

**KESSA 2025
THE 17TH ANNUAL CONFERENCE**

P R O G R A M

**Theme:
Future-Proofing Our Global Engagement: Adaptability for Sustained Impact in a Dynamic World**

The 17th Annual KESSA conference
September 5–6, 2025, at the **Georgia State University Student Center**,
55 Gilmer St SE, Atlanta, GA 30303



Theme:

Future-Proofing Our Global Engagement: Adaptability for Sustained Impact in a Dynamic World

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55 Gilmer St SE, Atlanta, GA 30303

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2. Secretary

About KESSA

Our Mission

Kenya Scholars and Studies Association (KESSA) is a not-for-profit, 501 (c) (3) professional association established in the State of Ohio in the United States for the exclusive purpose of advancing scholarly and scientific research work in/on the Republic of Kenya. Its membership is drawn from all disciplines and persuasions. Donations to KESSA are tax-deductible.

What We Do

- We build our members intellectually and professionally through mentorship, promotion of their scholarship and publications, and by hosting scholarly conferences and other professional networking forums for them.
- We contribute to Kenya's education policy.
- We work to strengthen the role of the Kenyan diaspora and Kenyanist scholars in Kenya's and the broader world's socioeconomic development.
- We aspire to build individual and institutional scholarly partnerships between Kenya and the outside world.
- We help to celebrate Kenya's heritage throughout the globe

Our Purpose

- To promote scholarly, scientific and research work in/on Kenya in all scholarly disciplines and persuasions.
- To promote and facilitate cooperation through the exchange of ideas and meaningful dialogue among groups and/or persons engaged in scholarly and scientific research work in/on Kenya.
- To encourage and facilitate the dissemination of information, publications, and other scholarly works on Kenya.
- To organize scholarly workshop panels, discussions, symposia, and conferences on Kenya.
- To raise funds in support of the foregoing activities.

Our History

KESSA was formed in 2008 by Profs. Kefa Otiso, Maurice Amutabi, Charles G. Manyara, and Francis Koti to primarily promote the intellectual and professional interests and welfare of Kenyan Diaspora scholars and their associates. Moreover, KESSA seeks to promote scholarly, scientific and research work in/on Kenya in all scholarly disciplines and persuasions; promote and facilitate cooperation through the exchange of ideas and meaningful dialogue among groups and/or persons engaged in scholarly and scientific research work in/ on Kenya; encourage and facilitate the dissemination of information, publications, and other scholarly works on Kenya; organize scholarly workshop panels, discussions, symposia, and conferences on Kenya; and raise funds in support of the foregoing activities.

Since then, KESSA has pursued these objectives by especially holding annual conferences, sponsoring the publication of edited book volumes, publishing annual conference proceedings, mentoring Kenyan diaspora students and aspiring scholars, and creating networking opportunities for its members. In that time, KESSA has become a one-stop shop for its members. We have successfully mentored and helped many Kenyan diaspora students to gain advanced degrees, and numerous Kenyan academics at home and in the diaspora to grow intellectually and professionally.

Our conferences have been held in Bowling Green, Ohio (2008-2013), Florence, Alabama (2014-2015), the Atlanta Marriott Marquis, Atlanta, GA (2016-2019; 2023-2024), and Dallas, TX (2021-2022). Some of

our most momentous conferences were the 2008 inaugural conference, the 2013 conference that coincided with the Kenya @50 independence celebrations, and the 2017 conference that marked KESSA's 10th anniversary. Our annual student paper competitions have, over the years, proven to be effective tools for intellectually and educationally growing our student members.

Throughout our existence, our conferences have consistently attracted high-caliber keynote speakers, including the late Prof Ngugi wa Thiong'o, Author & Academic, the late Pheroze Nowrojee, Senior Council, Wamwari Waichungo, Ph.D., Vice President Global Scientific & Regulatory Affairs; Joanna Masingila, Ph.D., Dean of the School of Education at Syracuse University and a professor of mathematics and mathematics education, and F. George Njoroge, Ph.D., Senior Research Fellow, Eli Lilly. Jendayi Frazer, Ph.D., a one-time U.S. Assistant Secretary of State for African Affairs, Bureau of African Affairs, U.S. Department of State; all sitting Kenyan Ambassadors to the United States, notable scholars; senior Kenyan government officials, including Members of Parliament, Senators, Ministers, Cabinet, and Principal Secretaries.

This year, we are privileged to welcome Dr Willy Mutunga, retired Chief Justice, Supreme Court of Kenya; Rebecca Ochong, Director for Government Relations and International Advocacy at Habitat for Humanity International; Prof Kivutha Kibwana, Prof Daystar University, Human Rights Activist and former Governor; Dr Peter Oburu, Chief Analytics Officer, USIS Equifax Inc., and Jennifer Oburu, Chief of Staff and Technology Programs Director, Elevance Health.

KESSA PRESIDENT

On behalf of the KESSA Executive, Governing, and Advisory Board, I welcome you to the 17th Annual Kenya Scholars and Studies Association, KESSA 2025, Conference in Atlanta, GA. I honorably welcome our keynote and invited speakers, Hon. Dr Willy Mutunga, Rebecca Ochong, Hon. Prof Kivutha Kibwana, Dr Peter Oburu, and Jeniffer Oburu.

I am delighted and thankful for your participation in this year's conference at the Georgia State University Student Center. Our venue underscores our relevance and dedication to promoting academic and professional excellence. The world feels unpredictable. It is easy to feel overwhelmed. But we must not lose sight of what truly matters – the things we can influence. The presentations featured during KESSA 2025 showcase examples of men and women who, through focusing on things that they can influence, are making a positive impact on the world. I applaud each of you for responding with resilience, agility, and adaptability to the pressures that you have been subjected to. I also thank you for your ongoing commitment to KESSA. Quoting our Nobel laureate, the late Prof Wangari Maathai, “I’m very conscious of the fact that you can’t do it alone. It’s teamwork. When you do it alone, you run the risk that when you are no longer there, nobody else will do it.” KESSA 2025 is the product of the legacy of good teamwork.

Since its inception, KESSA has made major strides in advancing scholarly, scientific, and research work in the Republic of Kenya and providing a forum for disseminating the knowledge generated. Through the efforts of the Executive Office, the Governing and Advisory Council, friends, and supporters, KESSA proudly asserts its goals. We envision KESSA as an outstanding and visible organization that attracts significant participation from all who are passionate about studying the pertinent Kenyan issues. This year’s conference has the theme “Future-Proofing Our Global Engagement: Adaptability for Sustained Impact in a Dynamic World.” As we network and engage in this conference, my request to each member is that you continue to invest your skills, time, and expertise in shaping conference outcomes that demonstrate our true value as a diverse community. To our student members, we hope that this KESSA conference will give you access to professional platforms, networks, and resources that enhance your career goals.

I want to express my heartfelt appreciation to all our conference sponsors (listed in the program). Your support and partnership played a key role in the success of our event, and we appreciate your participation. We will be back in Atlanta on Sept 4th and 5th, for the 2026 Annual KESSA Conference. Please save the date on your calendar. There are many scholars and professionals out there, both here in the USA and abroad, who can contribute to and benefit from participating in our KESSA conferences. Please reach out to them - help us reel them in.

I wish you a very productive conference with exciting and encouraging discussions and exchange of knowledge so that together we can anticipate a future of groundbreaking research, education, innovation, and development for Kenya.

Respectfully Submitted,

Prof. Esther Obonyo, Penn State University, State College, PA

KEYNOTE SPEAKERS

“Featuring a Stellar Line-Up of Influential Voices”

Hon. Dr. Willy Mutunga



Dr Mutunga was appointed to the Supreme Court of Kenya on 22nd June, 2011. He holds a Doctorate Degree in Jurisprudence obtained in 1992 from Osgoode Hall Law School at York University in Toronto, Canada. His area of study was Contracts. Dr. Mutunga obtained both his Bachelor of Laws (Honours) and Master of Laws degrees from the University of Dar es Salaam in Tanzania in 1971 and 1974, respectively. Dr. Mutunga joined the University of Nairobi as a lecturer in the Faculty of Law in October 1974. While at the University of Nairobi, he served as the secretary-general of the University Staff Union between April 1979 and July 1980, when it was banned. Dr. Mutunga was thereafter detained for 16 months (1982-3) for his activism while at the University of Nairobi and for his work at the Legal Advice Centre (Kituo Cha Sheria). Dr. Mutunga has established

and served in several other civil society organizations, including the East African Centre for Constitutional Development (Kituo Cha Katiba), Uganda and the International Centre for Human Rights and Democratic Development (Rights and Democracy) in Montreal, Canada. For his outstanding contribution to the development of law, human rights, good governance, and social justice, Dr. Mutunga has received several national and international honours and awards, including Elder of the Golden Heart for his distinguished service to the nation and his role in leading reforms in the Judiciary under the new Constitution (2012). Between 2004 and 2011, Dr. Mutunga wrote a column in the Sunday Nation newspaper under the pen name of Cabral Pinto. He has published two books: *The Rights of Arrested and Accused Persons* (Nairobi: Oxford University Press, 1990) and *Constitution-Making from the Middle: Civil Society and Transition Politics in Kenya, 1992-1997* (Nairobi and Harare: Sareat/MWENGO, 1999). He has also published many essays and papers on human rights, law, and society. He has co-edited and co-authored several books.

Dr. Peter H. Oburu is Chief Analytics Officer, USIS at Equifax Inc., where he is responsible for various



data management functions, including quality control, domain expertise, governance, modeling, monetization, and master data management. As part of the Analytics Delivery Function, he is responsible for pipeline development, data curation, data delivery, deploying analytics and data science solutions, and data movement. He has held several leadership positions in finance, consulting, and telecommunications organizations, focusing on analytics and data science. He holds a PhD and a master's in economics from the Andrew Young School of Policy Studies at Georgia State University. He attended Kenyatta University for his undergraduate program in Economics. He lives in Atlanta, Georgia, with his wife and two college-age children. An Iron Man Race finisher, he is also an avid triathlon participant and uses this passion to raise funds for various campaigns. Additionally, he is a leader in his local church as part of the Prayer Ministry.



Jennifer N. Oburu, MBA, PMP, Chief of Staff/Global Program/Project Management. Jennifer Oburu is a Chief of Staff and Technology Programs Director at Elevance Health (parent company for the Blue Cross Blue Shield group of healthcare insurance companies). In her role, she partners with senior leadership and other business associates to drive strategic initiatives for the enterprise. Before joining Elevance Health, she was the Global Process Owner for the Service Catalog and Request Management processes at Coca-Cola, where she led the redesign of the Global Catalog, a project that won a national award from the IT Service Management Organization. In 2018, CIO magazine named her as a “Ones to Watch” for inspiration, leadership, and commitment to advancing technology innovations. She holds a master’s in business

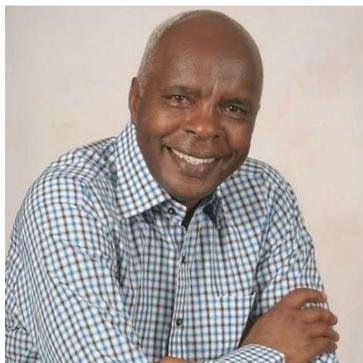
administration from the J. Mack Robinson College of Business at Georgia State University and did her undergraduate studies at Kenyatta University, where she studied Business and German. She is happily married to her husband of 25 years and has a son and daughter, both in college, in addition to their family dog, Sasha. She loves traveling and creating memories with her family and friends and serving in her home church and community.

Rebecca Ochongo, Director, Habitat for Humanity International. A land governance expert with more



than 20 years’ experience in the land and housing sector, and has been instrumental in strengthening security tenure, housing, and land policies and practices at national, regional, and global levels. Has worked in areas that include international development and program management of development partner-funded projects within the UN system, the EU, World Bank, AFD, SIDA, and in private sector environments. Has extensive experience in the development and implementation of participatory, inclusive, and gender-responsive land tools. With excellent networking skills, has been instrumental in building strategic partnerships that facilitated the successful co-creation of interventions in the land and housing sector. Has co-authored and contributed to more than 30 publications, articles, and conference papers on land governance and property rights. Formerly, she was the Associate Director, Global Affairs at Habitat for Humanity International. In this role,

she worked to further Habitat for Humanity’s global advocacy agenda, including issues related to adequate and affordable housing, security of tenure, housing finance, informal settlements, and disaster response. Before joining the GLTN Secretariat, she worked on a broad range of land projects and engaged as a part-time lecturer at the School of Surveying and Geospatial Sciences at the Technical University of Kenya. Rebecca holds a Master's in Land Management from KTH-Royal Institute of Technology, Sweden, and a Bachelor of Science Degree in Surveying and Photogrammetry from the University of Nairobi. She is a current member of the Institution of Surveyors of Kenya (Land Surveyors Chapter).

Prof. Kivutha Kibwana

Prof. Kivutha Kibwana is a Kenyan human rights activist, academician, writer, and change-maker. He studied Law at the universities of Nairobi, London (SOAS), Harvard, and George Washington, and later Theology at the African International University. He was a Law lecturer at the University of Nairobi between 1977 and 2002, rising to the positions of Dean of Faculty and Associate Professor. In the mid-1990s, he actively participated in Kenya's civil society, eventually leading the country's pro-democracy movement as the Spokesperson for the National Convention Assembly (NCA) and National Convention Executive Council (NCEC) from 1997 to 2002. This movement helped birth a return to multipartyism and Kenya's 2010 Constitution. Kibwana joined politics as a Member of Parliament (2003 to 2007). He served as Assistant Minister in the Office

of the President and thereafter Office of the Vice President, as Minister for Environment and Natural Resources, and Minister for Lands. During this period, he acted as President of the UN Climate Change Conference, COP 12, held in Nairobi in 2006. In January 2008, he was appointed Presidential Advisor for Constitutional, Parliamentary, and Youth Affairs, discharging such duties until September 2012. He further served two terms as Governor of the sub-national government of Makueni County, from 2013 to 2022.

SPONSORS ACKNOWLEDGEMENT:

“Empowered by Collaboration”

Our heartfelt gratitude goes to our generous sponsors, whose unwavering support has been pivotal in bringing this event to life. Your commitment to fostering academic excellence and research is deeply appreciated.



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Prof. Francis and Margaret Koti

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1. College of Social Work, University of Tennessee, Knoxville
2. Kristin Barrows, EFAC-Education for All Children

CONFERENCE PROGRAM

Future-Proofing Our Global Engagement: Adaptability for Sustained Impact in a Dynamic World

Georgia State University Student Center 5 Gilmer St SE, Atlanta, GA 30303	
DAY 1: FRIDAY, SEPTEMBER 5, 2025	
8:00 AM – 10:00 AM	Registration
8:00 AM – 8:30 AM	Breakfast at the conference venue (Kenyan style)
8:30 AM – 8:40 AM	Conference Opening: Room East 216 Opening Remarks- Prof. Esther Obonyo (KESSA President)
8:40 AM – 8:45 AM	Singing of the National Anthem Anthems: J.K Njenga, Music Director
8:45 AM – 9:30 AM	KEYNOTE ADDRESS: Prof. Willy Mutunga Keynote: Navigating the Path of Public Service.
9:30 AM – 9:45 AM	KESSA President/Executive Team: Overview of the Conference Program Acknowledgement of any government official attending the conference
Short Break & Transition to the Panel Session	
Panel Session: 10:00 AM- 10:45 AM	
Session 1A: Panel Session 10:00 – 10:45 AM – Room East 216 Topic: Closing the Gap: Strategies to Improve Graduate Completion Rates and Harness Diaspora Expertise in Kenyan Universities Moderator: James Mutunga	
Panelists:	Jennifer Kibicho – University of Wisconsin- Milwaukee Jonathan Choti – Michigan State University Patrick Ochieng – Oakwood University Teresa Wasonga – Northern Illinois University Elimelda Ongeri – North Carolina A&T State University

Session 1B: Panel Session 10:00 – 10:45 AM – Room East 217 Topic: Manifesting and (re)urbishing Rhumba in Kenya’s cosmopolitan, academic and religious spaces. Moderator: Mary Gitau			
Panelists:		Eric Koome Muriangi - University of Kansas Sylvester Matete Makobi - Indiana University John K. Njenga - Ball State University Shaka Marko- Alabama State University	
10:45 AM – 11:00AM: Short Break Networking & Transition to Breakout Sessions			
11:00 AM – 12:15 PM: Concurrent Sessions 2, 3, and 4			
Session Time: 11:00AM – 12:15PM	Session 2: Room East 216 Chair: Jane Opiri	Session 3: Room East 217 Chair: Francis Koti	Session 4: Room East 218 Chair: Sylvester Matete Makobi
11:00AM-11:20AM	Holistic Wellness – Body, Mind, and do not forget the ‘Spirit Priscilla Njeri Gitimu - Belmont	Spatial and temporal shifts in macroinvertebrate community structure in a large tropical river and implications for biomonitoring in East Africa Joshua M. Benjamin - University of Florida	Ancestral Echoes and Sonic Presence: The Power of Kenyan Music to Evoke, Resist, and Heal Kevin Kimtai - University of Florida
11:20AM-11:40AM	Healing Stitches: Quilting as a Tool for Promoting Mental Health, Gender Equality, and Social Inclusion in Rural Communities Jane Opiri – University of Arkansas at Pine Bluff	Vertical slums, a changing face of Nairobi, or a new market reality? A geographer’s perspective on the emerging high-rise luxury apartments in upmarket areas of the City of Nairobi Francis Koti - Middle Tennessee State University	Motherhood as an Archive of Resistance: Nyambura wa Ngugi and the Motif of Motherhood in Ngugi wa Thiong'o's Works and Life Twalha Abbass - Indiana University, Bloomington
11:40AM-12:00PM	From Frayed to Formations: Weaving a Tapestry of Transition in Graduate School Robert Rukwaro Maina - Indiana University Indianapolis	Investigating the Applicability of the Rank-Size Relationship to Kenya's Urban Hierarchy Kefa M. Otiso - Bowling Green State University	Q & A for section 4 presentation, 15 minutes
12:00PM-12:15PM	Q & A for sections 2 & 3 presentations, 15 minutes		

12:15-12:45 PM: Lunch (on your own)			
PLENARY SESSION 5: <i>Plenary Speech: Contribution to National Development: Hits and Misses</i> Prof Kivutha Kibwana- Room East 216 1:00 PM- 1:45 PM Chair: Prof. Esther Obonyo			
1:45PM- 2:00 PM: Q&A – 15 minutes			
2:00-2:30 PM: SHORT BREAK AND HEADING TO SESSIONS 6, 7 & 8			
Session Time: 2:30PM-3:45PM	Session 6: Room East 216 Chair: Moses Ogutu	Session 7: Room East 217 Chair: Moses K. Ochanji	Session 8: Room East 218 Chair: Fidelis Ndombera
2:30PM- 2:50PM	Africa's Trade Agency in a Fragmented Landscape: The Promise and Limits of the AfCFTA in Africa – EU Trade Moses Ogutu - Syracuse University - Maxwell School of Citizenship	Developing a Culturally Sensitive Postgraduate Diploma in Addictions and Substance Use Disorders: A Case Study of Kenya in Africa. George Mugoya - University of Alabama, Tuscaloosa Noony K. Omare – The University of Alabama, Tuscaloosa	Improving Patient Safety Through Hand Hygiene Practices in Nursing Lewis Wanjiku - University of the West of England, Bristol
2:50PM-3:10PM	Enduring and changing patterns of family dynamics in Kenya Jane Rose Njue - Northern Illinois University Teresa Wasonga - Northern Illinois University	Bridging the Gap: Strategies for Implementing Policy for Inclusive Education for Children with Disabilities in Kenya Eric Njue - University of Oregon	Reducing the risk of malaria through decision-making in the built environment Esther Obonyo - Penn State University Dr. James Mutunga - Penn State University
3:10PM- 3:30PM	Are Ordinary People on a Livelihood Rehearsal? Challenging Academic and Professional Narratives of Development in Kenya Mary Njeri Kinyanjui	Building a Culture of Mentorship in STEM Teacher Development: Lessons from a U.S. Noyce Model for Kenyan Contexts Moses K. Ochanji - California State University San Marcos	Revolutionizing Medical & Healthcare in Africa with Artificial Intelligence using Pawanax-AI Medical Agent Fidelis Ndombera - Kenya Scientists in Diaspora Inc.
3:30PM-3:45 PM	Q & A for all three presentations: 15 minutes		
Group Photo 4:00 – 4:30 PM			

Lobby			
4:30PM – 6:00 PM: BREAK IN PREPARATION FOR DINNER & KEYNOTE ADDRESS			
Session 9: Dinner & Keynote Address 6:00 PM – 9:00 PM, Room Chair: Prof. Esther Obonyo			
6:00 PM – 7:00 PM 7:00 PM – 8:00 PM 8:00 PM – 8:30 PM	Dinner Keynote Address: Dr. Peter Oburu & Jennifer Oburu Title of Keynote: Tooling Yourself for Future Impact: Our Experience Awards & Recognitions		
DAY 2: SATURDAY, SEPTEMBER 06, 2025			
Georgia State University Student Center 5 Gilmer St SE, Atlanta, GA 30303			
7:15 – 8:30 AM: Registration			
8:30 AM – 9:45 AM: Concurrent Sessions 10, 11, 12			
Session Time: 8:30 AM - 9:45AM	Session 10: Room East 216 Chair: Jonathan Choti	Session 11: Room East 217 Chair: Joseph Njuki	Session 12: Room East 218 Chair: Mary Gitau
8:30 AM - 8:50 AM	Constructing Gender: How Socialization Shapes and Sustains Traditional Norms in Kenya Jonathan Choti - Michigan State University Danielle Totzke - Michigan State University	Goodness-of-fit test for Kumaraswamy distribution using energy statistics Joseph Njuki - Coastal Carolina University, SC	From Research Support to Intellectual Shortcuts: The Paradox of Using AI in Scholarship Jane Opiri - University of Arkansas at Pine Bluff

8:50 AM - 9:10 AM	Umoja Village, Sisterhood, and Resistance Justine Waluvengo- Vanderbilt University	Consistent Regulatory Testing Assures Quality of Medicines in Kenya Matthew Kwena - National Quality Control Laboratory, USAID's Promoting the Quality of Medicines Plus Program, Nairobi, Kenya	Desperation as Strategy: Examining the Labor Implications of U.S. Policy Shifts from a Diasporic Lens Evalyne Onyoni- Grand Canyon University
9:10 AM - 9:30 AM	Barriers to Education for Girls in Rural Kenya Zainabu Momanyi- University of Oklahoma	(p)ppGpp is required for <i>Shigella flexneri</i> glucose metabolism Grace Kago- University of Texas at Austin	Influence of Computer Programs on Academic Performance of Learners with Disabilities in Public Primary Schools in Saboti Sub-County, Kenya. Peter Namasaka- Mount Kenya University
9:30 AM - 9:45 AM	Q&A for all three presentations: 15 minutes		
9:45 AM – 10:15 AM: TRANSITION TO KEYNOTE ADDRESS			
SESSION 13: 10:15 AM – 11:00 AM: Room East 216			
KEYNOTE ADDRESS: Rebecca Ochong			
Title of Keynote: Achieving Agenda 2030 Through Housing			
11:00 AM – 11:15 AM: Transition to Concurrent Sessions 14-16			
Session Time: 11:15AM – 12:30 PM	Session 14: Room East 216 Chair: Teresa Wasonga	Session 15: Room East 217 Chair: Charles Opondo	Session 16: Room East 218 Chair: Mary Gitau
11:15AM – 11:35AM	Kenya's secondary schools: The graveyards of dreams Teresa Wasonga - Northern Illinois University Jane Rose Njue - Northern Illinois University	The relationship between a group-based microfinance program and food insecurity in rural Western Kenya Charles Opondo - Indiana University School of Public Health	Bridging Digital Divides Through Global Engagement and Partnerships: Empowering Rural Communities in Kenya through Digital Literacy Mary Gitau - University of Tennessee, Knoxville.

11:35AM – 11:55AM	Science Engagement in African Mother Tongues as a Method of Increasing Scientific Literacy Grace Kago - University of Texas at Austin	The Role of Agricultural Extension Services in Promoting Agricultural Sustainability: A Central Malawi Case Study Leah M. Mungai - University of Alabama	Not For Sale: Bride Price and its Role in Gendered Violence and Harmful Traditions Njeri Kinuthia - University of Central Florida
11:55AM – 12:15PM	Seeding and Catalyzing Transdisciplinary Competencies Esther Obonyo - Penn State University	The World's Guinea Pig: Kenya and the Ethics of Experimentalism in Global Innovation. Moses Ogutu - Syracuse University - Maxwell School of Citizenship	School leadership preparation for behavior management: A review of discipline policies and practices in Kenya and Saskatchewan, Canada. Beatrice Odhiambo, Kenyatta University Janet Okoko, University of Saskatchewan;
12:15PM – 12:30PM: Q & A for sections 10 & 11 presentations: 15 minutes			
Lunch Break: 12:30 – 1:00 PM (On your own)			
Session Time: 1:00PM - 2:00PM	Room East 216 Chair: Jeremiah Okari	Room East 217 Chair: Fredrick Onyango	
1:00PM - 1:20PM	Business and Entrepreneurship Practices in Kenya: A Farmer's Perspective Diane Uyoga - Moi University, Eldoret, Kenya	Monocyte -to-lymphocyte ratio (MLR) predicts TB mortality among ART-naïve hospitalized Kenyan children living with HIV (CHIV) Henry Kitiabi, University of Georgia	
1:20PM- 1:40PM	Kenyan Diaspora Cooperative Societies in Economic Development and Challenges Faced Jacob Ongaki, Southern Oregon University Jeremiah Okari, Saint Mary's University of Minnesota	Early Detection of Gastrointestinal Cancers Using Machine Learning and Blood Biomarkers. Fredrick Onyango, Geethanjali Karuturi, Mahitha Gogu, Rashmita Kudamala. Indiana University Bloomington	
1:40PM- 2:00PM: Q&A for the two presentations: 20 minutes			

2:00PM – 2:15PM: Transition to the Business Meeting

KESSA BUSINESS MEETING: Room East 216

2:15 PM – 4:15 PM

Chair: Esther Obonyo

- Treasurer's report
- Student Competition Report and Awards
- President's Report
- KESSA Elections: Prof. & KESSA Advisory Board

4:15-6:45 PM: Tour of Atlanta and Dinner (on your own)

CELEBRATION AND COMMUNITY OUTREACH

Networking, Music, and Entertainment

7:00 PM- 11:00 PM, Location/Room

Abstracts by Session - DAY 1

Closing the Gap: Strategies to Improve Graduate Completion Rates and Harness Diaspora Expertise in Kenyan Universities

Jennifer Kibicho - University of Wisconsin-Milwaukee
Jonathan Choti – Michigan State University
Patrick Ochieng – Oakwood University
Teresa Wasonga – Northern Illinois University
Elimelda Ongeri – North Carolina A&T State University

Panel Discussion

Reports by Kenya's Commission for Higher University Education (CUE) and recent studies reveal key challenges in Kenyan postgraduate education. They include low PhD completion rates (10%), prolonged program durations, and a widening gap between the demand and supply of doctoral-level prepared professionals. These challenges hinder the development of a skilled research workforce, weaken institutional capacity and limit innovation—ultimately constraining Kenya's progress toward Vision 2030's goal of expanding the pool of highly trained professionals for academic, research, administrative, and leadership positions in both the public and private sectors. This panel discussion will explore possible ways that Kenyan scholars in the Diaspora may support Kenyan universities, faculty, and graduate students in addressing the challenges. Training workshops, serving in dissertation committees, sharing informational materials, collaborating in research projects, and participating in exchange programs are some of the ways Kenyan Diaspora scholars may use to support graduate education in Kenyan universities. For over a decade, the Carnegie African Diaspora Fellowship Program (CADFP) has successfully supported over 140 short-term fellowships in Kenya—lasting 14 to 90 days—to advance co-curriculum development, graduate supervision, junior faculty mentoring and collaborative research, with a focus on sustainable improvements in graduate education. KESSA is uniquely positioned to build faculty capacity for graduate student supervision at Kenyan universities by mobilizing its interdisciplinary and diaspora networks to deliver targeted mentorship, training and collaborative support to strengthen faculty supervisory effectiveness. The objectives of the panel discussion are to: Discuss the systematic and institutional barriers to timely graduation for postgraduate students in Kenya; Explore the transformative potential for both immediate and sustained Diaspora engagement in enhancing the quality of graduate student mentorship and education; Propose policy recommendations for integrating Diaspora expertise into Kenyan higher education. The ultimate goal of the panel discussion is to explore how KESSA can strengthen graduate education in Kenya by mentoring faculty and promoting best practices in graduate student supervision.

Manifesting and (re)furbishing Rhumba in Kenya’s cosmopolitan, academic and religious spaces.

Eric Koome Murianki - **University of Kansas**
 Sylvester Matete Makobi - **Indiana University**
 John K. Njenga - **Ball State University**
 Shaka Marko, **Alabama State University**

Panel Discussion

Rhumba is a well-known popular music genre that has cycled and been recycled in Africa and its diaspora. Potently known for storytelling in text, instrumentation and motion, it is most associated with secular and maybe ‘profane’ dance whose purposes are for romance, courtship and sex broadly understood. Rhumba made deep inroads into Kenya’s soundscapes during the nation’s nascent independent years mostly via Congolese immigrants and refugees beginning in the early 1960s. This panel seeks to present, interrogate and critique how rhumba repertoire as well as stylistic elements were acculturated, adapted, arranged and repurposed to reflect a Kenyan ethos and service its diverse audiences’ interests. The different authors discuss the resultant manifestation in linguistic transformation as well as its musical furbishing for academic, religious, competitive, and professional employment to speak to national consciousness on one hand but also to address particular Kenyan social class, educational, urban and religious sensibilities.

Holistic Wellness – Body, Mind, and do not forget the ‘Spirit

Priscilla Njeri Gitimu - Belmont University, Nashville, TN

Holistic wellness encourages nurturing the body, mind and spirit and emphasizes their connectedness. The Body-Mind-Spirit (BMS) model of health unveils the interconnection of body, mind, and spirit as fundamental to well-being. Holistic wellness is a state of health balance and not just the absence of disease. Holistic wellness is an indicator of balanced aspects of well-being in order to combat prevalent mental health challenges such as depression. There has been a growing emphasis on a healthy diet and the pursuit of happiness, but spirituality needs to be included because it is important for individuals to feed their spirit and connect to something bigger than themselves. e.g., A recommended daily routine should be ‘eat healthy, exercise, and meditate.’ The body and the mind cannot ignore their spiritual presence, and this discussion illuminates and explores more connection between spirituality and holistic wellness. Emerging research shows a positive influence of religion and spirituality to well-being. Engaging in formal religion, spirituality and meditation is linked to positive body image, increased gratitude, and increased body appreciation. This discussion will be solidified by a kaleidoscope of stories of how spirituality has played a role in the well-being of individuals who are part of the FOCUS- Fellowship of Christian Union.

Healing Stitches; Quilting as a Tool for Promoting Mental Health, Gender Equality, and Social Inclusion in Rural Communities

Jane Opiri - University of Arkansas at Pine Bluff

Rural communities worldwide face significant challenges in accessing mental health services, leading to heightened health disparities and social isolation among mature women. However, traditional crafts,

particularly quilting, have historically served as vehicles for community building and emotional expression in these communities. The objective of this research was to investigate the impact of quilting on promoting mental well-being among mature women in rural settings. Through a six-month ethnographic study, the researchers examined quilting's impact on mental health, social connections, and cognitive function involving eight participants aged 60-79 in rural US. The qualitative data was collected using focus group interviews and participant observations during regular quilting sessions. The thematic analysis of the data revealed four primary benefits. In addition, these findings suggest that community-based quilting programs could serve as cost-effective interventions for promoting mental health in rural areas, particularly among mature women. This study supports four UN Sustainable Development Goals: SDG 3 Good Health and Well-being observed by the improved mental health of the participants, SDG 5 Gender Equality achieved by empowering women through creative expression, SDG 10 Reduced Inequalities achieved by addressing rural healthcare disparities, and SDG 11 Sustainable Communities achieved through community-building initiatives. This session will help the audience understand how creative activities can promote sustainable social development, fostering a more cohesive and inclusive global community.

From Frayed to Formations: Weaving a Tapestry of Transition in Graduate School

Robert Rukwaro Maina - Indiana University Indianapolis

My first year as an international PhD student was more than an academic pursuit. It was the weaving of a personal tapestry, threaded with reflection, creativity, and connection. Each experience, scholarly or soulful, added texture to a journey of becoming. I engaged with complex theories and rigorous research. Yet, in quiet moments writing diary entries, composing poetry, and engaging with art, I truly began to understand myself. These creative acts became tools of reflection, helping me process transitions and growth. Leading the church choir in Swahili songs offered a sacred thread of cultural continuity. Each note echoed home, affirming that identity can be both rooted and evolving. Volunteering during a vaccine drive, I spoke with parents, responded to hesitant “no’s,” and translated policy requirements into compassionate dialogue. I learned that science must be humanized to be heard; to communicate not just facts, but trust, in a time when public health depends on both. Nature played its part. Road trips and conference travels became spaces of renewal, reminding me that movement can heal and stillness can teach. This tapestry, academic rigor, cultural anchoring, civic engagement, and creative reflection shaped my research interests and sense of purpose. Presenting this narrative inquiry autobiographical journey as seen in Schlossberg’s Transition Theory (The 4 S Model) at an academic conference is more than storytelling; it is a call to honor the emotional, cultural, and creative dimensions of graduate education, and to see students as whole people weaving their own transformations.

Spatial and temporal shifts in macroinvertebrate community structure in a large tropical river and implications for biomonitoring in East Africa

Joshua M. Benjamin - University of Florida

Benthic macroinvertebrates, vital bioindicators of aquatic ecosystem health, are increasingly threatened by anthropogenic pressures. Despite their importance, long-term studies in Afrotropical regions remain limited. This study examines temporal and spatial variation in macroinvertebrate communities along the

Mara River—from its headwaters to the Kenya-Tanzania border—during 2008–2009 and 2021–2023, highlighting changes in one of Kenya's primary water sources that sustains the iconic wildebeest migration in the Serengeti-Mara ecosystem. We observed landscape transformation in the Mara River Basin, marked by an expansion of agricultural land—most notably in sites M1 (+14.97%), M2 (+12.16%), and M3 (+7.35%)—and a general decline in forest and shrubland areas, with the exception of localized increase in forest cover in M3 (+1.19%). Additionally, significant differences in water chemistry were detected between the 2008–2009 and 2021–2023 sampling periods, with ammonia levels decreasing significantly while nitrate, dissolved organic carbon, and total dissolved solids increased significantly. We found significant temporal shifts in community composition between the two sampling periods. Macroinvertebrate diversity increased from 2008–2009 to 2021–2023, and downstream sampling sites exhibited notable heterogeneity. However, the South African Scoring System (SASS) scores reflected a decline in ecological health, with most sites transitioning from "Natural" to "Good" conditions from 2008–2009 to 2021–2023. We found that elevation, velocity, temperature, and dissolved oxygen were significant drivers of current community composition. Ephemeroptera, Plecoptera, and Trichoptera (EPT) abundance increased from upstream downstream. These findings underscore the need for continued monitoring and conservation to mitigate environmental impacts and preserve freshwater biodiversity in the Mara River. Documentation of temporal changes in tropical rivers is rare, highlighting the critical need for ongoing monitoring and conservation efforts to mitigate the impacts of environmental change and preserve the freshwater biodiversity of the Mara River.

Keywords: Freshwater biodiversity, Anthropogenic pressure, Bioindicators, Macroinvertebrate composition, Mara River

Vertical slums, a changing face of Nairobi, or a new market reality? A geographer's perspective on the emerging highrise luxury apartments in upmarket areas of the City of Nairobi

Francis Koti - Middle Tennessee State University

The leafy suburbs of Lavington, Westlands, Kileleshwa, and Kilimani that once characterized high-end living in the City of Nairobi are slowly transforming into concrete jungles of highrise luxury apartment buildings. These areas which are categorized as zone 4 by (the now defunct) Nairobi City Council did not previously allow construction of buildings above four floors. This is no longer the case as recently constructed highrise luxury apartments in these areas now rise above 15 floors. What has made this possible and what should we expect? Can the infrastructure, amenities, and space support these developments? Are these developments sustainable? How are the local communities likely to respond? Should we expect to see the same transformation in other upmarket areas of Nairobi such as Muthaiga, Runda, Karen, Spring Valley, Kitisuru, Gigiri, and Rosslyn? Preliminary results from field research, supported by a survey of urban development literature indicate that beyond the blatant violation of building codes by developers also lies a reality that the proximity of these areas to the Central Business District cause them to seek rents higher than the value of many structures they currently house – making them prime targets for urban developers. This preliminary study, however, seeks to establish a framework for investigating a broader question. With Nairobi's population expected to hit 10 million in the next few decades, is it realistic to expect these areas to remain the way they were in the 80s, 90s, and early 2000s? Key words: Urban geography; urban residential development; community quality of life.

Investigating the Applicability of the Rank-Size Relationship to Kenya's Urban Hierarchy

Kefa M. Otiso - Bowling Green State University

The Rank-Size Rule, a core concept in urban geography and spatial analysis, posits a predictable relationship between the size and rank of cities within a national urban system. This study explores the applicability and deviations of the Rank-Size Relationship within Kenya's urban hierarchy, using recent census and urban development data. The analysis reveals a primate city distribution, with Nairobi disproportionately larger than other cities, followed by secondary centers like Mombasa and Kisumu that deviate from the expected log-linear pattern. Contributing factors include historical colonial urban planning, economic centralization, and regional disparities in infrastructure and investment. The findings highlight both the dominance of Nairobi and the emerging roles of secondary cities in shaping a more balanced urban system. This research underscores the importance of regional planning and policy interventions aimed at fostering equitable urban growth and addressing the spatial inequalities that characterize Kenya's urban landscape. Understanding why Kenya's urban system deviates from the rank-size rule is important for planning and development purposes. It highlights the need to address specific challenges and opportunities associated with the unequal spatial (geographic) distribution of urban populations and economic activities in the country.

Keywords: Urbanization, urban hierarchy, rank-size rule, economic development.

Ancestral Echoes and Sonic Presence: The Power of Kenyan Music to Evoke, Resist, and Heal

Kevin Kimtai - University of Florida

This chapter examines the dynamic relationship between music, memory, and resistance in Kenya, presenting sound as a powerful archive of Black cultural survival. It draws on various traditions—including ritual dance performances such as kilumi and isukuti, anti-colonial Beni satire, Mau Mau freedom songs, urban benga, and youth-led protest hip-hop—and argues that Kenyan music functions as a sonic continuum that links ancestral histories with present-day struggles. The idea of sonic presence underpins the analysis, positioning music not just as entertainment but as a living practice that awakens spiritual, political, and historical awareness. The chapter integrates insights from African musicology and Black studies to frame Kenyan soundscapes as counter-archives that resist colonial erasure, facilitate healing, and encourage creative resistance. By analyzing musical styles and the social-political contexts that influence them, this study reveals how Kenyan music continues to unite communities, preserve intergenerational memory, and reimagine freedom across time and space.

Keywords: Kenyan music, sonic presence, Black cultural survivance, musical resistance, African epistemologies.

Motherhood as an Archive of Resistance: Nyambura wa Ngugi and the Motif of Motherhood in Ngugi wa Thiong'o's Works and Life

Twalha Abbass - Indiana University, Bloomington

In this session, I explore the multifaceted concept of motherhood in Ngugi wa Thiong'o's literary works and personal life. Ngugi, throughout his glorious life, has advocated the understanding of motherhood across its dimensions, from a physical representation of class struggles and decolonization to a spiritual embodiment of being and existence. This motif is evident throughout his novels, plays, and poetry. I examine Ngugi's 1964 novel, *Weep Not, Child* and his 1977 play *Ngaahika Ndeenda* (I Will Marry When I Want), which consistently present his ideologies on land and African politics. My research roots in Ngugi's emphasis on mother tongue as a form of cultural and political resistance and insights I gained from the Ngugi wa Thiong'o archival collection at Indiana University's Lilly Library. The archives reveal Nyambura wa Ngugi, Ngugi's wife, as an instrumental figure during Ngugi's turbulent periods, including his 1977-1978 detention and subsequent exile. Despite her silent public persona, Nyambura's strength and resilience sustained their family during Ngugi's imprisonment. I argue that Nyambura embodies the powerful, often unacknowledged "mother" figure, mirroring characters like Njeri and Nyokabi in *Weep Not, Child* and Wangeci in *Ngaahika Ndeenda*. Ultimately, motherhood in Ngugi's works and Nyambura's life signifies cultural continuity, resistance, and collective memory, transforming beyond biological terms into a site of resistance, memory, and potential revolution.

Reimagining Africa's External Trade Policy: The AfCFTA, EU Relations, and the Quest for Coherence

Moses Ogutu - Maxwell School, Syracuse University

Africa's external trade landscape remains fragmented, shaped by overlapping agreements and external dependencies. This paper analyzes the potential of the African Continental Free Trade Area (AfCFTA) to serve as a platform for more coherent and strategic external trade policy, with a focus on Africa-EU trade relations. Using a developmental regionalism lens, the paper traces historical asymmetries in Africa-EU trade and critiques the limitations of Economic Partnership Agreements (EPAs). It argues that a reimagined trade framework—anchored in AfCFTA—can shift Africa's trade posture from reactive to proactive, enabling collective negotiation, value addition, and industrial upgrading. The paper draws on institutional theory and new regionalism scholarship to highlight the conditions under which AfCFTA can enhance Africa's voice in global trade governance.

Enduring and changing patterns of family dynamics in Kenya

Jane Rose Njue - Northern Illinois University

Teresa Wasonga - Northern Illinois University

The results of a study of Kenyan families reported by Njue et al. (2007) titled "Family Strengths and Challenges in Kenya" revealed that, despite numerous challenges, Kenyan families have demonstrated remarkable resilience. Over the years, Kenyan families have adapted to various life challenges by embracing diverse family structures, functions, and creative strategies, effectively responding to contemporary issues like the HIV/AIDS pandemic, unemployment, poverty, and lack of adequate government resources. This resilience has been characterized by a communitarian approach, which emphasizes family values such as collectivism, the utilization of extended kin networks, communal child-rearing practices, and collective caregiving for vulnerable family members. The role of women was found to be particularly pivotal, as they continued to serve as sources of hope for family survival amidst adverse conditions. Additionally, religion was identified as essential in providing stability and meaning within families and the broader society. The secular sector also contributed significantly by promoting child—and family-friendly legislation, implementing poverty eradication initiatives, and managing HIV/AIDS programs, all of which aimed to enhance the livelihoods of Kenyan families. However, the Kenyan family structure has evolved from traditional nuclear models towards greater diversity, which brings challenges and opportunities influenced by social, economic, cultural, and technological factors at both the local and global levels. The proposed roundtable discussion will explore the enduring and changing patterns of family functioning in Kenya and the factors contributing to these dynamics.

Are Ordinary People on a Livelihood Rehearsal? Challenging Academic and Professional Narratives of Development in Kenya

Mary Njeri Kinyanjui

Academics and development professionals have invested significant resources in advocating for the inclusion of ordinary people in the modern neoliberal economy, producing extensive research, reports, and interventions. Despite these efforts, the living conditions of many ordinary people in Kenya and across Africa remain unchanged. This paper critically examines the prevailing development discourse, questioning whether ordinary people perpetually engage in a "livelihood rehearsal" – striving towards an ideal that remains perpetually out of reach. As a development scholar, I argue that this perspective overlooks ordinary communities' inherent agency and robust strategies. Through empirical case studies from Kenya, this paper demonstrates that ordinary people are not merely rehearsing for a better life; instead, they actively construct and engage in their systems, institutions, and practices that enable them to experience well-being and flourish within their existing contexts. This research challenges the dominant top-down development paradigms and advocates for re-evaluating how we understand and support the diverse pathways to a "good life" as defined and practiced by communities.

Developing a Culturally Sensitive Postgraduate Diploma in Addictions and Substance Use Disorders: A Case Study of Kenya in Africa.

George Mugoya - The University of Alabama, Tuscaloosa

Noony K. Omare - The University of Alabama, Tuscaloosa

In a global context, the counseling profession encounters various challenges shaped by cultural differences and regional dynamics. In Africa, the state of the counseling profession is similarly impacted by unique obstacles that hinder the effectiveness and outcomes of counseling services. The increasing prevalence of addiction and related disorders has increased the need for counselors with adequate training to meet the unique needs of individuals suffering from addiction and related disorders, especially given the cultural setting of Africa. In response to these needs, scholars from Kisii University (Kenya) and University of Alabama (USA) collaborated to develop a Postgraduate Diploma Program in Addictions and Related Conditions (PGARC) to be offered by Kisii University in Kenya.

Bridging the Gap: Strategies for Implementing Policy for Inclusive Education for Children with Disabilities in Kenya

Eric Njue - University of Oregon

This study critically examines the policy landscape and implementation efforts in Kenya concerning inclusive education for children with disabilities. While Kenya has exhibited a longstanding commitment to inclusive education through constitutional mandates, international treaties, and successive policy reforms, significant gaps persist between policy intentions and actual outcomes. Barriers, including inadequate identification, assessment, and placement systems; insufficient teacher training; inconsistent funding and resourcing; limited data utilization; and poor coordination among stakeholders, continue to hinder progress. Drawing on various policies enacted between 1964 and now, as well as recent national data reports from the Kenya National Bureau of Statistics (KNBS, 2022), the Kenya Institute of Special Education (KISE, 2018), and the Education Sector Report (2024), this study examines recurring policy themes, identifies implementation gaps, and provides targeted recommendations. This study finds that despite the government's efforts to formulate Special Needs Education (SNE) policies, the pace of implementation remains slow due to structural, financial, and cultural barriers. Key recommendations for strategies to enhance the implementation of inclusive policies include strengthening and resourcing the Educational Assessment and Resource Centres (EARCs), utilizing enrollment data to inform targeted support, developing a transparent and needs-based financing framework, enhancing public awareness and teacher training, and expanding curriculum adaptation and inclusive teaching resources.

Building a Culture of Mentorship in STEM Teacher Development: Lessons from the U.S. Noyce Model for Kenyan Contexts

Moses K. Ochanji - California State University San Marcos

Teacher shortages are a global issue, with high attrition especially among early-career educators in under-resourced communities. In Kenya, just as in the U.S., teacher preparation must extend beyond recruitment to address the critical need for support and retention in the profession. This presentation shares a U.S.-based model for cultivating mentorship across the STEM teacher development pipeline and explores its potential application within the Kenyan education system. Drawing on the NSF-funded Noyce Track 1 project at California State University San Marcos, the model features a multi-tiered mentoring cycle involving STEM faculty, peer mentors, interdisciplinary educators, and alumni teachers. It begins at the undergraduate level, where faculty champions initiate mentorship relationships with students exploring teaching careers, and extends through the early years of teaching. Informal meetings, collaborative events, structured feedback, and alumni engagement form the backbone of this relational, community-building approach. Early findings suggest that this model increases teacher identity, confidence, and long-term commitment to the profession, which are factors that align with retention needs in both the U.S. and Kenya. The session will draw comparisons with Kenyan teacher preparation policies, invite dialogue on localized adaptation, and propose ways Kenyan universities and teacher education programs might incorporate layered mentoring to support STEM education in rural schools.

Improving Patient Safety Through Hand Hygiene Practices in Nursing

Lewis Wanjiku - University of the West of England, Bristol

Hand hygiene is one of the most important practices in nursing that helps reduce the spread of infections in hospitals. This paper looks at how nurses follow handwashing guidelines and how this affects patient safety. The study includes a review of current research and observations of hand hygiene practices in a UK hospital setting. Research shows that when nurses clean their hands properly and often, the number of hospital-acquired infections goes down. However, some nurses do not always follow the correct steps, especially during busy times or emergencies. This paper discusses ways to improve hand hygiene, such as regular training, visual reminders, and easy access to handwashing supplies. In conclusion, improving hand hygiene is a simple but powerful way to protect patients and improve the quality of care in hospitals.

Reducing the risk of malaria through decision making in the built environment

Esther Obonyo - Penn State University

Dr. James Mutunga - Penn State University

This interactive session is part of a recently launched Belmont Forum Collaborative Action Project on Climate Environment and Health that is directed at developing and validating a transdisciplinary decision support framework that can be used to minimize the risk of malaria transmission. Our approach uses data-informed and stakeholder-responsive deployment of built environment knowledge systems and decision

support tools, physical infrastructure, and human structures. Malaria is preventable; however, it continues to devastate families and communities across the globe. There are currently more than 200 million cases worldwide, and over 625,000 people die from malaria every year. The vast majority of these occur in Africa and >80% of the deaths are children under 5 years old. The risk of malaria is associated with factors that extend outside of the health sector such as inadequate living conditions and infrastructure. Extreme weather events often exacerbate this risk. Unfortunately, our collective global response to malaria remains largely anchored in a healthcare-based approach with relatively less focus on non-health sector interventions. Recent developments have made a strong case for restructuring our thinking about malaria as a health sector concern towards a comprehensive coordinated multi-pronged effort that harnesses action, commitment, and expertise across all sectors. Translating the existing conceptual framework as articulated in Roll Bank Malaria's publication on the Global Response Framework to Malaria and Mosquito-transmitted Diseases in Urban Areas will require an enhanced understanding of the influence of extreme weather events on the built environment and other dynamic factors on the root causes of malaria that lie beyond the health sector's reach, including stormwater, housing, and living conditions. Our proposed transdisciplinary research is directed at addressing this need. The proposed session will help define performance targets for local, place-based health-focused adaptation strategies that are effective for malaria prevention.

Revolutionizing Medical & Healthcare in Africa with Artificial Intelligence using Pawanax-AI Medical Agent

Fidelis Ndombera - Kenya Scientists in Diaspora Inc.

Africa's healthcare systems face critical challenges that include insufficient infrastructure, limited healthcare workforce, and restricted access to essential services. Many rural areas have poor services due to insufficient physicians leading to delayed diagnoses. One cross-sectional study carried out in 2022 in the British Medical Journal Global Health, found that Africa has an average of 1.55 physicians for every 1,000 individuals against the WHO-recommended threshold of 4.45 per 1,000 people. In addition, language barriers between patient and doctor exist and persist mainly because medicine is taught in European languages, yet the African illiterate population speak over 1000 different local languages. Such disparities necessitate scalable solutions powered by Artificial Intelligence to fast-track quality delivery of healthcare. To narrow these gaps, we developed an AI Medical agent christened Pawanax-AI with capability to facilitate communication between doctor and patient in African languages. Importantly, our AI agent, PawaEye, has the capability to analyze complex medical images and provide fast and accurate medical information to help in diagnosis and treatment of various disease conditions. Additionally, there is an additional mental health assistance application to help the user navigate various mental issues. In this workshop, we will demonstrate the utility of the application live to attendees and present results of our survey among users in Kenya. Attendees will be able to have hands-on experience with the Pawanax Medical AI-Agent and apply it to their own health conditions. In our survey, 83% of community health workers reported an increase in patient engagement with Pawanax AI compared to non-users.

Abstracts by Session - DAY 2

Constructing Gender: How Socialization Shapes and Sustains Traditional Norms in Kenya

Jonathan Choti - Michigan State University

Danielle Totzke - Michigan State University

Gender patterns are common across the cultures of the world and are reflected and reinforced in different ways and contexts. Especially, gender socialization plays a critical role in shaping both individual identities and broader societal expectations, norms, perspectives, and values. This paper explores how institutions such as education, religion, politics, and family dynamics serve as powerful agents in transmitting and reinforcing traditional gender roles in Kenya. Drawing on a range of relevant literature and oral interviews, the discussion highlights how these institutions not only influence personal and societal understandings of gender but also contribute to the maintenance of systemic inequalities in Kenyan society. By examining the mechanisms through which gender norms are perpetuated, this analysis highlights the need for transformative approaches to dismantle these biases. While there is no singular solution to the gender problem, identifying the roots and outcomes of gender socialization is a necessary first step in creating a more equitable and inclusive society.

Umoja Village, Sisterhood, and Resistance

Justine Waluvengo - Vanderbilt University

Umoja is a female-only village in Samburu, Kenya, founded by Rebecca Lolosoli and Others in 1990. It serves as a sanctuary for Samburu women fleeing the horrors of rape, domestic violence, child marriages, female genital cutting, and other forms of gender violence. Umoja is not merely a physical refuge; it symbolizes a radical reclamation of agency by systematically marginalized women. Central to the ethos of Umoja is the recognition of the multifaceted nature of womanhood, which transcends biological categorization to encompass the complex social constructions of feminine identity. The women exercise a degree of control over their sexuality and maintain autonomy over their bodies by experiencing sexuality and motherhood on their terms. This challenges the traditional narrative that portrays them solely as victims of sexual violence and oppression. I argue that the collective resistance and sisterhood that Umoja women showcase can serve as a blueprint for African women's intellectual and political endeavors. That is, the significance of Umoja extends beyond its physical boundaries to offer a nuanced model for generating discourse on gender and sexuality as political projects, and commitment toward the empowerment of women to resist gender violence and assert their agency.

Barriers to Education for Girls in Rural Kenya

Zainabu Momanyi - University of Oklahoma

Education is a lifeline, but for many girls in rural Kenya, staying in school remains an uphill battle. This study investigates how cultural practices and menstrual hygiene access shape the educational journeys of girls aged 12 to 18 in rural communities, despite national efforts like Free Primary Education (FPE). Grounded in a quantitative research design, the study explores two key barriers: harmful cultural expectations (including early marriage, female genital mutilation, and gendered domestic roles) and limited access to menstrual hygiene resources. Using stratified random sampling across three Kenyan regions, data is collected through structured questionnaires and school records. Analysis of Variance (ANOVA) is employed to examine how varying levels of exposure to these barriers affect school retention and completion rates. Preliminary findings are expected to show statistically significant disparities in educational outcomes, especially among girls who face high exposure to cultural norms and limited menstrual hygiene support. More than just data, this research highlights interrupted dreams and untapped potential, while proposing targeted, evidence-based interventions for policymakers, educators, and community leaders to foster equitable learning environments. At its core, this study is a call to action: when we dismantle systemic barriers, we don't just educate girls, we empower entire communities.

Keywords: rural education, girls' retention, cultural practices, menstrual hygiene, Kenya, ANOVA

Goodness-of-fit test for Kumaraswamy distribution using energy statistics

Joseph Njuki - Coastal Carolina University, SC

In this session, the presenters will discuss how they developed a univariate goodness-of-fit test for the Kumaraswamy distribution based on energy statistics. Due to the availability of its quantile (inverse) distribution function, Kumaraswamy distribution has been shown to be the preferred alternative to the beta distribution, since both have bounded support in the $(0,1)$ interval. In addition, Kumaraswamy distribution is found to be more flexible when compared to many other bounded distributions in the $(0,1)$ interval and thus more applicable in modelling data such as proportions, ratios, Gini index for different economies, among many others. The proposed test procedure is simple and more powerful against generative alternatives. Under different settings, simulations show that the proposed test is capable of being well controlled for any given significance (nominal) levels. In terms of power comparisons, the proposed test outperforms other existing empirical distribution functions (EDF) methods in different settings. We then apply the proposed testing procedure to two real-life datasets (African hidden (ghost) economies and global relative humidity) to demonstrate its competitiveness and usefulness.

Consistent Regulatory Testing Assures Quality of Medicines in Kenya

Matthew Kwena - National Quality Control Laboratory, USAID's Promoting the Quality of Medicines Plus Program, Nairobi, Kenya

The National Quality Control Laboratory (NQCL) is Kenya's statutory body established to perform physicochemical, biological analysis and other pharmaceutical evaluation of pharmaceuticals manufactured

locally or imported. The purpose of such testing is to determine whether medicines comply with compendial specifications. The NQCL is WHO Prequalified and ISO/IEC:17025:2017 accredited. The objective of this study was to determine the quality of medicines tested at NQCL between 2020 and 2023. METHODS: NQCL analyzed its data repository of samples tested between 2020-2023. These samples included those submitted by pharmaceutical companies for product pre-registration testing; those submitted by the regulatory body for routine post-marketing surveillance (PMS) of the quality of medicines in the local market and those from procurement and supply agencies. RESULTS: A total of 2,115 records were retrieved. Majority of the samples tested were pre-registration (61%), followed by PMS (25%). Three quarters of products were from Asia and 12% were from Africa. One third were anti-infectives, including anti-bacterials, anti-malarials, and anti-virals, while the rest were for non-infectious conditions. Overall, product failure rate was 2% (44 of 2115); majority (21) being from pre-registration samples, 12 from PMS and 11 from procurement and supply agencies. Asian-sourced products accounted for 61% of the failures, products from Africa accounted for 22%, while the rest of the world accounted for 16%. CONCLUSION: Overall, there was a low rate of quality failure among medicines tested at the NQCL between 2020-2023. Of the failed medicines, the majority were either pre-registration or from quality surveillance. Most of the failed products originated from Asia. This reinforces the need for risk-based surveillance approaches in monitoring the quality of medicines in Kenya.

(p)ppGpp is required for *Shigella flexneri* glucose metabolism

Grace Kago - University of Texas at Austin

Shigella flexneri, a human enteric pathogen that replicates in the cytoplasm of intestinal epithelial cells and spreads cell-to-cell, grows with glucose or pyruvate as the sole carbon source. Mutant *S. flexneri* with defects in glucose metabolism via the Embden-Meyerhof-Parnas pathway (*pfkAB*) are able to invade human cells in culture but form small plaques, indicative of reduced intracellular replication and cell-to-cell spread. Carbon metabolism in Enterobacteriaceae is influenced by the stringent response alarmone (p)ppGpp, but the role of this alarmone in *Shigella* growth and metabolism in the intracellular environment is underexplored. We show that disruption of synthesis by deleting the synthetase genes *relA* and *spoT* (Δ RS) in *S. flexneri* prevents plaque formation and diminishes the ability of the bacteria to grow in the presence of glucose, but not pyruvate, as the carbon source. The effect of glucose is toxicity, rather than a failure to use glucose, since growth on pyruvate is severely reduced in the Δ RS mutant when glucose is also present. Glucose sensitivity was also observed in the *S. flexneri* *pfkAB* mutant, which is unable to metabolize fructose phosphate. The Δ RS strain showed greatly increased sensitivity to α -methyl glucoside, a non-metabolizable glucoside, further indicating that the loss of (p)ppGpp renders the cells more sensitive to stressors associated with impaired glucose metabolism. The α -methyl glucoside sensitivity of the Δ RS strain and the glucose sensitivity of both the *pfkAB* and Δ RS mutants suggested that the glucose toxicity was associated with accumulation of the phosphorylated glycolysis intermediates. Taken together, our results indicate that (p)ppGpp plays an important role in *Shigella* spp. carbon metabolism in vitro and in the intracellular environment of the host cell.

From Research Support to Intellectual Shortcuts: The Paradox of Using AI in Scholarship

Jane Opiri - University of Arkansas at Pine Bluff

The widespread adoption of AI technologies in academic settings presents a fundamental paradox. While these tools demonstrate clear benefits in accessibility and efficiency, emerging evidence suggests potential negative consequences for cognitive development and critical thinking abilities. This presentation examines the dual nature of artificial intelligence integration in educational contexts, analyzing how AI tools simultaneously enhance productivity while potentially compromising critical cognitive development, and proposing frameworks for balanced implementation that preserves essential intellectual skills. Additionally, this analysis synthesizes recent empirical research, including MIT electroencephalography studies examining neural connectivity patterns, comparative studies of AI-assisted versus traditional learning approaches, and educator reports on structured AI integration strategies. AI's educational impact depends critically on implementation methodology. Successful integration requires active rather than passive engagement, with educators reporting positive outcomes from assignments requiring students to critique AI-generated content. Current challenges include plagiarism risks, equity gaps, and the need for comprehensive AI literacy training. The future of AI in academia centers on balanced approaches that use technological efficiency while preserving foundational intellectual habits. Recommended strategies include AI literacy training, policies mandating source verification, and assessments prioritizing learning processes over outputs, ensuring AI enhances rather than replaces human intellectual development.

Desperation as Strategy: Examining the Labor Implications of U.S. Policy Shifts from a Diasporic Lens

Evalyne Onyoni - Grand Canyon University

As global conversations around equity and workforce transformation intensify, recent U.S. policy shifts present a subtle yet powerful case study in how desperation can be quietly leveraged as a labor strategy. This paper examines how the passage of the so-called “Big Beautiful Bill”—with its simultaneous cuts to aid programs like SNAP and Medicaid, as well as strict immigration crackdowns—may be restructuring the U.S. labor force not through opportunity, but through systemic pressure. Drawing on my lived experience as a Kenyan public sector administrator in the U.S. and current doctoral research in organizational leadership, I synthesize practical observations, secondary data, and leadership analysis to examine how low-income populations may be pushed into undervalued labor as social support shrinks and previously undocumented roles become vacant. The phrase “desperation becomes the new labor strategy” captures this shift, raising critical questions for workforce equity and ethical leadership. This paper situates U.S. policy within a global labor and migration context, offering implications for scholars and practitioners navigating similar tensions in Kenya and across the African diaspora. Through a reflective, equity-centered lens, the work invites leaders to consider how systems are shaped not only by formal policy but by the assumptions we embed in them. In line with the conference theme, this paper aims to unite diverse perspectives across borders, elevating the role of ethical, inclusive leadership in shaping a just future for global labor and workforce development.

Influence of Computer Programs on Academic Performance of Learners with Disabilities in Public Primary Schools in Saboti Sub- County, Kenya.

Peter Namasaka - Mount Kenya University

The purpose of this study was to assess the influence of computer programs on academic performance of learners with disability in public primary schools in Saboti Sub- County, Kenya. The study adopted a descriptive research design with a target population of 1,509, which comprised 1,496 learners with disability and 13 head teachers in public primary schools in Saboti Sub- County. A sample size of 310 was determined by the use of the Krejcie and Morgan Table for determining sample sizes. Purposive and stratified random sampling techniques were utilized to determine the respondents. From the sample size of 310, all the 13 head teachers were purposely selected to participate in the study, with the remaining 297 being learners with disability, who were picked through the stratified random sampling technique. The main data collection tools used in the study were interview schedules and structured questionnaires. A reliability coefficient of 0.79 was obtained from the instrument, indicating that they were reliable. Descriptive statistics and the chi-square test were employed to analyze quantitative data and presented in tables. The analysis of qualitative data was based on the themes of the study and was presented using quotations. The study established that computer programs such as Access to Math, Live Scribe, and Big Calc helped in improving academic performance. The study will be beneficial to scholars, legislators, and society as a whole.

Kenya's secondary schools: The graveyards of dreams

Teresa Wasonga - Northern Illinois University

Jane Rose Njue - Northern Illinois University

For every Kenyan child stepping into secondary school, a world of dreams unfolds—dreams of becoming doctors, engineers, nurses, teachers, or lawyers. They dedicate four years to learning, frequent assessments, and hours into revision. Families and the government invest money, covering costs for boarding, teacher salaries, and various necessities. Despite this investment, the academic outcomes of the Kenya Certificate of Secondary Education (KCSE) extinguish as the rations of a staggering number of students. Over the past eight years, half of those sitting for the KCSE have consistently achieved grades of D+ and below. Particularly alarming is the number of students receiving grade E—46,151 (2021), 30,882 (2022), 48,174 (2023), and 48,333 (2024). These results fail to adhere to a normal distribution, raising questions about the alignment between the curriculum and the content assessed in exams. The specter of exam leakage and cheating haunts the system, while disparities in school resources and infrastructure create an uneven playing field. Unexpected jumps in grades from one year to the next in some schools, teacher attitudes, and the moral intentions of school leaders exacerbate this crisis. Since grades dictate the educational and professional pathways available to students, over 50% of Kenyan secondary school students may be unjustly barred from their desired professions. At the same time, the current examination process allows individuals to qualify for critical fields like medicine, engineering, and law—disciplines for which they may lack genuine interest or merit—while denying opportunities to those truly deserving. These challenges stifle rather than nurture the dreams of Kenyan youth.

Science Engagement in African Mother Tongues as a Method of Increasing Scientific Literacy

Grace Kago - University of Texas at Austin

Effective science engagement facilitates integration of scientific knowledge into everyday choices and decisions, evidence-based decision making, and in the understanding required to prioritize and invest in biomedical research as part of essential government expenditure. The internet and the social media platforms within it have been useful tools for science engagement by providing ready access to information about science, scientific discoveries, and information about human health to users across the globe. These resources have also expanded access to education professionals who encompass a diverse range of skills, expertise, and linguistic knowledge, thereby creating informal education resources that can supplement understanding and provide clarity about scientific and health-related knowledge. These informal education resources are of increased importance because, according to UN reports, 40 per cent of the world's population does not have access to education in the language they speak or understand. Against this landscape, informal scientific education and science engagement in various languages emerges as an underexplored and underused frontier of education resource development across the globe. In this talk, I aim to build a case for how using African mother-tongues and non-English languages for science engagement on social media platforms presents a powerful tool that can: 1) Increase scientific literacy across education barriers, 2) Facilitate language revitalization of various underused mother-tongues, 3) Integrate modern knowledge and traditional knowledge, and 4) enable fertile possibilities for interdisciplinary scholarship. Taken together, science engagement in mother tongues offers a multifaceted approach to increase scientific literacy, especially in countries where much of the population has varied access to education resources.

Seeding and Catalyzing Transdisciplinary Competencies

Esther Obonyo - Penn State University

Students in engineering and other STEM disciplines that have a bias towards technologies and products usually end up learning how to solve well-structured story problems in which all parameters of the problems are known. Story problems rely on established methods for how to arrive at solutions. These include equations that can be used to assign value to unknown parameters. This linear approach translates problem-solving into a procedure that can be memorized, practiced, and habituated. It inadvertently encourages students to default to optimize performance using quick, easy tricks that fail to capture the wickedness of environmental sustainability challenges. Learning paradigms that are anchored in story problems encourages students to view knowledge as certain and to expect a single “right” answer. This limits students’ ability to address the major ill-structured, wicked problems of our time such as climate change, public health challenges, housing, food, water, and energy insecurity, loss of biodiversity, and poverty. Some universities offer educational experiences that transcend disciplinary boundaries. While these efforts have demonstrated that engineering students can engage in wicked, complex, societal problem-solving, training students using story problems remains the norm. One of the constraining factors is linked to the educators’ lack of adequate training and experience in addressing wicked problems such as environmental sustainability. Other challenges include a lack of clarity on the content students need to learn to be able to address wicked problems, the types of pedagogical methods that can be used to support that learning, and how learning outcomes could be assessed. Larger programs such as Engineers without Borders, Engineering for a Sustainable World, and Engineering for Change seek to address this need. While the impact of such

programs is commendable, strategies that can be used to engage a broader community of engineering students are relatively new and still being developed. Through leveraging our use-inspired environmental sustainability-related projects and networks in the US and Kenya, the author is developing a program that can address outstanding issues through seeding and catalyzing transdisciplinary competencies among STEM students.

The relationship between a group-based microfinance program and food insecurity in rural Western Kenya

Charles Opondo - Indiana University School of Public Health

Background: Kenya faces widespread food insecurity, with over 10 million people chronically affected and 2–4 million in need of emergency assistance. Nearly half the population lives below the poverty line of \$1.75 per day, with rural residents most impacted. Microfinance programs may promote economic well-being and result in improved food security, but these relationships are understudied in Kenya. Objective: This study explored the association between participation in a group-based microfinance program, the Bridging Income for Group Integrated Care (BIGPIC), and household food security in rural western Kenya, as well as the modifying effect of sex. Methods: We conducted a cross-sectional survey to interview a sample of 300 adults from two rural communities in Bungoma County, 100 of whom were BIGPIC microfinance members. Food security was assessed using the Household Food Insecurity Access Scale (HFIAS), and specified log-binomial regression to estimate adjusted prevalence ratios (APR), accounting for potential confounders and stratifying by sex. Results: Results showed that microfinance members were 1.49 times more likely to be food secure than non-members, but the association was not statistically significant (APR = 1.49, 95% CI: 0.56–3.99). The effect was more pronounced in females (APR = 1.72, 95% CI: 0.52– 2.92) compared to males (APR = 1.02, 95% CI: 0.09–10.52), though still not significant. Conclusion: Microfinance members tended to have higher food security than non-members, though results were not statistically significant. Results may be explained by a true small effect or measurement bias. Future programs should include targeted food assistance interventions.

The Role of Agricultural Extension Services in Promoting Agricultural Sustainability: A Central Malawi Case Study

Leah M. Mungai - University of Alabama

The majority of studies examine farmers' response to extension services; however, few examine the extension service from a provision and delivery capacity perspective. This study investigates the role of agricultural extension personnel in four study sites of Central Malawi. We collected data using semi-structured interviews of 19 extension staff selected purposely from four Extension Planning Areas (EPAs). Thematic analysis was utilized to identify key themes, including agricultural practices, land and water management, as well as extension training and information sources. Findings revealed a diverse extension service provided by various actors, including government agencies, non-government organizations, farmer groups, and the private sector. All participants mentioned using the Guide to Agricultural Production booklet, the official manual for agricultural information, along with printed leaflets (79%) containing specific technologies from crop specialists. Advisory topics covered were crop and soil management, land,

and climate-smart practices, primarily disseminated through the lead farmer system (84%) and farmer field schools (47%). Additionally, recent mobile technologies such as WhatsApp and traditional radio, which offer the widest geographic coverage, were identified by some participants as key channels for information communication. This study identified potential new areas for enhancing extension services not only applicable to Malawi, but also to Kenya and other African nations that include: (a) fostering multidirectional engagement through partnerships among public, private, and non-governmental extension services, alongside farmer-group platforms. (b) integrating mobile phone and media innovations to address the low extensionist-farmer ratio problem and bridge information and service gaps. For example, Kenya's public and commodity-led extension services can benefit from this study by improving farmer networks and farmer business schools encourage financial literacy and market-oriented products through improved multimedia that caters for commodity crops such as coffee, tea, and pyrethrum as well as specialty crops. And finally, (c) expanding the scope of extension advisory service and training to address urgent issues such as climate change adaptation and value addition. This aligns with Kenya vision 2030 initiatives that promote agricultural value addition to accelerate national and local agricultural economies.

The World's Guinea Pig: Kenya and the Ethics of Experimentalism in Global Innovation

Moses Ogutu - Maxwell School, Syracuse University

In recent decades, Kenya has emerged as a key site for piloting new technologies, pharmaceutical products, and policy innovations. From the testing of AI systems and biometric ID platforms to pharmaceutical trials and digital financial services, Kenya is often lauded as a global innovation hub. Yet beneath this narrative lies a more troubling pattern: the disproportionate use of Kenyan citizens, systems, and environments as experimental subjects for unproven or underregulated global technologies. This paper interrogates Kenya's evolving role as a "guinea pig" for global innovation and raises critical questions about power, consent, and justice in international research and development. Drawing on examples such as the rollout of WorldCoin's iris-scanning program, biometric identity experiments like Huduma Namba, pharmaceutical trials, and the piloting of AI and edtech platforms in low-income communities, the paper explores how Kenya's institutional, economic, and regulatory asymmetries make it vulnerable to exploitative experimentation. Anchored in theories of data colonialism, postcolonial science studies, and global political economy, the analysis critiques the global innovation ecosystem's selective ethics and calls for a rebalancing of agency, accountability, and regulatory parity. It also considers how African countries, and Kenya in particular, might assert epistemic sovereignty and develop robust ethical frameworks that resist exploitative innovation while still embracing transformative technologies.

Bridging Digital Divides Through Global Engagement and Partnerships: Empowering Rural Communities in Kenya through Digital Literacy

Mary Gitau - University of Tennessee, Knoxville.

This paper will explore innovative global engagement and partnership strategies aimed at bridging the digital divide and fostering empowerment in rural Kenyan communities. Despite the transformative potential of digital technologies in promoting economic development and academic advancement in urban areas, many rural communities in Kenya remain marginalized due to infrastructural deficiencies, cultural

and economic barriers, and limited digital literacy. The presentation will examine two community-based digital literacy initiatives that have successfully introduced computer labs and technology access in underserved regions in Kenya, with a particular focus on empowering women and youth. These initiatives have equipped community members with critical digital competencies, enhanced entrepreneurial capacity, and fostered pathways to self-sufficiency. By providing free or low-cost access to digital tools and computer training, the programs have made technology more accessible to individuals who might otherwise be excluded from the digital economy. Drawing from case studies, the session will highlight effective strategies, community engagement and global partnerships that have enabled rural populations to overcome systemic barriers and harness digital skills for social, education and economic advancement. These interventions also serve as practical examples of how grassroots digital inclusion efforts can align with and advance the United Nations Sustainable Development Goals, specifically Goal 5 (Gender Equality) and Goal 9 (Industry, Innovation, and Infrastructure).

Not For Sale: Bride Price and Its Role in Gendered Violence and Harmful Traditions

Njeri Kinuthia - University of Central Florida

My research examines bride price as a force perpetuating the commodification of women and fueling gender-based violence, child marriages, and Female Genital Mutilation in Kenya. Bride price is a cultural practice in which the groom pays the bride's family to formalize marriage. In some communities, it is a source of immediate income for parents, encouraging practices that increase the perceived worth and marriageability of girls. Families also arrange child or forced marriages for economic gain, often denying girls autonomy and agency over their future. The transactional nature of bride price reinforces the idea that women can be purchased and owned, which often leads to rigid gender roles, stifling control, and gender-based violence. As a visual artist, I respond to these injustices through artworks informed by research, interviews with survivors, and personal observation. Growing up in Kenya, I witnessed some of these traditions, and I am passionate about revealing their ramifications. Through painting, drawing, sculpture, installation and public art, I create multidisciplinary works that challenge oppressive traditions and raise awareness of their detrimental effects on women. I create portraits of women bound in cultural fabrics to highlight oppression, develop sculptures inscribed with subversive text to confront misogynistic and patriarchal traditions, and celebrate the resilience of women and their liberation through large, imposing installations. In this presentation, I will share my artwork and discuss the themes that inform my practice. My work invites viewers to reflect on these topics and question how cultural traditions influence their own identities.

Business and Entrepreneurship Practices in Kenya: A Farmer's Perspective

Diane Uyoga, Moi University, Eldoret, Kenya

The farming landscape in Kenya is vibrant, robust and diverse in terms of trade and service provision. Home grown businesses are well established and ascribe to the nature of doing business in the region. Trading of produce is majorly based on the availability within the local area. Much attention has been paid to the large-scale farmer with resources to enhance and sustain their agricultural operations. The small-scale farmer has devised and adapted ways for sustainability and household sustenance that meet the required needs. This

study focuses on the farmer who has found indigenous enterprising ways to sustain their small-scale operations, support household set up, and generally improve their standards of living. The ways and methods employed may be sufficient to bring them out of the poverty line while having the perspective of their farming activities to be entrepreneurial and hence business as opposed to being limited to providing for their households and communities. The farmer's perspective comes from indigeneity of their common practices based on their cultural and economic beliefs. The study is grounded on Indigenous Wholistic Theory and Social Practice Theory that help in shedding light towards the culture and behavior that surround farming practices as a way of a holistic approach to wellbeing and social life. A quantitative method of data collection will be employed where enterprising small-scale farmers give their views on their farming practices.

Keywords: Small scale farmer, procurement strategies, indigenous entrepreneurship, indigenous marketing strategy, Indigenous Wholistic Theory, Social Practice Theory.

Kenyan Diaspora Cooperative Societies in Economic Development and Challenges Faced

Jacob Ongaki, Southern Oregon University
Jeremiah Okari, Saint Mary's University of Minnesota

The role of diaspora cooperative societies in Kenya's economic development is increasingly significant, particularly through the mobilization of remittances, promotion of financial inclusion, and investment in housing, education, and entrepreneurship. By pooling member resources, these societies provide secure savings, affordable credit, and investment opportunities while reducing reliance on costly or informal remittance channels. Despite their contributions, diaspora cooperatives face challenges such as governance weaknesses, regulatory inconsistencies, member contribution dormancy, irregular remittances, negative peer experiences, and sectoral inefficiencies within umbrella bodies like KUSCCO. The Sacco Societies Regulatory Authority provides oversight and accountability, although gaps remain in governance and digital integration. This study employs a descriptive and exploratory research design using qualitative methods, including interviews with SACCO officials and focus group discussions with members, alongside quantitative analysis of financial statements and member contribution records. The research aims to evaluate the influence of regulatory oversight, sectoral inefficiencies, member-related challenges, and access to digital financial technologies on the sustainability of diaspora cooperatives while proposing strategies to enhance their contribution to Kenya's economic development.

Monocyte -to-lymphocyte ratio (MLR) predicts TB mortality among ART-naïve hospitalized Kenyan children living with HIV (CHIV)

Henry Kitabi, University of Georgia

The blood monocyte-to-lymphocyte ratio (MLR) is associated with tuberculosis (TB) disease in children but has not been evaluated as a biomarker to predict TB mortality. Setting: We used data from Kenyan children enrolled in the Pediatric Urgent Start of HAART (PUSH) trial, a randomized controlled trial of hospitalized ART-naïve children with HIV and TB aged 0-12 years who were initiating ART and were followed for six months. We determined absolute monocyte and lymphocyte counts at enrollment with which we computed MLR. Children underwent microbiological evaluation for TB disease; 181 children were classified as confirmed, unconfirmed, or unlikely TB. Methods: We evaluated MLR at enrollment as a predictor of TB mortality among children with confirmed and unconfirmed TB using Kaplan-Meier curves and Cox proportional hazard models. Results: Of 93 children, 13 (14%) had confirmed TB, and 80 (86%) had unconfirmed TB. A total of 27 (29%) died, and most deaths occurred during the first month of follow-up (n=22, 81%). MLR above 0.218 identified children who died, with a sensitivity of 92% and specificity of 39%. After adjusting for age, tuberculosis classification, antituberculosis therapy (ATT), and orphans or vulnerable children (OVC), we found a higher risk of death among children with MLR > 0.218 compared to those with MLR < 0.218 (aHR = 3.87; 95% CI: 1.31-11.43; P = 0.01). Conclusion: Monocytes and lymphocytes are routinely collected during complete blood counts in resource-limited settings. MLR can be an inexpensive biomarker to help clinicians target rapid treatment for children with suspected TB.

Early Detection of Gastrointestinal Cancers Using Machine Learning and Blood Biomarkers

Fredrick Onyango, Geethanjali Karuturi, Mahitha Gogu and Rashmita Kudamala, Indiana University Bloomington

Early detection of GI cancers is critical but often limited by the invasiveness and cost of current screening methods. This study investigates whether routine blood biomarkers, when combined with machine learning (ML), can serve as a scalable and non-invasive diagnostic tool for early GI cancer detection. Data from the CancerSeek dataset were curated, comprising 1,255 patients with 39 blood biomarkers and demographic variables (age, sex, race). Only gastric, colorectal, and normal cases were retained, and biomarker values were cleaned, standardized, and clinically threshold flagged. Statistical analyses (t-test, Chi-square, Mann-Whitney U) identified significant biomarker differences. Class imbalance (812 normal vs. 453 GI cancer) was addressed using SMOTE, oversampling, undersampling, and bootstrapping. Random Forest (RF) and Logistic Regression (LR) classifiers were trained on an 80:20 stratified split, with model performance assessed via AUC, precision, recall, and F1-score. RF consistently outperformed LR across sampling strategies. The best configuration RF with SMOTE achieved an AUC of 0.92, precision of 0.76, recall of 0.83, and F1-score of 0.79. Key predictive biomarkers included CEA, AFP, IL-6, and Thrombospondin-2. Statistical tests confirmed significant differences in biomarker distributions between cancer and normal groups ($p < 0.05$ for most features). Combining routine blood biomarker profiling with machine learning offers a promising, cost-effective approach for non-invasive GI cancer screening. This method demonstrates strong predictive performance and potential for clinical integration, particularly in settings where traditional screening is limited.

Keywords: Gastrointestinal cancer, blood biomarkers, machine learning, early detection.

School leadership preparation for behavior management: A review of discipline policies and practices in Kenya and Saskatchewan, Canada.

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Leadership makes a difference in the effectiveness of teaching and learning and overall school improvement. The nature, and milieu in which school leaders work is becoming more complex, making it difficult to ignore the need for school leaders to have requisite competencies if schools are to succeed. (Okoko, 2019; Wildy, 2008; Yan & Ehrich, 2009). Behavior management and student discipline are areas that have come to the forefront of school leader competencies as cases of indiscipline increase in schools. Kenya like many countries recognises that school leader preparation and development cannot be left to chance (Republic of Kenya, 2010; 2017). The presentation is based on a scoping review that explored how school leaders in Kenya and Saskatchewan, Canada, are prepared to manage student discipline/behavior. The review focused on leadership structures, policies, practices, and leadership preparation approaches. The literature included policy documents, as well as primary and secondary research. Findings revealed a notable contrast, but also substantial similarities. While Kenya focuses on discipline management, emphasizing punitive measures and rule enforcement, Saskatchewan takes a "behavior management" approach with both proactive and reactive strategies aimed at positive influences of student conduct. Kenya's centralized system strives to meet the needs of diverse student populations, whereas Saskatchewan's decentralized approach enables schools to implement context-specific strategies. When it comes to leadership preparation, school leaders often attend courses after appointment, leaving them underprepared. Conversely, Saskatchewan provides pre-appointment training, equipping leaders with essential skills for behaviour management. While Kenya faces challenges adopting alternative discipline approaches, Saskatchewan is recording some success with their approach which integrates less punitive strategies such as restitution and School-Wide Positive Behavior Interventions and Supports (SWPBIS). However, both contexts have strong legal frameworks that support school discipline and behavior management. The study recommends that Kenya considers shifting from reactive discipline to a proactive, behaviour-focused model, and that the Kenya Education Management Institute (KEMI) revise its leadership training to include pre-appointment behaviour management. It also affirms decentralization of discipline systems to address context challenges arising from cultural and socio-economic diversity. Finally, the study advocates for adopting context specific, but evidence-based strategies, such as self-regulation and executive function skills, as seen in Canada and Finland, where indiscipline has reduced by 80%.

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4. Dr. JaneRose Njue, Northern Illinois University
5. Leah M. Mungai, University of Alabama
6. Dr. Mary Gitau – College of Social Work, University of Tennessee, Knoxville.
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26. Charles Opondo; Indiana University School of Public Health
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