94 and 0.95. These results demonstrate strong diagnostic performance and the ability to reliably differentiate between infected and uninfected cells. While the achieved accuracy is robust, future improvements may explore advanced architectures capable of reaching accuracies above 96%. This study highlights the potential of deep learning-based systems for accurate, rapid, and scalable malaria detection, particularly valuable in resource-limited clinical environments.

A deep learning based image multi-class classifier for eye diseases

Kyeyune Ashiraf

Unicaf in partnership with University of East London

The human eye is an important organ of the human body responsible for vision. Various people face eye problems at one time or another. These may be minor or major problems that can lead to loss of sight (Organization, 2019). However, the number of eye specialists is still scarce, especially in Sub-Saharan Africa (Graham, 2018). Thus, it is necessary to identify the major problems that should be handled by optometrists and ophthalmologists and leave the minor problems to opticians. This will help to save specialists time to focus on more complicated problems, thus increasing efficiency in human resource utilisation.

This study presents the development of a multiclass image classification model using a VGG-19 convolutional neural network architecture. The model is able to distinguish between different eye conditions depending on the features that exist in the fundus image as a result of the eye condition. During implementation, the model was trained using a dataset on “eye diseases classification” from the Kaggle website. The dataset contains images of eyes affected by cataract, diabetic retinopathy, glaucoma, and normal eye images. The model was tested with a new dataset and the classification report indicated a macro-average of 0.87 for precision, 0.86 for recall, and 0.86 for the F1 score.

For practical application, the trained model was integrated into a web-based platform that enables users to upload fundus images and receive predictions regarding the likely eye condition, along with class probabilities. The platform also provides brief information about some symptoms and tips on the treatment of the predicted eye condition. This tool has the potential to support early screening and clinical decision making, particularly in low-resource settings.

Treatment outcomes for tuberculosis in TB/HIV co-infected patients in Low and Middle-Income Countries: A scoping review

Fatima Omowumi Lawal-lah

Unicaf in partnership with Liverpool John Moores University

Background: Tuberculosis (TB) and Human Immunodeficiency Virus (HIV) co-infection remains a significant global health challenge, particularly in Low- and Middle-Income Countries (LMICs). The synergistic interaction between the two diseases increases the risk of mortality and reduces the treatment success rates in co-infected patients. While substantial efforts have been made to improve TB/HIV management, treatment outcomes in co-infected populations remain suboptimal and highly variable. This scoping review mapped the existing literature on TB treatment outcomes among TB/HIV co-infected patients in LMICs. It highlighted key determinants of success or failure, including gaps in current knowledge.

Methods: This scoping review followed the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews) guidelines. A comprehensive search was conducted across PubMed, Scopus, and CINAHL databases for articles published from 2013 to 2025. Studies were included if they reported on TB treatment outcomes (cure, treatment completion, failure, loss to follow-up, or death) among HIV-positive individuals receiving treatment for TB in LMICs. Data were extracted and charted according to geographical region, study design, population characteristics, reported outcomes and factors associated with outcomes.

Results: Out of 520 identified records, 20 studies and one global TB report met the inclusion criteria. The majority of studies were conducted in Sub-Saharan Africa. Treatment success rates varied widely, ranging from 32.4% to 88.9%, with higher success associated with early ART initiation, presence of other co-morbidities and integrated TB/HIV services. High rates of mortality and loss to follow-up were consistently reported, particularly among patients with advanced HIV disease, limited access to ART and Retreatment cases.

Conclusion: TB treatment outcomes among TB/HIV co-infected patients in LMICs are highly heterogeneous and influenced by clinical, structural, and socioeconomic factors. Strengthening integrated TB/HIV services, improving early diagnosis and ART uptake, and addressing health system barriers are essential for enhancing treatment outcomes. Further research is needed to assess the impact of novel interventions and to guide evidence-based policy in resource-constrained settings.

Evaluating the role of deep learning in early cancer detection: Enhancing diagnostic**Lapologang Motladiile****Unicaf in partnership with University of East London**

Deep learning (DL) is increasingly recognised as a transformative tool in medical diagnostics, particularly in early cancer detection. Its capacity to extract complex patterns from large-scale imaging datasets has enabled the development of automated screening systems with promising accuracy and speed. This systematic review critically evaluates the diagnostic performance, efficiency, and safety of DL models, while also addressing ethical, regulatory, and implementation challenges. Following PRISMA guidelines, peer-reviewed literature from 2015 to 2025 was screened across major databases. A total of 42 studies met the inclusion criteria and were analysed using a combination of meta-analysis and narrative synthesis. The findings reveal that convolutional neural networks (CNNs) routinely achieved high diagnostic metrics, with several models reporting accuracies above 95% for cancer image classification tasks (Ahsan et al., 2023). In comparative studies, DL models performed on par with or exceeded expert radiologists in terms of sensitivity and specificity—particularly in mammography, where AI demonstrated an average sensitivity of 0.85 compared to radiologists' 0.77 (Rodriguez-Ruiz et al., 2019). Additionally, DL models offer substantial reductions in image processing time, enabling near real-time diagnostic workflows (Shen et al., 2019). Despite these advances, generalisability remains a concern due to dataset bias, image heterogeneity, and overfitting risks (Zhou et al., 2021). To address transparency issues, explainable AI (XAI) methods such as LIME and SHAP have been adopted to improve clinician trust and model interpretability (Gunning et al., 2019). Ethical concerns surrounding data privacy, algorithmic fairness, and liability persist, especially under regulatory frameworks like GDPR and HIPAA (McCradden et al., 2020). While select DL systems have secured FDA clearance, widespread clinical adoption requires standardised validation, interpretability mandates, and cross-centre trial data. In conclusion, DL holds significant promise in early cancer detection, offering enhanced diagnostic precision and operational efficiency. However, successful clinical integration depends on addressing ethical concerns, standardising evaluation protocols, and ensuring robust external validation to safeguard patient outcomes.

**A scoping review of the health risks associated with the use of electronic nicotine dispensing systems (vapes)
used as a harm reduction method in the United Kingdom**

Forget Mupfunya

Unicaf in partnership with Liverpool John Moores University

Electronic nicotine dispensing systems (ENDS), commonly known as e-cigarettes or vapes, have gained widespread use as harm reduction tools, particularly in the United Kingdom. Although perceived as less harmful than conventional tobacco products, concerns persist regarding their potential health implications. This scoping review aims to assess the acute and long-term health risks associated with ENDS by synthesising evidence from 29 peer-reviewed studies published between 2015 and 2025. The studies covered a range of methodologies, including in vitro, cross-sectional, cohort, and animal-based research, offering insights into respiratory, cardiovascular, and general cytotoxic effects.

Key findings indicate that while e-cigarettes emit fewer carcinogens than traditional cigarettes (Goniewicz et al., 2016), however, they are not without risk. One study posits that the comparator needs to be clean breathing air and not cigarette smoke. Respiratory effects such as wheezing, bronchial irritation, and COPD association were commonly reported (Li et al., 2020; Xie et al., 2020). Cardiovascular challenges like elevated heart rate and prolonged ventricular repolarisation were also reported in the reviewed studies (Reudisueli et al., 2023). In vitro studies revealed oxidative stress, cell injury, and inflammatory responses following exposure to e-vapour (Scheffler et al., 2015; Corriden et al., 2020). While some reports suggest perceived health improvements among smokers switching to vaping (Hart et al., 2018), evidence remains inconclusive and the users may lack insight on the impact of vaping on their health.

Electronic cigarettes may expose users to substances that can potentially cause harm. Especially when used in the long term as a harm reduction method. This review underscores the complexity of evaluating ENDS-related health risks due to device variability, evolving formulations, and methodological heterogeneity. As such, it highlights an urgent need for longitudinal studies and regulatory oversight to assess the long-term health effects of vaping. The findings are intended to guide public health policy, support clinical decision-making, and promote informed choices among consumers. This is especially so with the continuous evolution of the ENDS products presentation and contents.

Session 10: Leadership in Education**Brain monitoring technologies in educational leadership****Lars Arvid Archer Lorimer Olsson****Unicaf in partnership with Liverpool John Moores University**

This systematic scoping review (SSR) explores how brain monitoring technologies (BMTs) may support educational leadership (ELS). It integrates findings on BMT use in both leadership and education, focusing on four research questions: (1) current applications of BMT, (2) the present usefulness of BMT for ELS, (3) future potential and challenges of BMT in ELS, and (4) the findings' alignment with existing ELS theories.

Following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, primary studies were searched via Google Scholar and multiple academic libraries. Eligibility criteria included the use of BMT in an education or leadership context. Only the author conducted the review and assessed the studies for bias (selection, sampling, and measurement). Due to the methodological heterogeneity of the literature, findings were synthesised narratively.

Out of the 185 articles included, Electroencephalography (EEG) emerged as the most common technology (57%), followed by Functional Near-Infrared Spectroscopy (fNIRS) (38%), and with a small number of magnetic resonance imaging (MRI) and functional magnetic resonance imaging (fMRI) research. Most studies (72%) employed BMTs to either corroborate findings (64%) or interventions (8%). Common aims included gauging engagement, stress, collaboration, and neurodiversity.

Results suggest that BMT holds promise for evidence-based ELS, enabling real-time insights into staff and learner needs without labelling. However, ethical considerations and privacy concerns should be addressed. Further research should refine best practices, extend cultural inclusivity, and study long-term impacts on leadership performance and learner outcomes.

A literature-based analysis of pension reform and retirement security for educators in Nigeria: focus on the contributory pension scheme and its implementation in Delta State

Juliet Efemena Edugbo

Unicaf in partnership with Liverpool John Moores University

Introduction: This study explores the intersection of pension reform and retirement security for educators in Nigeria, with a particular focus on the implementation of the Contributory Pension Scheme (CPS) in Delta State. Introduced under the Pension Reform Act of 2004 and amended in 2014, the CPS was designed to promote transparency, financial sustainability, and improved retirement outcomes for public-sector workers (Ahmad, 2006; Odia & Okoye, 2012). However, persistent complaints from retirees and evidence of poor compliance at the subnational level raise concerns about the scheme's effectiveness, especially in the education sector.

Methods: A qualitative, literature-based approach was adopted, relying on descriptive analysis of secondary sources. These included academic journal articles, legal and policy documents, reports from the National Pension Commission (PenCom), government publications, and media investigations. The research is framed using institutional theory to understand how organisational structures, rules, and norms influence pension policy outcomes and implementation gaps (Ikeanyibe & Ele, 2021; Ezeani, 2015).

Results: The analysis reveals that while Delta State has formally adopted the CPS, implementation has been inconsistent. Key challenges include delayed or non-remittance of employer contributions, inadequate funding of Retirement Savings Accounts (RSAs), and limited awareness among educators. Reports indicate systemic weaknesses in compliance monitoring and institutional capacity, contributing to dissatisfaction and reduced trust in the pension system (PenCom, 2023; Vanguard, 2022; This Day, 2023).

Discussion: The study concludes that despite the CPS's reformist intent, its practical impact on educators in Delta State is undermined by administrative inefficiencies, regulatory lapses, and poor stakeholder engagement. These issues threaten the broader objectives of pension reform and risk long-term consequences for workforce morale and financial security. The study recommends targeted policy interventions to enhance compliance, strengthen institutional frameworks, and improve retirement outcomes for educators in Nigeria.

Leading STEAM innovation in Egypt's British primary schools: Strategies aligned with Vision 2030

Noha Bayoumi Hassan Ahmed Bayoumi

Unicaf in partnership with Liverpool John Moores University

Introduction: This study investigates how school leadership contributes to integrating STEAM education into the British curriculum in primary schools in Egypt. It aligns with Egypt's Vision 2030 and the Education 2.0 reform strategy, both of which prioritise innovation, sustainability, and digital transformation in education (MOETE, 2018; Egypt Vision 2030, 2021).

Methods: Using a qualitative desktop research methodology, the study analyses secondary data drawn from peer-reviewed journals, policy documents, international frameworks, and educational case studies. The research is guided by three core frameworks: Transformational Leadership, Distributed Leadership, and the Technological Pedagogical Content Knowledge (TPACK) model (Burns, 1978; Gronn, 2002; Mishra & Koehler, 2006).

Results: The findings indicate that school leadership is critical to successful STEAM adoption. However, implementation is uneven due to systemic challenges such as policy ambiguity, limited professional development, and unequal resource access (Shalaby, El-Khouly, & Taha, 2021). Schools with visionary, collaborative leaders demonstrate higher engagement in interdisciplinary projects, computational thinking, and digital integration.

Discussion: This research highlights the importance of establishing a national STEAM leadership framework and investing in sustained teacher development. It recommends context-specific leadership strategies to align British curriculum practices with Egypt's national education goals. Although empirical fieldwork was not conducted, the study offers policy-relevant insights for educational reform and sustainable innovation in primary schooling.

Session 11: International relations and Politics

Post-2020 coup resurgence, the role of western and non-western actors, and the fracturing of democracy in Africa

Jacqueline Cochrane

Unicaf in partnership with Liverpool John Moores University

This dissertation investigates the resurgence of military coups in Africa after 2020 and the shifting geopolitical dynamics surrounding these events. Focusing on Mali, Burkina Faso, and Niger, it explores how democratic disillusionment, insecurity, and perceptions of foreign interference have enabled military takeovers. The study examines the waning influence of Western actors, particularly France and the United States, and the parallel rise of Russian engagement through military support, disinformation and resource-for-security deals.

Using a qualitative, desk-based approach grounded in secondary sources from the past five years, the research conducts a multi-level analysis of structural drivers, regional responses and international realignments. The formation of the Alliance of Sahel States (AES) is assessed as both a defiant response to regional pressure and a pivot toward a post-Western sovereignty model. The study argues that reversing Africa's democratic backslide will require addressing root causes of fragility, restoring regional legitimacy and rethinking international engagement.

Aid or Dependency? Rethinking global North approaches to development in the global South

Janet Agaba

Unicaf in partnership with University of East London

The research project examines the complex relationship between international aid from the Global North and development outcomes in the Global South, drawing on both academic literature and firsthand practitioner experience. As the Fundraising Manager at Amani Centre for Street Children in Tanzania, I have directly observed how donor-driven aid, while offering essential support, can limit local innovation, disrupt continuity, and foster dependency through restrictive funding models and top-down decision making and programming.

The study explores historical instances where aid has saved lives, including emergency responses to the war in South Sudan, natural disasters in Uganda and Haiti, public health crises in the Democratic Republic of the Congo, and the ongoing humanitarian crisis in Gaza (Clemens & Kremer, 2022; UNICEF, 2021). It also critically assesses how aid delivery, when planned and executed without meaningful local involvement, has undermined the independence of community-based organisations and excluded them from key decisions, despite their central role in direct service delivery (Rodriguez-Pose & Hardy, 2021; Peace Direct, 2021).

Drawing from existing literature, field-based observations, and the real-world constraints I have encountered in my role at Amani Centre, the research demonstrates how donor grant restrictions and externally designed programs can impede the long-term sustainability of grassroots initiatives.

At the same time, it highlights emerging models that succeed where traditional aid often fails, showcasing how trust-based, participatory approaches can unlock local agency and foster long-term resilience. Case studies, including One Acre Fund's market-based model, GiveDirectly's cash transfer approach, and community-led post-disaster recovery in Nepal, highlight how participatory, trust-based models can successfully counter aid dependency (Haushofer & Shapiro, 2019; Patel & Van Brabant, 2023).

Ultimately, the paper argues for a fundamental shift in how aid is structured and conceptualised, moving away from conditional charity and towards ethical partnerships and cooperation. It calls on donors, INGOs, and policymakers to centre local leadership, encourage community-driven innovation, and embrace flexible funding mechanisms that promote sustainable development (Peace Direct, 2021; ODI, 2022).

Bridging migration and education through international relations: A policy oriented study

Joette Crystal Simon

Unicaf in partnership with Liverpool John Moores University

In recent years, it has been discovered that migration and education no longer work in silos but are interconnected. This is as a result of political instability, global warming, economic shifts and conflict. The number of refugees and migrants throughout the world has been on the rise. Due to the aforementioned issues, it has caused displacement in economies. As such, inclusive and adaptable educational systems are in dire need.

This dissertation seeks to address the difficulties migrants face when trying to obtain occupation abroad. The main focus is to demonstrate how international relation (IR) policies can increase the success of education for migrants internationally and regionally by bridging the gap they face. It illustrates how national level strategies barely meet the requirements of addressing the transnational realities of migration.

By finding alternative approaches to migration and education through IR policies and frameworks such as the *Global Compact for Migration (GCM)*, the *Global Compact on Refugees (GCR)*, and *UNESCO's* education initiatives, this study identifies how IR can facilitate global cooperation, protect human rights, promote social and economic integration that benefits migrant and host communities.

The research methodologies primarily used will be case studies such as, policy document analysis, comparative analysis, education statistics and research. The countries chosen for the case studies are Germany, Canada, Thailand, Sweden and Lebanon. Simply put, they have successfully instilled inclusive policies based on the international human rights agreements into their educational system. These cases were selected based on their accessibility of reliable data, diversity in policy implementation and relevance. They were also strategically chosen based on the idea that they were from different geopolitical regions that will consider varied responses to challenges in education for migrants.

This paper suggests practical recommendations for policy makers, educators and international organisations in education to achieve a mutual goal.

Day 5: School of Education, Humanities and Social Science
Friday, November 21st, 2025**Session 12: Education and English literature****The impact of the school principal on fostering collective efficacy to enhance teachers' professional growth and students' academic achievement****Nardia Campbell-Chambers****Unicaf in partnership with Liverpool John Moores University**

The educational landscape is fundamentally shaped by the dedication and effectiveness of its educators, with teachers serving as the primary drivers of student learning and development. Complementing their crucial role, school principals stand as pivotal figures, tasked with cultivating environments where teachers can thrive and students can achieve their full potential. The ongoing pursuit within educational research and practice centers on identifying and implementing strategies that enhance teacher effectiveness and consequently improve student outcomes. In this context, the concept of collective efficacy has emerged as a significant factor influencing both the professional lives of teachers and the academic success of students.

Collective efficacy, a construct rooted in social psychology, refers to a group's shared belief in its ability to organise and execute the actions necessary to achieve specific goals. In the realm of education, this translates to the shared conviction among teachers within a school that their collective efforts can positively influence student learning and achievement.

This shared belief system has garnered considerable attention due to its demonstrated impact on various aspects of the educational ecosystem.

Despite the growing recognition of collective efficacy's importance, the specific mechanisms through which school principals can effectively foster this shared belief among their teaching staff warrant deeper investigation. While the literature acknowledges the principal's influence on school culture and teacher motivation, a comprehensive understanding of the principal's role in actively cultivating collective efficacy and its subsequent impact on teacher professional growth and student academic achievement remains crucial for educational stakeholders and researchers alike.

The impact of quality teaching and teacher training on student performance, notably SEN and low-achieving students

Rania Khaled

Unicaf in partnership with Liverpool John Moores University

The term "quality teaching" has been in use since the early 1900s and continues to feature prominently in most educational research conducted in the 21st century. It has been vital in shaping academic curricula in classrooms worldwide. Although there is a substantial body of literature discussing the concept of quality in education, either as the primary focus or in a broader context, defining quality in teaching is still somewhat challenging due to the lack of a unified and clear definition for quality teaching. However, there is a general agreement that the concept of effective teaching is crucial for student achievement and contributes to career success, regardless of any discrepancies in the definition of "quality" or the practices that lead to it. Consequently, scholars have been striving for decades to provide a clear definition and set of standards that educators and schools can follow to enhance student learning and achieve excellent results. Thus, there is a strong call for consensus and identification of best practices to be implemented in classrooms that promote student achievement and ensure career success for all students, regardless of their background and cognitive or noncognitive skills.

The research is based on literature reviews and educators' opinions from 3 different countries to evaluate the most effective practices in classrooms. Furthermore, it establishes key prerequisites for quality teaching regarding class size, time, and learning environment. The study does not aim to analyse student motivation or the influence of family at home; instead, it focuses on factors and conditions within schools that educators can control, which impact student progress. The research aims to identify the standards and practices that should be implemented in the classroom to improve the results not only of high achievers and average students, but also of low-achieving and SEN students, providing them with fair learning opportunities and reducing the educational inequalities they experience in their schools. The research effectively identifies six factors that directly influence student performance. These factors, referred to as Key Performance Indicators in schools, are crucial for human well-being and the advancement of the education sector worldwide. The research effectively identifies six KPIs that directly influence student performance; namely, class duration, class size, teacher training and experience, learning environment, modern teaching strategies, and, finally, a variety of assessments in classrooms.

Investigating the effectiveness of inclusive education in secondary schools in Blantyre District in Malawi

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Unicaf University in Malawi

Inclusive Education (IE) accommodates learners with disabilities alongside their peers without disabilities in the same mainstream educational settings (Ainscow, 2005). This globally endorsed approach promotes interaction, social inclusion, and equal learning opportunities for all learners, regardless of their abilities. However, implementation in Malawi remains slow and faces persistent challenges (Charema, 2010). Learners with hearing impairments (HI), visual impairments (VI), and physical disabilities continue to encounter significant barriers in accessing quality and equitable education (Ministry of Education, 2020).

This study investigated the effectiveness of IE in selected secondary schools within Blantyre District, Malawi, focusing on mainstream settings that include learners with HI, VI, and regular learners. Specifically, it explored how physical, social, and instructional environments affect the participation and academic engagement of such learners.

A qualitative research design guided by the phenomenological approach was employed (McLeod, 2024). Data were gathered through semi-structured interviews (Adosi, 2020) with 15 purposively selected participants, comprising head teachers and teachers (Stratton, 2023). All interviews were audio-recorded, transcribed, and thematically analysed using Taguette software (Rampin, 2025; Dawadi, 2020).

Guided by the Social Model of Disability (Chalise, 2024), the study found that while schools are making commendable efforts such as the use of sign language intervention, large print, magnifiers, peer support, and school-based inclusive policies; effective implementation is limited by a lack of adequate resources and trained personnel. Learners with HI were found to face more academic challenges than those with VI, primarily due to limited communication support (Kumatongo & Muzata, 2021). These findings support MacJessie-Mbewe et al. (2023), who highlighted the need for accessible instructional materials.

The study recommends stronger policy enforcement, increased deployment of trained teachers, improved access to inclusive learning resources (Lomosi, 2023), formal integration of sign language into the curriculum, and strengthened peer support systems to promote equitable learning in Malawi's secondary education system.

Experiencing and processing trauma among female protagonists in Alice Walker's *The Color Purple* and Toni Morrison's *Beloved*

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This research explores the portrayals of trauma and resilience among female protagonists—Celie in Alice Walker's 'The Color Purple' and Sethe in Toni Morrison's 'Beloved.' The purpose of the study is to investigate how literary representations depict trauma as a societal wound, and how narrative, community, and resistance serve as vital tools for healing and empowerment within marginalised communities.

Methodologically, a comparative literary analysis is employed, examining key passages, narrative structures, and character development while situating these within the Jim Crow South and the legacy of slavery. The analysis reveals that both Celie and Sethe endure emotional, physical, and psychological trauma linked to their environments. Celie's trauma, stemming from childhood abuse and systemic violence, initially silences her but ultimately leads to empowerment through storytelling (Walker 236). Sethe's trauma, rooted in slavery, manifests through haunting memories and unresolved grief, illustrating the necessity of confronting one's past for healing (Morrison 183).

The findings underscore that resilience emerges through acts of storytelling and community support. Both novels depict how structural oppression amplifies suffering yet also provides avenues for resistance. The research confirms that storytelling serves as a form of resistance, transforming trauma into strength.

In conclusion, 'The Color Purple' and 'Beloved' exemplify how Black women confront and transcend trauma through storytelling and community solidarity. The study advocates for further interdisciplinary research and recognition of narrative as a vital tool in trauma recovery and social justice initiatives.

Session 13: Psychology and mental health**A systematic review of psychological interventions for insomnia in prisoners****Esther Chidinma Otuyemi****Unicaf in partnership with Liverpool John Moores University**

Introduction: Insomnia is a common finding among prisoners and has been seen to trigger and perpetuate other psychological distress in them. Globally, prisoners are bedeviled with a variety of physical and mental health challenges, of which insomnia is one (Yoon et al., 2017). For instance, Morin and Benca (2012) reported that at least 60% of prisoners in the United Kingdom have insomnia. Therefore, this systematic review aimed to review the published research articles that provided evidence for the psychological interventions for insomnia in prisoners.

Methods: A thorough literature search in relevant databases (PUBMED, PsycINFO, MEDLINE, JStor, the Cochrane Central Register of Controlled Trials, DOAJ, and Eric) for appropriate articles published from January 2005 to December 2024 was conducted. Key terms were utilised to search these databases for relevant studies published in English in the last 20 years. A credible search engine, Google Scholar, was used to access these studies. The inclusion criteria included studies of all design types published in peer-reviewed journals that analysed the prevalence of insomnia in prisoners with an analysis of a specified psychological intervention. Consequently, six studies were included in this review, with most of them being entirely interventional, except one, which was carried out as a modified Delphi qualitative study, and another, which was a mixed-method study.

Results: The number of participants in the included studies ranged from 15 to 208, and the majority of them were male prisoners. Furthermore, the prevalence of insomnia was reported to be significantly high. For instance, Dewa et al. (2024) reported the prevalence to be 97.2%. Also, half of the studies reported administering cognitive behavioral therapy for insomnia (CBT-i) to the participants. Other interventions were mindfulness and self-management guides, while one study obtained feedback from stakeholders. All of the studies reported a significant improvement in the insomnia symptoms after the interventions.

Conclusion: From the reviewed studies, CBT-I is the recommended modality of treatment. However, more trained providers of CBT-I are needed in the healthcare settings, particularly in prisons, to mitigate the manpower challenges associated with insomnia management. Also, more recent studies among female prisoners and other parts of the world, aside from the United Kingdom and Iran, are required to derive the appropriate intervention in these populations.

The hidden burden of caring: mental health challenges and global disparities in support of healthcare professionals caring for critically ill patients

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Background: Work-related traumatic events routinely impact the mental well-being of healthcare professionals (Alawage & Zaidi, 2024). Burnout, PTSD, and compassion fatigue are among the most reported mental health challenges that face HCPs (World Health Organization: WHO, 2024; Thapa et al., 2021). The aim of the study was to examine the prevalence of such challenges, the global disparities that add pressure on the healthcare systems in low- and middle-income countries, and the possible strategies that mitigate it.

Methods: A systematic review was conducted by searching four databases (PubMed, Cochrane, PsycInfo, and Prospero) and grey literature sources (Google Scholar and ProQuest Central: Dissertations and Theses) using selected keywords, guided by the PRISMA guidelines. The collected studies were screened and summarised to describe three themes of the main findings using a qualitative thematic analysis approach.

Results: A total of 14 studies were included in the review. A 50.65% prevalence of burnout, a 22.55% prevalence of PTSD, and a 55.36% prevalence of compassion fatigue were concluded across all the studies, with higher percentages reported among all low- and middle-income countries' studies. Multifactorial strategies are required to help mitigate these challenges.

Conclusion: The systematic review confirmed the prevalence of burnout, PTSD, and compassion fatigue among healthcare professionals irrespective of the geographical or economic status of the country, with higher levels among those working in low- and middle-income countries. Further research, organisational policies, and managerial strategies are needed to address these psychological challenges, especially in under-resourced countries.

The influence of societal structures and personal psychological needs on conceptions of the divine: A multidisciplinary exploration

Yomna Abobakr Ahmed Abdelmoety

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Introduction: This dissertation investigates how societal structures, and personal psychological needs interactively shape human conceptions of the divine. The research critically explores the extent to which morality at both individual and societal levels necessitates religious belief, and whether secular ethical frameworks can adequately support moral reasoning and societal harmony.

Methods: A secondary qualitative research design was employed, utilising Critical Discourse Analysis, Thematic Analysis, and Hermeneutic Interpretation. Existing literature, including peer-reviewed studies, published ethnographies, and archival datasets, served as sources. No primary data collection was conducted, and all data used were ethically approved and publicly available.

Results: Findings indicate that conceptions of the divine strongly reflect and reinforce societal norms, ideologies, and hierarchical power structures, serving as mechanisms for social cohesion and control (Durkheim, 2016; Fairclough, 2013; Marx & Engels, 2008; Van Dijk, 2015; Weber, 1993). Simultaneously, these conceptions fulfill individual psychological needs for security, belonging, esteem, and existential meaning (Kirkpatrick, 1999; Maslow, 1943; Pargament, 2001). Furthermore, morality was found to exist independently of religious belief, supported by secular frameworks such as humanist ethics, cognitive developmental models, and evolutionary psychology, emphasising human capacity for ethical reasoning without reliance on divinity (Bloom, 2014; Haidt, 2012; Kohlberg, 1981).

Discussion: This research underscores the dual role of religion as both an integrative and ideological force while highlighting morality's capacity for secular existence. Understanding religion as a construct shaped by sociocultural and psychological factors has significant implications for intercultural dialogue, ethical education, and psychological interventions aimed at promoting individual and collective well-being. Recognising the independence of morality from religion further facilitates inclusive ethical frameworks capable of supporting diverse, pluralistic societies (Grayling, 2013; Kirkpatrick, 2005; Norenzayan, 2013).

Assessing sociocultural drivers of gender-based killings in Sub-Saharan Africa: A five-year analysis (2019–2024)

Neo Selato

Unicaf in partnership with Liverpool John Moores University

Introduction: Gender-based killings (GBKs), or femicide, represent the most severe expression of structural violence against women in Sub-Saharan Africa (SSA), where entrenched patriarchal systems and harmful traditions persist. Despite global concern, GBK drivers remain underexplored, especially in post-pandemic contexts (UNODC, 2023). This study examines sociocultural factors influencing GBKs across 15 SSA countries, highlighting critical gaps in intersectional vulnerability and policy responsiveness.

Methods: A qualitative secondary analysis was conducted using 55 sources published between 2019 and 2024, including UN data, government reports, peer-reviewed journals, and NGO publications. Applying feminist and intersectionality frameworks, data were analysed through Braun and Clarke's (2006) six-phase thematic approach using NVivo 14. A modified PICO framework and PRISMA screening supported methodological transparency and rigour.

Results: Five key themes emerged:

1) Harmful traditional practices as structural violence (e.g., witchcraft accusations, child marriage) accounted for 42% of Nigeria's GBKs (NHRC, 2023). 2) Economic dependency intensified GBK risk, as 61% of women remain in informal labour, limiting autonomy (World Bank, 2022). 3) Intersectional and compounded vulnerability elevated fatality rates among elderly, disabled, and rural women (Amnesty, 2024). 4) Legal pluralism and impunity revealed that customary courts often override statutory protections (e.g., Malawi's 12% conviction rate; HRW, 2024). 5) Community-led interventions, such as Nigeria's interfaith coalitions, reduced GBKs by 35% (2021–2023). COVID-19 lockdowns further triggered GBK surges of 20–25% in Uganda and Kenya (UN Women, 2023).

Discussion: The findings show GBKs in SSA are systemic outcomes rooted in cultural and institutional inequalities. The pandemic amplified economic strain and isolation, exacerbating risks. However, contextually grounded interventions such as gender courts, interfaith alliances, and paralegal support offer culturally fitting reform pathways. Policymakers must adopt intersectional, community-driven strategies to dismantle the sociocultural conditions sustaining GBKs (Farmer, 2004; Tamale, 2011).

How socioeconomic status affects emotional development during infancy with a highlight on poverty

Khaled Jabsheh

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This study explores the impact of socioeconomic status (SES) on emotional development during infancy, with a specific focus on the role of poverty. Emotional development in the early stages of life is critical for shaping long-term psychological well-being, social competence, and cognitive functioning. (Denham & Wyatt, 2015) Infants in low-SES environments, particularly those living in poverty, often face heightened exposure to chronic stressors such as food insecurity, unstable housing, and limited access to healthcare and early education (Thompson, 2014).

These environmental risks can disrupt caregiver-infant interactions and diminish the quality of emotional caregiving, both of which are essential for healthy emotional regulation and attachment formation (Nelson & de Haan, 2008). Drawing from a range of interdisciplinary research, including studies done by Faul, Ainsworth, Biringen and their team members, this paper synthesises evidence from developmental psychology, neuroscience, and social science to examine how poverty-related factors influence the development of core emotional competencies, such as emotional expression, recognition, and self-regulation. The paper uses solely secondary data obtained throughout the years. It employs quantitative, cross-sectional design using a correlational approach. A moderated mediation model was used, in addition to SPSS and AMOS for path modeling.

Special attention is given to the biological underpinnings of emotional development, including the role of stress hormones like cortisol, and the development of brain structures such as the amygdala and prefrontal cortex. Findings suggest that infants raised in impoverished conditions are at increased risk for developing maladaptive emotional responses and may exhibit heightened emotional reactivity, diminished positive affect, and delayed social-emotional milestones.

Moreover, the study highlights how parental stress, often exacerbated by financial hardship, indirectly affects infants' emotional growth by impairing parental responsiveness and sensitivity. Protective factors, such as social support networks, early intervention programs, and high-quality caregiver relationships, are discussed as potential buffers against the adverse effects of poverty. In conclusion, the paper emphasises the urgent need for public health strategies and policy interventions aimed at reducing socioeconomic disparities in early childhood. Supporting families in poverty not only improves emotional development outcomes during infancy but also contributes to more equitable developmental trajectories across the lifespan.

Session 14: Law, CSR and Human Rights

Responsibility and accountability for human rights violations in Quasi-States: A case study of Hay'at Tahrir al-Sham-Controlled Idlib (2017-2024)

Asala Helal Saleh Al-Abadi

Unicaf in partnership with Liverpool John Moores University

The protracted Syrian conflict, which commenced in 2011, has been a significant catalyst for the proliferation of armed groups with varied ideologies and objectives. Among these, Hayat Tahrir al-Sham (HTS) has emerged as a prominent non-state actor. Following a period of intense military engagements and strategic territorial shifts, the Syrian government ceded control of the Idlib governorate, enabling HTS to consolidate its authority as the region's dominant power. This consolidation of control led to the establishment of the Syrian Salvation Government (SSG), a de facto civil and administrative body that oversees the provision of essential services, including education, healthcare, and judicial functions. The exercise of de facto control over Idlib and the governance of its civilian population positions HTS as a quasi-state, which arguably entails specific human rights obligations toward the population under its administration.

International reports have documented numerous violations of international human rights law (IHRL) committed by members of HTS. While the principle of mandatory adherence to human rights is universally applicable, the legal status of quasi-states complicates the issue of compliance and warrants a thorough examination of the extent to which international legal frameworks, specifically IHRL, apply to such entities. The central problem this study addresses is the challenge of accountability. Recognised states and their governing bodies are legally bound by international conventions and treaties and can be held accountable in both international and national forums. In contrast, the accountability of quasi-states and their leadership remains a more complex and legally ambiguous matter.

This study will advance the scholarly understanding of accountability in non-traditional governance contexts. It will first delineate the binding nature of international human rights law and customary international law on quasi-states. Subsequently, it will examine the applicability of the principle of command responsibility to violations of human rights perpetrated by subordinates within quasi-state structures. Finally, the research will explore the potential mechanisms for holding both the leaders and their subordinates accountable for these violations under international human rights law. By addressing these critical questions, this analysis aims to clarify the legal obligations and potential liabilities of unrecognised quasi-states and de facto regimes.

Theoretical and Methodological Framework: The research will follow a doctrinal methodology. This approach involves a detailed analysis of existing legal frameworks, scholarly literature, and jurisprudence to understand and interpret the application of legal principles. The study will not involve empirical data collection through interviews, surveys, or experiments. Instead, it will be based on a critical examination of legal documents, international conventions, and scholarly commentary related to the obligations of non-state actors and the principles of statehood and accountability, with a specific focus on human rights law.

The theoretical framework will center on the concepts of statehood and international legal personality, particularly as they apply to non-state actors that exercise quasi-governmental functions. The study will engage with legal theories that extend human rights obligations to entities that, while not recognised states, possess effective control over territory and population.

Corporate responsibility for sustainable development: Legal frameworks for aligning corporate governance with the United Nations Sustainable Development Goals

Henry Opiyo Opondo

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Introduction: This study investigates how international and domestic legal frameworks can be employed to align corporate governance practices with the United Nations Sustainable Development Goals (SDGs). It addresses the inadequacy of voluntary corporate social responsibility (CSR) models in holding multinational corporations (MNCs) accountable for sustainability impacts, echoing concerns raised in contemporary scholarship (Ruggie, 2013; Buhmann, 2006).

Methods: Adopting a doctrinal legal methodology, the research critically analyses normative instruments such as the UN Guiding Principles on Business and Human Rights (2011) and the OECD Guidelines for Multinational Enterprises (2011). It further undertakes a comparative examination of national legislation from France (Duty of Vigilance Law, 2017), Germany (Supply Chain Due Diligence Act, 2021), and Kenya (Companies Act, Constitution of Kenya 2010). Select corporate case studies are used to illustrate regulatory outcomes and compliance dynamics.

Results: Preliminary findings reveal that while certain jurisdictions, particularly in the EU, have enacted binding corporate sustainability obligations, the international legal landscape remains largely fragmented. This fragmentation facilitates *regulatory arbitrage*, whereby corporations exploit inconsistencies between legal regimes to avoid more stringent environmental or human rights obligations, thereby undermining the SDG agenda.

Discussion: The study argues that binding legal duties, rather than voluntary commitments, are essential to drive genuine corporate contribution to sustainable development. It calls for greater harmonisation of corporate governance and sustainability regulation across jurisdictions, including through treaty-based obligations and legislative reforms. These findings contribute to the growing legal discourse on transnational corporate accountability and offer insights relevant to policy-makers, regulators, and scholars working at the intersection of corporate law and sustainable development.

Corporate social responsibility: A path to sustainable business

Sonia Yvonne Davis

Unicaf in partnership with Liverpool John Moores University

Introduction: It has been accepted that the drivers of the economy are the businesses that contribute to its economic and social development, through job creation, skills development, technological advancements, and the provision of quality goods and services. No two organisations are similar in how their Corporate Social Responsible initiatives are manifested.

Significance: This presentation will show how relevant CSR is to businesses and Individuals and highlight the main takeaways such as, the Benefits of Corporate Social Responsibility to organisations & stakeholders, Key focal CSR Areas, CSR Implementation, Inherent Challenges and Opportunities.

Main Point: The main argument will look at the four pillars on which Corporate Social Responsibility sits: “environmental, philanthropic, ethical, and economic responsibility”. Each pillar will assert that for organisations to be effective, they should not only be environmentally responsible but should be environmentally friendly as well; that organisations should conduct themselves in a “fair and ethical manner”; that businesses can improve the conditions they exist in, by committing a percentage of their revenue to charities and trusts and manage those through economical responsible practices; and that Corporate Socially responsible companies should, not only maximise profit, but positively impact their surrounding environment, people, and society.

Conclusion: The presentation will conclude that CSR is no longer a “nice-to-have” but a “must-have” for Businesses to be effective and drive long-term sustainability and success, by prioritising CSR initiatives, to remain competitive, sustainable and relevant in today's marketplace.

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