

Mount Kenya University



BOOK of ABSTRACTS

**8th International Interdisciplinary and Inter-Universities
Consortium – Africa Research Conference (8iiiUC-A 2023)
March 29TH - 31ST 2023**

Theme: Participatory Leadership, Innovation and Knowledge Transfer
for Sustainable Economies



**VINCENT POL
UNIVERSITY**
IN LUBLIN, POLAND



Kyambogo University
Knowledge and Skills for Service



**UNIVERSITY
of MAKENI**
Building a Civilization of Love



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Home of knowledge and innovation



**CHUKWUEMEKA ODUMEGWU OJUKWU
UNIVERSITY**

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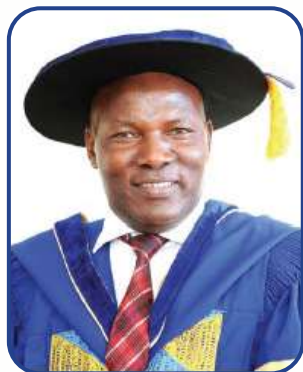
ORGANIZING COMMITTEE

- | | |
|-----------------------------------|---------------------------------|
| 1. Dr. Henry Yatich – Chairperson | 19. Madam Rose Macharia |
| 2. Dr. Marceline Kamande | 20. Mr. Amos Ngumbao |
| 3. Prof. Peter Wanderi | 21. Madam Nelly Wamaitha |
| 4. Dr. Serah Wairimu | 22. Mr. Michael Mukuha |
| 5. Dr. Purity Gacheri | 23. Mr. Martin Mwai |
| 6. Madam Jane Kuria | 24. Mr. Vincent Karuru |
| 7. Dr. Josphat Njuguna | 25. Mr. Bernard Mwaye |
| 8. Dr. Benson Njoroge | 26. Mr. Jesse Ndegwa |
| 9. Mr. Boniface Murigi | 27. Madam Immaculate Kakai |
| 10. Mr. Josphat Githua | 28. Mr. Bonface Joel Malala |
| 11. Dr. Jacqueline Omuya | 29. Prof. Kennedy Mutundu |
| 12. Dr. John Kamau | 30. Madam Mephis Mainga |
| 13. Dr. Samuel Karenga | 31. Madam Magdaline Jebet |
| 14. Dr. Solomon Mwaniki | 32. Prof. Mateusz Stefanek, PhD |
| 15. Dr. Phelista Njeru | 33. Prof. Mirosław Nalazek, PhD |
| 16. Dr. Nahashon Mwirigi | 34. Prof. Sławomir Kula, PhD |
| 17. Dr. Jared Onyancha | 35. Ms. Anna Szczepaniak |
| 18. Dr. Gilbert Mokua | |

PROGRAMME AND BOOK OF ABSTRACT

1. Dr Samuel Karenga
2. Mr Bonface Joel Malala
3. Dr Benson Njoroge
4. Dr Serah Kimaru
5. Prof. Kennedy Mutundu

1. Messages from Organizers and Guests



Message from Pro-Chancellor, Mount Kenya University

Dr Vincent Gaitho

I am delighted to join the Vice-Chancellor and MKU fraternity in welcoming you to the 8th International Interdisciplinary and Inter-Universities Consortium–Africa Research Conference 2023 at Mount Kenya University, Thika. The theme of the conference is

Participatory Leadership, Innovation and Knowledge Transfer for Sustainable Economies. This conference theme was advised by the need to provide solutions to challenges facing world economies. The participatory leadership, innovation and knowledge transfer are seen as the tripartite panacea to these issues. The organizers have provided a platform to engage various stakeholders to interrogate on issues related to this theme. I wish to acknowledge and appreciate all participants from different countries especially the Universities that are members in this Consortium. My sincere appreciation goes to the organizing committee both at Mount Kenya University and Vincent Pol University. The convergence of thought between Mount Kenya University and Vincent Pol University on academics, research and a shared vision gave rise to the motive in co-hosting this conference. On behalf of Mount Kenya University, we appreciate the contribution that various partners and sponsors have made in support of the conference. To all delegates, thank you so much for joining us in this conference.



Message from the Vice-Chancellor, Mount Kenya University.

Prof. Deogratius Jaganyi

It is with a lot of pleasure that I welcome all delegates to Mount Kenya University for the 8th International Interdisciplinary and Inter-Universities Research Conference 2023. In line with the “new normal”, I acknowledge that due to various reasons we have two categories of delegates, namely, online delegates and those who are physically here at Mount Kenya University. To all of you, on behalf of MKU fraternity, I say Karibuni sana (you are all most welcome) to Mount Kenya University. I also take this opportunity to thank the Universities that are members of the Inter Disciplinary and Inter Universities Research Consortium (Africa) namely University of Eldoret (Kenya), Kyambogo University (Uganda), Chukwuemeka Odumegwu Ojukwu University (COOU)- Nigeria, and University of Makeni (Sierra Leone) for the opportunity that has been granted to MKU as a Consortium member University to host the 8th iiiRC. 2023. We wish all delegates and especially those that are here at MKU, a memorable experience. May you all interact fully with each other as we strive to improve the synergy availed by this partnership. Mount Kenya University is the United Nations Academic Impact (UNAI) Hub for Sustainable Development Goal number 10 on Reduced Inequalities. We are therefore happy to have you all on board as we jointly strive to to promote the SDGs 2030 and contribute towards reduced inequalities for the greater good of mankind in all our academic pursuit. Finally, to Vincent Pol University of Poland who have been MKU’s partners through the Erasmus program for more than 5 years - we deeply appreciate your presence and role in co-hosting this conference alongside Mount Kenya University. Your input has been greatly appreciated. I also thank the entire MKU fraternity for the support accorded in various ways towards the successful organization of this conference. Once more, to all delegates, “Karibuni sana”.



**Message from the Vice-Chancellor,
Kyambogo University, (The out-going
inter-universities Consortium Chairperson)**

Prof. Eli Katunguka

To all delegates who are attending the 8th International Interdisciplinary and Inter-universities Research Conference 2023 both online and physically at Mount Kenya University, on behalf of Consortium Member

Universities and on my own behalf, I take this opportunity to thank every one of you for your noble decision to participate in this conference. We do not take this for granted that, your presence in this conference, whether online or physically, goes a long way towards making the conference a great success. For the first time in the history of the consortium, we witness a new approach of the presence of a co-hosting partner, as provided by the Vincent Pol University of Poland. We also do appreciate this initiative and welcome Vincent Pol University to be permanent friends of the Consortium. I thank Mount Kenya University for hosting the 8th International Interdisciplinary and Inter-universities Conference and wish all delegates a pleasant experience. As the outgoing Consortium Chairman, I thank the Consortium members for the support they accorded to me during the time that I have served as the consortium Chair. I also do welcome the incoming Consortium Chairman, Prof. Deogratious Jaganyi of Mount Kenya University and wish him a pleasant experience in the Consortium leadership.



Message from Rector Vincent Pol University in Lublin, Poland

Prof. Mariusz Korczyński,

It is my humble privilege to have the honour of co-organizing the 8th iiiUC-A-2023 conference with Mount Kenya University, through our continued collaboration under the Erasmus program for more than 5 years. I wish to acknowledge and appreciate all participants

drawn from different countries globally. My sincere appreciation goes to the organizing committee both at MKU and Vincent Pol University. Our desire to co-host the conference stems from our research and academic focus and shared similarities with MKU. With a current student drawn from Americas, Africa and Asia, as well as other European countries, we aspire to break the border boundaries and work with like-minded institutions so as to promote acquisition of practical knowledge and skills required on the job market, and preparing our learners for a fulfilling professional career. On behalf Vincent Pol University, we salute all the delegates, invited guests and lead organizing university-MKU for the informative and focus-based conference.



Message from Ag. Principal, College of Graduate Studies and Research, Mount Kenya University

Dr Henry Yatich (Conference Chairman)

It is my humble privilege to have chaired and led the planning and organization of the 8th International Interdisciplinary and Inter-Universities Research Conference 2023. I wish to thank the university management for the

immense support and Vincent Pol University Poland who with their support, we are here today. I also wish to acknowledge Paleo Hotel, Maxland, St. Luke Cravers, and Eton Hotel for their willingness to accommodate our delegates. The 8th iiiUC-A-2023 conference seeks to bring together more than 100 delegates, stakeholders from academia, public and private sectors to discuss strategies to entrench leadership, innovation and knowledge transfer that can promote socio-economic development under conference theme “Participatory Leadership, Innovation and Knowledge Transfer for Sustainable Economies”. I wish to acknowledge and appreciate all the delegates drawn from Kenya, Uganda, USA, Nigeria, Sierra Leone, Poland, Scotland, Estonia, United Kingdom and the Mount Kenya University organizing team for making the conference happen. I also wish to appreciate the CEO's from National Commission for Science, Technology & Innovation (NACOSTI) and National Research Fund (NRF) for accepting to grace the occasion albeit with a short notice-Asante!. The conference happens during the Post COVID-19 era when most organizations have accepted the centrality of technology. The socio-economic challenges including Russian-Ukraine war, global climate change, and desire for research innovation led approaches, so that its effects as well as civil tension and hunger in a number of countries including Kenya are given consideration. As we embrace the recently launched AU-EU innovation agenda, the conference also embraces Mount Kenya University's status of being the United Nations Academic Impact (UNAI) SDG10 on Reduced Inequalities Hub, in collaboration with Vincent Pol University-Lublin. On behalf of the committee, we look forward to sharing ideas, knowledge, expertise and experiences. Dziękuję! Thank You! Suur tänu! Asante!



**Message from the Chief Executive Officer,
National Commission for Science,
Technology and Innovation (NACOSTI)**

Prof. Walter O. Oyawa (Chief Guest)

It is with great pleasure that I welcome all delegates and invited guests to the 8th International Interdisciplinary and Inter-Universities Research Conference 2023 at Mount Kenya University-Kenya. I am cognizant

that this is an annual conference that rotates among the members of the five universities drawn from Kenya, Uganda, Sierra Leone, and now the organizing partner Vincent Pol University from Poland. Considering that this is the 10th year, since the consortium has been in place, I wish to laud the five consortium members, led by the current organizer, Mount Kenya University and note that the conference theme resonates with not only the National Commission For Science, Technology & Innovation (NACOSTI) focus on Science Technology and Innovation (STI) priorities, but also the AU-EU innovation agenda. The conference sub-themes have also been specifically chosen by the committee with focus on our national research priorities. I challenge the delegates and all researchers to continue focusing on research outputs that not only influence policy decision but also solve the foregoing challenges of the day. I wish to acknowledge the conference steering committee for organizing and planning this conference and recognize Vincent Pol University, Poland who have been MKU's partners through the Erasmus program for their role in co-hosting this conference. I look forward to the next conference to be held in Nigeria, by Chukwuemeka Odumegwu Ojukwu University. To all participants today, your input is greatly appreciated. Asante!



**Forward Message from
The Chief Executive Officer
National Research Fund (NRF)**

Prof. Dickson Andala (Guest Speaker)

It is my honour and privilege to welcome all delegates and guests to the 8th International Interdisciplinary and Inter-Universities Research Conference 2023 at Mount Kenya University-Kenya. I wish to acknowledge all the

delegates, keynote speakers, plenary speakers, chairs of sessions, rapporteurs, and the organizing team. I happy that due to limited resources, and the need for diversity, the five consortium institutions; University of Eldoret (Kenya), Kyambogo University (Uganda), Chukwuemeka Odumegwu Ojukwu University (COOU) - Nigeria, and University of Makeni (Sierra Leone), the host partner, Mount Kenya University (Kenya) and the co-sponsoring partner, Vincent Pol University, Poland agreed to organize such and informative and impactful conference. I am happy to note that, as NRF we are currently funding active research projects for seven members of faculty and four Ph.D students at Mount Kenya University to the tune of KES. 129, 773, 317. Some of these funding are multidisciplinary and multi-institutional, and we hope that these endeavors will continue growing so as to address the challenges of our times. I challenge the delegates and all researchers to seek and work with partners as this is a better way of engagement in research and collaboration initiatives. For Kenyan researchers, I wish to note that, we at NRF are always ready to facilitate research for the advancement of science, technology and innovation, competitively.

Thank You!

2. Conference Programme

DETAILED CONFERENCE PROGRAMME

DAY 1: Wednesday, 29th March 2023

DAY 1: Wednesday, 29 th March 2023			
DATE/ TIME	ACTIVITY	RESPONSIBLE	SESSION CHAIR
08:00	Registration	Secretariat	
Session 1 Venue – Main Hall Master of Ceremony: Jesse Ndegwa			
09:00	Prayer	Father Paul Mbugua	
09:10	Welcome Remarks by the Chair of the organizing Committee	Dr. Henry Yatich	Chair: Dr. Samuel Karenga Rapporteur: Dr Samuel Mungai
09:20	Artistic Presentations on Peace - 1		
09:30	Introduction of Partners	1. University of Eldoret 2. <i>Chukwuemeka Odumegwu Ojukwu University</i> 3. University of Makeni 4. Kyambogo University 5. Vincent Pol University	
09:45	Consortium Overview	Prof. Ahmed Ferej	
10:00	Health Break		
10:30	Remarks by DVC-ARA, MKU	Dr. Mercyline Kamande	
10:40	Remarks by the host, Mount Kenya University	Prof. Deogratius Jaganyi, Vice-Chancellor, Mount Kenya University	

10:55	Remarks by Pro-Chancellor	Dr. Vincent Gaitho			
11:10	Remarks by MKU Co-Founder	Dr. Jane Nyutu			
11:20	Remarks by Consortium Chair	Prof. Eli Katunguka, Vice-Chancellor, Kyambogo University			
11:30	Chief Guest Address & Official Opening	Prof. Walter O. Oyawa, CEO-National Commission for Science Technology and Innovation (NACOSTI)			
11:50	Group Photo				
Parallel Sessions Seminar Rooms Wing A-D					
Time	Room	Sub-Themes	Abstract title	Presenter	Rapporteur
12:00	Seminar Room A (3 rd floor) Education, Innovation and Entrepreneurship		Curriculum Innovation in Higher Institutions of Learning	Goretti Kaahwa	Chair: Prof. Kennedy Mutundu
12:15			Towards Sustainable Livelihood And Tour Guiding Services For Kenya’s Tourist Guides Through A Tour Guiding	Ariya George	Rapporteur: Dr. Mary Mugwe
12:30			Information Communication Technology (ICT) Management for Pedagogical Use in Selected Secondary Schools in Nakawa Division, Kampala District - Uganda	Nakaggwa Prosscovia Ssempijja	

12:45		Education and the museum: a case of Nairobi National Museum, Kenya	Tabitha Ndogoto	
13:00		Community Engagement for Sustainable Development in ASALs: The Mully Children's Family Trust Tree Planting Project in Yatta, Machakos County, Kenya	Chris Wesonga	
13:15		Channels of University-Industry Technology Transfer and their Effectiveness. A Case of Ugandan Public Universities	Kitagaana Zaidi	
13:30		Job market analysis as a tool of higher education programming and employability	Dr. Mary Mugwe	
Lunch Break				
14:30	Seminar Room A (3rd floor) Education, Innovation and entrepreneurship	Entrepreneurship Participatory Leadership (1 Cor. 12: 12-30): Key to Sustainable Development	Fr. Anthony Ezeogamba	Chair: Dr. Phelista Njeru Rapporteur: Mr. Harrison Kihuga
14:45		Entrepreneurship Financial Strategy And Sustainability Of Private Secondary Schools In Uganda	Dr. Mary Maurice	
15:00		Influence of Leadership on Innovation Efficiency in Manufacturing Firms in Kenya	Isaac Muiruri Gachanja ¹	

15:15		Individual Factors As Predictors Of Research Productivity Of Academic Staff In Kyambogo University	Leticia Komba Rwakijuma	
15:30		Research Infrastructure and Lecturer's Research Output in a Ugandan Public University	George Wilson	
15:45		Sustaining Home-Based Early in Marginalized Communities: Lessons from the IHELP Model in Uganda, Kenya and Zimbabwe	Godfrey Ejuu	
16:00		Moderating effect of Customer Product Knowledge on Service Quality and customer satisfaction in selected hotels within North Rift region: Kenya	Nabalayo.O. Amina	
16:30	Health Break			
12:00	Seminar Room B (3rd floor) Academia as a driver for technological and scientific advancements	Funding and Lecturer's Research Effectiveness in Public Universities in Uganda	George Wilson	Chair: Prof. Ahmed Ferej Rapporteur: Ms. Mary Wachira
12:15		Assessment of Digital Competence of Academic Staff in Public Universities in Uganda	Wilson Mugizi	

12:30		Measuring Online Classroom Self-Efficacy of Academic Staff in Public Universities in Uganda	Joseph Rwothumio	
12:45		An evaluation of the effects of domestic debt and external debt on economic growth in Kenya	Cheworei Peter Ptengwer	
13:00		Pedagogical and Andragogy Training: Capacity building inmate-teachers working with Adults in Conflict with the Law	Benson Njoroge Wanjiru	
13:15		Using ICT Tools for Virtual Training of Teacher Organisation officials in Uganda	Godfrey Bakaira	
13:30		Competence-Based Curriculum Innovation in the Management of Kenyan Education System. What is the Problem with its Implementation?	Patrick Acleus Kafu	
Lunch Break				
14:30	Seminar Room B (3rd floor) Climate Change & Security	Autocratic Decision-Making Process in Promoting Environmental Education for Climate Change by Public Universities in Uganda	Wilberforce Okongo	Chair: Sis. Prof. Felicia Opara

14:45		Mitigating climate change through mainstreaming green skills training into higher education programmes	Dominic Magut	Rapporteur: Mr. Michael Mwangi
15:00		Induced Effects on Beneficial Plant-Microbe Interactions in Agricultural Systems	Aloo, B. N	
15:15		Promoting Local Community-Based Climate Change Adaptation Resilience in Uganda	Wilson Okaka	
15:30		Ensuring Agricultural Food Nutrition Security Through University Gender-Responsive Climate Change Research Communication for Adaptation Resilienc	Abel Baguma	
15:45		Promoting Gender Equality Lens in Climate Change Policy Information Communication	Mercy Nakayiwa	
16:00		East African population exposure to precipitation extremes under 1.5 °C and 2.0 °C warming levels based on CMIP6 models	Brian Odhiambo Ayugi	
16:30	Health Break			
12:00	Seminar Room C (3rd floor) Cross cutting issues	Customer Relationship Management Technology, Competitive Intensity And Performance Of Selected Hotels In Kenya	Wambui Nganga	Chair: Dr John Kamau

12:15		Ways of engaging the community by universities: a case of evangel Christian university in Kenya	Evelyn Makori	Rapporteur: Mr. Mark Makau
12:30		The Impact of information technologies on tourist markets and industries	Miroslaw Nalazek	
12:45		Relationship between Physical Abuse and Juvenile Delinquency among Girls in Kirigiti Girls Rehabilitation and Training Center, Kiambu County, Kenya	Emmanuel Gitonga Gicharu	
13:00		Mentorship Of Undergraduate/Graduate Junior Statisticians by Senior Faculty Staff at Institutions of Higher Learning in Kenya. A Review Paper	J. Koech	
13:15		Employee Commitment on Blue Ocean Leadership Style and Organization Performance among selected Companies in Eldoret	Jane Chepngeno Sang	
13:30		Effects of family stability on depression levels: A Case of University students in Kenya	Mokua Gilbert Maroko	
Lunch Break				
14:30		Threshold moisture content for slope stability using Artificial Neural Networks based on laboratory flume tests	Kanule Jason	Chair: Dr Emmy Kerich

14:45		Factors Associated With Personal Protective Equipment Use among Pesticide Handlers in Mwea Irrigation Scheme, Kenya	Fredrick Gakuya Kinyua	Rapporteur: Mr. Alex Rotich
15:00		Mapping the Discourse of Power: Diplomatic Actors on Twitter	Daniel Oloo	
15:15	Seminar Room C (3rd floor) Food security and nutrition	Efficacy of Arbuscular Mycorrhizal Fungi on Potato Blight (<i>Phytophthora infestans</i>) in Potato	Kibiro, E. M.	Chair: Ms. Jane Kanjuru Rapporteur: Dr. Martin Onsiro
15:30		Influence of Planting Materials Costs and land Policy on Mango Production in Endo Ward, Elgeyo Marakwet County, Kenya	Kipchumba Abraham	
15:45		Ecohydrological effects of shade trees spacing on soil characteristics affecting tea yields: a case study of moniere estate in kipkebe of sotik sub-county	Dennis Makori	
16:00		Length-weight relationship and condition factor of <i>Labeobarbus altianalis</i> along river	Emily Jepyegon Chemoiwa	
		Molo in Lake Baringo Basin - Kenya		

16:15		Genetic transformability of selected kenyan groundnut (arachis hypogaea l.) genotypes with ipt gene using cotyledonary node explants	Purity Gacheri Limbua	
16:30	Health Break			
12:00	MKCC Main Hall Education, Innovation and Entrepreneurship -2	The Nexus between Digital Footprints and Credit Worthiness for SMEs Post-COVID 19	Mercyline W. Kamande	Chair: Dr. Patrick Kafu Rapporteur: Ms. Jane Ngure
12:15		Nutrient Composition of Acacia Pods as Food Supplements for Ruminants in African Drylands	Mutai Paul	
12:30		Nurturing, entrepreneurship education and innovation in fragile and post- conflict countries: case of higher institutions in Sierra Leone	Sr. Janet Odey	
12:45		Influence of Teacher-Parent Joint Decision-Making on Pupils' Achievement in Pre-Primary Schools in Laikipia County	Jane Chiuri	

13:00		Trainers' Level of Understanding of Competency-Based Education and Training Objectives in National Polytechnics in Kenya's Nyanza Region	Nyakongo Mokaya Clinton	
13:15		7e Learning Cycle Model for Unlocking Gender Difference in Biology Academic Achievement among Secondary School Students, Kenya	Samikwo C. Dinah	
13:30		Determinants of food safety management in selected restaurants in Kabarnet town, Baringo county	Ogweyo Peter Ogalo	
Lunch Break				
14:30	MKCC Main Hall	The Dual Vocational Training System: Is it viable in Kenya?	Ahmed Ferej	Chair: Dr. Richard Ochieng
14:45	Utilization of human and natural resources	Skills for Promotion of Innovation: Evaluation of the state of Trainers Skills at Public Technical and Vocational Education in Kenya	Charles Nyongesa Lumuli	Rapporteur: Ms. Serah Nginga
15:00		Influence of School Calendar Disruption on Adoption of Digital	Tuwei J. Ednah	

		Learning of English Language in Kapseret Subcounty, Kenya			
15:15		Postal and Telecommunication services and the Effective Utilization of Human and Natural Resources in Uganda, 1963 to1977	Daniel Ndawula		
15:30		The experiences of lowly paid workers in rich neighborhoods of the Rand	Mathew Nyashanu		
15:45		Non-economic drivers in adoption of Soil Water Conservation (SWC) technologies among smallholder farmers in eastern Kenya	Serah Kimaru – Muchai		
16:00		Delegated management model of water service provisioning: a panacea of slum settlements in Kisumu City, Kenya	Gordon Ocholla		
16:30	Health Break				
DAY 2: Thursday, 30 th March 2023					
Parallel sessions					
Time	Room	Sub-Themes	Abstract title	Presenter	Rapporteur
08:00	Registration		Secretariat		
08:30	Keynote Speaker		Dr George Njoroge (Founder of Centre of	Panelists	

	Plenary Session	Africa's Life Sciences (C.O.A.L.S)) Topic: Role of universities in enhancing sustainable development in an interdisciplinary approach	1. Sis. Prof. Felicia Opara 2. Sister Janet Odey 3. Prof. Patrick Kafu 4. Dr George Njoroge 5. Dr Mercyline Kamande	Chair: Dr. Benson Njoroge Rapporteur: Ms. Sarah Wahu
10:00	Health Break			
10:30	Seminar Room A (3rd floor) Education Innovation and entrepreneurship	I need to move on”: Female Academics’ Initiatives in Enhancing their Academic Career Progression: A Case of Selected universities in Uganda	Phoebe Nabawanuka	Chair: Dr. Bernard Kanoi Rapporteur: Dr. Judy Mwangi
10:45		Promoting Local Community-Based Climate Change Adaptation Resilience in Uganda	Wilson Okaka	
11:00		Effects of compensation strategies on academic staff retention in public universities in Uganda	Opio Patrick	
11:15		Teenage girls’ perceptions on the best behavior change communication approaches to addressing girls’ education issues	Patrick Gatsinzi	

11:30	Employing science process skills to demystify the concept of regular polygon in senior secondary schools for greater students' achievement	Okafor Chinyere Francisca	
11:45	Re-engineering curriculum in higher institutions of learning to address societal needs in Sub-Saharan Africa	Josephine Kagwiria Kiriimi	
12:00	The place of intelligent design in explaining the origin of universe and life: a parallel to macro evolution theory	Richard Ochieng'	
12:15	Influence of Processes Innovation Strategy on the Performance of Commercial Banks in Kenya.	Teresa Mutisya	
12:30	Influence of Laboratory and Library on teaching and learning processes	Solomon Gitonga Mwaniki	
12:45	Leveraging the students' socialization outcomes through religious-based students' associations in public universities	Priscilla Murugi Ng'ae	
13:00	Teacher's level of self-efficacy on learners' academic achievement in public secondary schools in Kiambu County, Kenya	Edith Njoroge	

13:15		Bureaucratic processes and sociological challenges in education institutions	Kamara Margaret Kosgey	
Lunch Break				
14:15	Health and Wellness (Main Hall)	Formulation of bathing skin care soap containing <i>hypericum keniense</i> extract and evaluation of its quality	Onyancha Misonge Jared	Chair: Sis. Dr. Goretti Kaahwa Rapporteur: Ms Rachael Kimani
14:30		Efficacy of Commonly used Disinfectants against Bacterial Pathogens in a Teaching and Referral Hospital in Kenya	Rono Salinah	
14:45		Bachelor's degree in environmental health science or bachelors' degree in public health?	Oguta Zaddock	
15:00		COVID-19 pandemic's impact on socially vulnerable population's health and economic	Pius Nyutu	
15:15		The Perception of Students on the Importance of Gestures in Classroom Interaction	Jacinta Akinyi Muyuku	
10:00	Health Break			
10:30	Seminar Room B (3rd floor) Climate Change & Security	Mitigation and Adaptation Strategies Adopted in Kenya to Cope with Climate Change Impact on Water Resources	Emmy Kerich	Chair: Dr. Jared Onyancha

10:45		Climate Change Financing for Sustainable Food Security in Kenya	Collins Musyoka	Rapporteur : Monica Mucheru
11:00		Agrochemical use in Kenya and developing an environmentally friendly baited trap for fruit fly management	Jonathan Richard	
11:15	Health and Wellness	Using the principles of a holistic wellness concept and service design to increase patient well-being	Margrit Kärp	
11:30		Prevalence and causative fungal species of tinea capitis among school children in Marigat, Baringo County, Kenya	Pixley K. Kipsumbai	
11:45		Television gained-framed cervical cancer messages and screening uptake behavior among reproductive women in Kiambu county	Faith Ngure	
12:00		Determinants of Covid-19 Vaccine uptake among Adults in Mwala Sub-county, Machakos County, Kenya	Kilonzo Kimolo	

12:15		The Role of Interpersonal Effectiveness in Improving Mental Health of Learners Living with Disability in the Era of Covid-19 in Selected Schools in Western Kenya Region	Alice Limo	
12:30		Awareness and knowledge of HIV/AIDS and VCT among secondary students in Kiambaa division, Kenya. "Implication for counselling in health and wellness for sustainable economies."	Grace Wambui Nyahe	
12:45		Assessment of family attributes on alcohol-use disorder among recovering clients in rehabilitation centers Nairobi, Kenya	Marypiah W.G. Kuria	
13:00		Knowledge and awareness on cervical cancer screening services among mothers attending maternal child health clinics in Mwala Subcounty of Machakos county, Kenya	Lynette Muthoki	
	Lunch Break			
10:00	Health Break			

10:30	Seminar Room C (3rd floor) Food security and nutrition	Impact of agricultural interventions on food security and nutrition: a case study of farmers in Nakuru County, Menengai West	Francis Mbai	Chair: Mr. Humphrey Mwambeo Rapporteur: Ms. Annet Wandia
10:45		Modification of Rhizosphere pH and Contents of Selected Mineral Nutrients by Cowpea (Vigna Unguiculata L. Walp) Cultivars Grown in Acid Phosphorus Deficient Soils	Janeth Sang	
11:00		Effect of lean inventory management on the performance of milk processing firms in Kiambu county, Kenya	Solomon Gitonga Mwaniki	
11:15		Gender Equality in Climate – Smart Agriculture (CSA) Information Services for Smallholder Farmers' Food Security Needs in Africa	Wilson Okaka	
11:30	Seminar Room C (3rd floor) Creative Arts and Human Rights	Enhancing Children Rights to Education Using ADDIE Model Approach in Arid And Semi-Arid Lands (ASAL) For Sustainable Development	Ochieng A. Pamela	

11:45		The Role of Music Education in Gender Equality Climate – Smart Agriculture (CSA) Information for Smallholder Farmers' Food Security Needs in Uganda	Wilson Okaka	
12:00		The Right to Development as a Key to Participatory Leadership, Innovation, and Knowledge for Sustainable Economies	Catherine Kendi Mutungi	
12:15		Artistic engine in the creative arts industry: <i>mugithi</i> genre in contemporary popular performances in Kenya	Peter Muhoro Mwangi	
12:30		Effect of youtube instructional video package on students' achievement in physics	Alachi, Sunday	
12:45		Ekisaakaate" (Royal Enclosure) Traditional Story Telling Instruction Pedagogy and Early Childhood Moral Learning Outcomes in Buganda Kingdom in Uganda	Sarah Namande Mugerwa	
13:00		Assessment of the current state of Teacher Social and Policy Dialogue (TSPD) in Uganda	Godfrey Grace Bakaira	Chair: Sis. Dr. Janet Odey
13:15		Women's Rights in Traditional African Societies: A Case of the Acholi of Uganda	Charles Amone	Rapporteur: Dr. Clement Shiluli

	Lunch Break			
10:00	Health Break			
10:30	MKCC Main Hall Cross-Cutting issues	A Historical perspective of women participation in political leadership in Uasin Gishu County	Bosibori Lilian	Chair: Mr. Bonface Malala Rapporteur: Dr. Appolonius Kembu
10:45		Impact of phone addiction and distress among selected small and medium enterprises in Kiambu and Nairobi city Counties	Erastus Thoronjo Muriuki	
11:00		Leadership training as a tool for student development	Lapid Leaders Africa	
11:15		Leveraging Technology in Doctoral Supervision-A Complementary Approach in Kenya's Institutions of Higher Learning	Henry Kiptum Yatich	
11:30		The Effect of <i>the Big Four Agenda</i> Budget Variances on Economic Performance in Kenya	Susan Jepkorir	
11:45		Christian Counseling in School Related-Gender Based Violence in Kerarapon Primary School Kajiado County, Kenya	Evelyn Makori	
12:00		Effects of strategic resource mobilization on financial performance of smes in Kenya; Case of Nyeri county SMES	Machira J. Mwangi	

12:15		Influence of Work Flexibility on Financial Performance of Mobile Telecommunication Companies in Kenya	Appolonius Shitiabai Kembu	
12:30	MKCC Main Hall Utilization of human and natural resources	An evaluation of the performance of selected County Forest Conservators in Kenya	Ogilo Maurice	
13:00	Lunch Break			
18:00	COCKTAIL FOR INVITED GUESTS AND DELEGATES AT MAXILAND HOTEL, JUJA			

DAY 3: Friday, 31st March 2023

DATE/ TIME	ACTIVITY	RESPONSIBLE	SESSION CHAIR
CLOSING CEREMONY VENUE: MAIN HALL			
08:00	Registration	Secretariat	MC
08:10	Assembly and Prayer	Registrar AA	
08:15	Plenary Session 1. Dr Peter G. Kirira 2. Prof. Pamela Ochieng' 3. Prof. Teresa Akenga Prof. Eli Katunguka	Theme: Role of research and innovation in universities 3 rd stream revenue generation	Chair: Dr. Serah Kimaru Rapporteur: Ms. Fiona Oyatsi
09:15	Artistic Presentations on Peace - 1		

09:25	Remarks by Conference Committee	Dr. Henry Yatich/Prof. Peter Wanderi	
09:40	Remarks by Consortium Chair and Handing over consortium Chairmanship to MKU VC		
10:00	Remarks by the host, Mount Kenya University	Prof. Deogratius Jaganyi , Vice-Chancellor, Mount Kenya University	
10:20	Guest Speaker	Prof. Dickson Andala CEO-National Research Fund (NRF)	
10:50	Closing Remarks by Pro-Chancellor	Dr. Vincent Gaitho	
11:00	Group Photo & Health Break		
12:00	Guests Leave at their own pleasure		

3. Conference Abstracts

CURRICULUM INNOVATION IN HIGHER INSTITUTIONS OF LEARNING

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Abstract

In Higher Institutions of Learning, Curriculum innovation in education is central to imparting knowledge, skills, values, abilities and attitudes that are relevant to the 21st Century. Curriculum innovations are deliberate actions applied to improve the learning environment by presenting materials to Students, which involve human interactions, hands-on activities and Student feedback that is more relevant to Students. Curriculum innovation is a means to improve both Students' achievements and Teachers' abilities in the education system, to answer the goals and objectives of education which reflects the needs, interests, values and problems of the society. A relevant curriculum innovation is appropriate, economical in time, space and resources and should be in line with the philosophies of the society and the institution/school. Curriculum innovation is a modifying tool in many components in the education system. This can be through the curriculum content, teaching methods, teacher-student interactions and the organization of activities which impacts employability Arena. The aim of this paper will be to look at how Curriculum Innovation modifies curricular components to Students' whole development in a Specific, Measurable, Achievable, Result-oriented, and Time-bound manner to students' whole development. The following will be discussed in this paper: what is curriculum innovation; the process of curriculum innovation; factors and characteristics of curriculum innovation; barriers to curriculum innovation; importance of curriculum innovation; models of curriculum innovation; identifying meaningful innovations across educational systems; new products and services of curriculum innovation; new processes for delivering teaching and learning, e-learning services due to COVID-19 Virus; and new marketing techniques of higher education.

Key words: Education, Curriculum Innovation, Higher Institutions of Learning

TOWARDS SUSTAINABLE LIVELIHOOD AND TOUR GUIDING SERVICES FOR KENYA'S TOURIST GUIDES THROUGH A TOUR GUIDING APP

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Abstract

Tourist guides play instrumental, interactional, social and communicative roles, which are significant but neglected elements in Travel and Tourism (T&T) sector. Kenya's majority tourist guides are freelance with unsocial working hours, difficult working conditions, and low and erratic wages that affect their livelihoods, work performance, tourist experiences and sustainability of tourist destinations. Covid-19 pandemic has amplified their dilemma in securing livelihoods due to reduced guiding opportunities. On the other hand, majority of independent travelers seeking tour guiding services within tourist destinations like city tours have difficulty in securing competent, reliable, accredited, and legitimate tourist guides. As a way to address the current dilemma, we employed a design thinking methodology, based on inspiration, ideation and implementation to develop an innovative ICT-facilitated tour guiding app, which can be integrated into the guiding marketplace. This IT-enabled peer-to-peer mobile app aims to make tour guiding services more accessible and reliable to secure better guiding jobs, improved income and service delivery, trust and confidence as well as legitimacy and guiding compliance in the Kenya's guiding marketplace.

Key words: Sustainable Livelihoods, Tour Guiding Services, Tourist Guides, Tour Guiding App.

**INFORMATION COMMUNICATION TECHNOLOGY (ICT) MANAGEMENT
FOR PEDAGOGICAL USE IN SELECTED SECONDARY SCHOOLS IN
NAKAWA DIVISION, KAMPALA DISTRICT - UGANDA**

Nakaggwa Prosscovia Ssempijja and Wilson Okaka

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Abstract

This paper presents information communication technology (ICT) management pedagogical use in the selected secondary schools in Nakawa Division (Kampala, Uganda). The objectives of the study were to: establish the teachers' knowledge of ICT affected the frequency of pedagogical use of ICT in secondary schools, examine the teachers' access to ICT resources affected their pedagogical use of ICT in secondary schools, and determine the strategies of improving ICT management for the teachers' pedagogical use of ICT. We used a cross-sectional survey research design for qualitative and quantitative research approaches. The participants were secondary school teachers and headteachers. We employed a stratified random sampling method to select samples from the independent and random stratum of the schools. Proportionate stratified random sampling techniques were used to select a total of 130 respondents. Findings showed that the teachers had basic ICT literacy skills in MS Word, Spreadsheet, PowerPoint, Publisher, and email. In addition, they had ICT skills for students' assessments. The study revealed that they did not have the basic technical skills to assemble the ICT components. They were unable to prepare lessons using ICTs, had never had access to ICT laboratories, except for the ICT facility in their staffroom, most of them did not have access to digital assistants (technicians), inadequate PCs, and a lack of ICT devices at home. As a result, schools began to build ICT infrastructure, and recruit trained ICT teachers and lab technicians. There was a vital need for the schools to service ICT devices and maintain the ICT infrastructure. Schools need to expand ICT infrastructure, increase access, and purchase and maintain the ICT facilities with a focus on improved teaching and learning, for better student outputs. In addition, the schools should increase the number of

computers in their laboratories, and more in-depth studies should be done on the related problems

Key words: ICT, school management, ICT labs, teachers, students, headteachers, Uganda.

EDUCATION AND THE MUSEUM: A CASE OF NAIROBI NATIONAL MUSEUM, KENYA

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Abstract

The role of the museum as an educator of the past cannot be undermined. The museum has played a vital role in educating the public about their past through the use of their exhibits. Specifically, this study will establish the role played by Nairobi National Museum in archaeological public education. It will also investigate the extent at which the public are aware as well as their participation in archaeological work in Kenya. Lastly, it will look at the legal mechanisms for the protection of archaeological heritage in the country. The study will be guided by Public Dialectics theory that has its roots in the Marxism ideology. Data was collected using observation, structured interviews as well as key informant interviews. The research findings indicate that public archaeology in Kenya is underdeveloped. Secondly, public archaeology programmes have not been well utilized in educating the different groups of public. Lastly, there is need to introduce the discipline of archaeology at lower levels of learning before students get to the higher levels of education. In conclusion, different segment of the public including students and ordinary citizens have a major role to play in the development and growth of the discipline of archaeology in Kenya. The stakeholders in the discipline of archaeology have a role in introducing the discipline at lower cadres of learning. Recommendations, there is need to introduce the discipline of archaeology from lower levels of learning so that students can grasp the content at an early age on its importance in educating them of their past. Archaeologists should develop the discipline of archaeology by

constantly communicate to the public about their findings, what they do and why since they have an obligation to educate the public. Public education programmes should be well developed to suit all public from the level of school going children to all citizens. Education visits to the museum should be developed and encouraged as well as museum programmes to align to the school curriculum.

Key words:

COMMUNITY ENGAGEMENT FOR SUSTAINABLE DEVELOPMENT IN ASALS: THE MCF TREE PLANTING PROJECT IN YATTA, MACHAKOS COUNTY, KENYA

**Kennedy K. Mutundu^{2*}, Charles Mulli¹, Mary N. Mugwe², Chris Wesonga¹,
Vincent Opiyo¹**

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Abstract

Expanding world populations and increasing socio-economic requirements are placing heavy demands on arid and semi-arid lands (ASALs), causing loss of productivity and desertification. Mully Children's Family (MCF) Trust adopt-a-tree Project targets local subsistence farmers who depend on erratic rain-fed agriculture. The purpose of this study was to analyse the effect of community engagement (adopt-a-tree) in enhancing tree cover for microclimate enhancement and sustainable livelihoods. Community engagement is a core outcome of rural development in Kenya.. The experiential learning theory - the process whereby knowledge is created through the transformation of experience, in a Participatory Action Learning and Action Research, was the most effective, collaborative, creative, innovative, and self-developed community engagement. The project targeted the residents of Yatta Sub-County, where purposive sampling of 50 farmers were picked based on their grasp of dryland farming, tree planting and water conservation practices. Through field visits and key informant interviews, data were collected and analyzed in both descriptive and narrative way to create ready to use information. It was established that farmers in Arid and Semi-Arid lands require committed

demonstration of possibilities within their environments.

The co-creation of knowledge with communities, a description of the adopt-a-tree story was produced to foster the transfer of knowledge on sustainable Climate action. The paper concludes with recommendations of scaling up initiatives and replication of best practices in the ASALs of Africa.

Key words: Community engagement, Sustainable Development, ASALs, Tree-Planting.

CHANNELS OF UNIVERSITY-INDUSTRY TECHNOLOGY TRANSFER AND THEIR EFFECTIVENESS

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Abstract

It is widely acknowledged that University-Industrial Technology Transfer (U-ITT) is a key university priority in addition to the missions of teaching and research. More recently, the increased recognition of universities as core actors in national innovation systems and the changing complexity of societal needs calls for various stakeholders to work together more strategically. In this vein, I set out to explore the preferred channels of U-ITT and their effectiveness. I specifically intended to answer the following question: What are the most preferred channels of U-ITT at Ugandan Public Universities and how effective are they? Using the Human Capital Theory as the lense, I utilised multiple case study design anchored in the interpretivist lens, and purposively selected public universities in Uganda which explicitly acknowledge TT as one of their core functions (Makerere and Kyambogo). I generated data through: reviews of government and institutional documents, as well as qualitative semi-structured face-to-face interview. Data were analysed and interpreted thematically. I discovered that the selected universities use different channels to transfer technology to industry, ranging from research publications and conferences (informal), to consultancy, joint research, spin-offs and licensing patents (formal). I concluded that TT at public universities is largely through informal means implying limited

interaction with industry. I recommend that University managements should ensure that TT activities are fully integrated in all programmes of academic departments. Universities should finance and build sustainable institutional infrastructure to enhance TT.

Key words: Technology Transfer, Effectiveness, Public University, Research & Development, Human Capital Theory.

JOB MARKET ANALYSIS AS A TOOL OF HIGHER EDUCATION PROGRAMMING AND EMPLOYABILITY

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Abstract

Unemployment is reckoning several sectors around the globe. For Kenya, it reflects the worsening situation and more specifically for the fresh graduates. The Kenya National Bureau of Statistics in 2018 statistics put unemployment rate in the country at 7.4%. Apparently, majority of this group (85%) are the youth. Statistics also indicate that with 75,000 jobs created in 2012, the trends were promising until 2017 when about 114,400 of jobs were created. However, from 2018 (only 78,400 jobs created), the pace has been slowing. This is at the backdrop of annually increment of fresh graduates in the country. A total of 84,243 students graduates from University each year in Kenya as per 2017 statistics. Thus, the study explored how higher education programming relates job market analysis and employability of the 21st century graduates. The study was guided by three objectives; i) to explore the state of employment in various higher education programs ii) to identify higher education programming gaps in relation to employability and, iii) to develop a framework for review of higher education programs attributed to identified needs. The study employed a systematic literature review design coupled with qualitative methods. Using the existing literature in online platform published between 2015 and 2022, the study analyzed 52 articles themed around job market analysis, higher education programming and employability. The findings showed that there exist variations in level of employability for various higher

education programs. The analysis revealed theory-practice gaps in offered programs that informs review needs. The study concluded that higher education programming for the 21st has missed the alignment to job market and employability. The recommendation is drawn for the CUE to engage industry and higher education institutions to adopt programming framework that reflects the needs for 21st century graduates.

Key words: Higher education, Education programmes, Job market, Market Analysis, Employability.

PARTICIPATORY LEADERSHIP (1 COR. 12: 12-30): KEY TO SUSTAINABLE DEVELOPMENT

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Abstract

In the First Letter to the Corinthians, St Paul metaphorically describes the Church as a human body where every part works optimally for the welfare of the body (12:12-30). So, just as the human body exists, functions, and is sustained because various parts of the body are selflessly working for the good of the entire body in the same way in any organization where every stratum is working optimally, that organization would be healthily kept in existence, maintained and sustained. Using the university as a body where we have such components parts or administrative parts. These are like parts of the same body and if they contribute their quota optimally the university in question would be second to none. The greatest problem we have today in most organizations is that there seems to be no meaningful development in most organizations or bodies because there is no synergy between various organs of the organization. This paper aims at using the Pauline model understanding of the Church as a body to encourage participatory leadership or collaboration for the enhancement of sustainable development. To achieve this, data were collected from both primary and secondary sources and the data so collected, and 1 Cor. 12:12-30 were analyzed and interpreted using Historical-Critical and Textual Criticism Methods. The researcher

discovered that there could be no meaningful development unless there is a participatory or collaborative leadership style or synergy between various strata of any organization or body. The work recommends among other things, that before a body can continue to exist and be sustained in being every part of every organization must optimally function. Significantly, this work will be of immense benefit to all organizations including countries, and universities.

Key words: Participatory, Leadership, Body, Sustainable, Development.

FINANCIAL STRATEGY AND SUSTAINABILITY OF PRIVATE SECONDARY SCHOOLS IN UGANDA

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Abstract

Financial sustainability of Secondary Schools has been in balance given the current economic turbulence as entities are recovering from the effects of the COVID-19 pandemic. Financial sustainability of entities has a bearing on achieving Sustainable Development Goal 8 on decent work and economic growth. This paper examines the effect of financing strategies on the financial sustainability of private secondary schools. Specifically, the study examined the effect of external borrowing, external grants and internal fund reserves on the sustainability of private secondary schools. The study was informed by the trade-off theory of capital structure that requires keen consideration to debt financing. A cross sectional survey research design was adopted with both qualitative and quantitative approaches. The data used was collected from 61 randomly selected private secondary schools using both structured questionnaires and interviews. The analysis was performed using regression analysis. The findings established that whereas, both grants and internal fund reserves had a positive effect on financial sustainability, external borrowing instead had a significant negative contribution on financial sustainability. The study therefore concluded that private secondary

schools may opt for grants and internal fund reserves as a long-term financing strategy that may have a direct contribution on financial sustainability while limited focus should be put on external borrowing especially when schools aim is future financial sustainability of the school. The key recommendation is for private secondary schools, school owners and policy makers to step up efforts of lobbying for grants by setting up grants, lobbying committees and negotiate with government and private schools should invest more on internal income generating activities so as to increase internal fund reserves.

Key words: Finance, Sustainability, strategy, trade-off, private schools.

INFLUENCE OF LEADERSHIP ON INNOVATION EFFICIENCY IN MANUFACTURING FIRMS IN KENYA

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Abstract

The purpose of this paper is to determine the influence of leadership on Innovation Efficiency (IE) in manufacturing firms in Kenya. A mixed research methodology was used and cross-section design was applied. The target population was 2484 leaders and multi-stage sampling was used to sample 345 respondents. Primary data was collected which was both qualitative and quantitative. The results revealed that leadership has a significant influence on IE. It is concluded that management should practice and encourage creativity, exploration, inspiration, exploitation and entrepreneurial mindset to promote IE. Further research should be conducted to find out how leadership should balance the trade-off between risk management and IE.

Key words: Leadership, Innovation Efficiency, Exploration, Entrepreneurial Mindset.

INDIVIDUAL FACTORS AS PREDICTORS OF RESEARCH PRODUCTIVITY OF ACADEMIC STAFF IN KYAMBOGO UNIVERSITY

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Abstract

Low levels of research productivity among academic staff prompted the study. This study explored whether individual factors such as self-efficacy, motivation, commitment, research orientation and research skills predict the research productivity of academic staff of Kyambogo University. Using the positivist research paradigm and the predictive cross-sectional survey design, data were collected from 165 academic staff using the questionnaire survey method. Regression analysis revealed that individual factors of motivation and research skills were significant positive predictors of research productivity. Therefore, to improve research productivity of academic staff at Kyambogo University, managers were recommended to enhance the motivation of academic staff by making research enjoyable, curiosity-raising, and relevant in terms of improving their status and income. They should also enhance the research skills of academic staff in relation to research methodology skills, grant-getting skills, computer skills for research and writing skills.

Key words: Individual Factors, Kyambogo University, Predictor, Regression, Research Productivity.

RESEARCH INFRASTRUCTURE AND LECTURER'S RESEARCH OUTPUT IN A UGANDAN PUBLIC UNIVERSITY

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Abstract

It is incontestable that universities are expected to provide an enabling infrastructure, facilities, and resources for teaching, research and community service. With research becoming a dominant university function for generating new knowledge for society advancement, the need for a supportive infrastructure needs no overstatement. However,

most Ugandan public universities are characterized by a weak research supporting infrastructure in form of ill-equipped laboratories, inadequate and outdated field equipment, inadequate and unconducive office space, intermittent power black-outs, poor internet connectivity and poor library services among others. This Mixed-Methods study was thus intended to assess the effect of the university research infrastructure on lecturers' research output at Kyambogo University. Research infrastructure comprised the physical infrastructure and electronic resources that support research in the university. Quantitative data collected from a sample of 127 PhD holding lecturers using self-administered questionnaires were analysed using Structural Equation Modelling, while qualitative data gathered through interviews with three faculty deans, two directors, the university bursar and university librarian were analysed through content thematic analysis. The research Infrastructure support was found to be weak in the university, but with a strong positive relationship with lecturers' research output. Results imply that the research infrastructure is a strong predictor of research performance, for which university managers should earmark serious investment as a strategic measure to promote the university research function.

Key words: Research infrastructure, Lecturer Research output, Ugandan Public University.

SUSTAINING HOME-BASED EARLY IN COMMUNITIES: LESSONS FROM THE IHELP MODEL IN UGANDA, KENYA AND ZIMBABWE

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Abstract

Introduction: Early childhood education has been found to lay a firm foundation for children's later life. However, quality service is largely experienced among the privileged class who are able to afford the exorbitant costs of providing early learning services. Majority of the poor who live in marginalized communities who greatly need the services never get this opportunity. When donors try to establish

centres to provide services to the poor, such initiatives normally collapse as soon as the funder withdraws. The objective of this study is to explore avenues from a community perspective on what they can do to sustain early learning centres established in their communities. This is an exploratory study that employs a phenomenological design. Data was collected from 16 Inclusive Home based Early Learning Project (IHELP) in Uganda located in four districts. A total of 16 teachers and 32 parents were interviewed after purposively selected and data analysed thematically. Results indicated that many parents who have children in the established centres volunteered their services in the centre to reduce costs. They were also used centres as learning points for livelihood activities. Exchange visits helped them to learn ways of sustaining their centres. Activities spearheaded by parents showed a strong ownership. Trust in what was being taught to children ensured continued enrolment and influential parents acted as teachers to teach children morals. We recommend that policies that encourage greater autonomy of parents to manage their centres should be promoted to ensure independence. Targeted support to be given to parents, including illiterate ones who have been assigned roles to play in teaching children need to be encouraged. Education officials need to designate the centres as inclusion sites for children with disability for targeted support.

Key words: Inclusive education; early learning; home based learning; sustainability.

MODERATING EFFECT OF CUSTOMER PRODUCT KNOWLEDGE ON SERVICE QUALITY AND CUSTOMER SATISFACTION IN SELECTED HOTELS WITHIN NORTH RIFT REGION: KENYA

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Abstract

Meal experience is highly influenced by service quality hence is very important element of meal experience dimensions. Moderation effects on link between Service Quality and customer satisfaction has not been

conducted in North Rift region Kenya. Therefore, this study examined how customer product moderated link between service quality and customer satisfaction in selected star rated hotels in North rift region, Kenya. The study was grounded on SERVEQUAL Five Aspect Meal Models and Customer Loyalty theories. The target population was 1652 while sample size was 490. Stratified and Simple random sampling strategies were employed to select the respondents. This study used questionnaires to gather information from selected samples. Statistical package for social sciences version 25 was used to analyse descriptive and inferential statistics. Hypothesis testing was conducted through multiple liner regression analysis. Interaction and hierarchal model was used to analyse how customer product knowledge affected link between service quality and customer satisfaction. Findings of this research revealed positive and significant moderating effect of customer product knowledge on relation between service quality and Customer satisfaction. Additionally, customer product knowledge statistically significantly predicted link between Service quality and customer satisfaction. Customer product knowledge had weak moderation effect on the link between service quality and customer satisfaction. Therefore, the study recommended that studies be conducted on moderating effect of. Customer product knowledge on the relationship between service quality and customer satisfaction in other service set up in different geographical regions.

Key words: Customer product knowledge, Service quality, Customer satisfaction

FUNDING AND LECTURER'S RESEARCH EFFECTIVENESS IN PUBLIC UNIVERSITIES IN UGANDA

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Abstract

Increase in university research funding is vital in order to generate and disseminate knowledge, skills and orientations that are critical to sustainable development as well as improving people's quality of life.

However, the financing of research in Ugandan universities has remained a major problem for both public and private universities. Research funding is characterized by small financial budgets that are severely constrained by the many competing demands, hence low research effectiveness. This mixed-method cross-sectional survey was thus intended to examine the effect of funding on lecturers' research effectiveness in Kyambogo University as a case for other Ugandan public universities. Research funding was conceptualized in form of funding for data collection and analysis, meeting lecturers' publication and authorship costs, conference presentation costs, and financial incentives for publication, authorship and graduate students' supervision. The study collected quantitative data using self-administered questionnaire from 127 PhD holding lecturers and qualitative data through interviews from seven key informants. Results revealed a moderate level of research funding, and no significant relationship between research funding and research effectiveness. Findings implied that lecturers conduct research on their own, with or without direct funding from the university. Since the availability of funding in a university is widely believed to determine the strengths of other capacity correlates, the study thus recommended further investigation into research funding and research effectiveness through mediated relationships by other organisational correlates for research effectiveness.

Key words: Research funding, Lecturer, Research effectiveness, Public Universities,

ASSESSMENT OF DIGITAL COMPETENCE OF ACADEMIC STAFF IN PUBLIC UNIVERSITIES IN UGANDA

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Abstract

The unanticipated lockdown of universities campuses caused by COVID-19 disrupted education worldwide. Nonetheless, the benefit that came with the lockdowns is that while previously interest in online

learning was an emerging unique mode of delivery used by particular institutions, it expanded virtually all universities leading to large scale digitalisation of teaching and learning. However, in Uganda public universities have been slow at digitalising their education compared to private universities. This study was attracted to assess digital competence of academic staff in public universities. Digital competence was measured in terms of course design, technical, communication and time management competences. Using the cross-sectional design, data were collected from a sample of 327 academic staff from a population of 2225 academic staff from four public universities in Uganda that is one university from Central, Eastern, Northern and Western parts of the country respectively using a self-administered questionnaire. Descriptive statistics and structural equation modelling using partial least square structural equation modelling (PLS-SEM) were used to analyse data. Descriptive results revealed that; course design, technical, communication and time management competences were high. PLS-SEM indicated that the four measures appropriate measures of digital competence. It was concluded that academic staff in public universities have the digital competences necessary for effective digitalisation of education. Therefore, it was recommended that universities managers should take advantage of course design, technical, course and time management competences of academic staff to roll out digital education at large scale.

Key words: Communication, Competences, Course Design, Digital, Measures, Technical.

MEASURING ONLINE CLASSROOM SELF-EFFICACY OF ACADEMIC STAFF IN PUBLIC UNIVERSITIES IN UGANDA

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Abstract

The Covid-19 disease that broke out in 2019 spread worldwide not only affecting health systems but also other fields including education. Due

to its high probability of infection through physical contact educational institutions implemented physical social distancing by adopting online methods of providing education. However, in Uganda implementation of online teaching and learning was virtually resisted by lecturers and students. Up to today, online teaching and learning has failed to become fully entrenched in education delivery in public universities in Uganda with many lecturers preferring on campus face to face classrooms. Against this background, this study measured online classroom self-efficacy of academic staff. Academic staff self-efficacy for online classrooms has been measured considering instructional methods, classroom management and student engagement. This cross-sectional study involved a sample of 327 academic staff from a population of 2225 academic staff from four public universities in Uganda. Data were collected using a self-administered questionnaire and analysed quantitatively. Data analysis used SmartPLS for partial least square structural equation modelling (PLS-SEM). Results indicated while instructional methods online classroom self-efficacy of academic staff was fair, their classroom management and student engagement were high. PLS-SEM indicated that the three measures were appropriate measures of online classroom self-efficacy of academic staff. It was concluded that while academic staff in public universities had limited online classroom self-efficacy instructional methods, they had sufficient classroom management and student engagement online classroom self-efficacy. Therefore, it was recommended among others universities managers provide academic staff with training in online instructional methods.

Key words: Instructional Methods, Self-Efficacy, Student Engagement, Student Management.

AN EVALUATION OF THE EFFECTS OF DOMESTIC DEBT AND EXTERNAL DEBT ON ECONOMIC GROWTH IN KENYA

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Abstract

During the period 1963 to 2008, Kenya's economy went through cyclical booms and depressions. As a result, the Kenyan government turned to external and domestic borrowing to finance the budget deficits. However, this has negatively affected the country for instance leading to high dependency ratio as compared to the previous years. Therefore, this study assessed the effects of domestic borrowing and external borrowing on economic growth in Kenya for the period between 1988 and 2019. The study was anchored on the Keynesian theory of economic growth and the dynamic theory of public spending.

Autoregressive distributed lag (ARDL) model was used to analyze data, with the aid of SPSS and STATA. The study's findings show that 1% increase in domestic debt causes a 1.25 % decline in Kenya's economic growth while a 1% increase in external debt causes a 1.10 % decline in Kenya's economic growth. Results also revealed that there exists a significant inverse short-term relationship between economic growth and domestic debt. These results imply that both domestic debt stock and external debt stock are significantly correlated with Kenya's economic growth. It is recommended that proper debt management need to be done to contain increases in debt level in order to ensure a steady economic growth in Kenya.

Key words: Domestic debt, External debt, Economic growth.

PEDAGOGICAL AND ANDRAGOGY TRAINING: CAPACITY BUILDING INMATE-TEACHERS WORKING WITH ADULTS IN CONFLICT WITH THE LAW

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Abstract

This action research reports an intervention in support for teacher inmates with limited pedagogical and andragogy skills but bestowed with responsibility to facilitate formal learning of their fellow inmates. In its quest to fulfil its mandate of community outreach, Mount Kenya University in 2016, carried out outreach activities in Naivasha Maximum Security Prison. A major gap observed was that there were 75 inmate teachers charged with the responsibility of teaching 1500 fellow inmates but these inmate teachers had no pedagogical and andragogy skills. Capacity building revolved planning for teaching, classroom management, learner-centred pedagogies, adult pedagogies, and assessment strategies, modern technologies of teaching and teaching practice. The inmate teachers reported enhanced confidence during class delivery, enhanced classroom interaction, quality assessment and better grades among inmates. The study concluded that capacity building of teacher inmates on pedagogical and andragogy enhances learning in prisons. The study recommends that the universities should offer an andragogy training to all inmate-teachers so enhance rehabilitation of inmates through education and eventually reduce recidivism.

Key words: Prison Education, Lifelong learning, recidivism, Andragogy.

ASSESSMENT OF THE CURRENT STATE OF TEACHER SOCIAL AND POLICY DIALOGUE (TSPD) IN UGANDA

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Abstract

Teacher voice through effective social and policy dialogue on teacher contexts, issues, concerns and priorities is paramount to achievement of quality teaching and learning with tangible standards for accountability on their profession. Teachers should operate in favourable conditions of service, welfare, motivation, economic stand and political will for their peace, security, justice and sustainability. The assessment was to establish state of teacher social and policy dialogue as means of teachers voicing their issues, concerns and priorities in the teaching profession in Uganda. Research was set to examine teachers' knowledge, values and practice on teacher social and policy dialogue, find out teacher's participation in formulation and decision of their policies and evaluate extent teachers were voicing out their concerns and issues. The design was mixed, mainly qualitative and evaluative. It targeted primary and secondary school teachers, teacher educators, teacher organisations and institutional leadership; forming sample size of the 1410 on purposive and stratified sampling. Consultative workshops, questionnaires and interviews, social media platforms sharing and feedback were applied. Literature review in and beyond Uganda was conducted. Data analysed through identification of themes, coding, clustering similar data on the knowledge, practice, attitudes of teachers on social and policy dialogue and quantitative data analysis involved basic descriptive statistics. Results were; inadequate knowledge and concepts scope, knowledge on teacher regulations and state of being familiar with TSPD. very insufficient knowledge on forms of social and policy dialogue, no idea about the Models of social and policy dialogue, limited practice level in social and policy plans, conducting and collaboratively conducting teacher social and policy dialogue and so far, conducted were not effective, not comfortable with the way teacher regulations enforcement in Uganda. Institutionalization

of TSPD, enforcing teachers' policies and relevant frameworks for Uganda to regulate the teachers for a common teacher voice, creating enabling environment between teachers, employers and government, using bottom-up strategies in formulation of teacher regulation, engaging teachers and teacher organisations in the integration and application of ICT in TSPD. Conclusion; teachers did not have a voice to their concerns and issues, did not participate in policy formulation and decision, never applied teacher social and policy dialogue, and leadership did not involve other member in developing TSPD implementation plans. Teachers were in agreement with having both one harmonised constitution and harmonised teacher organisation for all teachers for a common voice in Uganda.

Key words: Teacher, social dialogue, policy dialogue, teacher organisations, teacher voice.

COMPETENCE-BASED CURRICULUM INNOVATION IN THE MANAGEMENT OF KENYAN EDUCATION SYSTEM. WHAT IS THE PROBLEM WITH ITS IMPLEMENTATION?

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Abstract

As Ssentenza-Kajjubi (1969) points out, reforms in education are expectations and are evidence of promoting quality in education. In independent Kenya (from 1963), the Ominde Education Commission (1965) was the first attempt to reform education in this country by decolonizing its management system/practice. But thereafter, there followed several ineffective attempts to reform the management of independent Kenya education system that has culminated in the present Competence-Based Curriculum innovation which, educationally, is the best education system that can ever be designed and administered in any society including the Kenyan one. Yet this development is facing serious national revolt/resistance. The main worry is, what is the real problem with the CBC education system in the Kenyan context? Hence, the need to design the present paper to

address the existing main gaps in the process of designing and administering reforms in education in Kenya since 1965. The focus of the discussion will be on the considerations and the process of conducting meaningful and acceptable reforms in modern Kenyan education system

Key words: Competence-based Curriculum; Consideration; Curriculum; Innovation; Management.

AUTOCRATIC DECISION-MAKING PROCESS IN PROMOTING ENVIRONMENTAL EDUCATION FOR CLIMATE CHANGE BY PUBLIC UNIVERSITIES IN UGANDA

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Abstract

This paper investigates the effectiveness of autocratic decision-making in promoting environmental education for Climate Change at Ugandan public universities. This paper was inspired by the call for participatory leadership, innovation and knowledge transfer for sustainable economies. The goals of this paper are to: present the key processes, and consequences of an autocratic approach to decision making in inducing Environmental Education (EE) in public universities; establish the importance of promoting the effectiveness of EE for better ranking, and to explore the need to provide incentives for university academics to promote EE in Uganda. A systematic literature review of UN policies on Environmentally Sustainable Development and the Ugandan national policies on environmental education influenced this paper. Data were further obtained from recent Ugandan studies on the role of autocratic decision-making in improving university rankings, with a focus on academic productivity. While preliminary findings show that autocratic decision-making is unpopular and demoralizes academics, it works well in areas of innovation such as interdisciplinary programs on environmental education. It is thus concluded that the implementation of environment programs at universities begins with autocratic decision-making as a policy process by all HEIs. It is strongly

recommended that every public university promote interdisciplinary EE because it is a national and legal requirement imposed by the government.

Key words: Autocratic decision-making, environmental education, Climate Change, Universities.

MITIGATING CLIMATE CHANGE THROUGH MAINSTREAMING GREEN SKILLS TRAINING INTO HIGHER EDUCATION PROGRAMMES

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Abstract

The need for transitioning towards more environmentally sustainable modes of production and consumption has become imperative for both the developed as well as for developing countries. Sustainable Development Goals (SDG) No 9 and 12 advocates for upgrading industry infrastructure to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies by 2030. It is feared that these changes may lead to emergence of new occupations that shall demand for new skills profiles, qualifications and training frameworks.

Transitioning into such generic green skills is an endeavour that needs to be addressed with utmost urgency and precision. The role and directions of higher learning institutions should therefore be aligned with the needs and wants of the industry. Even though questions on what generic green skills to adopt is still contentious, it is nonetheless imperative for these institutions to revamp their training experiences in order to produce graduates with green skills so as to cater for the demand of future manpower market. This paper sought to interrogate these skills in line with the challenges that impede their mainstreaming within learning institutions. A cross sectional survey was carried out in twelve randomly selected institutions within Nairobi region and findings complemented with desktop research to determine fundamental gaps that hinder of-take of green skills training programs. SPSS and Tableau software were used for data analysis and visualization. The study

unraveled a raft of fundamental gaps that if addressed can propel this institution profile as icons of climate change and sustainable development.

Key words: Generic green skills, Sustainable development, Environmentally Sound Technologies.

CLIMATE CHANGE-INDUCED EFFECTS ON BENEFICIAL PLANT-MICROBE INTERACTIONS IN AGRICULTURAL SYSTEMS

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Abstract

Plant-microbe interactions have marveled scientists for several years due to their beneficial ecological roles in agricultural systems. Likewise, decades of research have enabled the understanding of these interactions and how they can be harnessed to develop sustainable agricultural systems. On the contrary, knowledge of how climate-induced changes have affected ecologically significant plant-microbe interactions has not increased as fast. This review propounds the value of beneficial plant-microbe interactions in agricultural systems and sheds light on how climate change has impaired these interactions. It also looks at the future perspectives regarding climate-change-induced effects on beneficial plant-microbe interactions and highlight the opportunities that can be pursued to reduce these effects and develop sustainable agricultural systems. Such information is both urgent and necessary to increase knowledge in these important plant-microbe interactions to reach their maximum exploitation universally.

Key words: Plant Growth Promoting Rhizobacteria, Climate change, Sustainable Agriculture, Global warming, Plant-Microbe Interactions.

PROMOTING LOCAL COMMUNITY-BASED CLIMATE CHANGE ADAPTATION RESILIENCE IN UGANDA

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Abstract

We present the vulnerabilities of the local communities to the damage and loss from climate change disaster effects and the need to build the resilience capacity of the local government district development. The objectives are to: examine the local community context of climate change and variability status in some districts, discuss the district climate change action plan for community disaster resilience to the adverse impact of climate stress in selected districts, and explain the role of effective climate information services (CIS) for enhanced in the semi-arid district located in the cattle corridor of Uganda. Informed by the five-year district policy plan analysis, systematic review, national planning authority documents, Uganda's national environment policy, sub-regional and regional data, additional information was obtained from the UN systems, media coverage, and multiple internet sources. Climate change and variability impacts have exacted severe socio-economic loss, damage, and stress on individuals, households, infrastructure, and local communities in some of the pioneer southwestern Ugandan districts. Climate variability has dangerously eroded the sociocultural, economic, and environmental resources of vulnerable communities prompting ferocious weather and climatic events. So far, most of the local communities have perpetually suffered the brunt of intense soaring heatwaves, unprecedented disastrous floods, ravaging wind storms, catastrophic droughts, cancerous food insecurity, and elusive famines that are linked to frequent agricultural droughts. The district has adopted a sectoral climate action for climate change and variability disaster resilience adaptation strategy for sustainable community livelihoods. In addition, the districts have approved communication plans for a participatory message development and delivery. There are potential climate service benefits, eco-services, social equity, and women and girls' empowerment for

improved socio-economic household welfare opportunities through university outreaches.

Key words: Climate change, variability, adaptation, southwestern Uganda, district.

ENSURING AGRICULTURAL FOOD NUTRITION SECURITY THROUGH UNIVERSITY GENDER-RESPONSIVE CLIMATE CHANGE RESEARCH COMMUNICATION FOR ADAPTATION RESILIENCE

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Abstract

We assert that gender-responsive agricultural production is a precondition for achieving the UN 2030 SDG 2 calls for a sustainable agriculture action that promotes food nutrition security per household, local community, and nationally. The objectives are to explain the key targets for gender-responsive and sustainable agriculture production for food nutrition security; key issues and actors of research and policy focus; and the types of academic or policy research communication focus. This was a review of effective gender-responsive climate change research and policy communication with a focus on good practice, UN 2030 SDGs, research, and policy data. Gender-responsive issue captures gender discrimination, gender gaps, and gender oppression that affect access to and control over resources, benefits, and opportunities everywhere. Climate change or variation has affected agricultural food nutrition security needs in Uganda. The women and girls in Uganda contribute over 70% of the home food supply besides grappling with reproduction, household (kitchen) management, gender-specific discrimination, triple adverse climate change socio-economic, hydrological, and meteorological effects like droughts, flash flooding, windstorms, hailstones, flood, or landslides. Gender responsiveness ensures sustainable food security in the face of climate change vulnerability risks, and the role of women is vital. Effective gender-responsive climate change research and policy communication promote early warning for early action by households, communities,

and local government districts. Most universities cannot co-create, communicate, or disseminate knowledge for smallholder farmers; information needed for food security agriculture production in Uganda, Africa, and globally.

Key words: Climate change, research communication, food security, climate variation.

PROMOTING GENDER EQUALITY LENS IN CLIMATE CHANGE POLICY INFORMATION COMMUNICATION

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Abstract

We present the significance of climate policy and research information services for effective household, local community, and national adaptation resilience with a focus on a gender-responsive lens. The main objective of this paper is to highlight the current status of the national climate change policy implementation process in Uganda: The paper's objectives are to state Ugandan national climate adaptation and mitigation priority sectors; explain local communities' vulnerabilities to the impacts of climate change disaster risks; highlight key sector-specific climate action and inter-sectoral coordination mechanisms; and discuss gender-responsive lens in climate information services for effective community-based resilience adaptation. Our paper was informed by data obtained from national and international documents on climate change action, policy analysis, multiple internet search engines, news bulletins, email discussions, and a systematic literature review on the national and decentralized climate action in Uganda. The Ugandan government has adopted a national climate change policy derived from the EAC climate change policy, and local government district climate adaptation and mitigation priority sectors. Most of the local communities are too vulnerable to the adverse impacts of climate change disaster risks like extreme droughts, heavy floods, heatwaves, hailstorms, windstorms, torrential heavy rains, and famines. Local adaptive capacity is too weak for adaptation resilience

due to big gaps in climate information services, ICT adoption and diffusion, green technology, climate finance, gender equality, and media literacy. There is more need for community-based adaptive capacity to combat climate hazards and enhance the benefits of climate change management. Climate change policy practice should focus on mainstreaming gender equality for women's empowerment through community-based adaptation good practice. There is a need for urgent climate change emergency action, a gender-responsive lens, and south-south-north partnerships.

Key words: SDGs, community, adaptation, resilience, gender-responsive lens.

EAST AFRICAN POPULATION EXPOSURE TO PRECIPITATION EXTREMES UNDER 1.5 °C AND 2.0 °C WARMING LEVELS BASED ON CMIP6 MODELS

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Abstract

Understanding population exposure to precipitation-related extreme events is important for effective climate change adaptation and mitigation measures. We analyze extreme precipitation using indices (EPIs), including consecutive dry days (CDD), annual total precipitation, simple daily intensity, and the number of extremely wet days, under the past and future climatic conditions over East Africa. The exposure of the East African population to these extreme events at 1.5°C and 2.0°C global warming levels is analyzed based on Climate Model Intercomparison Project phase 6 (CMIP6) models. Exposure is computed from extremely wet and dry days (R95p and CDD, respectively). Under both global warming levels, EPIs (except CDD) averaged over East Africa are projected to increase under the Shared Socio-economic Pathways (SSP) 2-4.5 and SSP5-8.5 scenarios. The largest increase in wet events will likely occur in eastern and northern Kenya. The results also reveal an intensification of precipitation extremes over Burundi, Rwanda, and some parts of Uganda. However, small changes are expected over most parts of Kenya and Tanzania.

Examination of population exposure to EPIs shows that the most prominent and net intense occurrence is over Burundi, Rwanda, and some parts of Uganda. In contrast, less change is noted to occur over vast parts of Kenya and Tanzania. Meanwhile, limiting the warming target to less than 1.5 °C but not more than 2.0 °C has 37% (44.2%) and 92% (4%) less impact on the occurrence of EPIs for R95p (CDD) under SSP2-4.5 (SSP5-8.5) scenarios, respectively. The study establishes that future exposure is predominantly driven by changes in population compared to other factors such as climate or concurrent changes in climate and population (the nonlinear interaction effect). The high exposure noted over East Africa calls for a shift in policies to instate suitable adaptation measures to cushion the already vulnerable population.

CUSTOMER RELATIONSHIP MANAGEMENT TECHNOLOGY, COMPETITIVE INTENSITY AND PERFORMANCE OF SELECTED HOTELS IN KENYA

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Abstract

Rife competition in the hotel industry has generated a high level of uncertainty. Consequently, to retain customers, hotel industry has incorporated CRM technology to achieve competitive advantage. CRM technology is engaged to capture information on customers which hotels use to offer customized services. The main objective of the paper was to establish the moderating effect of competitive intensity on the relationship between CRM technology and performance of selected hotels in Kenya. The study was informed by Resource-Based View and used explanatory research design. Data for empirical analysis was collected from 330 responses provided by informants to a structured self-administered survey. Hierarchical regression model was used to test the research hypotheses at 0.05 confidence level. The study findings indicated that competitive intensity had a moderating effect on the relationship between CRM technology and hotel performance. Thus, the study concludes that there is empirical evidence that

adoption and utilization of CRM technology would enhance hotel performance. Additionally, with introduction of competitive intensity, effect of CRM technology is strengthened. The study recommends that hotels should increase utilization of CRM technology to do well in competitive business environment.

Key words: Customer Relationship Management, CRM technology, performance, competitive intensity

WAYS OF ENGAGING THE COMMUNITY BY UNIVERSITIES: A CASE OF EVANGEL CHRISTIAN UNIVERSITY IN KENYA.

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Abstract

Introduction: Anchor institutions generate jobs, attract industry, provide cultural opportunities, and work to improve the condition of a community. Engagement refers to the range of ways in which university staff, students and management interact with external communities in mutually beneficial ways, either as part of teaching and research or as part of other projects and joint initiatives. The main objective of this study was to find out ways in which Christian universities in Kenya are involved in community engagement. The study design was a qualitative phenomenological case study that included interviews with the administrators, students and staff of the University. The university had relatively little emphasis on economic impacts, though this is central to the theory of anchoring institutions. This can be attributed to the fact that it is a Christian university and may not give centre stage to business or profit-making ventures. The authorities should organize dialogues engaging university students, staff and administrators, and community representatives to build shared understanding of and common actions to strengthen community engagement. Engaging the community is a useful strategy that universities can use in building mutually beneficial relationships with external stakeholders and advancing transformation, it is a means for higher education to contribute to public well-being because their initiatives have the potential to contribute to the transformation and sustainability of both universities and communities.

Key words: Engaging, community, university, anchor institution.

INFLUENCE OF TEACHER-PARENT JOINT DECISION-MAKING ON PUPILS' ACHIEVEMENT IN PRE-PRIMARY SCHOOLS IN LAIKIPIA COUNTY

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Abstract

Teacher-parent collaboration and joint decision-making has been highly encouraged because of its strong associations with educational success. However, it has not been verified whether it influences pupils' academic performance in the early years of education and hence a significant issue. The purpose of the study was to determine the influence of teacher-parent joint decision-making on pupils' achievement in public pre-primary schools in Nyahururu Sub-County, Laikipia County. The study was anchored on Epstein's theory of parental involvement and Bronfenbrenner's ecological systems theory. The study used a mixed methods approach and an explanatory sequential research design. The accessible population was 351 teachers and all parents of the 8088 pupils in the 176 public pre-primary schools. The sample was 69 teachers and 72 parents. Cluster random sampling, simple random sampling and purposive sampling techniques were used to obtain the study sample. Likert scale questionnaires were used for data collection. Piloting was done in five pre-primary schools. Split-half method was used to test reliability of the instruments. Experts from the university scrutinized the instruments to ensure validity. Data collected was analyzed using statistical package for social sciences (SPSS) version 25. Results were presented using frequencies, ratings and mean scores in statistical tables. The study found that joint decision-making had a significant impact on pupils' academic performance to a great extent. The significance of the study was to enlighten all the early years' education stakeholders on the importance of teacher-parent joint decision-making impact on pupils' academic performance. Teachers and parents should establish effective collaboration in decision-making thus improving pupils' academic performance.

Key words: Teacher, Collaboration, Decision-Making, Performance, Pre-Primary.

TRAINERS' LEVEL OF UNDERSTANDING OF COMPETENCY-BASED EDUCATION AND TRAINING OBJECTIVES IN NATIONAL POLYTECHNICS IN KENYA'S NYANZA REGION

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Abstract

The purpose of the study was to examine the trainers' level of understanding of Competency-Based Education and Training objectives in National Polytechnics in Kenya's Nyanza region. The study adopted descriptive research design. The study targeted 58 Administrators and Management, 450 Trainers, and 15150 trainees from Kisumu and Kisii National Polytechnics. Stratified random sampling technique was used to select the respondents. Questionnaires and interview schedule were used to collect data. Quantitative data was analyzed through descriptive statistics and inferential statistics while qualitative data were analyzed thematically. The findings were packaged and presented to the institution's management, the stakeholders in education, and the Ministry of Education to help them bridge the gaps and formulate policies that will improve the quality of tertiary teaching and learning, hence equipping learners with relevant skills. The study found out that a majority (63.6%) of the trainers had a deep understanding of the objectives of competency-based education and training. Furthermore, results of this study established that trainers agreed that they understood the concept of competency-based curriculum (mean = 4.08; std. dev. = 1.041). The study recommends that the government, the institutions' management and administrators need to monitor and enhance the trainers' level of understanding of the CBET objectives through various induction programs, seminars and trainings.

Key words: Competency-Based Education and Training, Objectives, Curriculum, National Polytechnics.

7E LEARNING CYCLE MODEL FOR UNLOCKING GENDER DIFFERENCE IN BIOLOGY ACADEMIC ACHIEVEMENT AMONG SECONDARY SCHOOL STUDENTS, KENYA

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Abstract

The study sort to investigate the effect of 7E learning cycle Model on gender performance in Biology in secondary schools in Chesumei Sub-County. Quasi experimental design was used. A sample size of 346 form three students was selected using stratified sampling and simple random sampling techniques. Data collection instrument was Biology Achievement Test. Validity of the instrument was determined by two experts in the field of Biology Education. Test- retest technique was used to determine the reliability of the instrument. A reliability coefficient of 0.83 was obtained by use of statistical tools. Mean, standard deviation and t-test were used to analyze data. The results were presented using inferential statistics. Results of the study revealed that the mean score of the girls in the experimental group performed better than the boys in the same group. In addition, the study also found that there was a statistically significant difference between the mean scores of those taught using 7E Learning Cycle Model and those taught using Convectional Instructional Method. The study concluded that 7E Learning Cycle Model has the potential of improving academic achievement of the learners in both group. It was therefore recommended that Biology teachers should employ such constructivist approach as 7E learning cycle model in teaching. In addition, Kenya Institute of Curriculum Development should organize and conduct capacity building on teachers on the adoption of 7E LCM during instruction.

Key words: Learning, Model, Gender, Biology, Academic, achievement.

ROLE OF ONLINE TRAINING ON SERVICE DELIVERY OF WAITERS IN LICENSED HOTELS IN NAIROBI COUNTY.

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Abstract

There are challenges facing waiters in hotel industry which require training for them to get skills for service delivery. People started working at home, these called for online training needs for various organizations including hotel industry. There is limited literature about the online training done purposely for waiters justifying the area to be explored through research. The study focused on online training and service delivery to Waiters. Consequently, it purposes to model the Role of online training on Service Delivery of Waiters in licensed hotels in Nairobi City County. The purpose was to establish model of online training and service delivery of waiters in the licensed hotels in Nairobi County during Covid 19 seasons. Subsequently the research methods was convergent parallel design which entails that the researcher concurrently conducts the quantitative and qualitative approach of research methodology. There are 71 hotels to be targeted besides target population of 1300 waiters' supervisors besides 260 which was 20 % of the population of the study but response was (N=242) out of the expected 260. The data was collected by sending online questionnaires (Using Google forms). IBM SPSS software version 21 was used to clean, present and analyze data. The variables were modelled using regression model to establish the relationship between the variables. The results showed that there was positive contribution of technical skills ($B = 0.541$) and interpersonal skills ($B = 0.032$) acquired during online training to the service delivery of the waiters. However, there was negative relationship between conceptual skills ($B = -.206$) and service delivery. The study outcomes concluded that technical skills and interpersonal skills are required at the operation level than conceptual skills in enhancing service delivery. Therefore, the training department should only focus at the delivery technical and interpersonal skills when conducting online training. The TIC (Technical, Interpersonal and

Conceptual skills) and service delivery model can help policy makers in making decisions.

Key words: Delivery, Online, Training, Skills, Conceptual.

THE DUAL VOCATIONAL TRAINING SYSTEM: IS IT VIABLE IN KENYA?

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Abstract

There has been an outcry in the quality of graduates coming out of the TVET system in Kenya with many stakeholders proposing ways to address the challenge. The dual vocational training system has been proposed as a panacea to address this problem. In a dual system, training is split between industry and the training institution in an apprenticeship type format. This paper proposes to give a desktop analysis of the dual vocational system. The paper will discuss how the dual system is implemented in Germany, its country of origin and its strong points. It will also present a similar system that previously existed in Kenya and the environment in which it was implemented and why it gradually petered out. Then examine the challenges of re-introducing the dual vocational training system and how these could be mitigated. The prevailing context was quite different then to what is currently obtaining. The number of institutions has grown rapidly and now enrolls thousands of students, making it difficult to accommodate all in the available industries. A suggestion is presented to consider including SMEs in the training eco system and creating incentives that would motivate them to take on trainees for industrial attachment and longer term apprenticeships.

Key words: Dual, Training, Apprenticeship, Quality Training.

SKILLS FOR PROMOTION OF INNOVATION: EVALUATION OF THE STATE OF TRAINERS SKILLS AT PUBLIC TECHNICAL AND VOCATIONAL EDUCATION IN KENYA

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Abstract

Kenya has placed the onus of skill development to Technical Education and Vocational Training, hopefully that pursuance of such line will make her realize marked economic trajectory as evidenced from Countries like Singapore that have recorded higher levels of development by embracing the same. However, such skills have to be in line with demands of global agenda on Sustainable Development which arose on the realization that the rates at which earth's natural resources were being depleted and regenerated was a threat to survival of Mankind, a situation that culminated in the development of a Blue Print for provision of global guidance on how Sustainable Development (SD) was to be achieved, what is popularly known as "17 Sustainable development Goals". Therefore, ability of TVET to meet Kenya's development agenda in line with global demands of United Nations Convention to which she is a signatory lies to the extent to which TVET is able to promote development of innovative skills. This paper undertook an evaluation of ability of TVET to promote development of innovative skills based on evaluation of capacity of trainers from selected institutions in Western Kenya in comparison with capacity of TVET trainers in best institutions in selected Countries in terms of trainer initial qualifications, continuous professional development and mode of curriculum delivery. The study was guided by Education Production Theory. Data was collected through questionnaire, document analysis and interview schedule. The study found that as opposed to state in Model study institutions, majority of TVET trainers in Kenya had low academic qualification, over 93 percent taught on basis of historical competencies and learning was majorly trainer centered. The study concluded that the nature of trainers and mode of curriculum delivery have negative impact on the

ability of TVET institutions to produce graduates who may spur Kenya's development aspirations. The study calls for urgent need to address the issue of skill development in order to enhance effectiveness of TVET.

Key words: Economic, development Trajectory, competencies; Sustainable.

INFLUENCE OF SCHOOL CALENDAR DISRUPTION ON ADOPTION OF DIGITAL LEARNING OF ENGLISH LANGUAGE IN KAPSERET SUBCOUNTY, KENYA

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Abstract

Recently, COVID-19 led to abrupt and indefinite closure of schools globally forcing most governments and schools to embrace digital learning as a matter of urgency so as to mitigate the adverse negative impacts of prolonged school closure on learning. This study sought to explore the influence of school calendar disruption on adoption of Digital Learning of English Language (DLEL). Premised on Albert Bandura's Social Cognitive theory which proposes that learning continually occurs through social interactions and influences from the community, media and the internet, the study sought to establish whether indefinite closure of schools, educational technologies and digital literacy had influence on adoption of DLEL. Data collected from 327 respondents including students and teachers from selected high schools in Kapseret Sub County revealed that away from school, students and teachers were scattered in their town houses/homes 50.2% and 51.7% and rural homes 36.6% and 14.3% respectively while all the head teachers remained on duty throughout the closure. With very interesting sleeping patterns, only 2.5% of the students considered their homes very convenient for study. A paltry 3.8% engaged academically for more than 5 hours daily while 45.6% spent only 2-3 hours 13.2% never engaged in study at all despite 77.9% acknowledging availability of study opportunities at home. Nearly all the respondents had access to

some digital devices and 72.3% had access to internet even though 60.2% rarely or never used the accessible internet for academic purposes. 70.1% believed they had fair to very good digital skills largely acquired through interaction with friends and personal effort. Only 5.3% gained digital skills through lessons offered in school. Also, 71.5% of ToEs were not competent in using digital devices and apps to plan, execute and monitor teaching since they had not undergone any formal training to prepare them for the same. There is need to equip both teachers and students with the right digital platform and skills for academic purposes for effective content delivery, evaluation and interaction of English language learning.

Key words: Covid-19, School Closure, English, Learning, Adoption

POSTAL AND TELECOMMUNICATION SERVICES AND THE EFFECTIVE UTILIZATION OF HUMAN AND NATURAL RESOURCES IN UGANDA, 1963 1977

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Abstract

Postal and telecommunication services are famous for transporting mails, small packages and messages to destinations around the world. Domestically and internationally, they receive and transport documents, deal in specialized services, operate postal facilities and sale philatelic and mailing supplies. Little, however, is known about their role in logistics, financial services and other business areas. This study focuses on the performance of postal and telecommunication services in Uganda from 1963 to 1977 with the view to unpack its role in effective utilization of human and natural resources. We used archival research and documentary analysis focusing on documents retrieved from the defunct East African Post and Telecommunication Corporation and the Uganda Post and Telecommunication Services. The study revealed that postal and telecommunication services are pivotal in the effective utilization of a country's human and natural resources depending on the political environment prevailing in the country. This is because the use of telephones, radio and microwave communications, as well as fibre optics and satellites play a crucial role in a country's economy. It is

recommended that modern states should not rush to privatize postal and telecommunication services because they are highly needed to develop and sustain economic vibrancy.

Key words: Services, telecommunication, human capital, natural, Uganda.

INFLUENCE OF WORK FLEXIBILITY ON FINANCIAL PERFORMANCE OF MOBILE TELECOMMUNICATION COMPANIES IN KENYA

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Abstract

The purpose of the study was to determine the influence of work flexibility on financial performance of mobile telecommunication companies in Kenya. The research design was descriptive study and the targeted population was 178 managerial staffs of the four major telecommunication firms that operate in Kenya. A sample size of 89 was used in this study. Because the sample was not homogeneous, stratified random sampling was utilized to ensure that all respondents were represented equally and without bias. The financial data was collected over a five-year period (2016–2020) and analyzed retrospectively. Several variables in the financial statements were used to assess the company profit gain and financial position over time in telecommunication companies; the variables were used to measure the company performance and how well the company performed. According to the results, work flexibility has a positive and significant effect on financial performance of mobile telecommunication companies in Kenya. This means that improving work flexibility practices such as having flexible work arrangements, distributing manageable amounts of work to each employee, using part-time work and shifts, encouraging job sharing, and allowing employees to work overtime with adequate compensation will significantly improve the financial performance of mobile telecommunication companies. Telecommunications companies in Kenya should design and implement policies around work flexibility, as well as create awareness programs to

educate employees about the benefits of such practices to both themselves and their organizations, and align flexible work initiatives with their business strategies.

Key words: Work flexibility, Flexible Working, Financial Performance.

GENETIC TRANSFORMABILITY OF SELECTED KENYAN GROUNDNUT (ARACHIS HYPOGAEA L.) GENOTYPES WITH IPT GENE USING COTYLEDONARY NODE EXPLANTS

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Abstract

Groundnut (*Arachis hypogaea* L.) is an important crop in terms of income and nutrition. Despite its importance, groundnut yield is limited by environmental factors such as drought. The cotyledonary nodes of six Kenyan adapted groundnuts genotypes (ICGV 12991, CG 7, Red Valencia, ICGV 90704, Chalimbana, and JL 24) were transformed using *Agrobacterium tumefaciens* strain EHA 101 carrying PNOV-IPT binary vector containing an IPT gene, which was driven by SARK promoter and terminated by TNOS terminator. The vector also contained the phosphomannose isomerase (PMI) gene for the selection of transformed tissues. Putative transformants were tested for the presence of the transgene by PCR designed to amplify the IPT gene sequence. Gene expression was confirmed by RT-PCR. Transformation frequency was calculated as a percentage of the number of putative transformants divided by the total number of infected cotyledonary nodes. This ranged from 9.87% for ICGV 90704 to 19.77% for JL 24. Transformation efficiency was calculated as a percentage of the number of PCR positive plants divided by the total number of cotyledonary nodes infected. This ranged from 0% for ICGV 12991 and Chalimbana to 1.74% for JL 24. The data suggest the possibility of transforming groundnuts with the IPT gene and regenerating normal transgenic plants. This information will be useful during the transformation of groundnut towards different factors that affect production.

AN EVALUATION OF THE PERFORMANCE OF SELECTED COUNTY FOREST CONSERVATORS IN KENYA

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Abstract

Kenya Forest Service (KFS) is normally engaged every year to prepare Annual Workplan and Budget (AWP&B) as required by the government policy for fund allocation by the treasury which presents focus role and a determined direction that estimates organization finances against her activities in a financial year. This study therefore evaluated the performance of selected County Forest Conservators (CFCs) against their Performance Targets (PCs targets) as indicated in their AWP&B. Specifically, the performance was evaluated against their PCs targets as indicated in their AWP&B. Descriptive research design was employed to analyze the structure of AWP&B on performance of selected CFCs. The evaluation was meant to assess the impact of AWP&B system against PCs targets in line with KFS strategic plan targets. The study derived a correlation between funds allocation and performance of selected CFCs. The results on evaluation on performance showed that the observed calculated Chi-square (χ^2) test statistics was greater than the critical value (5.99) determined by the level of significance (0.05) with degree of freedom (2). Thus, test result was found to be significant showing the performance of CFCs does not support full realization of their PCs targets as indicated in their AWP&B. The study therefore recommend that the management need to put in place effective and efficient structure of AWP&B that will conform 80% to 100% to requirement by the treasury guideline for funds allocation which will lead to increase in the performance of CFCs and enable them attain the achievement of their PCs targets.

Key words: Performance, Forest Conservators, Workplan, Budget.

THE PERCEPTION OF STUDENTS ON THE IMPORTANCE OF GESTURES IN CLASSROOM INTERACTION

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Abstract

Nonverbal communication is a main way of human communication. Human beings possess the ability to communicate which is much more than mere composition of certain physical attributes such as vocal folds, articulators etc. They have the ability to symbolize or understand concepts in terms of images or symbols. It is this, which helps them in effective communication. Communication then, is not merely, an understanding of the words, which are spoken, but also the symbols and the gestures that accompany the spoken words. The teacher should be competent in variety of skills, one of the important ones being nonverbal communication. There are variety of nonverbal signs and signals that constitute nonverbal language. The study focused on establishing the perception of students pertaining the importance of gestures in classroom interaction. Through purposive sampling, 150 students, 50 from form three stream of each of the 3 selected public secondary schools in Mombasa County, Kenya were selected to participate in the study. Data was collected through structured likert-scale questionnaires comprising of six statements regarding gestures as nonverbal cues used in classroom interaction. The participants' responses were recorded, analyzed and explained through the use of tables and graphs. Data analysis was guided by Bird-whistell's (1952) Kinesics Theory. The theorist argues that all bodily movements have potential meaning in communicative contexts and highlights seven key assumptions on which the theory is based. The findings of the study revealed that gestures are of great importance in classroom interaction. Majority of the respondents supported the fact that gestures are communicative in teaching and learning process. Thus nonverbal communication is key in classroom interaction.

Key words: Gesture, Nonverbal, Communication, Language, Interaction.

DELEGATED MANAGEMENT MODEL OF WATER SERVICE PROVISIONING: A PANACEA OF INFORMAL SETTLEMENTS IN KISUMU CITY, KENYA

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Abstract

More than half of humanity now dwells in cities. This population needs portable water for public health, personal well-being, poverty eradication, promoting gender equity and environmental sustainability. However, in sub-Saharan Africa, a whopping 71% of urban population live in the informal settlements where a centralized municipalized water system is maladapted to the changing cityscape and population dynamics. Thus, service delivery is hampered by tenure security, exploitative water cartels, clandestine connections and infrastructure vandalism leaving the majority unserved or under-served. The objective of this research was to examine how a pro-poor intervention of water service provisioning called Delegated Management Model used by Kisumu Water and Sewage Company has impacted service delivery in Kisumu city, Kenya. The research used descriptive research design where qualitative information was gathered through interviews from the utility intermediaries or master operators, state and non-state agencies involved in urban water service delivery. Simple random sampling was used in selecting 10 master operators' representatives from Nyalenda, Obunga, and Nyamasaria settlements. Purposive sampling was used to pick individuals for interview from Kisumu Water and Sewage Company, Water Sector Trust Fund, Lake Victoria South Water Service Board, Water Services Regulatory Board, Kisumu Urban Apostolate Programmes and Umande Trust. The findings demonstrate that the pro-poor intervention has enabled Kisumu Water and Sewage Company to increase water coverage, reduce infrastructure vandalism, improve revenue collection, enhance community participation, eliminate cartels, increase staff productivity and create employment opportunities for the informal settlement dwellers. Nonetheless, inadequate funding to sustain and expand the water network infrastructure, lack of transparency and accountability on revenue

generated by master operators were identified as some challenges facing the implementation of Delegated Management Model in the city. Therefore, the research recommends the adoption of the model for water service delivery in sub-Saharan Africa cities as it will enable the water utilities to balance their financial mandate (profitability) and social objectives (provision of safe, affordable and reliable water services) towards realization of SDG 6 and 11.

**“I NEED TO MOVE ON”: FEMALE ACADEMICS’ INITIATIVES IN ENHANCING
THEIR ACADEMIC CAREER PROGRESSION: A CASE OF SELECTED
UNIVERSITIES IN UGANDA.**

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Abstract

This study explored female lectures’ initiatives in support of their academic career progression at Makerere and Kyambogo Universities in Uganda. I specifically focused on personal attributes which are behind actions undertaken by female academics that contribute to their academic career progression. Anchored in the advocacy world view, and guided by Social Cognitive Career Theory [SCCT], I employed a qualitative research approach and I used semi-structured interviews comprising of 16 female academics, 8 from each university with more than five years at the rank of lecturer within the same university were used as a sample. Data were thematically analyzed and I found that personal attributes such confidence, resilience, self-motivation determination and self-beliefs enable female academics to take initiatives such as setting realistic goals, making career decisions which enhance their academic career progression. However, these are moderated by external factors such as institutional, family and collegial support. The paper recommends that academic career progression of female lecturers should be enhanced by creating a supportive environment in which measures such as encouragement, mentoring, and ongoing training in scientific writing, adequate funding and promotion of co-authorship which stimulate female academics’

individual abilities and their subsequent academic career progression are prioritized.

Key words: Female Academics, Initiatives, & Academic Career Progression.

EMPLOYING SCIENCE PROCESS SKILLS TO DEMYSTIFY THE CONCEPT OF REGULAR POLYGON IN SENIOR SECONDARY SCHOOLS FOR GREATER STUDENTS' ACHIEVEMENT

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Abstract

Mathematics together with other science subjects are considered very important not only in Nigeria education system but in other countries of the world. Mathematics is currently made compulsory in all Secondary Schools in Nigeria and is applied in virtually all science related subjects offered in Nigerian Secondary Schools. Considering the importance of mathematics in the world and in our daily activities, it's abysmal performance by our secondary school students have been a great source of worry and concern to mathematics Educators and general public at large. Regular Polygon which is a topic in mathematics have been identified by WAEC Chief Examiner as a topic that students fail and skip to attempt questions on in SSCE. This paper discussed application of science process skills in demystifying the concept of Regular Polygon in Senior Secondary School Students for greater achievement.

Comprehensive lesson plans that portray the application of Science process skills in teaching of regular Polygon were presented with key questions and answers by both teachers and students. The importance of applying science process skills in mathematics for greater students achievement and skill acquisition towards becoming future scientists and Mathematicians of great repute were equally x-rayed. The paper concluded that application of science process skills in teaching of regular Polygon and mathematics in general will enhance students' ability to solve real world problems and relate what they learnt in the classroom to the outside world. This paper finally recommends that

teachers should be encouraged and sponsored to attend Conferences, Seminars and Workshops that relates to Sciences as frequent as possible so as to enhance the skills required for effective teaching for greater students' achievement.

Key words: Science Process Skills, Demystify, Regular Polygon, Senior Secondary School, Achievement

RE-ENGINEERING CURRICULUM IN HIGHER INSTITUTIONS OF LEARNING TO ADDRESS SOCIETAL NEEDS IN SUB-SAHARAN AFRICA

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Abstract

Curriculum has purposes, aims and objectives that reflect general societal aspirations. A good curriculum can change the face and fate of the society. Society plays a significant role in determining what is considered worthwhile knowledge, desirable attitudes and relevant skills. The body of knowledge that a society draws from the curriculum should be imparted on the individual who in turn use the same knowledge to evoke untapped inherent knowledge to improve self and society. Therefore, curriculum is not all about shaping an individual to be an intellectual, but enabling him/her to use head, heart and hands, as such it should embrace cognitive, affective and psychomotor objectives to develop a complete individual who is able to think outside the box. The tendency to develop individuals who cannot think beyond bookish learning is tragic and illogical. The increase of degree-offering institutions has downgraded the quality of graduates being spewed to the market at the end of every academic year. They are not fully equipped to help the nations win the war against poverty, bad governance, corruption, unemployment because the curriculum being used is divorced from the societal expectations. The study therefore delves into establishing how the curriculum of higher institutions can be re-engineered to meet societal needs in Sub-Saharan Africa. The study will adopt descriptive survey design. Questionnaires, focus group discussion and interview guides will be used to collect data from

University lecturers, students and sampled targeted employers. Target population will be 50 lecturers, 250 students drawn from Universities. Random and purposive sampling techniques will be used to get sample size. Re-aligning curriculum to meet societal needs will aid in fighting corruption in the society. A curriculum that incorporates societal aspirations in its development addresses societal issues adequately. The researcher recommends curriculum developers to reflect societal aspirations in curriculum development process.

Key words: Re-engineering, societal needs, curriculum, higher institutions of learning.

THE PLACE OF INTELLIGENT DESIGN IN EXPLAINING THE ORIGIN OF UNIVERSE AND LIFE: A PARALLEL TO MACRO EVOLUTION THEORY

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Abstract

Human beings have constantly belaboured on the question of origin of life and the universe with different scholars fronting different pathways. The debate in some parts of the world has been controversial and emotive creating avenues for community of scientists to engage in further research in order to create new knowledge. Some of the theories advanced include: the theory of special creation, panspermia theory, abiogenetic, and theory of chemical and biological evolution. One of the main theories that has had a relatively wider coverage and acceptance globally in answering the question about origin is the theory of evolution earlier advanced by Robert Charles Darwin. The question to provide a satisfactory answer to the puzzle of origin of life has led to the changes in the Darwinian evolution theory postulated by Robert Charles Darwin and emergence of other theories. Based on critical analysis and cutting-edge research, it has been established that these theories have gaps and missing links and therefore cannot comprehensively explain the origin of life and the universe. Studies have shown that the existing theories have limitations in explaining the origin of life and the universe and some of the major gaps in the current theories of biological and chemical evolution fall in the

following areas: Biochemistry, Chemistry, Taxonomy, Genetics and Paleontology. This paper therefore interrogates the current theories that attempts to explain the critical question of origin and presents an alternative scientific theory that best explains the origin of life and the universe. The paper is grounded on the positive cases for Intelligent Design Theory, provides cases in nature that points to intelligent causation from an African perspective, highlights the major gaps in the theory of evolution and therefore creates a platform for a paradigm shift in academia. The theory provides the best alternative explanation to the question of origin of life and the universe.

Key words: Intelligent Design, Intelligent Causation, Origin, Evolution, Life, Universe.

INFLUENCE OF PROCESSES INNOVATION STRATEGY ON THE PERFORMANCE OF COMMERCIAL BANKS IN KENYA.

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Abstract

The study was conducted to examine the influence of processes innovation strategy on the performance of commercial banks in Kenya given the dynamism in the business environment hence the need for organizations to move with speed and make choices that add value to customers and those which will enable the organization remains relevant in such a dynamic business environment. Diffusion of innovation theory was incorporated in the study since it widely supports the spread of agency banking, mobile technology, and online banking. An explanatory research design was used. Both primary and secondary data were collected. Primary data was collected using a questionnaire while secondary data was collected from relevant literature materials, the organization's annual reports, and the website. Cronbach's Alpha coefficient was used to test the reliability of the data with an acceptable level of 0.7 at a confidence level of 95%. The study targeted tier 2 Commercial Banks in Kenya with the top management bank employees as the key respondents. The target population was 144 top

management bank employees. The study employed a census targeting the entire population of 144 top management bank employees. Out of the 144-target population, 120 top management employees responded to the questionnaire hence results from the findings were based on the 120 respondents. Descriptive and inferential statistics were used in analysing the data. Descriptive statistics entailed the measure of central tendency (mean) and the measure of dispersions (standard deviation). The statistical package for social sciences (SPSS) was used to generate the descriptive statistics. Inferential statistics entailed regression and correlation analysis. Data were presented using tables. The study established that there was a significant influence of process innovation strategy on the performance of commercial banks in Kenya. The findings of the study concluded that mobile banking and internet banking have greatly enabled customers to access essential services in the comfort of their homes or offices and without necessarily having to go to the bank whereas agency banking has significantly reduced the queues in the banking halls and customers do not have to wait for long hours to be served at the bank. The study recommended that banks need to adopt a process innovation strategy in order to enhance performance.

Key words: Agency Banking, Internet Banking, Mobile Banking, Performance, Processes Innovation Strategy

INFLUENCE OF LABORATORY AND LIBRARY ON TEACHING AND LEARNING PROCESSES

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Abstract

Globally, the critical role played by the equipped laboratories and libraries in the facilitating teaching and learning process is apparent in secondary schools. The purpose of this study was to examine the influence of laboratory and library infrastructures on teaching and learning process in public secondary schools in Nyeri and Nairobi Counties, Kenya. The objectives of the study were; to establish the

safety status of laboratories in secondary schools, to determine the safety status of libraries in secondary schools, and to ascertain the level of equipping of laboratories and libraries in secondary schools. To achieve these objectives of the study, expo-facto design was used. Data were collected using questionnaires administered to: a sample size of four hundred and ninety-eight (473) respondents, consisting of; three hundred and eighty-three (383) form three and four students, forty-four (44) Deputy Principals, forty four (44) Principals and two (2) County Quality Assurance and Standard Officer (CQASO) who were interviewed. Further, the researcher used Observation Schedules to guide making of observations in the laboratories and libraries in the sampled schools. Quantitative and qualitative techniques were used to analyse the data collected. The study found out that: most secondary schools' laboratories and libraries were not spacious enough and the laboratories lacked cupboards for proper storage of chemicals and proper firefighting facilities. It was also established that most libraries were poorly ventilated and ill equipped with the relevant learning materials. This study recommended that: Ministry of Education should increase remittances to schools for; constructing spacious laboratories and libraries as per Ministry of Education Safety and Standards Manual, equipping the libraries with requisite teaching and learning resources, lastly, Principals of Schools should strictly follow the recommended enrolment guidelines so that students admitted do not over stretch school's physical facilities and hence interfere with their health as well as the teaching and learning process.

Key words: Laboratories, Libraries, teaching and learning processes.

LEVERAGING THE STUDENTS' SOCIALIZATION OUTCOMES THROUGH RELIGIOUS-BASED STUDENTS' ASSOCIATIONS IN PUBLIC UNIVERSITIES

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Abstract

Human beings live in societies and human life is essentially a life of association. Students' associations are a very important feature in any university. Students run the associations on their own and, therefore, if

they are not monitored, they can engage in some anti-social and negative behaviour and activities. A student, who is positively socialized such is self- disciplined, responsible and can cope with the challenges of university life and even thereafter. Thus, this study entailed an objective - To investigate the influence of religious-based students' associations on educational socialization outcomes among students in selected universities in Nairobi County-Kenya. The study used mixed methodology whereby qualitative and quantitative methods were concurrently triangulated. Data was gathered from respondents using observation checklist, questionnaire for students and interview schedule for deans of students. Qualitative data was presented thematically while the quantitative data was presented using tables and charts. The research instruments were piloted in Nazarene University. Reliability and validity of the instruments was checked using the split half technique and critically assessing the consistency of the responses on the pilot questionnaires. The study found that the day of worship is the highest attraction with 47.9% (80) for formation of - based associations. The findings showed that religious-based students' associations influence many aspects of social life in the universities including educational achievements. The religious- based students' associations influenced stress management and academic performance. The associations also helped to enhance moral standards among students. The study concluded that the students' socialization outcomes can be effectively leveraged through the religious-based associations in public universities. Based on the study findings, it is important that university authorities set up systems that cultivate formation and participation in religious-based students' associations.

Key words: Students' Associations, Socialization Outcomes, Religious-Based Associations, Public Universities, Educational Socialization.

TEACHER'S LEVEL OF SELF-EFFICACY ON LEARNERS' ACADEMIC ACHIEVEMENT IN PUBLIC SECONDARY SCHOOLS IN KIAMBU COUNTY, KENYA.

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Abstract

This paper reports a study carried out to assess the influence of teachers' psychological well-being on learners' academic achievement in public secondary schools in Kiambu County, Kenya. Teacher's psychological well-being can be measured using teachers' level of self-efficacy, quality of relationship with others, teachers' personal growth, teachers' autonomy and the teachers' sense of purpose in life on learners' academic achievement in public secondary schools in Kiambu County, Kenya. The objective of the study was to assess teacher's level of self-efficacy on learners' academic achievement in public secondary schools in Kiambu County, Kenya. The study was guided by the self-efficacy theory by Albert Bandura. The study used a mixed methodology approach. The target population of the study was 116,333 comprising of 227 Principals, 2606 Teachers and 113,500 students in all the 227 public secondary schools in Kiambu County. The sample size of the study was 11,784 respondents comprising of 23 school principals, 261 teachers and 11,500 students. Data collection was by use of interview schedule for Principals, questionnaires for teachers and observation guide for students. In addition, document analysis was used to complement the collected data. The study showed that there is a strong relationship between teachers' self-efficacy and the learners' achievement, $r=.756$, at $\alpha = .05$. Further, the study showed that a 71.2% variation in the learners' academic achievement can be attributed to teachers' level of self-efficacy. The study recommended that, the schools' heads, TSC and MOE enhance guidance and counseling for teachers so as to safeguard their self-efficacy which in turn affects their teaching and eventually the learning outcomes of learners.

Key words: Teachers' psychological wellbeing, Teachers' sense of purpose in life.

BUREAUCRATIC PROCESSES AND SOCIOLOGICAL CHALLENGES IN EDUCATION INSTITUTIONS

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Abstract

The purpose of this paper is to highlight the impact of formal organizational structures and their impact on sociological processes in education. The study, carried out in a Kenyan public university explored emerging sociological issues in higher education in the background of structural adjustments in quality management of educational institutions. While much attention into the natural sciences is justified in dealing with the environmental challenges like climate change and sustainable development, the continued neglect of sociological issues in education can become lethal in societal wellbeing. The study, in a descriptive qualitative design, was set in the Husserlian tradition of lived experience. It gathered qualitative data through oral interviews and observation from lived experience. A purposive sample of five participants in the position of Heads of departments and three student representatives was used to identify emerging issues in education. Secondary data was also used and analysed through content analysis of policy documents like quality manuals to establish functions, processes and outcomes in administrative procedures at university. A blending of social exchange theory and grounded theory was used. Primary data from oral interviews was transcribed, colour coded and discussed under themes. Findings indicated existing challenges of lack of adequate office space, excessive workload, and inadequate facilitation, hostility of colleagues and administrators, tight schedules, dissatisfaction with remuneration, unrealistic performance targets and workforce imbalance. The study indicates that, education institutions are immersed in the quest for excellence in educational administration and management, yet the organization models adopted are not in consistence with existing structures in institutions. This threatens not only the quality of education but also the sociological processes and professional development of individuals within education. The study recommends inclusion of motivation procedures, thorough education

and sensitization of workers, provision of conducive work environments and establishment of social support structures.

Key words: Bureaucracy; sociological challenges; organizational structures; education

FORMULATION OF BATHING SKIN CARE SOAP CONTAINING HYPERICUM KENIENSE EXTRACT AND EVALUATION OF ITS QUALITY

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Abstract

Hypericum keniense is a plant well known to contain compounds for skin care in African traditional medicine. The accepted name of the plant is Hypericum revolutum subsp. keniense and scientifically, it has demonstrated invitro activity against microbial pathogens including Staphylococcus aureus, methicillin-resistant staphylococcus aureus and Escherichia coli. Though, there is existence of skin care soaps named after the plant extracts in their formula in the Kenya market like the common Aloe soap, to the best of our knowledge, there is no soap formulation containing Kenya Hypericum. The science of preparing the plant material in a more acceptable form in the market for skin care purposes coincides with the increasing demand for natural products as compared to conventional ones. Conventional antiseptic soaps are becoming much more expensive and have been implicated to contain ingredients which pose risk to human health. Therefore, there is need to search for alternative antiseptic soaps. The objective of this current study was to formulate and evaluate the physicochemical and antibacterial properties of herbal soap containing Hypericum leaf powder extract. The Hypericum leaves were collected from Gakoe forest in Kiambu County, and they were dried under shade at the drying room in the Pharmacognosy Department of Mount Kenya University. Different concentrations of handmade soap (1.25 – 5 % w/w) were prepared through a cold saponification process. The quality parameters physicochemical parameters based on the Kenya Bureau Standards

procedures. Antibacterial activity was determined by agar disk diffusion method using Dettol as the reference standard. Data analysis was conducted by graph pad prism. The moisture content of the soap ranged between $6.176 \pm 0.633\%$ to $11.2250 \pm 0.167 \%$, pH between 10.385 ± 0.025 - 10.875 ± 0.025 and formability ranged between $32 \pm 4.00 \text{ cm}^3$ to $61 \pm 5 \text{ cm}^3$. The zones of inhibition range between $8.0 \pm 0.58 \text{ mm}$ - $12.0 \pm 0.58 \text{ mm}$ against methicillin-resistant staphylococcus aureus and between $8.33 \pm 0.33 \text{ mm}$ - $14.00 \pm 0.58 \text{ mm}$ against Staphylococcus aureus. All the soap samples exhibited significantly higher activity against staphylococcus aureus as compared to methicillin-resistant staphylococcus aureus ($p < 0.05$). In conclusion, the formulated soap meets the required standards and is a potential antibacterial soap. And therefore, we recommend this as the minimum product viable formula pending toxicity study.

Key words: Antibacteria, Handmade soap, medicinal plants, saponification.

EFFICACY OF COMMONLY USED DISINFECTANTS AGAINST BACTERIAL PATHOGENS IN A TEACHING AND REFERRAL HOSPITAL IN KENYA

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Abstract

Nosocomial infections are a major concern in health care settings and contribute to increase in morbidity, mortality, hospital stay and medical expenses. These infections are transmitted through hands of patients or health care givers or contaminated equipment and surfaces. The widespread use of disinfectants and antibiotics has led to increase in microbial resistance. However, knowledge regarding efficacy of common disinfectants used in healthcare settings in Kenya is limited. This study undertaken at Moi Teaching and Referral Hospital, Uasin Gishu County, Kenya, sought to determine the sites and identity of bacterial contaminants in clinical laboratory, range and use of sterilants / disinfectants and establish their efficacy against bacterial isolates. A total of 200 swabs were made on different sites of the microbiology

laboratory and processed using standard procedures. Disc diffusion method was used to determine and compare efficacy of five different types of sterilants /disinfectants against bacterial isolates.

Pseudomonas aeruginosa ATCC 27853, *Escherichia coli* ATCC 25922, *S. aureus* ATCC 29213 and *E. faecalis* ATCC 29212 standard strains were used as quality control strains. The study revealed that the types of sterilants and disinfectants commonly used are alcohol (39.4%), iodophor (13.3%), hypochlorites (43.3%), hydrogen peroxide and gluteraldehydes (1.28%) each respectively. The most predominant bacterial contaminants were obtained from laboratory walls (31.5%, workbench (33%), floor (32%) and equipment (2.5%) and identified as *Escherichia coli* (34.5%), *Klebsiella pneumonia* (18.5%), *Pseudomonas aeruginosa* (9.0%), *Proteus mirabilis* (3.5%), and *Salmonella typhi* (7.0%), coliforms (19.0%), *Staphylococcus aureus* and *Streptococcus pneumonia* (2.0%). *Escherichia coli* and *Proteus mirabilis* each showed 100% resistance to iodophor. *E. coli*, *K. pneumoniae* and *P. mirabilis* showed 100% sensitivity to alcohol followed by *P. aeruginosa* (93%). The study recommends quality control of sterilants / disinfectants as an integral component of infection control to prevent nosocomial infections.

Key words: Nosocomial infectants, Disinfectants /Sterilants, Bacterial contaminants, Efficacy.

ENVIRONMENTAL HEALTH DEGREE OR PUBLIC HEALTH?

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Abstract

Over 12 million people around the world die annually because of unhealthy work environments. The state of our world affects our physical and mental health. Education creates the resources for employment and growth in businesses, public service, and, thus, the economy as a whole. Although the mission of universities is to generate skills and knowledge for the labor market and not necessarily offer employment, there is increasing substantial evidence that university

education and employment are mutually exclusive. Interested parties like governments, parents/guardians, and students investing in higher education often wish to see some general economic payback. The purpose of the five-year study was to find out reasons that lead to universities offering two courses with similar outcome and their employability rating. The study relied on desk review of secondary data from related articles and books around the world using google scholar software; observations covered the field of academia in Kenya while qualitative approach was used to recorded statements from participating students and parents on the same. Results show the Universities offering the two programs were evenly distributed in all the eight continents; continuous debate ranges whether Bachelor in Environmental Health Science course truly reflects the face of preventive medicine like a bachelor's degree in Public Health. We concluded that skills acquired by both grandaunts match the job market on equal footing. We recommend that the status -quo be maintained and consumers left free to choose. A study be conducted on the employability rating of the respective alumni. The content is expected to alleviate the reader's fears on the two programs especially serving public health officers, continuing public health students, parents/guardians, and academics.

Key words: Environmental health, public health, skills, employability.

COVID-19 PANDEMIC'S IMPACT ON SOCIALLY VULNERABLE POPULATION'S HEALTH AND ECONOMIC WELFARE

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Abstract

The adverse effect of disasters is more significant for socially vulnerable populations (Flanagan, Hallisey, Adams, & Lavery, 2018). Studies on impact of COVID-19 pandemic have indicated negative health outcomes (Asmundson et al., 2020; Ettman et al., 2020), and particularly on more vulnerable groups than others (Pfefferbaum & North, 2020). Low-income and minority groups were shown to have higher increase in unemployment and financial hardships (Chen et al., 2021; Moen et al.,

2020). Social vulnerability refers to the socioeconomic and demographic factors that affect the resilience of communities (Cumberbatch et al., 2020). The authors noted that social vulnerability can be used to guide public health officials in understanding the needs of various communities while addressing future hazards. This study, therefore, employed the Center for Disease Control and Prevention's Social Vulnerability Index (SVI) as a framework to examine COVID-19 impacts on general health and economic welfare (employment and finances) among disadvantaged populations. Data were collected from 596 participants (217 males, 356 females), well distributed in terms of SVI categories of socioeconomic status, household composition and disability, minority status and language, and housing and transportation (ATSDR, 2020). The measure was The COVID-19 Testing Questionnaire, a 42-item instrument that was developed by the researchers. Correlations were detected between the results of COVID-19 and age ($r = .112$) and living in a crowded household ($r = -.179$). Younger and elderly individuals were more at risk of COVID-19 as compared to ages 18–64. With regard to finances, employment, and general health, the findings of MANOVA indicated more concerns by those living in crowded households and had no access to a vehicle, while those with less income had lower welfare concerns than others. The implications of the findings and recommendations for reducing impact of disasters on less fortunate groups will be discussed in the presentation.

MITIGATION AND ADAPTATION STRATEGIES ADOPTED IN KENYA TO COPE WITH CLIMATE CHANGE IMPACT ON WATER RESOURCES

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Abstract

Climate change is a significant threat to water resources in Kenya, with the potential to cause severe impacts on the availability, quality, and distribution of water. The country's economy, health, and social well-being are all closely tied to water resources, and any changes in water availability and quality could have far-reaching consequences.

One of the main problems caused by climate change is the reduction in the amount of rainfall, which has led to water shortages in many parts of the country. The country's water supply largely depends on rainfall, and with the changing climate, the amount and distribution of rainfall have become increasingly unpredictable. This has led to a reduction in water availability for domestic, agricultural, and industrial use, which has in turn affected the livelihoods of millions of people in Kenya. As a result, the country has implemented various adaptation strategies to cope with the adverse effects of climate change on water resources. In this review, mitigation and adaptation strategies adopted in Kenya in response to climate change impact on water resources were analyzed. The study established that Kenya has implemented various water harvesting technologies such as dams and water pans to collect rainwater. The government of Kenya also has initiated reforestation programs aimed at increasing forest cover, which helps to regulate the water cycle and reduce soil erosion. In addition, Kenya has also implemented community-based water management programs aimed at empowering communities to manage their water resources sustainably. Further, the government of Kenya has also invested in the water conservation technologies such as drip irrigation, mulching, and agroforestry which reduces water use in agriculture. Moreover, Institutional and legal reforms have been implemented to enhance the governance of water resources in Kenya. This included reforms to improve water allocation, water pricing, and water use efficiency. Also, Kenyan government has encouraged the use of renewable energy sources such as solar, wind, and geothermal, which can reduce greenhouse gas emissions from fossil fuels. The impact of climate change on water resources in Kenya is expected to worsen in the future, leading to increased water scarcity, water-related conflicts, and negative impacts on health, agriculture, and the economy. Therefore, urgent action is needed for increased investment in water resource management and the adoption of more sustainable water use practices.

Key words: Water, climate change, mitigation, adaptation, Kenya.

CLIMATE CHANGE FINANCING FOR SUSTAINABLE FOOD SECURITY IN KENYA.

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Abstract

Climate change is one of the most significant challenges facing the world today presenting challenges to agriculture and food security. The impact of climate change on agriculture is projected to result in a decline in overall potential agricultural productivity of between 9 and 21 percent by 2050 in developing nations, resulting in hundreds of millions of people experiencing food insecurity and hunger. To mitigate the impact of climate change on agriculture and promote food security, significant investments will be required. The development and implementation of efficient agricultural mitigation and adaptation strategies is still in its infancy, and there is a critical need to fund these initiatives. This research provides insights into the financing mechanisms that could be used to address the challenges of climate change in agriculture and promote food security. The study conducted in Kajiado County using stratified and simple random sampling with a sample size of 397 respondents utilized descriptive statistics such as frequencies, percentages, mean, and standard deviation for data analysis. The study found that the County and National governments have the ability to solve many unforeseen challenges on food security through the adoption of climate change financing. The study recommends that County governments develop policies and legal frameworks that encourage climate change financing, particularly in forecasting, monitoring citizen behavior, changes of internal and external environment, promoting the adoption of warehouse receipts as a means of exchange, and promoting post-harvest waste control through community cold storage facilities. In conclusion, addressing the impact of climate change on agriculture requires significant investments in both mitigation and adaptation strategies. Therefore, funders and policy makers should take note of these findings to develop effective policies and funding mechanisms to support the

implementation of agricultural mitigation and adaptation strategies that promote food security.

Key words: Climate change financing, Food Security, Agriculture, mitigation.

AGROCHEMICAL USE IN KENYA AND DEVELOPING AN ENVIRONMENTALLY FRIENDLY BAITED TRAP FOR FRUIT FLY MANAGEMENT

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Abstract

Fruit flies are pests of global agricultural importance that are primarily managed using synthetic insecticides, an approach to pest management that is known to be detrimental to the environment including humans, beneficial organisms and produced crops. In Kenya, the pest often affects several fruit crops especially mangoes, leading to loss of income, yields and export bans against the European market due to phytosanitary restrictions. Our project is a multidisciplinary collaboration between Farmtrack consulting (Kenya), Mount Kenya University (Kenya) and the University of the West of Scotland (UK). Expertise from all partners will develop, test and seek to register a novel environmentally friendly pest management product. The aim of our work is to develop a novel and environmentally friendly female fruit fly protein baited trap using locally available raw materials. This will reduce reliance on the use of damaging synthetic insecticides and enhance supply chains. Our project work involves the collection of baseline data concerning agrochemical use in Kenya by surveying mango farmers and agro-dealers. Simultaneously, we are constructing a pilot plant for the production of our protein bait prior to the optimisation of a mass production processes. To date we have surveyed 220 mango farmers in

Muranga and Embu counties and 26 agro-dealers in Muranga. We will survey agro-dealers in Embu during March. The methodology used in the survey work involved a detailed questionnaire-based approach. With respect to the pilot plant this is in its early stages of construction. The novel product will be analysed chemically prior to field trials that will investigate trap placement and optimal trap densities for different fruit fly populations. The data collected will be used for registration of the product with the relevant authorities. In our paper we report on the progress made to date with respect to the analysis of the survey data collected and we also report on the pilot plant construction.

Key words: Fruit Flies, Pest Management, Food Security, Product Development, Partnership

INNOVATION IN HEALTHCARE - USING THE PRINCIPLES OF A HOLISTIC WELLNESS CONCEPT AND SERVICE DESIGN TO INCREASE PATIENT WELL-BEING

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Abstract

Healthcare organisations around the world are challenged to support patients' recovery and well-being by adding value to traditional medical treatments and developing new services. The holistic approach to health in developing and designing services based on patient well-being has become an integral part of hospital services. According to WHO, health innovation is a new or improved solution with the transformative ability to accelerate positive health impact. Based on this definition, innovation in healthcare is expressed in developments, whether simple or complex, that lead to improvements in health outcomes and patient experience. Rehabilitation is highly recommended when a person has limitations in daily physical and social functioning due to aging or health conditions, including chronic diseases or disorders, injuries, or trauma. For such conditions, rehabilitation aims to avoid costly expenses and hospitalisation, as well as to shorten the duration of hospital stay. However, such restrictions

also affect a person's mental well-being, which is crucial for recovery, coping and adapting to a new situation. Considering that health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, it is vital in rehabilitation to provide patients with equally supportive physical, psychological, and spiritual environments. The aim of this article is to present an overview of implementing theoretical approaches of the holistic wellness concept in healthcare, noteworthy changes and trends in the design and development of healthcare and related services, and the application of the concept in the design of services.

Key words: Holistic wellness concept, service design, healthcare innovation

PREVALENCE AND CAUSATIVE FUNGAL SPECIES OF TINEA CAPITIS AMONG SCHOOL CHILDREN IN MARIGAT, BARINGO COUNTY, KENYA

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Abstract

Ringworm of the scalp (tinea capitis) is a superficial fungal infection primarily caused by dermatophytes that invade the hair shaft. Effective elimination of the fungi is dependent on the identification of the species associated. This study investigated the occurrence of fungal species causing head scalp disease. A total of 267 pupils were sampled from nursery level to standard five (<5years to 14 years) children attending Marigat primary school in Baringo County and examined for the presence of scalp disease. Fungal specimens were collected from infected children. Using sterile scalpels and forceps, infected epilated hair was cut around the scalp region, collected aseptically and wrapped in sterile aluminum foil paper. The collected samples were transported to the Kenya Medical Research Institute laboratory, Nairobi, for isolation and identification. The data on the demographic features was collected using a structured questionnaire. The data were analyzed using analysis of variance test and correlation analysis. The prevalence of tinea capitis among the pupils in Marigat Primary School was 39.4%, which was

significantly different ($p < 0.05$) with gender, age, class and previous history of antifungal treatments. The most prevalent species causing tinea capitis was *Trichophyton tonsurans* (48.3%) followed by *Trichophyton mentagrophyte* (37.1%) while *Nannizia gypsea* (29.2%) was the least, and the occurrence was significantly different. It is clearly indicated that there is high occurrence of tinea capitis caused by three fungal species. There is need to device mechanisms to manage tinea capitis in this area.

Key words: Tinea capitis, prevalence, fungal infection, causative agent.

TELEVISION GAINED-FRAMED CERVICAL CANCER MESSAGES AND SCREENING UPTAKE BEHAVIOR AMONG REPRODUCTIVE WOMEN IN KIAMBU COUNTY

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Abstract

Cervical cancer has increased in prevalence and incidences globally with over 530, 000 new cases annually. Cervical cancer is a threat amongst women where per every 100,000 women 8600 of them lose their lives locally. In fight against the disease the television plays a crucial role in defining health problems, identify the causes and giving solutions. As such, cervical cancer messages have been framed as per their causes, prevention, screening, and treatment as a way of stirring action and adaptive behavior. Based on the cervical cancer television messages individuals weigh prospects and make decisions based on the probable benefits. This is because the messages are phrased to portray outcomes in positive aspects. The gained-framed messages are found effective in targeting cervical cancer preventive behavior. By media giving labels to cervical cancer, they influence behavior and inspire individuals for positive rewards. The study, therefore, sought to explore how the gained-framed television messages on cervical cancer affected screening uptake behavior of women of reproductive age in Kiambu County. The research was mixed study and was based on three theories: media framing theory, prospect theory and the health belief model. The study obtained a sample size of 392 reproductive women, 5 nurses,

and 5 cervical cancer victims. The statistics by ANOVA computation indicated the value of $P=0.000b$ ($P=0.000b < 0.05$), where if P is lesser than 5% ($p<0.05$) the relationship is statistically significant but if P is greater than 5% ($P>0.05$) there is no statistical significance. gain frame $P=0.000<0.005$. The findings found that gained frames had significant statistical relationship. As such, when an issue is presented while aiming out at latent gain, target populations may be inspired or not inspired to act in a certain way so as to get rewarded.

Key words: Gained-framed, messages, cervical cancer, reproductive age.

DETERMINANTS OF COVID-19 VACCINE UPTAKE AMONG ADULTS IN MWALA SUB-COUNTY, MACHAKOS COUNTY, KENYA

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Abstract

Despite the available evidence on benefits of COVID-19 vaccine, its low uptake and hesitancy remain a challenge. This study assessed individual, administrative, social, and demographic factors associated with COVID-19 vaccine uptake. Analytical cross-sectional study design was used. The data was collected using structured questionnaires administered to 384 respondents and key informant interview guides that engaged six informants. Ethical considerations of informed consent, confidentiality, and anonymity were observed. The data was analysed using SPSS software version 26. Uptake of the first dose was 46.60% while fully vaccinated respondents were 11.70% of the total. Chi-square test of association and binomial logistic regression analysis were used to check for statistical relationship between variables at significance level $p=0.05$. There were significant associations between COVID-19 vaccine uptake and demographic predictors of age ($\chi^2=15.524$, $df=3$, $P=0.001$), sex ($\chi^2=5.250$, $df=1$, $P=0.022$), education level ($\chi^2=107.556$, $df=3$, $P<0.001$), and marital status ($\chi^2=35.328$, $df=3$, $P<0.001$). Some social factors such as dependence on unreliable sources of information ($\chi^2=32.904$, $df=3$, $P<0.001$) and collective responsibility of getting vaccinated to protect others ($\chi^2=292.931$, $df=3$, $P<0.001$) also

exhibited significant associations. However, religious teachings did not influence vaccine uptake ($df=1$, $R^2=0.099$, $p=0.997$). Individual factors of susceptibility perception ($p<0.001$, $R^2=0.525$, $df=1$), severity perception ($\chi^2=234.515$, $df=3$, $P<0.001$), safety concerns ($\chi^2=277.624$, $df=3$, $P<0.001$), and perception that the vaccine benefits did not outdo side effects ($\chi^2=277.624$, $df=3$, $P<0.001$) determined vaccine uptake. Administrative factors of vaccine stock-outs ($R^2=0.091$, $df=1$, $P=0.997$) and long queues ($R^2=0.061$, $df=1$, $P=0.997$) had no influence on vaccine uptake.

Conclusion: These findings bring forth key determinants of vaccine uptake among adults in Kenya and will provide useful insights in the development of strategies to encourage COVID-19 vaccine uptake.

Key words: COVID-19, vaccine uptake, vaccine hesitancy.

THE ROLE OF INTERPERSONAL EFFECTIVENESS IN IMPROVING MENTAL HEALTH OF LEARNERS LIVING WITH DISABILITY IN THE ERA OF COVID-19 IN SELECTED SCHOOLS IN WESTERN KENYA REGION.

Alice Limo

Abstract

The Kenya mental health taskforce 2020 urged the government to declare mental illness a national emergency of epidemic proportion and establish a mental health commission that would advise, coordinate and continuously monitor the status of mental health and report on the annual national happiness index. Persons with disabilities in Kenya are at higher risk of mental illnesses in the era of COVID-19 (UNICEF, 2020). The purpose of this study was to examine role of interpersonal effectiveness in improving mental health of learners living with disability in the era of covid-19, especially those with difficulties in the domains of hearing, seeing and cognitive functioning. This category was disadvantaged in access to inclusive communication strategies, critical to mental health during Covid-19 era. The study objective was to promote interpersonal effectiveness and improve mental health for learners living with disability. The study was anchored on the biosocial theory of borderline personality disorder that emphasizes on emotions in treatment. The study adopted a dialectical philosophy, a critical postmodern alternative, where researchers strive to continually

balance and synthesize acceptance and change-oriented pandemic-focused dialectic behaviour therapy in managing mental health of learners. The study adopted randomized control trial to assign respondents to experimental and control groups. The study target population consisted of learners with visual impairments, hearing impairments and mental disorders in Western Kenya Region. This study contributes significantly to the knowledge base in mental health and informs practitioners and students in institutions of higher learning and special schools in use of interpersonal effectiveness as a dialectic behavior therapy.

Key words: Interpersonal effectiveness, mental health, dialectic behaviour therapy, disability

AWARENESS AND KNOWLEDGE OF HIV/AIDS AND VCT AMONG SECONDARY STUDENTS IN KIAMBAA DIVISION, KENYA: “IMPLICATION FOR COUNSELLING IN HEALTH AND WELLNESS FOR SUSTAINABLE ECONOMIES.”

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Abstract

The primary objective of this study was to evaluate the level of awareness and knowledge about HIV/AIDS in relationship of gender among students with the aim of promoting knowledge transfer for sustainable health and wellness. The study also explored students' level of awareness about VCT services and their utilization. In order to achieve this objective two secondary schools, were selected at random from Kiambaa Division namely Gacharage and Wangunyu secondary schools. A sample size of eighty (80) students, forty (40) boys and forty (40) girls selected for every study level from form one, two, three and four. The instrument for data collection included self-developed questionnaire and twenty item objective test questions. The data was then analysed, interpreted and presented in the form of tables and pie charts with the use of statistical package for social sciences (SPSS) software. The result findings of this study showed that both male and female students did not differ in the level of knowledge with regard to

HIV/AIDS. The findings also revealed that majority of the students were aware of VCT services offered at VCT centers but had not utilized them. Based on the finding of this study the implication of the results was discussed in relation to strengthening of HIV/AIDS education in Kenya Secondary schools to increase knowledge of HIV/AIDS in order to bring about sexual behavioral change among the youth. The results of the study were essential in identifying gaps in knowledge for matters pertaining to HIV/AIDS in Kenyan Secondary School students. The study recommends that a similar study should be conducted on HIV/AIDS knowledge and awareness level in primary, college and university institutions of learning in Kenya.

ASSESSMENT OF FAMILY ATTRIBUTES ON ALCOHOL-USE DISORDER AMONG RECOVERING CLIENTS IN REHABILITATION CENTERS NAIROBI, KENYA

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Abstract

This study assessed the influence of family alcohol use on alcohol use disorder among recovering clients in selected rehabilitation Centers in Nairobi County, Kenya. The objective of the study was; to find out the influence of family alcohol use on alcohol use disorder and to come up with interventional strategies against the development of alcohol use disorder. The study was guided by three interrelated theories; the family system theory, social learning theories, and choice theory. Ex post facto research design guided the study with a target population of 287 recovering clients composed of 251 males and 46 females, the sample size was 213 males and 44 females. The representative sample was attained by using Stratified Sampling and Simple random sampling methods. A reliability level of 0.5 was accepted for the study. Qualitative data was collected through focus group discussion using an open-ended group discussion guide and analyzed using the content analysis under themes in line with the study objectives. Data collected from the field was analyzed using descriptive and inferential statistics. Inferential statistics involved hypothesis testing through the statistical package for social science (SPSS) version 25 for windows. Chi-square

test was used to test the hypothesis. The level of statistical significance was .05. Chi-square tests results showed that, there was no statistically significant relationship between family alcohol use and alcohol use disorder among recovering clients in selected rehabilitation Centers in Nairobi County, Kenya. Following the finding of this study, the researcher recommended more studies on personal factors and alcohol use disorder, studies to establish the effect alcohol predisposition on development of alcohol use disorder and to establish the protective factors against alcohol use disorder.

Key words: Family alcohol use, alcohol use disorder, non-user, social user, regular user.

KNOWLEDGE AND AWARENESS ON CERVICAL CANCER SCREENING SERVICES AMONG MOTHERS ATTENDING MATERNAL CHILD HEALTH CLINICS IN MWALA SUBCOUNTY OF MACHAKOS COUNTY, KENYA

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Abstract

Cervical cancer is a disease that is peculiar to women, and has adverse effect on their sexual and reproductive health as well as their general condition and family life. Family type may be monogamy, polygamy or polyandry. Cervical cancer mortality rates have fallen in much of the developed world during the past 30 years, largely due to screening and treatment programmes. During the same time, however, rates in most developing countries have risen or remain unchanged, often due to limited access to health services, lack of awareness and absence of screening and treatment programmes. A descriptive cross sectional study design was used involving both qualitative and quantitative methods of data collection. A total number of 117 MCH mothers were interviewed on an exit interview that was systematically randomly selected to the even numbered mothers on exit. Data were cleaned, coded and entered into Statistical Package for Social Sciences (SPSS) for analysis. Data was analyzed using descriptive statistics and presented in frequency tables. Qualitative descriptive data were summarized and reported. The mothers interviewed ranged from 10 –

59 years. 48.7% 20 - 29 years were between 20 had the highest number of birth and the lowest was between 40 - 49 years with 12%. More than half of the MCH mothers (71.8%) were married whereas 24.8 % were single. On deliveries, 93% of the participants had deliveries between 0 - 9 children and the lowest 0.9% between 10-19 children. On knowledge on Cervical Cancer, most of the MCH mothers reported to have (63.3%) where on the other hand 65.8% were not aware of preventive measures of Cervical Cancer which indicated that they were not very much knowledgeable on cervical cancer. The community on the other hand had little awareness on cervical cancer screening and only 5.8% of the entire MCH mother interviewed had knowledge on the preventive measures of cervical cancer.

Key words: Community, knowledge, awareness, cancer, Screening, Mwala

IMPACT OF AGRICULTURAL INTERVENTIONS ON FOOD SECURITY AND NUTRITION: A CASE STUDY OF FARMERS IN NAKURU COUNTY, MENENGAI WEST.

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Abstract

Agricultural interventions are widely used to for the purpose of improving food security and nutrition in third world countries. However, the impact of these interventions on farmers in rural areas, who are among the most vulnerable to food insecurity and malnutrition, remains unclear. Food security means ensuring that all people always have access to sufficient food to lead an active and healthy life that include: the availability of nutritionally adequate and safe food and the availability of personally acceptable food in a socially acceptable manner. Food insecurity exists whenever food security is limited or uncertain. Measuring food insecurity at the household or individual level involves measuring the quantitative, qualitative, psychological, social, or components that are central to the experience of food insecurity. This study aimed to assess the impact of agricultural interventions on food

security and nutrition among farmers in Nakuru, Menengai West and was guided by the following objectives: identification of various types of agricultural interventions implemented in Nakuru, Menengai West, examination of the impact of agricultural interventions on food security and nutrition among farmers in Nakuru, Menengai west and exploration of various factors that influence the success of agricultural interventions in improving food security and nutrition in Nakuru, Menengai West. A mixed-methods approach was adopted including survey of 200 farmers, agricultural extension officers, and other stakeholders. The study found that agricultural interventions have a positive impact on food security and nutrition among farmers in Nakuru, Menengai West. However, the impact varies depending on the type of intervention implemented. The study also provides insights into the factors that influence the success of agricultural interventions and their potential for scaling up to improve food security and nutrition at the regional or national level.

Key words: food security, Agricultural interventions, food nutrition

MODIFICATION OF RHIZOSPHERE PH AND CONTENTS OF SELECTED MINERAL NUTRIENTS BY COWPEA (VIGNA UNGUICULATA L. WALP) CULTIVARS GROWN IN ACID PHOSPHORUS DEFICIENT SOILS

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Abstract

Soil acidity is the major limiting factor to growth and production of most crops of economic importance. For improved production, soil acidity can be amended through lime application or use of acid-tolerant crop varieties. This study was conducted to assess the effect of selected Kenyan cowpea cultivars on rhizosphere pH and P, N and C contents in the soil. Four cowpea cultivars that were tolerant to acidity in nutrient solution cultures were evaluated in the field. The experiment was laid out in a split plot design, where one of the two main plots was limed (4 t/ha) and the other was not. The treatments were application of phosphorus (TSP) (60 kg/ha), lime (4 t/ha), phosphorus and lime, and

control and four cowpea cultivars; Brown with specks, KVVU 27-1, K80 and Ken-Kunde, arranged in a randomized complete block design (RCBD) with three replications. Soil samples from the plots were analyzed for soil pH, P, N and C profiles before planting, at flowering stage and at physiological maturity. The data were subjected to ANOVA and the means compared at a significant level of $P \leq 0.05$. The study site had low soil pH that ranged from (4.9–5.3), low available P (5.51 mg/kg), total N (0.13%), organic C (1.59%) and low exchangeable cations. All the four cowpea cultivars variably increased the rhizosphere pH at different treatments. All the cultivars caused a significant increase (> 14 mg/kg) of available P at flowering and at physiological maturity under control treatment. There was also a significant increase in rhizosphere pH and available P in plots applied with lime and P+L combination in rhizosphere soils of all the varieties. The results from this study show that the cowpea varieties can be used to amend acid soils for improved crop production.

Key words: Acidity, Phosphorus deficiency, Cowpea cultivars, Rhizosphere pH

EFFECT OF LEAN INVENTORY MANAGEMENT ON THE PERFORMANCE OF MILK PROCESSING FIRMS IN KIAMBU COUNTY, KENYA

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Abstract

In assembling, lean way of thinking is predominantly centered on squander decrease. These days, a few assembling organizations must follow the all-new innovation and devices to proficiently and viably introduce themselves as great rivals in the worldwide economy. Lean assembling is the essential method for improving the creation rate with least accessible assets. Lean distinguishes a few squanders like abundance stock, overproduction, hardware breakdown, material deficiencies, yield misfortune, improve and scrap, non-ideal execution, lack of enough materials and idle time. The purpose of this study was to investigate effect of lean inventory management on the performance

of milk processing firms. The study was guided by the following objectives; To determine the effect of Kanban system on the performance of milk processing firms, To assess the effect of Kaizen Principle on the performance of milk processing firms, To establish the effect lean practices on the performance of milk processing firms and To determine the effect of production rate with minimum available resources on the performance of milk processing firms. The survey design used was descriptive in order to establish the lean inventory management that milk processors adopted in Kiambu County. The study used census-sampling technique. The descriptive statistics revealed that the firms employ Kaizen Principle to improve discrepancies in inventory management techniques. This has been shown by the mean of 3.967 (std. dv = 0.758). Further, in a mean of 3.907 (std. dv = 0.952), the respondents agreed to the great extent that they have improved the production rate with minimum available resources. Moreover, in a mean of 3.855 (std. dv = 0.684), the respondents agreed to a great extent that the organization has invested in improving lean practices. In addition, the respondents also agreed to a great extent that they use the Kanban system to keep track the use of inventories. This has been supported by the mean of 3.732 (std. dv = 0.850). The research concludes that lean inventory management has a positive and significant effect on the performance of milk processing firms in Kiambu County. The study found that the firms employ Kaizen Principle to improve discrepancies in inventory management techniques. Further, respondents agreed to the great extent that they have improved the production rate with minimum available resources. The study realized that lean inventory management has positive and significant effect on the performance of milk processing firms in Kiambu County. This research further recommends that the management of the milking firms in Kenya should ensure adoption of first in First Out, Kaizen Principle and drop-shipping.

Key words: Lean inventory, milk processing

GENDER EQUALITY IN CLIMATE – SMART AGRICULTURE (CSA) INFORMATION SERVICES FOR SMALLHOLDER FARMERS’ FOOD SECURITY NEEDS IN AFRICA

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Abstract

This paper presents the influence of gender equality in climate change education for small-holder farmers for sustainable food security in every household to achieve the 2030 SDG2 national progress with a focus on Uganda. The objectives are to: examine the contributions of university education, innovations, and research in gender equality for women’s (girls’) empowerment in agricultural value chains for food security, and assess the importance of achieving UN SDG 5 in Uganda. In this review, we analyzed the national gender studies curriculum for Uganda, 2030 SDGs, and used lessons learned, best practices, and policy applications to illustrate the vital need for gender equality for women empowerment in agricultural food nutrition services. Data show that women contribute up to 75 % of domestic agricultural production for food security but climate change and variability affect women more than men in social, economic, or ecological services. Agriculture employs at least 85 Ugandans, mostly women, and smallholders make up 95% of Uganda’s agricultural landscape. The popular influence of music, dance, and drama in society can be used to avert the apparent negative outputs of agriculture production that have led to the chronic national food security status in Uganda with multiple adverse malnutrition. We need music education focused on gender-responsive CSA, food security, and food trade. Participatory university-community-private partnerships in music research, training, education, mentoring, co-creation of indigenous knowledge in traditional music, and many community outreach innovation exhibition events in Africa. Universities are obliged to lead the promotion of the UN 2030 SDG 5 calls to achieve gender equality and empower all women and girls, end all forms of discrimination against women and girls, and promote, enforce, and monitor equality and non-discrimination based

on sex; take urgent action to promote community-based adaptation and mitigation climate actions; ensure climate-smart agriculture (crop, livestock, and fish) production for food nutrition security.

Key words: Climate-smart agriculture, university, gender equality, food security, adaptation

ENHANCING CHILDREN RIGHTS TO EDUCATION USING ADDIE MODEL APPROACH IN ARID AND SEMI-ARID LANDS (ASAL) FOR SUSTAINABLE DEVELOPMENT.

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Abstract

Rights-based approach is a recent phenomenon in the education sector. Without learning, education fails to keep its promise of eliminating extreme poverty and creating a shared opportunity and wealth as observed by the world Development Report of 2018. The purpose of the study was to examine Children Rights to Education Using ADDIE Model Approach in Arid and Semi-Arid Lands (ASAL), Kenyan Perspective. The study aimed at establishing the effects of poverty on the delivery of education in the ASAL region of Kenya, determining the challenges encountered in the provision of education within the ASAL regions and the possible use if the ADDIE model in the implementation of the children right to education. The study utilized a triangulation approach with a focus on exploratory descriptive survey design. The target population were six Primary schools from Turkana County, in Northern Kenya. The Unit of analysis comprised of six head teachers, six deputy head teachers, and 60 teachers. The study findings revealed that the effects of poverty on the provision of education are diverse ranging from psycho-social to economic effects and that the effects were detrimental to the realization of the children's rights in ASAL regions of Kenya. It was observed that the ADDIE model can be utilized to enhance children rights to education in ASAL regions in Kenya. It is hoped the ADDIE model will infuse knowledge and skills for self-reliance contributing to the attainment of sustainable development goals.

Key words: Education, Children rights, ADDIE Model, ASAL

THE ROLE OF MUSIC EDUCATION IN GENDER EQUALITY CLIMATE – SMART AGRICULTURE (CSA) INFORMATION FOR SMALLHOLDER FARMERS’ FOOD SECURITY NEEDS IN UGANDA

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Abstract

This paper presents the influence of the music education curriculum in enhancing gender equality in climate change education for small-holder farmers for sustainable food security in every household to achieve 2030 SDG2 national progress in Uganda. The objectives are to: examine the contributions of music education, innovations, and research in gender equality for women’s (girls’) empowerment in agricultural value chains for food security, and assess the importance of achieving UN SDG 5 in Uganda. In this review, we analyzed the national music curriculum for Uganda, 2030 SDGs, and used lessons learned, best practices, and policy applications to illustrate the vital need for gender equality for women empowerment in agricultural food nutrition services. Data show that women contribute up to 75 % of domestic agricultural production for food security but climate change and variability affect women more than men in social, economic, or ecological services. Agriculture employs at least 85 Ugandans, mostly women, and smallholders make up 95% of Uganda’s agricultural landscape. The popular influence of music, dance, and drama in society can be used to avert the apparent negative outputs of agriculture production that have led to the chronic national food security status in Uganda with multiple adverse malnutrition. We need music education focused on gender-responsive CSA, food security, and food trade. Participatory university-community-private partnerships in music research, training, education, mentoring, co-creation of indigenous knowledge in traditional music, and many exhibition events.

Key words: Music education, agriculture production, gender equality, food security, SDGs

THE RIGHT TO DEVELOPMENT AS A KEY TO PARTICIPATORY LEADERSHIP, INNOVATION, AND KNOWLEDGE FOR SUSTAINABLE ECONOMIES.

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Abstract

The right to development is a universal human right that inhabits the human being and is safeguarded by various legal instruments. This right is considered not only as a right for purposes of claim but a catalyst for development of sustainable economies. The study seeks to demonstrate how the right to development facilitates participatory leadership, innovation, and knowledge for sustainable economies. The study is based on doctrinal research which refers to the law on right development, its characteristics and an analysis on its contributions to participatory leadership, innovation and knowledge for sustainable economies. The study evaluates the right to development as a tool that promotes self-generated political, social, economic, and cultural efforts for innovations and knowledge for sustainable economies. The study further analyses how the progressive and futuristic nature of the right to development accommodates sustainability of current economies and future ones. The study discloses that the right to development creates an enabling platform for advocacy, claim of rights, and compensation for breach of opportunities towards sustainable economies for people. This enabling platform would in turn promote innovations and knowledge that complements and meets both individual and people's needs and values, keeping in mind the need for self-preservation and thus enabling sustainable economies. The recommendation in the study would be that development actors find home grown mechanisms to implement the right to development to catalyze participatory leadership, innovations, and knowledge for sustainable economies.

Key words: Right to development, participatory leadership, sustainable economies

ARTISTIC ENGINE IN THE CREATIVE ARTS INDUSTRY: MUGITHI GENRE IN CONTEMPORARY POPULAR PERFORMANCES IN KENYA

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Abstract

The paper attempts to explore the position of musical artistry and creative endeavours in the performance of Mugithi genre in the contemporary Kenyan society. The genre emerged in the 1990s in Nairobi and other urban centres in Mount Kenya region of the nation-state. The term Mugithi may have been coined by an anonymous performer of Christian Kigooco sub-genre. The premiere performers of Mugithi song were Christian pilgrims who used to stage night vigils (keshas) in promotion of evangelistic missions across Kenya. The growth and development of Mugithi as a musical and literary genre could be traced back to the 1990s decade. By then musical production centred in the production of vinyl records, compact cassette and later on in the 2000s and 2010s CDs, VCDs and DVDs emerged as musical gadgets in the Kenyan music industry. Today, in the 2020s youtube channels and skiza tunes are the commonest on-line outlets for marketing, distribution and consumption of musical products in Kenya and globally. The objectives are to: To examine the creative artists popular performers' position in the innovation of new ideas and thematic concerns in the social front. To assess the drive and impact created by the emergent Mugithi performers in the Kenyan Music Industry. To assess the economic position gained by the premiere and emergent Mugithi performers in contemporary Kenyan music Industry. It is assumed that Mugithi is now an acceptable umbrella term for both the secular and Kigooco-gospel musical popular performances. From 1990s, 2000s, 2010s and now in the 2020s, this genre appears to have grown from strength to strength. From this end, it is a genre that has created jobs and economic advancements in the media and entertainment industries.

EFFECT OF YOUTUBE INSTRUCTIONAL VIDEO PACKAGE ON STUDENTS' ACHIEVEMENT IN PHYSICS

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Abstract

The enthusiasm with which the youth gather and spread information through the YouTube in 21st century underscores teaching and learning process that would leverage their knowledge, enhance their skills for optimum participation in the market economy. The study examined the effect of YouTube instructional video package on students' achievement in physics. Two research questions and two null hypotheses guided the study. The design of the study was quasi-experimental, specifically the pretest posttest non randomized control group design. The sample size for the study was 188 SS11 physics students. Physics Achievement Test (PAT) was used for data collection. Mean and Standard deviation were used to answer the two research questions and ANCOVA was used to test the null hypothesis at 0.05 level of significance. Results revealed that the use of YouTube instructional video package improved the mean achievement scores of students in physics than the use of lecture method. There is a significant difference in the mean achievement scores of students taught physics using YouTube instructional video packages and those taught with lecture method. The results also revealed that both male and female students taught physics using YouTube instructional video packages, the posttest achievement mean were greater than the pretest achievement mean with the female students having a higher mean gain. Therefore, there was no significant difference in the mean achievement scores of male and female students taught physics using YouTube instructional video package. Based on the finding of the study recommendations were made; that the use of traditional method of teaching should be de-emphasized in secondary schools to enhance better understanding of physics concepts vis a vis achievement in physics.

EKISAAKAATE” (ROYAL ENCLOSURE) TRADITIONAL STORY TELLING INSTRUCTION PEDAGOGY AND EARLY CHILDHOOD MORAL LEARNING OUTCOMES IN BUGANDA KINGDOM IN UGANDA

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Abstract

Moral principles like honesty, compassion, respect, and integrity, to name just a few, are increasingly recognized by many as the cornerstones of a country's socioeconomic and political progress. For any nation, these ideals ensure stability, security, cohesion, and prosperity. Given this, the greatest problem facing Ugandans today is ensuring that our children possess a wealth of these values. The worrisome level of moral deterioration in Uganda and the Buganda Kingdom specifically served as the impetus for the investigation. It has an impact on almost every element of life. The deteriorating moral standards of youngsters are a problem and a hot topic in the twenty-first century. Many interested parties and academicians are speculating about the potential causes. Therefore, the purpose of this study was to ascertain how early moral learning results in the Buganda Kingdom, Uganda, related to the traditional story-telling instruction technique known as "ekisaakaate." The study was conducted using a cross-sectional research approach, and a sample of 159 respondents was carefully chosen from primary schools in peri-urban districts of greater Kampala (Wakiso, Mpigi and Mukono). The information on the moral decline in youngsters was supplemented with library material, news articles, reports, and questionnaires. Data collected was analyzed using descriptive and statistical methods. Simple Linear Regression (SLR) Analysis and correlations were both used in the analysis. The consequences of early moral learning were positively influenced by discussions, oral narration, and imaginative instruction, according to scientific findings. In order to improve early childhood moral learning outcomes, the study advises stakeholders including early childhood education directors, instructors, and parents in the individual early development centers to increase the use of traditional story telling

instruction pedagogy.

Key words: Moral Learning Outcomes, Traditional Story Telling Instruction Pedagogy, “Ekisaakaate”, Early Childhood

USING ICT TOOLS FOR VIRTUAL TRAINING OF TEACHER ORGANISATION OFFICIALS IN UGANDA.

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Abstract

Virtual trainings of 300 officials from Teacher organisations from ten districts of Uganda were conducted by the dual. Participants were clustered on sub-region basis into four cohorts each comprising an average of 75 officials. The five-day trainings were conducted based on the philosophy of reflective practice so as to develop the core social and policy dialogue skills with the aim of getting evidence-based feedback on the knowledge and skills from teachers. The purpose was to equip the teacher organisation officials (the voice of the teachers) with skills of engaging in effective social and policy dialogue with the teacher employers and relevant stakeholders so as to prevent adverse effects of conflict. The key objective was to develop action plans in preparation for continued engagement in social/policy dialogue based on emerging issues and priorities for sustainability of a harmonised social/policy dialogue and its institutionalisation. The training provided a platform for teacher educators and stakeholders to share the role of the teacher in coping with the impact of Covid-19 in the education sector. The virtual training employed interactive participatory methodologies, ICT tools and platforms. Participants were engaged in critical thinking, reflective practice and problem-based activities through carefully selected animated videos, personally recorded videos, PowerPoint presentations, interactive chats and online live discussions in their districts of stay as was compelled/dictated by the second lock down due to the pandemic COVID-19 situation in Uganda. The training was supported by UNESCO in collaboration with MOES/TETD. In place are

artefacts and infographics.

Key words: Padlet, Kahoot, Mentimeter, Google forms and Virtual communication platforms

WOMEN'S RIGHTS IN TRADITIONAL AFRICAN SOCIETIES: A CASE OF THE ACHOLI OF UGANDA

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Abstract

There has been an intense debate of recent about the human right's status of African women. Many feminist scholars argue that since the African woman lacks individual rights to own land, inherit property and speak in a clan meeting, she is systematically denied basic human rights in stark contravention of the universal declaration of human rights and goals number 5 and 10 of the sustainable development goals set by the United Nations. This study tackles women's human rights in traditional Acholi society. Key informants were interviewed; the memoirs of early European travellers in northern Uganda and Southern South Sudan were consulted as well as songs, adages and customs of the Acholi people with regards to the position of women in society. Acholi women were found to have both individual and group rights that are intertwined with the gendered roles characteristic of most traditional African societies. The study recommends that the phenomenon of human rights should be seen within the prisms of the level of socio-political and technological advancement of each society.

Key words: Acholi, Human Rights, Women, Culture and Feminism.

A HISTORICAL PERSPECTIVE OF WOMEN PARTICIPATION IN POLITICAL LEADERSHIP IN UASIN GISHU COUNTY.

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Abstract

Women constitute substantially almost a half of the worldwide populace. These women are aggressively involved in financial

development of their states. Even though women play an important role in social economic development of their states, their contribution in governance in regards to social resources still remains to be trivial. In Kenya women have not been well represented in political leadership which is the case in Uasin Gishu County. Various researches have been undertaken on women but there is trivial effort that has been observed in Uasin Gishu County hence a gap that this research sought to cover. The study addressed four objectives; it examined the trends of women participation in political leadership, investigated factors responsible for gender disparity in political leadership, explored the role of women in political leadership and lastly, examined measures to improve women's participation in political leadership. The study was guided by Gender and Patriarch theoretical framework. The researcher employed Historical research, Qualitative approach as well as adopted Descriptive survey research design, purposive and simple random sampling were utilized as sampling techniques. The researcher used questionnaires and interview schedules to gather information. The study pointed out that there are various factors responsible for gender disparity. Despite these challenges women defended democracy powerfully, fought for women's rights and it was similarly observed that the aptitude of gender based electoral violence faced by women becomes the key obstacles to their participation in political affairs. The study recommended that women aspirant should actively participate in political affairs and position themselves in political party administration in order to be informed about the inner party dynamic forces. The Government should formulate policy that will ensure that election campaigns and voting period is safe from gender based electoral violence hence encourage women who fear the combative nature of the Kenyan politics.

IMPACT OF PHONE ADDICTION DISTRESS AMONG SELECTED SMALL AND MEDIUM ENTERPRISES IN KIAMBU AND NAIROBI CITY COUNTIES.

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Abstract

The increasing incidence of mobile phone addiction has been considered to be related to adolescents' psychological distress and work distress. However, the underlying mechanisms of this relation is still unclear. Many employees are not able to cope with daily chores due to addiction to phone use as they continue with their work. Mostly employees are caught up and carried away from concentrating on core activities, hence affecting their productivity at work and also creating social-emotional distress among them. Many Small and Medium Enterprises (SMES) have employed youth, who are addicted to their phone use following up on their whats App, tiktok, SMS and emails. SMES have been unable to have measures of control on phone usage at work in order to have their employees concentrate with their work. This research is therefore motivated to bridge the gap in knowledge by analyzing the impact of phone addiction and distress among selected small and medium enterprises in Kiambu and Nairobi city counties. The objectives of the study will be, to determine the extent of phone addiction among employees in SMES in Kiambu and Nairobi City Counties, to establish various alternatives of phone addiction control measures among the employees in Kiambu and Nairobi City Counties. The target population of this study will consider Small and Medium Enterprises. The sample population size will include SMES in Kiambu and Nairobi City Counties in Kenya. The study will adopt a descriptive research design and will use primary data, which will involve a questionnaire and interview guild from the Key informants. The finding will present and published to provide alternatives to solve the future challenges of phone addiction psychological and social-emotional distress among the employees, work related distress and organization work distress.

Key words: Mobile phone addiction, Psychological and social-emotional distress, organization work distress.

LEADERSHIP TRAINING AS A TOOL FOR STUDENT DEVELOPMENT

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Abstract

Leadership training is an essential tool for student development, as it equips students with valuable skills and attributes required for success in various spheres of life. As students' progress through their academic career, they require the skills and knowledge to lead themselves and others effectively. Leadership training provides students with opportunities to develop these skills and knowledge. This paper highlights the importance of leadership training for student development and its potential to enhance the academic, social, and personal growth of students as a strategy to realizing one of the targets of SDG Number 8: Decent Work & Economic Growth. Promoting supporting productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services. In East Africa, 60% of graduates from our local universities are ill-equipped to join the marketplace after graduation. Yet 80% of the African CEOs see a lack of skilled capital as one of the biggest threats to their business. In this paper, we will explore the role of leadership training programs such as Lapid Leaders Africa in bridging this gap & equipping the students with the skills they require to thrive in the current workplace. We will review the various leadership training strategies including mentorship & coaching, workshops, and experiential learning opportunities and the outcomes of leadership training programs such improved self-efficacy, improved communication skills, increased empathy, increased self-awareness, and increased leadership skills in improving and their role in ensuring the success of students during and after their time at the university.

THE EXPERIENCES OF LOWLY PAID WORKERS IN RICH NEIGHBORHOODS OF THE RAND CONURBATION, SOUTH AFRICA.

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Abstract

This study explored the experiences of lowly paid workers in rich neighborhoods of the Rand Conurbation, South Africa. This research utilised an exploratory qualitative approach to explore the experiences of lowly paid workers in rich neighborhoods of Johannesburg. Forty (40) individual semi-structured interviews were conducted with lowly paid workers in the Rand conurbation recruited through community organisations like churches and burial societies. A thematic approach underpinned by some aspects of the Interpretive Phenomenological Analysis (IPA) and The Silences Framework (TSF) were utilised for data analysis. The study found that the experiences of lowly paid workers in the Rand conurbation included: Living separately from family, Poor access to education, Low wages, Poor accommodation, and travelling long distance to work, COVID-19 contraction risk, Fear, and anxiety. Living with families for lowly paid workers can create a sense of togetherness and family bonding. Absence of the family can compound the already existing problems leading to despair. Poor education and accommodation are some of the common issues which impact on lowly paid workers leading to fear and anxiety to contract diseases in times of pandemic like COVID-19. To accelerate poverty and inequality reduction, there is need for a combination of robust and radical policies that seek to unlock the full potential of labour markets and promote inclusive growth through skilled job creation.

NON-ECONOMIC DRIVERS IN ADOPTION OF SOIL WATER CONSERVATION (SWC) TECHNOLOGIES AMONG SMALLHOLDER FARMERS IN EASTERN KENYA

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Abstract

Wide spread promotion of soil water conservation (SWC) practices that build soil fertility, prevent soil erosion, and conserve rain water has been done by public and non-private organisations in the semi-arid areas of Eastern Kenya. Farmers are influenced by a wide range of drivers in adoption of these technologies. Moreover, sustainability of the practices on the farms is determined by the perception and the expectation by the farmers. This study aimed at assessing the non-economic factors that motivate farmers in adopting the soil water conservation (SWC) practices. Structured questionnaires were used to collect data from 291 farmers in Tharaka Nithi County- Kenya. The most commonly known soil water conservation (SWC) practices by farmers in Tharaka Nithi county is terraces (87.3%) followed by Zai pits (86.3%) and then stone bunds (83.8) respectively. Majority (61%) of the farmers who had adopted Zai pit technology was as a result of high yields obtained from Zai pits. Promotion of Zai pits by NGOs using the model of cash for asset was a motivation for 38% of those who had adopted the technology. Non-Governmental Organizations were the main source of information for the farmers who had adopted the soil water conservation (SWC) practices. Lack of labor was highly lightened as a reason why farmers dropped the SWC practices by 51.4%. The study argues that organizations that aim at making great impact on influencing farmers to adopt and retain adopted SWC practices should invest more in both intrinsic and extrinsic motivation. Adoption of soil water conservation technologies will lead to increased farm productivity and ultimately contribute to enhanced food security.

Key words: Drivers, Perception, Expectation, Non-Economic, Zai.

LEVERAGING TECHNOLOGY IN DOCTORAL SUPERVISION-A COMPLEMENTARY APPROACH IN KENYA'S INSTITUTIONS OF HIGHER LEARNING

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Abstract

Doctoral supervision and research output has continued to become growing national concern in Kenya. The Commission for University Education in Kenya (CUE) reported in its findings of 2019 that 50% of doctoral students registered in a given session drop out, while the remaining take as long as 6 years to complete their studies. This paper examines previous empirical studies on adoption of emerging technologies in supervising doctoral students. The conceptual framework highlights the relationship between technology use and enhancing quality of supervision process, borrowing greatly from the theory of change methodology. It highlights the challenges and benefits analysis on the use of technology. The aim of this paper examined the efficacies of integration of the technology into the supervision process. As a result, it provides students, supervisors, colleges of graduate boards, training institutions of higher learning, and regulatory bodies with a framework of incorporating the use of technology, based on needs assessment of respective doctoral supervision process. Through a desktop review, the paper motivates more emphasis for higher education institutions to re-think their approaches in doctoral supervision so as to enhance completion rates and impact-based research output.

Keywords: Innovative Technologies; Doctoral Supervision; Quality Supervision, Pedagogy

THE EFFECT OF THE BIG FOUR AGENDA BUDGET VARIANCES ON ECONOMIC PERFORMANCE IN KENYA

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Abstract

The Big Four Agenda, hereafter BFA is a comprehensive plan for the realization of the Vision 2030 to create a globally competitive and prosperous nation. By focusing on the four pillars of the agenda, the government aimed to create sustainable economic growth and development, reduce poverty, and create equitable opportunities for all Kenyan citizens. The BFA includes; food security, universal health, affordable housing, increased employment opportunities through manufacturing. Ultimately, the government aims to create a more equitable and prosperous nation where all Kenyans can benefit from economic growth. Budgets provide guidance for governments in their decision making and help to determine the required resources for achieving the governments' development goals. Additionally, budgets can be used to monitor performance, evaluate spending and provide accountability for government projects. Budget variances can be calculated at any level of detail within the government, from individual departments to the entire government. The analysis should include an assessment of the factors that caused the difference between the planned and actual performance. This helps managers identify areas where performance can be improved and take corrective action. The main objective of this investigation therefore is to examine The Effect of the Big Four Agenda Budget Variances on Economic Performance in Kenya. The investigation will take a census of Government of Kenya Ministries budget variances on a panel data analysis to establish whether there is a relationship between these variances and economic performance measured in terms of Gross Domestic Product using descriptive correlation research design. The findings from this investigation will inform economic planning department of Treasury on how the budget variance analysis of the government of the day development agenda can inform economic development and also

expand knowledge on budget variance and economic performance.
Key words: The Big Four Economic Development Agenda, Budget Variance, Economic Development.

CHRISTIAN COUNSELING IN SCHOOL RELATED-GENDER BASED VIOLENCE IN KERARAPON PRIMARY SCHOOL KAJIADO COUNTY, KENYA

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Abstract

School-related gender-based violence is defined as acts or threats of physical, sexual or psychological violence or abuse that is based on gendered stereotypes or that targets students on the basis of their sex, sexuality or gender identities. It refers to acts or threats of sexual, physical, or psychological violence occurring in and around schools, perpetrated as a result of gender norms and stereotypes and enforced by unequal power dynamics. This study sought to use Christian counseling for mitigating school related gender-based violence in Kerarapon primary in Kajiado County. Specifically, it sought to identify the common types of school related gender-based violence cases, and to establish the action taken for school related gender-based violence cases, in Kerarapon primary school in Kajiado County. The study adopted a phenomenological approach, using interviews, observation and surveys. Secondary data included literature review of articles, and reports. Literature was reviewed from studies, publications, academic research papers, program evaluations, and methodological guidelines. Results show that the most common forms of SRGBV were sexual violence, bullying and corporal punishment. Most of the teachers did not have the skills for counseling the pupils. Christian counseling was used to counsel and guide these students, teachers and workers that had had any form of SRGBV. In conclusion, boys are victims as much as girls, hence, an all-encompassing intervention for both is needed and students should be oriented to be aware of their rights, duties, and responsibilities related to SRGBV. Teachers should learn about gender equality and violence against children, mental and physical effects of SRGBV and identifying SRGBV victims and guiding them.

EFFECTS OF STRATEGIC RESOURCE MOBILIZATION ON FINANCIAL PERFORMANCE OF SMES IN KENYA; CASE OF NYERI COUNTY SMES

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Abstract

Many SMEs in the manufacturing sector had been reporting reduced financial performance in the period between 2018 – 2021. This scenario brings to the fore the significant role that strategic resource mobilization play in influencing performance of these organizations. This research study was meant to explore the role that strategic resources have financial performance of SMEs. It specifically focused on highlighting the way market mobilization, innovation mobilization and knowledge mobilization influence how firms SMEs in the manufacturing sector perform. The study applied a descriptive research design and the study was conducted in Nyeri County. The population studied was 52 SMEs in this different category of the sme. No sampling technique was done since the study population was small and manageable. A questionnaire was the research tool. Pilot testing was through the questionnaire on 4 senior strategy officers working in four different SMEs This is to identify potential problematic areas and deficiencies in the research instruments and protocol prior to implementation during the full study. The process of analyzing this data was conducted by using inferential and descriptive means. The study findings illustrate that all the variables had significant positive association with organizational performance. The following recommendations are provided. SMEs should continually engage in research to track the continually changing customer needs and preferences, have a versatile market system of tracking the industry changes and determining how these changes influence customer needs, have hubs where employees can put their creativity and innovation into action. Adopt an organizational structure that supports knowledge creation and sharing,

Key words: versatile markets, Mobilization, customer needs, Hubs, Protocol

THE NEXUS BETWEEN DIGITAL FOOTPRINTS AND CREDIT WORTHINESS FOR SMES POST-COVID 19

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Abstract

Digital inclusive finance and technology acceptance has been seen as an impetus for growth in many firms including SMEs especially during economic downturn (Thathsarani & Jianguo, 2022). In the wake of COVID 19, many firms both large and small experienced an unprecedented economic downturn and only firms that were able to adopt innovation survived the storm. As argued by Pederzolito et. al. (2011), innovative SMEs have the ability to outperform other firms. Research has shown that digital marketing strategies enhance the performance of SMEs. For instance, Yasri (2020) found that effort expectancy, social influence, and facilitating condition have a significant effect on the use of digital marketing and SMEs' performance. Researchers have also found an association between managerial efficiency and credit-worthiness. The current study seeks to build on the earlier study by Kamande (2013) which found some potential benefits of innovation in reducing the probability to default by SMEs. Given that there was increased awareness and use of digitization after the COVID 19 outbreak, integrating the ex post attributes of credit scoring such as financial information and ex ante attributes such as digital footprints and managerial efficiency is likely to yield a better credit score for SMEs. The objective of this study is therefore to construct an integrated measure of credit risk assessment that combines financial information, digital footprints and managerial efficiency attributes and use it to determine the credit-worthiness of SMEs in Kenya.

NUTRIENT COMPOSITION OF ACACIA PODS AS FOOD SUPPLEMENTS FOR RUMINANTS IN AFRICAN DRYLANDS

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Abstract

Ruminants play a crucial role in rural livelihoods and developing-country economies. Acacia trees dominate most rangelands in Africa, and food is one of the greatest restrictions to ruminant production in the tropics. Acacia meals' high crude protein content makes them a good protein feed for ruminants. The majority of previous research has concentrated on the dietary value of acacia species leaves when used as feed for ruminants. Because of this narrow focus, the major role that acacia species' pods play in the feeding of animals has been given less attention than it deserves. This review therefore seeks to assess the nutrient composition of acacia pods as food supplements for ruminants in African drylands. An exhaustive bibliographic search was carried out with Scopus, Web of Science and Google Scholar to find scientific and technical articles as well as governmental documents on Acacia species pods used as ruminant feeds in Africa. Mineral concentrations vary by species, from insufficient to sufficient for animal production. Most Acacias evaluated had adequate crude protein, Ca, Mg, Na and K content, making them good feed. In conclusion, Acacia pods, can be safely used as a protein source for ruminant diets. However, there is only a handful of studies done on the nutritional values of acacia pods as compared to foliage of acacia species. The study recommends that farmers should be encouraged to pick and dry acacia pods during wet season, when animal feeds are plentiful, to use in dry season. More studies to be done on the nutritional value of pods of acacia trees or shrubs.

Key words: Acacia pods, Protein feed source, drylands, Ruminant's.

EFFICACY OF ARBUSCULAR MYCORRHIZAL FUNGI ON POTATO BLIGHT (PHYTOPHTHORA INFESTANS) IN POTATO

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Abstract

Potato (*Solanum tuberosum*) is a key food and cash crop in the Kenyan highlands, and the second most significant in Kenya after maize. It plays a key role in Kenyan food security and contributes to poverty alleviation employing over 2.5 million persons. The potato sector is plagued by many problems, including potato blight that remains a great challenge, particularly among small-scale farmers in the Kenyan highlands. About 30–60% of the potato crop is lost to the late blight yearly in Kenya. Because of development of more intense and fungicide-resistant strains and the poor ability of resource-strained farmers to control late blight, the optimum management of the disease is likely to be achieved through use of biocontrols. This study sought to determine the effectiveness of arbuscular mycorrhiza fungi (AMF) on *Phytophthora infestans* severity in potato tubers under greenhouse conditions. Two species of AMF (*Glomus intraradices* and *Glomus mosseae*) were tested. Treatments included inoculated plants with the AMF isolates and non-inoculated plants that served as controls. Each plant was inoculated with *P. infestans* thirty days after planting. The effects of the mycorrhizal treatments on the pathogen progression were evaluated throughout the season. The mycorrhiza treated plants showed the lowest potato blight symptoms with *Glomus mosseae* showing the least blight severity ($29.54 \pm 2.45\%$). This study demonstrated that potato plants inoculation with AMF confer significant degree of reduction in potato blight severity. Further investigation under field conditions and using mixtures of different AMF isolates needs to be carried out.

Key words: Potato blight, *Phytophthora infestans*, Biological control, Arbuscular mycorrhiza fungi, *Glomus* sp

INFLUENCE OF PLANTING MATERIALS COSTS AND LAND POLICY ON MANGO PRODUCTION IN ENDO WARD, ELGEYO MARAKWET COUNTY, KENYA

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Abstract

Mango (*Mangifera indica* L.) is Kenya's third most important fruit in terms of acreage and total production. Mango is grown in Coastal, Eastern, Central and in Rift valley dominantly in Kerio Valley belt due to favourable environmental conditions. Recent research, however, has reported a decline in mango production in Endo Ward. Therefore, the objective of this study was to determine the factors that affect smallholder mango production in Endo Ward, Elgeyo Marakwet County. A sample of 281 farmers was taken from a target population of 877. The respondents were selected through multistage sampling method taking into consideration population variability in the eight locations from which they were selected from. Primary data was obtained using questionnaires and interview on key informants. Data analysis was done using Statistical Package for Social Sciences (SPSS) and Spearman's correlation coefficient. The results indicated that 42.96% of planting materials are obtained by farmers from local private nurseries while 23.47% get from Kerio Valley Development Authority (KVDA) nurseries. Thus, the high cost deterred some farmers from accessing mango planting materials easily hence decline in production. Results also showed that the land policy and tenure was such that 89.53% of the farmers owned land communally while only 10.47 % owned individual land. This lack of property rights on Land resource did not motivate farmers sufficiently enough to invest optimally in mango production. This study recommends that there is need to assist the farmers access affordably plating materials and grant tittle deeds to farmers to motivate optimum individual effort.

Key words: Mango Production, Planting Material, Land Policy

THE IMPACT OF INFORMATION TECHNOLOGIES ON TOURIST MARKETS AND INDUSTRIES

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Abstract

The use of information technologies has brought about many important changes in the way the tourism markets and industries operate. That influences very strongly behavior of tourist products' consumers on one side, and economics of tourist establishments, on the other. The objective of the study is to analyze what is the impact of information technologies on the tourism market and tourist industries in Poland and selected other European countries. The paper is based on in-depth analysis of available literature. In addition empirical study of activities of major providers of tourist information as well as online intermediaries in Poland and selected countries was carried out. The use of information technologies in tourism is one of major factors causing profound changes in economics of tourism market, both on the supply and demand sides. It has changed the way tourists plan their trips, make bookings, and experience their travels. As result their position towards suppliers has strengthened considerable. Introduction of consumer self-service applications has not only greatly increased the convenience of the planning and booking process but also influenced economics of operations of tourist industries. For tourist suppliers' information technologies, especially the Internet created new opportunities for direct distribution, thus bypassing traditional travel agents and reducing cost of distribution. On the other hand, the rapid development of global online intermediaries such as Booking Holdings or Expedia Group and their negotiating power have caused the opposite effect – increased indirect distribution. Overall impacts on the economics of providers of tourist services especially in accommodation sector are considered to be negative.

Key words: tourism industry; tourism market, information technologies, e-commerce; travel and tourism services; travel intermediaries; distribution

RELATIONSHIP BETWEEN PHYSICAL ABUSE AND JUVENILE DELINQUENCY AMONG GIRLS IN KIRIGITI GIRLS REHABILITATION AND TRAINING CENTER, KIAMBU COUNTY, KENYA

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Abstract

Juvenile delinquency, which has partly been attributed to family violence, has been on the increase all over the world. This study sought to find out the extent of juvenile delinquency among Kirigiti Girls Rehabilitation and Training Center (KGRTC); to determine the prevalence of physical abuse among girls at KGRTC; and to examine the relationship between physical abuse and juvenile delinquency among girls in KGRTC Kiambu County, Kenya. The study was conceptualized by Attachment Theory. The study used an ex-post facto research design that combined both qualitative and quantitative techniques. The population study comprised of 61 girl child offenders, 6 teachers and instructors, 4 children's officers, and one manager totaling to 72 respondents at KGRTC. The research used a census inquiry that included all the 61 girl delinquents. Purposive sampling was used to select the manager, children's officers, and teachers from the KGRTC. Questionnaires, interview schedules, and focus group discussions (FGDs) were used to collect data for the study. The validity of the tools was established with the assistance of specialists from Pan Africa Christian University, while reliability was determined using Cronbach Coefficient Alpha through data collected in a pilot study that was conducted at the Kamae Girls Borstal Institution. A reliability coefficient of 0.855 was attained which was considered an appropriate threshold. The quantitative data was analyzed by means of inferential and descriptive statistics with the assistance of the computer software Statistical Package for Social Sciences (SPSS) Version 26 while the qualitative data was analyzed using themes developed from the study's objectives. The study revealed an existence of a positive correlation between the physical abuse and juvenile delinquency ($r=+.647$, $n=58$, $p < .01$). The results from prevalence showed physical abuse had a global mean score ($\bar{x}=2.10$) for all the 15 items used to rate how the prevalence

of physical abuse revealed that generally, the girl delinquent had experienced a moderate level of various forms of physical abuse establishing that physical abuse is a significant contributor to the development of juvenile delinquency. The implications of this research suggest the need to investing heavily in psychotherapy and treatment of the girls' inner hurts and childhood trauma as well as identifying appropriate methods of parenting for the girl child. These study outcomes imply that

Attachment Theory may serve as an effective guiding principle for studying juvenile delinquency. This study identifies areas where difficulties exist with regard to juvenile delinquency among girls and suggests benefits for the treatment of girls from a systemic and multidimensional dimension.

Key words: Juvenile delinquency among girls, sexual abuse, attachment, juvenile offender, family violence

MENTORSHIP OF UNDERGRADUATE/GRADUATE JUNIOR STATISTICIANS BY SENIOR FACULTY STAFF AT INSTITUTIONS OF HIGHER LEARNING IN KENYA

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Abstract

Mentorship has been identified to be the key driver of the skill gap between senior faculty staff and junior statisticians in many organizations globally. In this era of technological advancement, statisticians are faced with many challenges in their key role as providers of quality research information to meet the needs of data users. There is a growing need for mentorship with the current rapid changes and growth of statistics in the fields such as big data and data science. Statisticians work as collaborators with researchers in different fields and many organizations. Thus, academic institutions should promote the skills of senior faculty staff so that they transfer the same requisite skills to junior statisticians. In today's competitive environment, it is not enough to concentrate solely on the mastery of statistical

theories and new methodological approaches. Thus a lot need to be done to bridge the skill gap and improve the services of statisticians in academic institutions. On the contrary, their ability to solve daily emerging problems, communicate and successful collaboration with others needs to be strengthened. Research shows, however, that the statistical profession is faced with a myriad of challenges that need to be addressed to improve the current workforce of statisticians in the institutions of higher learning and the county at large.

EMPLOYEE COMMITMENT ON BLUE OCEAN LEADERSHIP STYLE AND ORGANIZATION PERFORMANCE AMONG SELECTED COMPANIES IN ELDORET

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Abstract

A major ingredient in most non-performing organizations is poor leadership. It is a sad truth about workplace in that just 30% of employees are actively committed to doing a good job (Gallup's 2013 USA report). Blue ocean leadership (BOL) is a new style, which aims to achieve a leap in an organization's leadership, quickly and at low cost, by engaging previously disengaged employees through unearthing unrealized potential. However, few studies have explored BOL in Kenya's organizations. The aim of this study was to determine the relationship between BOL and organization performance (OP) in four selected companies in Nairobi Securities Exchange (NSE) and determine the moderating role of employee commitment (EC) on the relationship. Specifically, the study assessed the effect of BOS on organization performance and determined the moderating role of EC on the relationship. The study first assessed the companies' current ('as-is') leadership canvases, developed alternative leadership states, and selected leadership profiles that could best unlock disengaged employees, which were validated against each company's performance. The sample consisted of 144 employees from the four companies in Eldoret Town, selected from a target population of 224, by

stratified random sampling. Data were collected using questionnaires and interview schedules. Findings showed a significant and positive effect of BOL ($\beta = 0.298$, $p < 0.0001$) on OP. Companies which outperformed others had senior managers who delegated duties, removed bureaucratic bottlenecks and spent more time analyzing and espousing the company's future. Middle managers in these companies coached, motivated and served their customers (junior employees), and not their bosses. Employee commitment was found to moderate the relationship between BOL and OP. The study concluded that BOL significantly improves employee commitment and engagement, leading to better OP. Thus, companies should implement BOL to improve their OP.

Key words: Blue ocean leadership (BOL), Employee commitment (EC), Organization performance (OP)

EFFECTS OF FAMILY STABILITY ON DEPRESSION LEVELS: A CASE OF UNIVERSITY STUDENTS IN KENYA

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Abstract

This study was on the backdrop of a psycho-education training program, which was in its second phase of implementation in a private university in Kenya. The training started in September 2022 and will end in April 2023. The participants consisted 302 randomly sampled first year students who served as the second cohort in the program. The program's main goal was to address psychosocial issues that derail student progression, retention and academic performance. This study had two goals: Firstly, to explore the prevalence of students' family stability and to determine prevalence of depression among first year students with the aim of coming up with early intervention. A ex post facto research design was used to determine how family stability predicted depression level. Depression was measured using Beck's Depression Inventory whereas family stability was measured using Pourmovahed's family stability questionnaire. The findings found that

127 (42.1%) of the participants came from families described as less stable whereas 175 (57.8%) came from more stable families. The study also found that 182 (60.3%) had a depression level of normal ups and downs, 90 (29.8%) had mild mood disturbance, 14 (4.6%) had borderline clinical depression, 9 (3%) had moderate depression, 4 (1.3 %) had severe depression and 3 (1%) had extreme depression. It was found that family stability significantly predicted depression level ($\beta = -.163$, $p = .136$). The implications of this study is discussed.

Key words: Family stability, Depression, Psycho-education, University student.

THRESHOLD MOISTURE CONTENT FOR SLOPE STABILITY USING ARTIFICIAL NEURAL NETWORKS BASED ON LABORATORY FLUME TESTS

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Abstract

Slope stability is a widespread problem in Kenya in the recent past. The impacts of slope failures and other unexpected soil mass movements have affected many livelihoods. These disasters are triggered by elevated water levels originating from intense rainfall storms. Soil water serves to increase the groundwater level and induce a decrease in matric suction (negative pore water pressure) that may cause slope failure. The minimum soil moisture content capable of triggering slope failure is still missing in literature. In this study, we propose a constitutive model linking the threshold soil moisture content to other slope parameters and utilize an Artificial Neural Network algorithm to predict the threshold water content. A solar-powered monitoring (SPM) system comprising of moisture sensors and optical strain/displacement transducers in combination with a rainfall simulator has been fabricated to aid in data collection. The collected data is then used to train, test and validate a back-propagation feed-forward (BP-FF) artificial neural network model. The threshold moisture content was established when displacement of the soil mass was detected. Comparison of computational and experimental results shows excellent agreement.

Conclusions from the results indicate that instead of complex state-of-the-art monitoring systems on slopes involving measuring several physical factors requiring enormous technological know-how in programming and installation, a set of soil moisture probes only would be relatively cheaper, but yielding satisfactory results, as long soil lithological parameters are known. Secondly, feeding the data in a neural network model for purposes of forecasting can aid in the design of inexpensive early warning system for disasters associated with slope instabilities.

Key words: Soil stability, solar-powered monitoring (SPM) system, soil moisture content, artificial neural network.

FACTORS ASSOCIATED WITH PERSONAL PROTECTIVE EQUIPMENT USE AMONG PESTICIDE HANDLERS IN MWEA IRRIGATION SCHEME, KENYA

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Abstract

Pesticide use among small scale rice farmers has drastically increased over time globally. Evidence shows that majority of pesticide handlers do not regard PPE use during pesticide application, hence low PPE compliance. This study explored factors associated with PPE use among pesticide handlers in Mwea Irrigation Scheme, Kenya. Pesticide handlers' level of PPE use, socio-demographic factors, Pesticide knowledge, attitude and perceptions towards pesticides and PPE use were investigated. The study was cross-sectional involving 246 respondents. A structured interviewer-administered questionnaire, an observation checklist and an FGD guide were used to collect data. Tools' pre-testing was done giving a Cronbach's alpha of 0.76 which is within the acceptable internal consistency level. Data analysis was done using SPSS version 26. There was low level of PPE use among pesticide handlers with none using full PPE and only 25.2% using 4-6 PPE items out of 7 possible items. The most used PPE were trousers (74.4%), long-sleeved shirt/jacket (65.9%) and hat (60.6%). The least worn PPE were gumboots (1.6%), gloves (2.8%) and goggles (9.8%). Only 4.9% of the sprayers were female. 89.8% had at least primary education. How

ever, only 32.5% had received training in pesticide safety. Majority of the pesticide handlers recorded moderate to high knowledge and attitude scores. Chi- square tests of independence revealed that sex ($X^2(6, 246)=14.44, p<0.05$) age ($X^2(210, 246)=283.20, p<0.05$) crop ownership ($X^2(6, 246)=42.54, p<0.05$), pesticide safety training ($X^2(6, 246)=25.21, p<0.05$), pesticide application experience ($X^2(12, 246)=30.77, p<0.05$), pesticide safety knowledge ($X^2(54, 246)=103.30, p<0.05$), attitude towards PPE use ($X^2(162, 246)=221.86, p<0.05$), perceived environmental health risk ($X^2(12, 246)=26.68, p<0.05$) and Perceived PPE importance ($X^2(6, 246)=40.11, p<0.05$) were significantly associated with PPE use. The above mentioned factors were all significantly associated with pesticide handlers' PPE use and provide insights for future interventions. More training on pesticide safety and PPE use will enhance compliance.

Key words: Pesticide, pesticide handler, Personal Protective Equipment.

MAPPING THE DISCOURSE OF POWER: DIPLOMATIC ACTORS ON TWITTER

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Abstract

This study explored the impact of power dynamics on digital diplomacy by analyzing the Twitter usage of three diplomatic actors (the Chinese, UK, and US Embassies in Kenya). The research aimed to answer questions about who the diplomats prioritized for engagement, how they used Twitter in crisis communication, and how they became media actors through adopting media logic in their digital diplomacy practices. The results of the study showed that Twitter was utilized by the diplomats to control the daily agenda, express opinions, and influence followers and media outlets. The Chinese and UK Embassies made use of the platform for formal communication and to communicate with their diaspora. The US ambassador followed online influencers to set the online conversation and expand their online presence. Meanwhile, the UK ambassador leveraged the media to drive foreign policy and

tailor messages to the Kenyan audience. The findings also indicated that all embassies had adopted a media logic by following various media sources. The study also found that the Chinese embassy was quick to respond to any tweet that mentioned human rights issues in Xinjiang, Tibet, and Inner Mongolia, and used Twitter as a tool to correct misinformation. In conclusion, diplomats use Twitter as a tool to engage with different audiences and achieve their diplomatic goals through interactive strategies such as two-way communication, storytelling, influencer engagement, hashtag campaigns, and media amplification. However, diplomats need to constructively engage with the digital public to accomplish their goals, while avoiding the risk of their messages being misconstrued.

Key words: Diplomacy, Power Influence, Twitter, Crisis Communication, COVID-19 pandemic, Global Political Tussle, US, China, UK

ECOHYDROLOGICAL EFFECTS OF SHADE TREES SPACING ON SOIL CHARACTERISTICS AFFECTING TEA YIELDS: A CASE STUDY OF MONIERE ESTATE IN KIPKEBE OF SOTIK SUB-COUNTY.

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Abstract

Shades are used in tea farms to modify micro-climatic and environmental conditions that affect soil hydrologic characteristics that determine the growth and development of tea plant. The study aimed at determining shade spacing effects on soil characteristics and their resultant impacts on tea yields. Using an experimental physical model, the effects of shade trees spacing on soil characteristics affecting tea yields were investigated using data on soil hydrologic characteristics and tea yield collected from the three-shade spacing of 6m by 6m, 8m by 8m and the control under study. The soil hydrologic characteristics were derived from three soil samples dug from 0-20cm, 20-40 cm and 40-60cm depth respectively from each shade spacing treatments. Tea yield was derived from tea leaves harvest associated with each shade spacing. The study employed

random sampling technique. Sample soils properties were ascertained in the field and at the Tea Research Institute laboratories. Tea yields were measured in the field. To associate and measure differences between shade spacing, soil hydrologic characteristics and tea yield, statistical technique of ANOVA was used and significance level tested at ($P \leq 0.05$). Results obtained showed that the soil hydrological characteristics varied significantly ($P \leq 0.05$) with shade trees spacing. Tea yields were insignificant at ($P \leq 0.05$) in relation to shade trees spacing. This study found that 6m by 6m and 8m by 8m shade spacing had similar results hence they can be used in tea farms in similar hydro- meteorological areas for high production of tea and environmental conservation.

Key words: shade trees spacing, soil hydrologic characteristics, ecohydrologic effects, tea yield.

LENGTH-WEIGHT RELATIONSHIP AND CONDITION FACTOR OF LABEOBARBUS ALTIANALIS ALONG RIVER MOLO IN LAKE BARINGO BASIN - KENYA

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Abstract

The condition of fish in an aquatic ecosystem is normally studied using the length-weight relationship because this provides allometric and isometric parameters, which informs the general wellbeing of the fish. The aim of this study therefore was to analyse the length-weight relationship and condition factor of *Labeobarbus altianalis* along River Molo in the Lake Baringo basin, Kenya. The parameters 'a' and 'b' of the length - weight relationship were estimated using the formula $W=aL^b$. The length and weight relationships of *Labeobarbus altianalis* samples studied were found to be highly correlated (r is equal or greater than 0.932). The 'b' values in the length-weight relationships of a majority of the fishes ranged between 1.93 and 3.2, implying that in two sites, the fish were exposed to poor environmental conditions hence poor growth. However, the fish in most sites exhibited positive allometric

growth. Further, the relative condition factor ranged between 0.79 to 1.53, implying that the condition of the fish in most sites along R. Molo was good. Further study is recommended to cover both dry and wet seasons in order to provide sufficient data and information to inform management for sustainable exploitation and conservation of River Molo fisheries.

Key words: length-weight relationships, Condition factor, *Labeobarbus altianalis*, allometric growth, isometric growth

NURTURING, ENTREPRENEURSHIP EDUCATION AND INNOVATION IN FRAGILE AND POST- CONFLICT COUNTRIES: CASE OF HIGHER INSTITUTIONS IN SIERRA LEONE.

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Abstract

This work is a critical study of how nurturing innovation, education and entrepreneurship in a fragile and post- conflict country can enhance economic growth, promote employment, and productivity, but also can be a driver to create peace and stability and produce democratic citizens. Much study has been done around entrepreneurial education in promoting economic growth and provide a platform for innovation but few studies have explored in detail on how entrepreneurial education can also promote peace and produce a democratic citizen that will bring about peaceful and prosperous communities. This paper will employ a case study research design to explore how universities in Sierra Leone are using entrepreneurial education to promote economic growth, bring about employment, peace and stability in a fragile and post – conflict country. The research design chosen is appropriate because it will help the researcher to gain concrete contextual in-depth knowledge of the situation and issues in its real life. It will help the researcher to see a relationship between phenomena, context and live reality of the participants. It enhances flexibility to collect data through various mean such as interviews, focused group and observation. The main findings of this study will enable educational practitioners to design better models, framework and best practices

that will bring about growth, peace and stability in fragile and post-conflict country. It will help the institution of higher learnings to understand what type of model to use and boost productivity, job creation and employment. It will help universities to look at the type of education that will help produce democratic citizens that are committed in rebuilding their country. It will help policy makers to look at broader debate on the purpose, mission and goal of university education and design better programmes in the curricula that will help student to gain employment after graduating from the university. Entrepreneurship education and innovation in fragile and post- conflict countries is critical in restoring the back the economic, education and social sectors that will help bring back innovation, employment, productivity, trust, equality peace, stability and democratic citizens.

Key words: Democratic citizen, curricula, entrepreneurship education.

EMPOWERING VULNERABLE LIVELIHOODS' CLIMATE RESILIENCE CAPACITIES WITH CLIMATE INFORMATION SERVICES FOR SUSTAINABLE FUTURES

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Abstract

Climate change and its related effects is one of the main global challenges affecting livelihoods in both developed and less developed world. Specifically, it affects livelihoods in less developed countries who depend mainly on rain-fed agriculture. Climate information services (CIS) is one of the alternatives to build livelihood's resilience against climate change related shocks. This study aimed at finding out the local farmers understanding of Climate change and environmental policies, their knowledge, attitude and practices of climate information services, and the required capacities they need to build their resilience in Rwanda' Eastern province. The study used a mixed design methodology. The sample size constituted 377 participants selected in

Rwimiyaga and Rwempasha Sectors of Nyagatare District. The data collection tool constituted both quantitative and qualitative items. Data was analysed using thematic and descriptive data analysis methods. Results indicated that farmers were knowledgeable of climate change and environmental policies, main climate change effects were droughts, dry spells, hailstorms and windstorms; 87.5% received CIS, CIS was received through radio (52%) and Television channels(14%), CIS was relevant (97%), 10% trusted CIS at the level of 100%, required capacities included access to CIS, capacity building on CIS translation, water for irrigation, irrigation facilities, resistant and adaptive seeds, pests control, and access to trees for planting. The study is significant in revealing what needs to be done to build farmers' resilience capacities against climate change capacities. We concluded that CIS capacity building were necessary to build farmers' resilience. We recommend for the design and implementation of CIS capacity building programs especially on the understanding and use of CIS and water for irrigation accessibility to farmers for climate change adaptability, resilience and sustainable living.

Key words: climate change, Climate Information Services, resilience, capacity empowerment

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