

**Kabarak University 5<sup>th</sup> Annual International Conference**

**14th - 17th July 2015**

**Theme: *Research, Innovation for Sustainable Development and a Secure World.***

**Venue: Kabarak University Main Campus**

**SPEECH BY THE CHANCELLOR HIS EXCELLENCY DANIEL T. ARAP MOI, CGH DURING THE OFFICIAL OPENING OF THE 5TH INTERNATIONAL RESEARCH CONFERENCE ON JULY 15TH 2015 AT KABARAK UNIVERSITY SCHOOL OF LAW**

Distinguished Guests, Scholars, Researchers, Kabarak University Students and Staff, Ladies and Gentlemen,

I take this opportunity to welcome you all to the 5th Annual Kabarak University International Research Conference. This is a great event in the calendar of Kabarak University.

This years' theme "**RESEARCH & INNOVATION FOR SUSTAINABLE DEVELOPMENT AND A SECURE WORLD**" aptly captures the mood of the nation and the whole world. It is time research takes the centre stage of every University and every nation all over the world. I commend every scholar and researcher who has given his or her best to make this conference a success. I also hope that research innovations and findings are made tangible in real economic and social situations of nations for Africa. It is through actualizing these inventions that our Continent will be able to achieve its goals and objectives.



**His Excellency Daniel T. Arap Moi, CGH,  
Chancellor of Kabarak University**

African Universities should become the springboards for economic development of the continent. It should be noted that the famous Silicon Valley in the US has become a world class high tech nerve centre basically because of contributions of research and innovation from Stanford University. I urge universities and industries in this country to borrow a leaf from Stanford and the Silicon Valley. Indeed, some nations today are replicating the Silicon Valley experience. For instance, the Silicon Valley of India is Bangalore, while the Silicon Valley of China is Zhongguancun. I challenge Researchers and Scholars gathered here today to ensure that in the long run, innovations and papers presented during this conference would not just be kept in the libraries and cabinets but actualized in order to benefit our society.

I urge the private sector to join hands with institutions of higher learning in supporting research especially in the key areas of innovation. Kabarak University will continue with its quest to ensure that our Institute of Postgraduate Studies and Research is adequately funded to ensure that our students do not become job seekers but job creators through Research and Innovation. Moreover, I would like to request our Government to invest more resources in man power development by creating a scholarship fund for students pursuing PhD programs in both Public and Private Universities. It should be noted that universities are facing acute shortage of teaching staff at the doctoral level and therefore more needs to be done in this area.

In order to survive the emerging social, political and economic challenges in the world today, all stakeholders the world over are required to sharpen their skills by coming up with innovative ways of tackling world problems. I therefore thank the organizers of this Conference for coming up with this year's theme that best describes the need to be in control in terms of tested research solutions to the changing technological and environmental challenges across the world.

I must say that I am impressed by the large number of researchers, scholars and students who have turned out for this years' conference. I urge all of you to remain focused and steadfast in ensuring that Kenya realizes Vision 2030 through your contribution in Research and Innovation.

I would like to thank the Organizing Committee for working tirelessly to make this conference a success.

THANK YOU AND GOD BLESS YOU ALL

## FOREWORD

On behalf of the Board of Trustees, the Governing Council, the Management Board, the staff and students of Kabarak University, I would like to welcome participants to the Kabarak University 5<sup>th</sup> International Research Conference. This year's conference focuses on Research, Innovation for Sustainable Development and a Secure World. This research conference comes at a time Kenya is facing many developmental challenges foremost of which is insecurity. It is important that this research conference addresses itself to finding solutions to insecurity of various kinds especially food and home land security. I wish to point out that Kabarak University emphasizes research and technology transfer as pillars that contribute to creativity, innovation, development and industrialization for Kenya and the world at large. The University continues to make research a top priority by enhancing the capacity of faculty and students in their research orientation.



*Rev. Prof. Jones Kaleli, Vice Chancellor*

Research is one of the foremost functions of institutions of higher learning and is crucial to national development. Investing in research as a university not only develops a research culture but promotes innovation which in turn leads to new products in the market and defines the University as a creator and disseminator of knowledge. Development of any nation depends on research outputs of its innovative minds often based in universities. It is important that the intellectual resource of any country be exploited in order to birth innovative ideas which can in turn spur economic growth. Innovations in agriculture, health, education, IT and entrepreneurship must be nurtured and invested in so that challenges of unemployment and poverty are effectively addressed. There is therefore need for researchers to focus on applied research which addresses the challenges facing our people and country especially as we work towards achieving Vision 2030.

In conclusion, I wish to recognize the role played by the organizing committee and the Institute of Postgraduate Studies and Research who have worked tirelessly to make this Conference a success. My appreciation is also directed to the media who have given this event wide coverage thus attracting participants from many institutions of higher learning. It is my prayer that you will find this conference enjoyable and rewarding.

**Rev. Prof. Jones Kaleli**  
**VICE CHANCELLOR**

## **Programme**

**DAY 1 – 14<sup>th</sup> July 2015**

**Time: 8.00 a.m. 9.00 a.m.**

**Venue: KLaw**

**Facilitator: Mrs. Tabitha Kaliakamur**

<b>Activity</b>
Registration

### **STUDENT EXHIBITIONS**

**Venue: KLaw 5**

**Date: 14<sup>th</sup> July 2015**

**Time: 9 am -12.00 pm**

**Facilitator: Mr. Nickson Karie & Dr. Moses Thiga**

#### **Ex2015-01 Digital Model of Zero-grazing (DM Zero-grazing)**

*Joseph B Ndalila, KabarakUniversity*

#### **Ex2015-02 A Smoke Activated Emergency Exit**

*Peter Ndegwa Kamondia, The Technical University of Kenya*

#### **Ex2015-03 Design and Construction of Smart Power Controller**

*Francis Njau Kariuki, The Technical University of Kenya*

#### **Ex2015-04 KABU Exam Results APP**

*Musabi Antony Guya, KabarakUniversity*

#### **Ex2015-05 Online Certificate Authentication System (OCAS)**

*Amugada Stephen Ambani, Masinde Muliro University*

#### **Ex2015-06 Online Shopping Mobile APP**

*Musabi Antony Guya, Kabarak University*

#### **Ex2015-07 Reclaiming old with new: Asphalt concrete and cobblestone transformation?**

*John Adamba Enonda, Rift Valley Institute of Science & Technology, Nakuru*

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## Plenary Session

Venue: K LAW 5

Chair: Prof. Kefa Rabah

Rapporteur: Dr. Stella Muhanji

Prayer: Rev. Justus Mutuku

Time	Activity
12.00 a.m. -1.00 p.m	<b>Invited Speaker: Dr. Marcella Ouma-CEO, Kenya Copyright Board</b> <b>Topic: Intellectual Property Protection for Development and a Secure Nation</b>

1 pm – 2.00 pm	Exhibition / Lunch Break
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## DAY 2 – 15<sup>th</sup> July 2015

Time: 8.00 a.m. - 9.00 a.m.

Venue: KLaw

Facilitator: Mrs. Tabitha Kaliakamur

Activity
Registration

## PRESENTATIONS BASED ON SYMPOSIA

### MAIN CONFERENCE PROGRAMME

#### Symposium B2015-A

Venue: K LAW 4

Date: 16<sup>th</sup> July 2015

Time: 9am-11am

Chair: Dr. John Gathii

Rapporteur: Mr. Geoffrey Kamau

Author(s)	Title
Muthoni King'ori and Grace Kinyua St. Paul's University; Limuru	B2015-01 Security, Information and Communication in Development
Daniel Kungu, St Paul's University. Limuru,	B2015-02 Detecting creative Accounting and Corporate Financial Distress Using the Altman Model: The Case of Mumias Sugar Company
Jacinta Moraa Onchari, Kabarak University	B2015-03 Achieving Service Excellence in the Public Sector in Kenya: The Critical Role of Human Resource Management
Ogutu Robert Peter (Kabarak Univ)	B2015-04 Internet Advertising: Investigating Attitudinal Differences of University Students in Kenya
Maina Esther Wanjiru and Muchina	B2015-05 Agri Business Sustainability in Kenya:

Stephen Wanyoike, Karatina University	Challenges of Tea Farming Enterprise at Household level
Eunice Kagure Muraguri, Edward Waweru and Peter Musyimi Karatina University	B2015-06 Application and Practice of Sustainable Procurement in Kenya
Stephen Wekesa Masinde and Emily Mokeira Okwemba; Jomo Kenyatta University of Agriculture and Technology	B2015-07 Corporate Leadership and Performance of Public Universities in Kenya

### Symposium B2015-B

*Venue: KLAW 5*

*Date: 15<sup>th</sup> July 2015*

*Time: 9am-11am*

*Chair: Prof. Allan Katwalo*

*Rapporteur: Mr. Ezra Rono*

Author(s)	Title
Mugalavai Cynthia Chamwada, Kenya Methodist University	B2015-08 Application of Socialization, Externalization, Combination, and Internalization (SECI) model in the management of knowledge: A case study of Kenya Methodist University
Khatambi Dora Maasai Mara University	B2015-09 Progress on the 8th MDG in Kenya
Charles Okeyo Owuor, Kabarak University,	B2015-10 Assessing County Government Strategies on Disaster Risk Management- A Case Study of Nakuru County
Jacinta Moraa Onchari, Kabarak University	B2015-11 Value-based Recruitment and Selection: A Critical Factor in Sustaining Public Sector Reforms in Kenya
Onyango Joseph Odhiambo Kabarak University;	B2015-12 Main Futures of Succession Planning: A Case of NGO Sector in Kenya
Mwangulu Johnester Ali Kabarak University;	B2015-13 The Effects of Financial Resources on the Marketing Effectiveness Among Micro and Small Enterprises in Kitui County – Kenya

### Symposium B2015 - C

*Venue: KLAW 1*

*Date: 15<sup>th</sup> July 2015*

*Time: 9am-11am*

*Chair: Mr. Paul Kibet*

*Rapporteur: Ms. Ann Wambui*

<b>Author(s)</b>	<b>Title</b>
Erick Nyakundi Onsongo Kisii University	B2015- 42 Human Resource Development pace with Emotional Intelligence Performance
Paul M. Shavulimo (Kenya Methodist Univ); Lydia Chepkoech (Kabarak Univ.) Magret Wachira and Penina C. Langat(JKUAT)	B2015-36 An Analysis of Factors Influencing Capital Structure Decisions of Microfinance Institutions in Kenya
Emily Tumwet Kabarak University	B2015- 45 Effects of Recruitment and Selection Techniques on Job Performance: A Case of Universities in Kenya
Lucy W. Mwangi, Caroline Boinett and Emily Tumwet, Kabarak University	B2015- 44 Effects of work life Balance on Employee Performance in Institutions of Higher Learning in Kenya. A case Study of Kabarak University, Nakuru
Monicah Mwangi and Hezron Osano Africa Nazarene University	B2015-14 Effect of Agency Banking On the Performance of Commercial Banks in Kenya: Case of Machakos County, Kenya
Tabitha Chebet; Kabarak University and Dr. S.K Kiprop Egerton University	B2015- 43 Effect of Debt Financing on Financial Performance of Small and Medium Enterprises in Eldoret County (2010-2014)

### **Symposium L2015**

*Venue: KLAW 3*

*Date: 15<sup>th</sup> July 2015*

*Time: 9am-11am*

*Chair: Dr. Charles Khamala*

*Rapporteur: Ms Luciana Wambu*

<b>Author(s)</b>	<b>Title</b>
Akepe Linus Kenobi Africa Director, International Institute of Certified Forensic Investigation Professionals	L2015-01 Economic & Financial Crimes on the Rise in Sub-Saharan Africa: A Threat to the Investment Climate and Development of the Sub Region
Akepe Linus Kenobi & Orekelewa Charles, International Institute of Certified Forensic Investigation Professionals, Abuja, Nigeria	L2015-02 Forensic Accounting as a Cure to Fraud and Corrupt Practices
Alex Kimani Waweru Kabarak University;	L2015-03 Legislation on terrorism: A case study of the Republic of Kenya
Simon Peter University of Dar es Salaam School of Education	L2015-04 Are Constitutional Right to Education taken Seriously?: Analysis of Domestic Child Trafficking in Tanzania
Nicholas Otieno Ondoro University of Bradford, UK	L2015-06 Post 2007 Police Reform in Kenya: Towards a Responsiveness Police Reform Agenda
Tsawe-Munga wa Chidongo	L2015-07 African Customary Law in Modern



Pwani University;	Society: A Study of the Midzi-Chenda People of Coastal Kenya
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11.00 – 11.30	Tea/Coffee Break + Exhibition	Precincts of the KLAW
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### OPENING CEREMONY

**Time: 11.30 a.m. - 1.00 p.m.**

**Venue: KLAW 5**

**Chair: Dr. John Ochola**

**Rapporteur: Mr. Steve Mutai**

Time	Activity
11.30 a.m. - 11.35 a.m.	Opening Prayer, Rev. Prof. Jacob Kibor
11.35 a.m. - 11.45 a.m.	Entertainment, University Choir
11.45 a.m. - 11.50 a.m.	Welcome Remarks: Vice Chancellor Kabarak University - Rev. Prof. Jones Kaleli,
11.50 a.m. - 12.20 p.m.	Remarks from the Chancellor
12.20 p.m - 1.00 p.m.	<b>Invited Speaker: Prof. Jacob Kaimenyi-Minister of Education</b> <b>Topic: Research &amp; Innovation for Sustainable Development and a Secure World</b>
GROUP PHOTO	

1.00 p.m - 2.00 p.m.	Lunch Break+ Exhibition
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### Symposium B2015-A

*Venue: KLAW 4*

*Date: 15<sup>th</sup> July 2015*

*Time: 2pm-5pm*

*Chair: Dr. Irene Asienga*

*Rapporteur: Ms. Daisy Bowen*

Author(s)	Title
David M. Okwena and Hezron M. Osano Africa Nazarene University;	B2015-15 Factors influencing Performance of Business Process Re-engineering Projects in Banks in Kenya: Case of Kenya Commercial Bank
Hezron Osano Africa Nazarene University;	B2015-16 An Investigation of Factors Influencing Global Expansion Performance of Kenyan Firms

Mary Githinji St. Paul's University, Department;	B2015-17 Changes In The Microfinance Institutions And Small Business Lending
Richard Rono (Egerton University) & Tikoko Betty Jeruto (Kabarak University)	B2015-18 Opportunity Threat Effect of Displacement and Resettlement through Initiated Development: The Case of Kirandich River Dam of Baringo County
Makungu Linda (Kabarak Univ), Benard Njehia (Kenyatta Univ) & Daisy C. J. Bowen (Kabarak Univ);	B2015-19 Effects of Sports sponsorship as a promotional strategy on performance of Companies involved in Sports in Kenya
Gilbert Nyakundi Okebiro & Anjela Kemunto Nyambane; Kisii University –Kitale campus;	B2015-20 Conflict Management Continuum and Sustainable development in West Pokot and Turkana Counties
Winnie Ndetta and Daniel Kimemia St. Pauls University Limuru	B2015-21 Effectiveness of Social Media in Advertising University programmes and Recruitment of New Students: A Case Study of St. Paul's University

### Symposium B2015-B

*Venue: KLAWS*

*Date: 15<sup>th</sup> July 2015*

*Time: 2pm-5pm*

*Chair: Mr Aggrey Lihanda*

*Rapporteur: Ms. Pamela Nengo*

Author(s)	Title
Gilbert Nyakundi Okebiro Kisii university-Kitale campus;	B2015-22 Talents versus academic intelligentsia in regional development and entrepreneurship
Kefa Rabah (Kabarak Univ) & Barrack Okello (JKUAT Nakuru campus)	B2015-23 Building Sustainable Competitive Advantages in Higher Education Institutions: A Review
Peter Kiwial Pembee (Kabarak Univ.), Lawrence K. Kibet and Cynthia J. Kipcjillat (Egerton Univ.)	B2015-26 Factors Influencing the Use of Library Information Systems by Staff and Students in Kabarak University
Arnold Kipchumba Egerton University	B2015 – 27 The Potential Role of Flood Crop Farming in Achieving Food Security in Turkana Central
Aloice Ouma Onyango Kabarak University	B2015-28 Effectiveness Of Project – Exit Strategies On Project Sustainability: A Case Of Community – Based Projects In Siaya County Kenya
Stellah Malaso Koini (Kenyatta Univ) & Jepkemboi Ruth Choge (Maasai Mara Univ.)	B2015-29 An Evaluation of Millennium Development Goals in Reduction of Maternal and Child Mortality in Narok County, Kenya
Ruthwinnie Munene	B2015-30 Effectiveness of Credit Reference

Kabarak University	Bureau on Enhancing Financial Performance: A Survey Of Financial Institutions In Nakuru County
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### **Symposium B2015 - C**

*Venue: KLAW 1*

*Date: 16<sup>th</sup> July 2014*

*Time: 2 pm-4.30 pm*

*Chair :Dr. Stellah Muhanji*

*Rapporteur: Mr. Moses Kaibos*

<b>Author(s)</b>	<b>Title</b>
Ruthwinnie Munene Kabarak University	B2015- 31 Challenges Faced by Micro-Finance Institutions in Lending of Funds to Small Scale Businesses: A Survey of Selected Small Businesses in Nakuru CBD
Titus Mwanthi , Peter Ngure ; (Daystar Univ.) and Dorcas Kalele (Univ. of Nairobi)	B2015- 33 Master in Business Administration program and the Industry: The Missing Link
Dukentaxer Ratemo Bosire Technical University of Kenya	B2015-34 A Conceptual Framework Model for Intra-Operable E-Government for Kenya: Issues and the Solution
Penina C. Langat and Daniel Thuo (University of kabianga); Lydia Chepkoech (Kabarak Univ.) Paul Mbiti Shavulimo (Kenya Methodist Univ) Magret Wachira (Jomo Kenyatta University of Science and Technology)	B2015-35 Effect of Debt Financing on the Profitability of Kenya Tea Development Authority Processing Factories: A Case of Kericho and Bomet Counties
Mary Mugo; Lily Njanja & David Minja, St. Paul University;	B2015- 37 The Collective Effect of Succession Planning, Succession Timing and Successor Commitment on Corporate Growth Strategy among Local Family Businesses in the Manufacturing Sector in Nairobi County
Cherotich Mung'ou University of Eldoret;	B2015- 38 The Contributions of ICTs to Peace building in Mount Elgon Region
Eunice Kagure Muraguri, Edward waweru and Peter Musyimi ; Karatina University	B2015-39 Application and Practice of Sustainable Procurement in Kenya
Muthoni King'ori, and Grace Kinyua St. Paul's University, Limuru;	B2015-40 Security, Information and Communication in Development

### **Symposium L2015 - A**

*Venue: KLAW 3*

*Date: 15<sup>th</sup> July 2015*

*Time: 2 pm-4.30 pm*

*Chair Mr Duncan Munai Okubasu*

*Rapporteur: Ms. Sylvia Waliaula*

<b>Author(s)</b>	<b>Title</b>
Ogalo, James Ochieng, (Kisii Univ.) and Ofwa Joanes O. Wu'Adongo (Jaramogi Oginga Odinga University of Science and Technology)	L2015-08 Cybercrime Security and Challenges: A Review of Security cases.
Akepe Linus Kenobi International Institute of Certified Forensic Investigation Professionals	L2015-09 Rise in the Rate of Economic & Financial Crimes in Sub-Saharan Africa, threat to the Image and Development of these countries
Maina Nyabuti and Adams Seth Anunda; Kisii University	L2015-10 The Role of Judicial Activism in Transforming the Judiciary Under the New Dispensation
Charles A. Khamala Kabarak University	L2015-11 The Role of Law on Genetically Modified Organism Technology in Promoting Food Security in Kenya
Segita, M.I.A; Kabarak University	L2015-12 Review of Political Party Democracy in Kenya
Vundi Nason St Paul's University, Limuru;	L2015-13 Devolution versus Democratization in Kenya: Where Are We Going Wrong? A Case of Makeni County Government
Nyandoro Omuria Egerton University	L2015- 14 Investigating Public Perception of Corruption in Nakuru County

### **Symposium L2015 - B**

*Venue: Senate Boardroom*

*Date: 15<sup>th</sup> July 2015*

*Time: 2 pm-4.30 pm*

*Chair: Mr. Justus Otiso*

*Rapporteur: Ms Luciana Wambu*

<b>Author(s)</b>	<b>Title</b>
Richard Kigen Koech Kabarak University;	L2015- 17 Cost of Constitutional Affirmative action for elective positions in County Assemblies in Kenya
Segita, M.I.A Kabarak University;	L2015-18 The Future of Administrative Law in Kenya
Otiso, Justus William Onchari Kabarak University;	L2015-19 The Role of Mediation in Settling Disputes in Succession Matters in Kenya: An Exploratory Study
Nicholas Otieno Ondoro; University of Bradford, UK	L2015-15 Post 2007 Police Reform in Kenya: Towards a Responsiveness Police Reform Agenda

Joy Kasandi Kelemba Kabarak University;	L2015- 16 Governance in Public Service in Kenya Under the New Constitutional Dispensation
Richard Kigen Koech, Kabarak University	L2015-05 Cost of Constitutional Affirmative Action for Elective Positions in County Assemblies in Kenya

### DAY 3 – 16<sup>th</sup> July 2015

**Time: 8.00 a.m. – 8.30 a.m.**

**Venue: KLaw**

**Facilitator: Mrs. Tabitha Kaliakamur**

<b>Activity</b>
Registration

### Symposium S2015-A

*Venue: KLaw 5*

*Date: 16<sup>th</sup> July 2015*

*Time: 8.30am-11.00 am*

*Chair: Prof. Jackson Kitetu*

*Rapporteur: Mr. Eliud Michura*

Author(s)	Title
Maithya J.and N. M. Mbithi Garissa University College	S2015-08 A Review of Wetland Management Systems: A Paradigm of Kenya’s Dwindling Resources.
*Maithya J <sup>1</sup> ., P. Wanjala <sup>2</sup> and N.M.Mbithi <sup>1</sup> <sup>1</sup> Garissa University College <sup>2</sup> , Moi University,	S2015-09 A Survey of the Socioeconomic Importance of Marura Wetland Ecosystem and its Response to increased Multiple Point Source Pollution
Boniface Mwenda Ntarangwi and Patroba Achola Odera ; Jomo Kenyatta University of Agriculture and Technology;	S2015- 12 Determination of Collection Points and Optimal Route for Solid Waste Disposal in Thika Municipality Using GIS
Vundi Nason St. Paul’s University;	S2015-14 An Evaluation of the Community’s Resilience in Coping with the Global Climatic Change: Case of Mwala District, Machakos County
Frederick N. Boithi, Rift Valley Institute of Science and Technology, Nakuru;	S2015-04 Smallholder Farmers’ Innovations for managing Climate Change Induced Water Scarcity in Lare Division Nakuru County, Kenya
Muhia S. Kabarak University	S2015-06 The Impact of Climate Change on Small Holder Dairy Processors: A Case Study of Lanet Division, Nakuru District, Kenya

Maithya J. and N. M. Mbithi Garissa University College	S2015-07 A Review of Fisheries Management Systems in Kenya: Good ideas, Strategic Management, Production Estimates
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### Symposium S2015-B

*Venue: KLAW 4*

*Date: 16<sup>th</sup> July 2015*

*Time: 8.30am-11.00 am*

*Chair: Mr. Nickson Karie*

*Rapporteur: Mr. Kenedy Sawe*

Author(s)	Title
Dennis Kipchumba Tanui Kabarak University;	S2015-03 Use of Ict in the Detection and Prevention of Crime in Kenya
Tarus K Silah; Kabarak University;	S2015-17 Use of Artificial Neural Networks in Optimizing Data Mining Techniques
Peter Kiwial Pembee (Kabarak Univ.), Lawrence K. Kibet and Cynthia J. Kipchilat (Egerton Univ)	S2015- 19 Factors Influencing the use of Library Information Systems by Staff and Students in Kabarak University
J. M. Githeko & R. A. Akach (Egerton Univ.), E. W. Kamau (Savannah Institute for Business and Informatics, Nakuru, Kenya)	S2015-25 Experiences with Live Internet Video Streaming from Semi-Rural Sites in Kenya
Moses M Thiga Kabarak University;	S2015-32 Developing Scalable and Sustainable ICT's for Agriculture: Lessons from the failed NALEP Monitoring and Evaluation System, Kenya.
Nicodemus Aketch Ishmael (Kabarak Univ.), Luke Otieno Okelo (Technical Univ. of Kenya), Njeri Ngaruiya (Univ. of Nairobi)	S2015-33 Model For Smart Buildings In Nairobi To Stem Climate change

### Symposium H2015

*Venue: KLAW 1*

*Date: 16<sup>th</sup> July 2015*

*Time: 9.00 am –11am*

*Chair: Dr. Stephanie Anguka*

*Rapporteur: Dr. Charles Aywak*

Author(s)	Title
Marera Dominic and KS Satyapal University of KwaZulu-Natal, SA	H2015-01 Age estimation using radiographic Staging of Medial Clavicular Epiphysis
Kimutai J.J, Moturi, W.N, Tsimbiri, P.F, and Okullo, J.; Egerton University	S2015-02 Faecal Disposal Practices and their relation to the burden of faecal-oral infections in Isiolo, Kenya
Dominic O Marera	H2015-02 <a href="#">The</a> Prevalence of and Factors

Kabarak University	Contributing to Complicated Malaria in Children Under 5 years at Kampala International University Teaching Hospital
Jacinta King'ori; Email: kingsndegwa@yahoo.com	E2015-12 Personality Disposition to HIV/AIDS; A Study of Locus of Control among HIV Positive Women in Thika Sub-County
Dominic O Marera Kabarak University;	H2015-03 Assessment of Stigmatization Patterns among Clients Attending HIV/AIDS Clinic in Kitagata Hospital
Banzi Wellars, University of Rwanda, Rwanda	H2015-04 Modelling the Effects of peer-Educators' Campaign on the Dynamics of HIV/AIDS in Rwanda
Lydia Chepkoech, Magret Wachira, Vivian Maiywa, Esther Nyoike and Edwin Omayio Mogoi (Kabarak Univ.); Paul Mbiti Shavulimo (Kenya Methodist Univ.) Robert K. Langat (Egerton Univ.)	H2015-05 An Analysis into the Factors Influencing Consumer Preference Choice of Health Facility in Kenyan Health Sector (A Survey of Selected Hospitals in Nyeri Municipality)

11.00 - 11.30	Tea/Coffee Break / Exhibition
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Plenary Session

Time: 11.00 a.m. - 12.30 p.m.

Venue: K LAW 5

Chair: Prof. Jackson Kitetu

Rapporteur: Dr. Dominic Marera

Time	Activity
11.30 a.m. - 12.30 p.m	<b>Invited Speaker: Prof. Maggie Kigozi-Chief Executive Officer Pepsi Crown Beverages Ltd Uganda</b> <b>Topic: Millennium Development Goals-Challenges and Opportunities for a Healthy and Secure Nation.</b>

12.30 pm – 2.00 pm	Exhibition / Lunch Break
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*Symposium S2015 – A*

*Venue: K LAW 5*

*Date: 16<sup>th</sup> July 2015*

*Time: 2.00 – 4.30 pm*

*Chair: Dr. Christopher. Maghanga*

*Rapporteur: Dr. Danice Awinda*

Author(s)	Title
Kitheka Joel Mwithui Jomo kenyatta University of Agricultur and Technology	S2015-01 Penetration Level of Auxiliary Service Voltage Transformer on a Power Transmission Network
John Kimutai Rotich; University of Kabianga; Jacob K. Bitok; University of Eldoret; M. Z. Mapelu; University of Eldoret;	S2015-13 Crank-Nicholson, Du-Fort and Frankel Hybrid Finite Difference Schemes Arising from Operator Splitting for Solving Two Dimensional Burgers Equation
Cheluget Kipkemboi; Kabarak University;	S2015-15 Bacterial Risk and Contamination Level of Raw Drinking Water from Ground and Surface Water Sources in Wamba Division, Samburu District.
Luke Okelo; Technical University of Kenya	S2015- 18 3D for Transfer of Spatial Representation Knowledge: How Users Navigate and Familiarize Themselves with Real World Places Using Virtual Worlds
R. J. Omusonga (Air Navigation Services, Kenya Civil Aviation Authority Nairobi, Kenya), D. M. Nyaanga & J. M. Githeko (Egerton Univ.) and B. K. Chomba (Technical University of Kenya)	S2015-22 Effects of Selected Roofing Materials on Air Navigation Signal Strength
Maithya J <sup>1</sup> , R. Abila <sup>2</sup> and N.M.Mbithi <sup>1</sup> <sup>1</sup> Garissa University College <sup>2</sup> South Eastern Kenya University	S2015- 20 Ecological Evolution of Lake Sare: The need to develop and manage Fisheries Resources of the Small Water Bodies in Kenya
Maithya J <sup>1</sup> ., P. Wanjala <sup>2</sup> and N.M. Mbithi <sup>1</sup> <sup>1</sup> Garissa University College <sup>2</sup> Moi University	S2015- 21 Environmental Impact Assessment of Elgeyo – Eldoret Road Project: why an EIA Report
Jared Amwatta Mullah <sup>1</sup> and Eliud Michura <sup>2</sup> <sup>1</sup> Kenya Forestry Research Institute (KEFRI) Rift Valley Eco-Region Research Programme, Londiani, Kenya <sup>2</sup> Kabarak University	S2015-34 Research Perspectives in Restoration of Watershed Ecosystems under a Changing Climate: Success, Opportunities and Challenges



*Symposium S2015-B*

*Venue: KLAW 4*

*Date: 16<sup>th</sup> July 2015*

*Time: 2.00 pm- 4.30 pm*

*Chair: Dr. Sellah Kebenei*

*Rapporteur: Mr. John Chebor*

Author(s)	Title
Jane Chepserson University of Eldoret	S2015-05 Influence of Trichoderma Harzianum from Semi-arid Soils on Maize Seed Germination and Early Seedling Growth under Drought Stress.
Saiya, E. and Aloo, B. N. University of Eldoret	S2015-23 Evaluation of Bacterial Load in Drinking Water Purified by Ceramic Pot Filters: Towards Simplifying Drinking Water Purification in the Rural Areas
Maithya J. and N. M. Mbithi Garissa University College	S2015-24 Growth Performance of Oreochromis Variabilis Larvae: A Case Study of Effect of Live and Formulated Diets on Growth and Survival rates
Pauline Winnie Orondo (JKUAT), Simon Muriu Mwangi Muriu (Pwani University)	S2015- 10 Comparative Efficacy of Organic Oil Derivative and Microbial Larvicides on Malaria Vectors in Semi-Field Conditions
Pauline Winnie Orondo; Jomo Kenyatta University of Agriculture and Technology, Kenya;	S2015-11 Use of Neem Crude Extracts in the Control of Mosquito Immature Stages in Malindi
Gilbert Nyakundi Okebiro Kisii University –Kitale campus;	S2015-31 Advances in Research on Tea Species Adaptive to Climatic Changes
Cheluget Kipkemboi; Kabarak University	S2015-16 Efficacy of Three Plant Extracts in Reducing Sediment and Heterotrophic Bacterial Load in Surface Raw Water in Samburu District, Kenya.

**Day 4 – 17<sup>th</sup> July 2015**

Time: 8.00 a.m. – 8.30 a.m.

Venue: KLaw

Facilitator:

Activity
Registration

**Symposium E2015-A**

*Venue: KLAW 5*

*Date: 17<sup>th</sup> July 2015*

*Time: 8.30 – 11.00 am*

Chair: Prof. T.M.O Ayodo  
 Rapporteur: Mr. Antony Somba

Author(s)	Title
Jepkemboi R. Choge and Oruta Florence Maasai Mara University;	E2015-01 Policy Formulation and Implementation in Education in Kenya: Reframing the Missing Link
Jepkemboi R. Choge Maasai Mara University	E2015-02 The Role of Education in Social Protection and Climate Change Resilience in Kenya: The Case of Maasai Mara University
Gidudu Hannah Lunyolo (Uganda Christian University,Uganda), T.M.O. Ayodo & Betty Tikoko (Kabarak University, Kenya)	E2015-03 Gender Equality Policies and Women's Access to Management Positions in Government Aided Secondary Schools in Uganda
Khamah Hassan Ali Kenya Methodist University-Mombasa Campus;	E2015-04 Education and the Devolution What It Should Be and Should Not Be: A Case of Mombasa County
Kurgat Martin Moi University	E2015-05 The Cultural Practice Of Female Genital Mutilation (FGM): Media Role In Addressing The Challenges And Opportunities In Kenya
David Gitau Turuthi , Kageni Njagi and Bernard Chemwei;Kabarak University	E2015-06 Effect of Video Mediated Instruction on Students' Achievement, Attitudes and Motivation in Learning Kiswahili Proverbs in Kenya.
Kihiu M. Wabiria Masinde Muliro University of Science and Technology;	E2015-07 Using Computer Program as a Tool to Enhance the Teaching of Mathematics In Schools

### **Symposium E2015-B**

Venue: KLAW 4

Date: 17<sup>th</sup> July 2015

Time: 8.30 am -11.00 am

Chair: Dr. Kageni Njagi

Rapporteur: Mr. Davie Bowen

Author(s)	Title
Tina Vundi Daystar University,	E2015-08 Church and Education: Consideration on Roles in Health Care and Nutrition Services in Early Childhood Development Subsector of Education in Kenya.
E. G.Mwangi & J. Shikhuyu Kirinyaga University College	E2015-09 Challenges of E-Learning Implementation in Kenyan University Education. Case Study of Kimathi University in Nyeri County, Kenya

Zipporah N. Chege & Aggrey M. Sindabi Egerton University;	E2015-10 Prevalence of Alcohol Associated Sexual Dating Violence Among College Students at Rift Valley Institute of Science and Technology, Nakuru County, Kenya
Jepkemboi R. Choge Maasai Mara University	E2015-11 Teacher Education in a Rapidly Changing Learning Environment in Kenya: Pressures and Possibilities
Amos N. Kimani Laikipia University Naivasha Campus;	E2015-13: Application of Social Media in Secondary Education, a Focus on Nakuru Municipality, Nakuru County
Janet M. Kinyua	E2015-14 Factors That Influence Principals' Managerial Effectiveness in Secondary Schools in Nakuru Municipality, Kenya

### **Symposium E2015-C**

*Venue: KLAW 1*

*Date: 17<sup>th</sup> July 2015*

*Time: 8.30 am -11.00 am*

*Chair: Dr. Gladys Kiptiony*

*Rapporteur: Mr. Walter Chemjor*

<b>Author(s)</b>	<b>Title</b>
Mwebi Bisonga, Robert, Kiumi J.K, Wachira, G.M (Laikipia Univ) Maithya, Redempta (South Eastern Kenya University)	E2015-16 Influence of Social-Cultural and Economic Factors on Wastage Rates in Public Secondary Schools in Nyandarua County, Kenya.
Micah Chepchieng, Jesse Kimani ,Tabitha Mwaniki and Stephen Ngari	E2015-17 Integrating Learner Disabilities in Inclusive Schools in Njoro Sub-County.
Florence Kanorio Kisirkoi Maasai Mara University, Kenya;	E2015-18 Curriculum for a Sustainable and a Secure Kenya
Mr. Eshphan W. Kingori & Mr. Philip M. Maina Laikipia University	E2015-19 Effect of Socio-Cultural Factors: Early Marriages, Puberty Related Issue and Community's view on Education on Motivation to Learn among Students in Public Secondary Schools in Laikipia West Sub-County, Laikipia County, Kenya.
Simion Ruto ,Mutua Hanninton Mutku and Elizabeth Mugenyu	E2015-20 An Investigation Into Integrating Biblical Faith and Learning For Sustainable Development
Obondo Gaudence, Moi University; Marande Elizabeth, Maseno University;	E2015-21 The Impact of Using Digital Images in Teaching and Learning in Lower Primary Schools;Kenya
Mary Nyawira Thongo Kenyatta University	E2015-22 An Assessment of the Influence of Women Representation on Social Economic Development in Kirinyaga County: (1992-2014)

**Symposium E2015-D***Venue: KLAW 3**Date: 17<sup>th</sup> July 2015**Time: 8.30 am -11.00 am**Chair: Dr. Esther Kibor**Rapporteur: Dr. Benard chemwei*

<b>Author(s)</b>	<b>Title</b>
Mayabi J.M (Kabarak univ,) Kariuki, M (Egerton Univ) and Mwenje. M (Karatina Univ.)	E2015-23 Prevalence of Sexual Activities among Secondary School students in Nairobi and Busia Counties Kenya
Bryan Mbego and Enoch Opuka Africa International University, Nairobi	E2015-30 Integrating Biblical Faith and Learning for Sustainable Development: A Case Study of Little Jewels Support Program, town, Kenya.
Karimi Amos Nyamu, Daystar University Anne Njango Njiiri, Moi University	E2015-29 The Role of Guidance And Counseling in Curbing Pornography among Youths: a Case of High School Students in Kirinyaga County- Kenya
Stephen Kyalo Mutiso, Egerton Univ. Joash.K. Kibett( University of Kabianga), James Obara (Egerton Univ.)	E2015-28 Perceptions of Teachers Towards Integration Of Adaptations, Mitigations And Cost-Reduction And Sustainability Topics On Climate Change Into Secondary School Agriculture Syllabus In Machakos County, Kenya
Kinuthia Jane Wanjiku, (Pan Africa Christian Univ.); Yakobo J.K.Mutiti, (Pwani Univ.); Wathika Lucy Njeri, (Egerton Univ.)	E2015-27 The Implications of Language and Power in Gikuyu Marriage Negotiation Discursive Domain, for Kenya's Vision 2030.
Kinoti Kibetu Chuka University;	E2015-26 Rolling out Geospatial Tools in Education: Opportunities, Challenges and Lessons from Kenya Secondary Schools
Tom Mong'are Nyagwoka, J.O.M Nandi (MMUST) and Robinson M. Gisemba (Kisii Univ),	E2015-25 The Influence of God's Law to the National Values in Enhancing Sustainable Development at Borabu Border

**Symposium E2015-E***Venue: Senate**Date: 17<sup>th</sup> July 2015**Time: 8.30 am -11.00 am**Chair: Prof James Awino**Rapporteur: Mrs. Ednah Koskei*

<b>Author(s)</b>	<b>Title</b>
Jane Metumi Kiarie Kabarak University;	E2015-31 Counselors Perceptions of The Benefits of Counseling Supervision: A Panacea

	For A Secure World
Francis Ofunya Afande and Mathenge Paul Maina; Dedan Kimathi University of Technology;	E2015-35 Causes and Approaches used in the Management of Truancy in Public Secondary Schools in Nyamira North District, Nyamira County
Kay, J., Kiptiony, G. & Awino, J. Kabarak University;	E2015-36 Influence of Existential Fulfilment on Work Engagement among Kenya Universities Professional Counsellors
Ondicho Rosemary, Njagi Kageni and T.M Ayodo KabarakUniversity Email:Ronyaundi@Yahoo.Com	E2015-32 Availability and use of Media Resources in Teaching and Learning: A Case of Selected Secondary Schools for the Hearing Impaired in Western Kenya
Maurice Kibet Kimosop (Karatina Univ.), Bernard Chemwei. (Kabarak Univ.)	E2015-33 Availability of Computers and Capacity Development of Users to Integrate ICT in Curriculum Management in Schools in Nandi and Uasin Gishu Counties, Kenya
S. M. Mutie; Bernard Chemwei; Antony Somba Mang'oka;	E2015-34 Authorship and Audience: How the Colonial Audience, the Opposition and the Post-Colonial Kenyan Citizenry Shapes Jomo Kenyatta's Identities in Suffering Without Bitterness
Achieng' Odhiambo and Valerie Jumba Kabarak University;	E2015-37 Emancipation of Both Genders: The Need For Gender Egalitarianism And Impartiality

11.00 – 11.30	Tea/Coffee Break
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#### Plenary Session

Time: 11.30 a.m. – 1.00 P.m.

Venue: KLAW 5

Chair: Prof. Ronald Chepkilot

Rapporteur: Mr. Kenneth Sawe

Prayer: Rev. William Koros

Time	Activity
11.30 a.m. -12.30 p.m	<b><i>Invited Speaker: Prof. Teresa A.O Akenga-Vice Chancellor,University of Eldoret</i></b> <b><i>Topic:Education and Innovation for a Secure Nation</i></b>

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**1.00 pm -2.00 Lunch break/Exhibition**

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**Symposium E2015-A***Venue: KLAW 5**Date: 17<sup>th</sup> July 2015**Time: 2.00 pm – 4.30 pm**Chair: Rev. Symon Kiuta**Rapporteur: Mr Dave Bowen*

<b>Author(s)</b>	<b>Title</b>
Bernard Chemwei Kabarak University;	E2015-38 Influence of Gender on the Achievement of Form Three Students in Poetry in a Cooperative Learning Set up
Gilbert Nyakundi Okebiro Kisii university-Kitale campus;	E2015-41 Regulating Pictures and Photographs in Teaching in Education Systems Globally
Gilbert Nyakundi Okebiro Kisii university-Kitale campus;	E2015-39 Hidden Polygamy among Dignitaries in African States
John Mwangi (Mount Kenya Univ.) Mwangi J. Gitau. (University of Maryland), Kioko .Pst.( <sup>3</sup> St. Paul's univ.), Maingi N.W (Mount Kenya Univ.)	E2015-40 Education in Biblical perspective enhances Good Governance for Sustainable Development
Ngwacho G. Areba, Theodore .M.O Ayodo &.Benard Chemwei; Kabarak University;	E2015-43 Effects of Hidden Costs of Free Secondary Education on Transition and Completion Rates: A Case Study of Selected Public Boarding Schools in Kisii County.
Waithaka M. N* and Mwangi J. Mount Kenya University Nakuru Campus;	E2015-44 Kenya's Religious Institutions Role in Devolution for Sustainable Development
Kageni Njagi and Bernard Chemwei Kabarak University, Kenya;	E2015-45 The Relationship between University Students' Training in Computing and their Motivation to Utilize ICT Resources in Learning in Selected Universities in Nakuru County, Kenya

**Symposium E2015 - B***Venue: KLAW 4**Date: 17<sup>th</sup> July 2015**Time: 2.00 pm -4.30 pm**Chair:Rev William Koros**Rapporteur: Mr. Walter Chemjor*

<b>Author(s)</b>	<b>Title</b>
Esther J. Kibor Kabarak University, Nakuru	E2015-47 The Design and Purpose of Marriage in Biblical Perspective: Is Separation or Divorce an Option?
Ruth Nyambura Egerton University	E2015-46 The role of Samburu Body Adornment in Challenging Gender Identities

	in the Era of Cultural Globalisation
Symon Kiuta Kabarak University	E2015-48 The Role of Christian Family on The Promotion of Positive Ethnicity. (A Case Study of Christian Families in Rongai Constituency, Nakuru County)
Tabot, Benedicta Aiyobei and Rono Joseph Kipkurui University of Kabianga, Kericho;	E2015-49 Towards a Cost-effective Model for Quality Supervision of Student Teachers during Teaching Practice in Public Universities in Kenya.
Bryan Mbego and Enoch Opuka Africa International University, Nairobi	E2015-50 Integrating Biblical Faith and Learning for Sustainable Development: A Case Study of Little Jewels Support Program, town, Kenya.
Jackline Sigei, Betty Tikoko, and Nelson Ngare: Kabarak University Evans Tallam; Mt. Kenya University	E2015-86 Curbing Dropout Rates of Students in Co Educational Public Day Secondary Schools in Rongai Sub County, Nakuru County, Kenya.
Evans Tallam; Mt. Kenya University Jackline Sigei and Betty Tikoko; Kabarak University	E2015-87 An Evaluation on the Level of Discipline among Students in Public Secondary Schools in Rongai Sub County, Nakuru County, Kenya.

*Symposium E2015 -C*

*Venue: KLAW 3*

*Date: 17<sup>th</sup> July 2015*

*Time: 2.00 pm -4.30 pm*

*Chair: Mr. Fredrick Ngala*

*Rapporteur: Ms. Faith Yator*

<b>Author(s)</b>	<b>Title</b>
Gilbert Nyakundi Okebiro Kisii University- Kitale Campus;	E2015-61 Regulating Pictures and Photographs in Teaching in Education Systems Globally
Kageni Njagi and Bernard Chemwei Kabarak University, Kenya ;	E2015-64 The Relationship between University Students' Training in Computing and their Motivation to Utilize ICT Resources in Learning in Selected Universities in Nakuru County, Kenya
Geoffrey Kipkirui Ngetich; Moi University, Kenya;	E2015-69 An Analysis Of Retention Rates Before And After The Introduction Of Government Funded Tuition In Public Secondary Schools In Kericho County
Jacinta M Adhiambo The Catholic University of Eastern Africa;	E2015-70 Principal Leadership an agenda for secure schools: Experience of a principal in Kenya
Lucy abuodha odhiambo Technical University of Kenya;	E2015-71 ICT, Education, Quality and Excellence
Lamek Kiprutto Ronoh and John	E2015-72 Latent Indicators of Student's

Oluoch Rongo University College ;	Performance in Uasing Gishu County: Case of Selected Schools
Francis Ofunya Afande and Mathenge Paul Maina; Dedan Kimathi University of Technology	E2015- 73 Effect of Guidance and Counselling on Pupils in Public Primary Schools in Makadara Division of Nairobi County
Syallow C.M; Hellen Sang	E2015-74 The Need For Counseling In Work Place
Syallow C.M; Hellen Sang;	E2015- 75 Effective Use of Teaching Strategies in Managing Change in the Classroom

*Symposium E2015 -D*

*Venue: KLAW 1*

*Date: 17<sup>th</sup> July 2015*

*Time: 2.00 pm -4.30 pm*

*Chair:Dr Benard Chemwei*

*Rapporteur: Mrs. Tabitha Kaliakamur*

TINA VUNDI St. Paul's University, Limuru;	E2015-79 Church and Education: Consideration on Roles in Health Care and Nutrition Services in Early Childhood Development Subsector of Education in Kenya
Racheal N. Wanjohi; laikipia university; Nyang'ara N.M; Laikipia university; Kay James; Kabarak University;	E2015-81 Influence of Self-Regulation of Facebook Usage on Academic Performance among University Students in Nakuru Town Campuses, Nakuru County, Kenya
Moses Gatambuki Gathigia ;Karatina University; Martin C. Njoroge; PAC University;	E2015-82 The teaching of vocabulary in Kenyan pre-schools: The elephant in the room?
Japheth Kigen;	E2015-83 Theology of Suffering: Global Reflection in Light of Biblical Christianity
Japheth Kigen;	E2015-84 Apostasy: A Theological Bottleneck in Islam in the Light of Biblical Christianity
Janet M. Kinyua, T.M.O. Ayodo and James O. Awino ; Kabarak University;	E2015-85 Perceptions of Trainers on Impact of Performance Contracting on Efficiency in Management Practices in Technical Training Institutes in Mount Kenya Region, Kenya
George Ochieng Ohanya; Siaya Central Primary School, Theodore M.O. Ayodo; Kabarak University	E2015-78 Challenges of Integration and use of Ict in Kenyan Education Sector: A case Study of the Ministry of Education

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**4.30 pm - Tea/Coffee/Snacks**

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## **ABSTRACTS**

### **STUDENT EXHIBITIONS**

#### **EX2015-01 Digital Model of Zero-grazing (DM Zero-grazing)**

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##### **Abstract**

Dm zero-grazing is a place set aside for feeding the domestic animals. The place is prepared in the automated manner. It is able to feed the animals without the presence of a shepherd or the owner. It works in the principals of hooks law and law of magnetism. There is the need of a water pump electricity source and a motor. The motor is used to rotate the conveyor belt to move the feeds from the tank to the feeds trough, while the pump is used to pump water to the water trough, the electricity is used to run both water pump and the motor. The project makes the work easy. The wastes are automatically eliminated. Adoption of this project will help may people by saving time. The project favors mostly beef farmers. So let us apply to improve our grazing mode.

#### **EX2015-02 A Smoke Activated Emergency Exit**

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##### **Abstract**

Fire has become a major threat in enclosed public places such as schools, industries, markets, shopping malls etc. This has led to loss of live, serious injuries and destruction of property. In most case emergency exists do not exist and where they exist they are normally closed, or they can be opened from inside but rarely tested to ensure their functionality. In the recent past, the number of fire situations in enclosed areas has escalated in both number and complexity. The general expectation by the society at large is that these institutions have both moral and legal obligations to provide a safe and secure environment to those placed under their care. To meet these obligations, institutions must be prepared to respond to any emergency situation that may arise. This project proposes an automatic smoke activation of emergency exit doors in enclosed premises to ensure rapid evacuation of people, reduce time in manual door opening. This will eliminate fear, panic which accompany fire tragedies leading to trampling as people scamper for safety. It is worthily to note time of critical essence in any evacuation.

#### **EX2015-03 Design and Construction of Smart Power Controller**

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##### **Abstract**

Do you want to live in a green world? Are you a victim of frequent blackouts? Do you receive plenty of sunshine? This project aims to provide a solution for the above questions. An automatic power controller will be designed and constructed to incorporate solar energy, KPLC and a

generator. The system utilizes a smart relay which will be programmed to meet the following conditions. It will monitor presence or absence of solar energy through the solar panels and also kplc, the relay will also monitor battery charge level. Wherever solar is available it will be used directly via inverter to consumer appliances, the solar will also charge the battery if low charge is detected. At night solar energy will be unavailable so the battery will be on load also via inverter. If the battery goes low and kplc is available, kplc then it will take up the load and charges the battery simultaneously. In a situation of no solar, low battery charge and absence of kplc the system will energize a standby generator. All these processes will be done automatically. Initially the project is aimed at providing power supply to lighting circuit and light load socket outlets to minimize the high cost accompanied with purchase of equipment that can meet the full load. I constructed the controller in a standard panel enclosure ensuring all the safety measures were met. The project met its objectives whereby solar energy is optimized hence conservation of environment is achieved. The consumer will worry less about blackout because of the secondary power supply which will cater mostly for lighting and light load socket.

### **EX2015-04 KABU Exam Results App**

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#### **Abstract**

As internet connectivity is becoming easy to access, it is playing an important role in the life of every human being. This shows that mobile technology can easily be understood by anyone. In today's world, the android market is growing rapidly with more than 1 million android mobile applications published which are being enjoyed by millions of people around the globe. The applications are serving different users in different fields of life such as medicine, entertainment, education and marketing. The numbers of users are growing rapidly each day with the affordability of smart phones. The proposed online mobile application (KABU EXAM Results APP) is engineered to provide a dynamic and engaging experience for mobile users. The proposed development of a mobile app would serve many users (Students) needs across the institution. Students require additional ways to access services from the exam and time tabling department. Such services include; ability to view exam time table, exam results and semester time table while on the other hand receive briefings on the same from the department. There are several drawbacks in our current system which is either manual or web based. This is a major drawback for students and the faculty staff who are inside and outside the campus. In order to get information on the current system, one needs to visit the university website or the faculty office.

### **EX2015-05 Online Certificate Authentication System (OCAS)**

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#### **Abstract**

The Degree Certificate awarded by a University is an asset of prime importance in an individual's life. Circulation of fake degree certificates is a menace to the society, and a threat to the integrity of both the certificate holder and the educational institution that has awarded the certificate. Hence, there is a pressing need for universities and other learning institutions to adopt

a process that can ensure security of information and authenticity of the certificate issued. Fake certificates that could easily pass for genuine ones are conveniently produced in the backstreet of major towns in Kenya. While the authorities have managed to burst some of the rackets involved in this crime, the practice is widely believed to be going on, thanks to technology and its sophistication. However, this situation cannot, and must not be left to continue. Online Certificate Authentication System (OCAS) enables universities to curb the problem of fake degree certificates and forgery of mark sheets. A certificate issuing authority can award certificates with an embedded reference number that references the holder's name, year of graduation, program and entire transcript, and photographs, all digitally signed by the university authorities. OCAS addresses these issues by providing means of linking certificates from multiple certifying authorities with features useful in combating identity theft and invasion of privacy. The system receives the certificate authentication request from a potential employer/institution and pass the request to the certificate issuing authority for verification. The main beneficiaries of the system include learning institutions, potential employers and recruitment agencies. OCAS also enables potential employers, foreign embassies, universities and stakeholders to access the certificate holders' data, and verify the identity of the certificate holder and authenticity of the certificate.

### **EX2015-06 Online Shopping Mobile APP**

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#### **Abstract**

Supermarkets are where people go and purchase goods of many varieties.. Shopping can be enjoyable and also a way to pass time but also it is tiresome and time consuming. As we all well know that time is valuable for those who treasure it. Even sometimes the supermarkets may have a small number of tellers to provide their services to the consumers making this a problem that need solving. The consumers need a quicker and convenient way that isn't time consuming to do their shopping; it should only take less time to do their shopping. This is why we have come up with a solution to deal with this problem by making an online Android platform Application called Urban Shopper. The Urban Shopper mobile application will give the consumers an online platform that will enable them to do their shopping from anywhere being at home or work, it also enables them to pay for their goods and services offered by the supermarkets then come at the end of the day to pick their goods or even choose the supermarket delivery services offered to deliver them to where they want them to be delivered. By using this proposed solution consumers will be able to save time and relax and I believe that supermarket will sell more goods this way so it's a win-win situation.

## **Ex2015-07 Reclaiming old with new: Asphalt concrete and cobblestone transformation?**

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Roads and infrastructure will be faced with multiple changes over the coming decades – challenges that in many ways bear little resemblance to those previously faced and as such will require new approaches. The major objective of this abstract is to transform the way road infrastructure is conceived and constructed as a key part of assisting society to respond to climatic changes and reduce other environmental pressures. Concrete asphalt possess a challenge of environment pollution by producing gases that contribute to the effect of global warming. Concrete creates hard surfaces which contribute to surface run-off that cause soil erosion, water pollution and flooding. The surface-runoff of water tend to pick up gasoline, motor oil, heavy metals, trash and other pollutants. Asphalt darkened nature also contribute to Urban heat island. Urban heat island is a city or a metropolitan area that is significantly warmer than in surrounding rural areas due to human activities. The temperature difference is usually larger at night than during the day. The main cause of urban heat island is from the modification of land surfaces which use materials that effectively store short-wave radiation. This includes black asphalt which absorb a large percentage of solar heat. The urban heat island decreases air quality by increasing the production of pollutants such as ozone and decreases water quality as warmer water flow into area streams and put stress on their eco-systems. By exploring the adverse effects of using concrete asphalt in road construction I aim to investigate the transformative effect of using cobblestones in road construction. The benefit of cobblestone is that it does not depend on crude oil. It is naturally mined and has no negative effects to the environments.

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## **B2015-01 Security, Information and Communication in Development**

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### **Abstract**

The purpose of this study was to assess the impact communication, information and security have on development. The researchers analyzed how communication and information can impact the development of a country, in this case Kenya. Through content analysis research method and an in-depth interview with a producer of a local radio station, the study attempts to answer which are the most appropriate communication strategies, media, policy makers, NGO's and community leaders can use to convey information and communicate effectively. The authors analyzed several documents and researches to demonstrate the vital role information plays in changing a people's attitudes and encouraging them to embrace new behavior that leads to development in different communities. Some of the documents examined include the Vision 2030 and the yet-to-be passed information bill. Vision 2030 is a roadmap for the country's development in various areas such as security, infrastructure, agriculture, political arena among others. The information bill if passed will ensure the right to access of information as contained in the constitution. The bill defines information as "all records held by a public entity." The in-

depth interview showcased the importance of radio as a tool to combat food security which has been a challenge in the past yet communities need to be taught how to be self-sufficient by taking appropriate actions to ensure that they can fend for themselves. From our analysis of the information bill, it is clear that this law would play a crucial part in ensuring citizens get essential information for development. Communication is essential for Vision 2030 to be actualized so that the country can experience exponential development.

*Key words: communication, development, access to information, power of radio*

### **B2015-02 Detecting creative Accounting and Corporate Financial Distress Using the Altman Model: The Case of Mumias Sugar Company**

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#### **Abstract**

The proliferation of creative accounting practices to camouflage financial distress is increasingly becoming common in modern corporations. Directors and managers are under immense pressure to post good results from shareholders. Key motivations for these practices include the need to justify bonus related pay, management's benefits from shares and share options, job security and cover up fraud. Mumias Sugar Company is a listed company at the Nairobi Securities Exchange. With a majority public shareholding standing at approximately 70.89%, its recent underperformance has left shareholders, cane farmers, employees, suppliers, financiers and related stakeholders with a bitter taste in the mouth. This paper employs the use of the Altman's Z score model to determine how early investors, the regulator (Capital Markets Authority) and other stakeholders could have detected early the financial distress facing the company. Data used consists of a full set of published financial statements for the last 6 years. The analysis reveals that incidences of creative accounting and financial distress could have been detected as early as 2010, which way longer before the company's share prices tumbled down and forced the government hand with a proposed bailout of 500 million Shillings. For a more accurate detection of fraud, this paper recommends the model to be used in addition to a clear emphasis on cash flow statements as opposed to the comprehensive income and statement of financial position.

*Keywords: bankruptcy, financial distress, creative accounting, Altman's Z score*

### **B2015-03 Achieving Service Excellence in the Public Sector in Kenya: The Critical Role of Human Resource Management**

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#### **Abstract**

Is human resource management the solution to the largely inefficient and poor service delivery in the public sector in Kenya? This paper seeks to answer this question by examining the critical role of human resource management (HRM) in driving service delivery. It is generally agreed that the four distinct characteristics of high-performance organizations are, people, culture, structure and leadership. HRM is at the heart of all these elements and is the critical link that holds them together. The paper will begin by critically examining how public service employees

can be managed to create a customer-responsive culture. There is a general consensus most successful service organizations are committed to effective management of HR, including recruitment, selection, training, performance management and retention practices. It will be argued that to achieve excellent service delivery, HR strategies in the public service must be aligned to the business strategy and that HRM policy and practices must support exceptional customer service. One of the strategic roles of HRM is to contribute to the shaping and embedding of organizational culture. The paper suggests that HRM should be involved in this process by creating and sustaining a public service culture that upholds excellence, is results-oriented, and one that encourages employees to reach their full potential. The paper will also argue that HRM should be involved in the design of the organizational structure and will show the importance of a culture-structure fit in enhancing service delivery in the public sector. Finally, the paper will discuss the leadership role of HRM in supporting service delivery. Empirical and theoretical literatures indicates that successful service organizations are characterized by leadership that performs symbolic actions that send signals about the kind of behavior and performance leaders wish to encourage and promote and substantive actions that indicate the management's commitment to improving service delivery.

### **B2015-04 Internet Advertising: Investigating Attitudinal Differences of University Students in Kenya**

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#### **Abstract**

The enhanced ICT infrastructure in Kenya resulting in improved and faster internet connection along with a drop in prices for internet services has raised the volume of internet users prompting interest in the growth of businesses on the internet with estimates projecting spending on internet advertising to increase (Kenya ICT Board, 2010; Synovate, 2010). The rapid growth and development has been quite sharp making the country the 4<sup>th</sup> in Africa behind Nigeria, Egypt and South Africa and 33<sup>rd</sup> in the world (ITU, 2014). Despite this growth minimal empirical research has been undertaken to explore consumer attitude towards Internet advertising in Kenya which potentially could help Internet advertising designers, marketers and other stakeholders better strategize their online advertising portfolios. Studies conducted in this area have mainly been in other contexts other than Kenya's. This study therefore explored attitudinal differences towards internet advertising with university students in Kenya as the target population. A cross sectional survey research design was adopted for the study to determine attitudinal differences towards internet advertising. A pilot test on the survey instrument used to collect data on attitude towards Internet advertising was conducted with Cronbach's alpha statistic returning a value of 0.727. A sample size of 383 subjects from a population of 153,591 university students was picked using both proportional and random sampling techniques. An independent sample t – test analysis was used to determine attitudinal differences towards Internet advertising among male and female respondents. Results found no evidence of attitudinal differences towards Internet advertising between male and female university students in Kenya.

**Keywords:** Internet advertising, Attitude towards internet advertising and Gender.

## **B2015-05 Agri Business Sustainability in Kenya: Challenges of Tea Farming Enterprise at Household level**

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### **Abstract**

Agricultural sector continues to be the backbone of the Kenyan economy with an annual direct and indirect contribution to GDP of 24 and 27 percent, respectively. Out of this, tea is the leading contributor, accounting for about 4% of GDP of the country. Tea farming has made great contribution to the socio-economic development of Kenya as a Country in the last five decades. Wealth creation and accumulation in rural Kenya in the so called white Highlands is certainly synonymous with tea farming. The good performance of the tea enterprise so far has been attributed to Government support, facilitative institutional structure, private sector contribution and growing international demand for Kenyan tea. However in the recent past, changes occurring in the tea sector have brought about uncertainty which has shaken the prospects of this enterprise at the household level. Changes in farm and farmer characteristics have diminished productivity and quality of green leaf. Increasing production costs, unpredictable climatic changes and declining global prices for processed tea as well as competition from emerging producers in the industry have curtailed income levels of the farmers concerned. The paper is supported by field data obtained from small-holder tea farmers sampled from Nyeri County in Central Kenya, using the simple random sampling method and secondary data from the tea sector stakeholders. The paper indicates that a serious turnaround effort is required if these trends are to be reversed. The paper recommends that the tea farm enterprise at household level be re-engineered through commercialization if tea is going to remain a significant enterprise among the masses in Kenyan farming community for sustainable agribusiness development.

*Key words: Household; Tea Farming Enterprise; Sustainability and sustainable Development; Productivity;*

## **B2015-06 Application and Practice of Sustainable Procurement in Kenya**

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### **Abstract**

Sustainable procurement isn't simply about being "green" but it's also about; socially and ethically responsible purchasing, minimizing environmental impact through the supply chain, delivering economically sound solutions and good business practice. Sustainable procurement is rising on the policy agenda for many countries but knowledge remains limited. In Kenya, the government has put in place a wide range of policy, institutional and legislative to govern all business activities in a move towards green procurement. These include; Environmental Management and Coordination Act (EMCA) 1999, Kenya Solid Waste Management by laws of 2007, The Factories Act (Cap 514 of the Laws of Kenya), The Environmental Management and Co-ordination Regulations, 2006. However, with all these acts and legislations, adoption of green procurement has been slow resulting in lower diffusion rate in Kenya. This study therefore



sought to evaluate the steps made towards sustainable procurement in Kenya, to establish the benefits accrued to a firm which embraces sustainable procurement, to establish the challenges faced by a firm which embraces sustainable procurement and to suggest opportunities for improving the use of sustainable procurement in Kenya. The study mainly relied on published secondary data from three industries in Kenya and reports by bodies such as PPOA, CIPs and UNEP. Purposive / selective sampling design was employed in selecting the three industries under study. The study established that the drive towards pollution prevention and minimization of environmental impacts at all stages of the product lifecycle from sourcing of raw materials, through manufacturing, transport, use and disposal has not been embraced by the sampled industries, there was evidence of allegations of irregular procurement at some companies, including non-adherence to environmental issues. Advantages associated with sustainable procurement included; minimizing risks, gaining market share and delivering better service provision. Challenges encountered were: employees resistant to change, the initial cost incurred, poor policy communication among others

Key words: *Green procurement, sustainable purchasing, pollution, legal framework*

## **B2015-07 Corporate Leadership And Performance Of Public Universities In Kenya**

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### **Abstract**

Corporate leadership is comprised of the executives and managers who run a company. It occurs when a company foresees ultimate success from the strong leaders that run its daily operations. Leaders themselves are responsible for effectively managing the company's resources, working with advertising teams and inspiring others to do their best work. The current study will establish the effect of corporate leadership on the performance of public universities in Kenya. Leadership theories will form the basis of the research. The study will employ descriptive causal survey research design. Employees from public universities will form the study population. The research will utilize both primary and secondary data. The research instruments that will be used will include questionnaire and the interview schedules. On validity of the instruments, a pilot test will be done in one of the private universities whose findings will not be included in the final research study. On reliability of the instruments the study will use the acceptable Cronbach's Alpha coefficient of at least 0.7 in non-clinical research. The data will be analyzed using SPSS version 20 using descriptive and inferential statistical tools. Descriptive statistics will include mean, standard deviation and frequency distribution while inferential statistics will include one-way Analysis of Variance (ANOVA) at 95% confidence and 0.05% significance level, Karl Pearson Correlation Coefficient and regression analysis. The outcome of the research is expected to be a statistically positive effect between leadership and performance of public universities in Kenya. The outcome of this study will contribute to existing pool of knowledge on strategic management and will form a basis of reference by interested parties.

**Key words:** *Leadership, performance, public universities*

## **B2015-08 Application of Socialization, Externalization, Combination, and Internalization (SECI) model in the management of knowledge: A case study of Kenya Methodist University**

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### **Abstract**

This paper examines the application of socialization, externalization, combination and internalization at Kenya Methodist University. Nonaka and Takeuchi proposed a model of the knowledge creating process to understand the dynamic nature of knowledge creation and to manage such process effectively. The creation of knowledge is a continuous process of dynamic interaction between tacit and explicit. Knowledge management involves connecting people with people, as well as people with information. It is a management philosophy, which combines good practice in purposeful information management with a culture of organizational learning, in order to improve business performance. The core skills of library and information professionals are both relevant and essential to effective knowledge management, but they are often under-utilized and under-valued. The four models of knowledge conversion interact in the spiral of knowledge creation. To explore the role of the SECI model at Kenya Methodist University, this paper analyzes all the various ways that the employers and managers use the model to manage knowledge among their staff and students at large. A desktop research was used in the Gathering and analyzing of information. In the process, Information and communication technology provides tools to handle knowledge in diverse domains by knowledge workers and experts so as to develop a knowledge industry to offer knowledge based products and services. Provision of such knowledge products and services, leads to emergence of knowledge industry, which is capable of meeting the ever expanding needs of humanity, thus rebuilding organizations so that knowledge can flow freely to create opportunities for problem solving. SECI model helped change how employees at Kenya Methodist University manage their knowledge

## **B2015-09 Progress on the 8<sup>th</sup> MDG in Kenya by 2015**

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### **Abstract**

The research is on the Millennium Development Goals (MDGs) that were put in place by the United Nations in order to improve the living standards of the people worldwide. MDG 8 is about developing global partnerships for development. Most countries, for instance the developing and the least developed nations have not established strong global partnerships. Global partnerships are important because they promote peace and economic prosperity which is a good recipe for development. This research paper looks into the progress made in Kenya on the achievement of the 8<sup>th</sup> MDG by 2015. This is because 2015 is the deadline for the achievement of the goals. The paper will identify the shortcomings and give recommendations for the same. Has Kenya been able to establish global partnerships? This research paper will employ the use of secondary data collection techniques from books, pamphlets, journals and the Kenyan parliamentary acts. The research paper found out that in achieving MDG: 8, the government has not put in a lot of effort to ensure the achievement of this goal. For instance the private public partnership (PPP) act was signed in 2013, two years to the deadline. Most of the global

partnerships have benefited the partners and not Kenya despite being a partner. For instance there has been an increased number of imports than exports which benefit the other partners. Kenya has made a substantial step towards globalization. In concluding, Kenya has to ensure that global partnerships are being strengthened for development purposes. The research recommends that the government should strengthen exports through value addition through industrialization.

**Key words:** *partnerships, developing, substantial, private and public.*

### **B2015-10 Assessing County Government Strategies on Disaster Risk Management- A Case Study of Nakuru County**

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#### **Abstract**

Disasters, both natural and manmade, have the potential to lead to significant human and economic losses at any time without warning. The rising emergencies such as fires, severe weather, floods, pandemic event and terrorist attack that rapid urbanization brings to Nakuru necessitated the current study. The main aim of the study was to assess the extent to which disaster management strategies have been deployed in the Nakuru County. The specific objectives were to examine how hazard mitigation, disaster preparedness, disaster response and disaster recovery strategies have been applied to bring about community resilience among Nakuru County residents. The study used the descriptive survey. The target population consisted of those with disaster management roles employed at the county level comprising 456 employees where a sample of 138 employees was selected using stratified random sampling. A semi-structured questionnaire was used to collect data from the respondents. Collected data was analyzed using both descriptive and inferential statistics. Percentages were used to describe the responses while inferential statistics involving correlation analysis, regression analysis and chi-square test were used. Correlation analysis showed positive relationship between improved disaster mitigation, disaster preparedness, disaster response and disaster recovery strategies on community resilience. The study recommended need for training, increased communication and coordination on an ongoing basis with all the key stakeholders. Further research is needed to highlight how that coordination can be carried out.

### **B2015-11 Value-based Recruitment and Selection: A Critical Factor in Sustaining Public Sector Reforms in Kenya**

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This paper examines the link between value-based recruitment and selection and the success of public sector reforms in Kenya. The working culture and value-system of the public service as often been identified as the weakest link in the achievement of Kenya Vision 2030 goals and public sector reforms. There is a general consensus that people are the most important asset of an organization; the argument in this paper is that, the right people are indeed the most important asset. The right employees are those who possess, the technical as well as behavioral competencies that are required to perform a job effectively. The right employees consistently exhibit desired

behavior and attitudes that is aligned to the organizational values regardless of external control or incentives. Public sector reforms have often laid a lot of emphasis on restructuring and performance contracting with little attention to the behavioral attributes of employees. Research has shown that where values - which employees use as behavioral guides - are not effectively developed in employees, there is a high probability that performance standards will not be attained, even though employees have the right knowledge and appropriate skills developed. The central argument of this paper is that sustained development can be achieved by attracting and selecting candidates, who share in, believe in and accept the professional values enshrined in the constitution of Kenya 2010 or have the potential to do so. The paper will discuss the importance of organizational values, illustrates the relationship between value-based recruitment and selection and organizational effectiveness; it will discuss the benefits of achieving a person-organization fit, and the negative consequences of a mis-match thereof. It will also offer suggestion on how to recruit and select the right employees for the public sector.

**Key words:** *Recruitment and selection, organizational values, Organizational effectiveness, Public sector reforms*

### **B2015-12 Main Futures of Succession Planning: A Case of NGO Sector in Kenya**

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#### **Abstract**

All organizations, whether in the private or public sectors, need to be able to find and manage the movement of people that possess right skills to fill key position in the organization at present and in future. Succession planning in the recent past has received more attention not only as a concern for the management of human resources, but also as institutional strategic management component for ensuring performance and growth. In Kenya, the recent developments in the Non-governmental organizations (NGO) sector are marked with the enactment of Non-Governmental Organizations' Act 2012 to ensure that NGOs maintain high standards in their internal governance, practice transparency and accountability. NGOs constantly face challenges not only associated with the perpetual evolving social, political and economic environment, but also with respect to rapid changing demographics of their workforce. Contingency theory and path goal theory provided a theoretical perspective whereas, Rothwels' Seven Star and Aberdeen's best in class models were adopted as theoretical models. The objective of this study was to assess succession planning practices in NGO sector. A total of 270 NGOs based in Nairobi participated in the study selected through stratified and random sampling strategies. The research designs adopted were descriptive and quantitative. Findings revealed that, less than half of the NGOs had written succession planning policies (39%) and only (18%) indicated that they identify potential successors. The moderating variables, years of establishment and number of staff establishment had no effect on succession planning. The main futures of succession planning that include strategic human resource programmes, succession characteristics that include top management support, total employee involvement linkage to strategic plan and periodic assessment as variables are significantly attributed to effective succession planning.

**Key words:** *Succession Planning, NGOs and Kenya*

## **B2015-13 The Effects of Financial Resources on the Marketing Effectiveness Among Micro and Small Enterprises in Kitui County – Kenya**

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### **Abstract**

The micro and small enterprises play an important role in the Kenyan Economy. Economic Survey indicates that SMEs created 426.9 thousand jobs out of 474.5 thousand which translated to 89.9%. In 2009 out of the total 543.3 thousand new jobs created in Kenya, the sector created 434 thousand jobs a 79.9%. The sector contributed KSh. 806,170 million of GDP which was 59 percent of total Gross Domestic Product that year. The role and importance of SMEs in a knowledge-based economy has been highly appreciated and acknowledged. Moreover, in the present economy, SMEs are facing tremendous challenges and threats to survive in a competitive environment. The purpose of this research is to examine the effects of financial resources on the marketing effectiveness among micro and small enterprises in Kitui County in Kenya. The study will be guided by the following specific objectives; to determine the influence of financial resources on marketing effectiveness among micro and small enterprises in Kitui County. The study will be based on Resource based view theory. The research will use cross sectional survey. The target population will be 3,200 registered Micro and Small Enterprises in Kitui County in the main towns of the County such as Kitui, Mutomo and Mwingi towns where this research will be undertaken. Regression analysis will be used while data will be collected using both closed and open ended questionnaires. The findings of this research will be a valuable asset to Kitui County which has high failure rates of SMEs in addition to high unemployment and poverty levels. High failure rates of micro and small enterprises must therefore be addressed to help foster high economic growth.

**Key Words:** *Firm Level Characteristics, Marketing effectiveness, Micro and Small Enterprises and Kitui County.*

## **B2015-14 Effect of Agency Banking On the Performance of Commercial Banks in Kenya: Case of Machakos County, Kenya**

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### **Abstract**

Technological advancements has not only affected the way of living but has had an effect on the way people do their banking. Technology has therefore created greater opportunities to service providers to offer great flexibility to customers. Agency banking involves the use of a number of information technologies. This study utilized a descriptive survey. The population of the study was 5 Commercial Banks offering agency banking in Machakos County, where the respondents of the study were the employees of the respective banks and the agents operating the outlets. The sample of the study was 150 respondents where 115 were the employees of the respective banks and 35 the agents. Primary data was collected by administering a semi-structured questionnaire and an interview. Quantitative data was gathered and the information was presented through the use of bar charts, graphs and pie charts. Content analysis was applied to test qualitative data. The study revealed that agency banking regulations negatively affects performance of commercial

banks in Kenya. The study established that agency banking staff skills and competencies positively affects performance of commercial banks in Kenya. The study found that marketing strategies used in agency banking positively affects the performance of commercial banks in Kenya. The study revealed that agency banking monitoring and evaluation positively affected performance of commercial banks in Kenya. The findings of this study will help other financial institutions to understand the effects of agency banking on commercial banks performance as well as attain the goal of financial Inclusion. The study recommends that the banking institutions should consider intensifying the agency banking network as this will ensure financial inclusion

**Key words:** *Agency banking regulations, marketing strategies, skills and competencies, monitoring and evaluation, performance of commercial banks.*

### **B2015-15 Factors influencing Performance of Business Process Re-engineering Projects in Banks in Kenya: Case of Kenya Commercial Bank**

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#### **Abstract**

The Kenyan banking sector has found it important to take up business process reengineering in an attempt to greatly improve performance. Business process reengineering has however proved to encounter challenges from beginning to end and there are various factors that influence the smooth initiation and materialization of such business process reengineering projects. The aim of the study was to investigate factors that influence performance of Business Process Reengineering projects in the Kenya Commercial Bank. Specifically, the study sought to investigate how management commitment, communication of change, processes and systems management and, monitoring and evaluation influence the performance of Business Process Reengineering projects at KCB Ltd. The study adopted a descriptive research design. The target population was the Kenya Commercial Bank Ltd and the target respondents were the 4,066 employees from which a sample size of 351 was derived to participate in the study. A questionnaire and interviews were used to collect primary data from the respondents who included senior and middle management and non-management staff. In analyzing of the data descriptive statistics was employed with measures of central tendency used to describe the central tendency and variance of the data. The study found that management commitment, communication of change, processes and systems management and, monitoring and evaluation influence the performance of Business Process Reengineering projects at KCB Ltd. The study concluded that employees at KCB Ltd were communicated early enough on the business processes; the needs for change were clearly communicated to them. The study concludes that monitoring and evaluation affect BPR through the kind of support offered and participation in strategy formulation. The study recommends that effective change management is a success factor for Business Process Re-engineering; organizations should therefore ensure communication of change is made to enhance the meeting of project objectives and effectively prepare their organizations for change. The study recommends that further research should be conducted to investigate how the other factors that have not been captured in this study affect the performance of BPR at KCB Ltd and in other organizations in other industries across East Africa and beyond.

**Key words:** *Business process re-engineering, management commitment, communication of change, processes and systems management, monitoring and evaluation*

## **B2015-16 An Investigation of Factors Influencing Global Expansion Performance of Kenyan Firms**

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### **Abstract**

The purpose of this research was to investigate the factors influencing global expansion performance of Kenyan firms. Kenyan firms must ultimately possess the capability to innovate and interact effectively with other firms in more or less tightly connected networks of shared production and innovation, critical capabilities in the current wave of globalization. The research study used descriptive and inferential design as a chosen design. The researcher used factor analysis and multiple/multivariate regression analysis to determine the functional relationship between independent variables (factors) and the dependent variable. The independent variables were: innovation & technology, fitness of management, global marketing strategy; and support environment and the dependent variable, global performance. A random sample of 205 firms was drawn out of 440 members of Kenya Association of Manufacturers, based in Nairobi, from Kenya Association of Manufacturers and Exporters Directory of 2012. The senior management of the selected firms were surveyed and 175 firms responded. The key findings from the research are that: there is a functional relationship between supportive environment for Kenyan firms and their global expansion performance; there is functional relationship between global market strategy and global expansion performance; there is a functional relationship between firms' intensity in innovation and technology and global expansion performance, and there is functional relationship between fitness (global management competence) and global expansion performance. The implications for practice is that the ranking of the factors in order of priority supports focusing concern on the orientation of business strategy toward global market strategy, market research geared at obtaining foreign market intelligence and information, innovation and technology, product adaptation, service orientation, collaborative ventures, and long-range vision as key factors in making Kenyan firms successful in the international market. The implication for policy is that there is need for collaboration between industry and government in pursuing policies for global expansion performance and among SMEs and large enterprises particularly in areas of rapid technological change. The Kenyan government should put in place mechanism to fund research in her universities that is geared at giving the country some technological leads and to commercialize the research outputs. In addition it would create an arm that gathers information of research outputs/ideas in the rest of the world universities. It is further recommended that an early-warning system to alert firms of changes that may lead to potential failure in their global business activities be developed. Also the Kenyan government should have more bilateral agreements and lobbying of WTO to ensure fair play - in this regard, develop trade negotiations capabilities within government, co-opt leading trade lawyers into trade delegations.

**Key words:** *global performance; fitness of management; innovation and technology; supportive environment; global market strategy; foreign marketing intelligence*

## **B2015-17 Changes In The Microfinance Institutions And Small Business Lending**

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### **Abstract**

Many small businesses rely on microfinance institutions as their source of funds for growth and development. However, after the establishment of the microfinance act in 2008, many MFI's have commercialized and evolved into regulated banking institutions. Many changes come with this transformation. The clientele base, products offered ownership structure and the general structure of the MFI. An analysis of the transformation shows that many institutions have had positive results expected in areas such as ownership and expansive outreach. However, have these changes helped in the improvement of the small businesses that rely on these institutions? This study shows changes in the MFI's affects the interaction of the MFIs with their clientele, mostly the small businesses. The businesses therefore shift their focus on their source of funds to other institutions. This paper gives an analysis of the empirical evidence of the effects of these changes in MFI's on the small businesses in various countries.

**Key words:** *Microfinance, Lending, Small Business*

## **B2015-18 Opportunity Threat Effect of Displacement and Resettlement through Initiated Development: The Case of Kirandich River Dam of Baringo County**

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### **Abstract**

Each year, millions of persons are forcibly displaced by development projects, whether dams, roads, reservoirs or oil, and mining projects. While such projects can bring enormous benefits to the society, they also impose costs, which are often borne by its poor and most marginalized members. This study was motivated by the desire to establish the concerns that have been raised in the course of establishing Kirandich River Dam in Baringo County. The objective of the study were to establish the opportunities and threats arising from the displacement and resettlement, the cohesion strategies that have been pursued by the resettled persons to mitigate against resettlement, and how these resettled persons have coped with the resettlement. Two models were applied in the study, that is, the Scudder-Colson's four stage model and Cernea's Impoverishment Risks and Reconstruction Model (IRRM). These models complement each other in explaining how people and socio-cultural systems respond to relocation and identify the opportunities and threats intrinsic to resettlement as well as coping mechanisms respectively. The research is a case study. The study used both quantitative and qualitative data collected from both primary and secondary sources. Sample of one hundred resettled persons within the study area and five key informants were interviewed to collect primary data. The key informants were to provide insights into the study. Secondary data was obtained from relevant books, journals, government publications and research reports. . The findings were that the resettled people were involved in a limited manner at policy and procedure formulation. Threats were related to capital



losses that is, human, and natural, physical and social while opportunities were related to potential for wealth creation from an environment that is well endowed with natural resources. Socio-economic strategies included relational activities involving establishment of places of worship, schools, trading centers and intra and extra-community commerce, multiple livelihoods and use of modern technologies in the farms as well as commerce. The coping mechanisms involved building long-term solutions and delivery instruments which have generally improved the living conditions of the resettled persons. The study recommends consultative relocation process, pre-development threat-opportunities identification, and a feedback mechanism to monitor coping progress. The study suggests further research that involves detailing out the differential impact of resettlement on gender and age.

### **B2015-19 Effects of Sports sponsorship as a promotional strategy on performance of Companies involved in Sports in Kenya**

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#### **Abstract**

The effects of sports sponsorship as a promotional strategy on performance of companies involved in sports has been extensively researched over the past two decades with authors generally agreeing on its positive outcome. Many companies make investment to sponsor the big sports events such as Olympics, world Cup and popular sports games. Effective promotional strategy involves five strategic decisions factors one of them being target audience. It appears however that previous studies placed much emphasis on its applications on fans' loyalty and consumers' memory towards sponsoring brands but there is lack of specific studies that have attempted to link this strategic decision to performance of the companies. The aim of this research was to examine the relationship on the level of awareness of companies and their products within the respect targeted market in Kenya. The study adopted a descriptive survey design targeting a population of 87 companies involved in sports sponsorship in Kenya. Data were collected by means of self-administration of questionnaire completed by a sample size of 82 respondents from operations/marketing department. A pilot study was carried out to pretest and validate the questionnaire. The Statistical Package for Social Sciences (SPSS) computer software was used for analysis to generate data array that would be used for subsequent analysis of the data. Inferential statistics was also used to analyze the statistical sample. Descriptive statistics was used to summarize the data. This included percentages, frequencies, tables and other graphical presentations for ease of understanding and analysis. The study used regression analysis to establish the relation between the study variable and ANOVA to test the research hypothesis. The study revealed that connecting the company brand through sponsorship, helps to develop a link in the minds of the target audience that the company is responsible. It revealed that sponsorship generate awareness, or raise levels of knowledge of a company's products and services, product lines. From the regression analysis the study revealed that there was positive significant relationship between target market awareness and performance of the company. This finding may be of help to the owner/managers to be more target market's awareness in order for them to survive in the intensively competitive market environment.

**Key words:** *sponsorship, target market, target audience, awareness, interest, firms and performance*

## **B2015-20 Conflict Management Continuum and Sustainable development in West Pokot and Turkana Counties**

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### **Abstract**

There has been persistent conflict between the Pokots and Turkanas in Kapedo and Kainuk area. There are frequent attacks either from the Pokots or Turkanas, as consequence, once on community is attacked, the other prepares to revenge, which lead to lose of lives, properties and livestock which is regarded as the backbone of economy. The attack paralyses all systems of educational, commercial and social that leads to development. Scholars wonder what is the root cause of the conflict which retards community development? The problem of study is no one can resolve conflicts and thus make peace without knowing the root causes of the conflicts are identified and dealt. It's against this problem that the current research to be conducted to know causes. The purpose is to study the best strategy to be applied to bring peace and reconciliation among the Turkana and Pokots and lead to sustainable development in the area. The study would adopt in-depth interviews through simple random sampling technique in respondents from both communities in Kapedo and Kainuk areas. The key findings are one, people lose lives and the civil servants fear to work in the area. Two, commercial or business activities stop to operate for several days and three, pupils stop going to schools because of fear of attacks and lead to the closure of schools. It is concluded that there no economic growth and sustainable development in Kapendo and Kainuk regions. As a consequence these regions would not be at par with other parts of Kenya in levels of development. The research recommends for conflicts to be resolved, it must be beyond surface issues and address the substantive and emotional issues as the same time the communities' needs and interests that are at the root of the conflicts. This implies lasting peace between conflicting communities is possible only when deeper needs are accommodated and satisfied.

Key words: *Root cause, conflict, peace, reconciliation, sustainable development.*

## **B2015-21 Effectiveness of Social Media in Advertising University programmes and Recruitment of New Students: A Case Study of St. Paul's University**

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### **Abstract**

Use of social media in offering learning institutions is key in today's business world. The University Public Relations Officers are exploiting new media of communication as avenues for them to reach their target audiences who in this case are students to enroll in their programs. Social media has become a game changer in how recruitment and advertising is carried out by universities in Kenya. Social media have almost replaced the traditional media of communication in reaching the students. This study sought to evaluate the use of social media by universities in Kenya in advertising, collection of feedback, and recruitment of new students. The study had three objectives. It sought to find the benefits of using social media in reaching out to students, the effectiveness of social media as a medium for advertising of academic programs as well as an evaluation of social media as a mode of collecting feedback from university students. The

research employed a case study method by studying one of the Private universities in Kenya. Stratified random sampling was used to obtain the study subjects. A questionnaire was used to obtain data from the study subjects. The data analyzed was from students who enrolled during the January 2015 semester. From the questionnaires, it was established that social media particularly Facebook was most used by the students and they had visited the university page to get certain information regarding the courses they applied for. Use of social media improved accessibility of students to the university. The major problem that the use of social media encounters is that few people have access to internet and the fact that one needs to have internet bundles for them to access internet which are costly. Results from the questionnaires verified that social media was used to educate the students, collection of feedback, inform them about new aspects in the university and help the students in solving problems related to the university services. The study concluded that use of social media has had a major impact on University communication and public relations. The study recommends that social media if well used and managed can help universities reach out to more students as well as help in maintaining good communication and relationships between the university management and the students.

**Key words:** *social media, university, advertising, communication*

### **B2015-22 Talents versus academic intelligentsia in regional development and entrepreneurship**

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#### **Abstract**

Talents are the inborn traits and skills which are displayed by a person in a specific trade with a lot of easiness, without the acquired knowledge in the educational system. The problem is in Africa children take a long period to identify their talents and when they use them, some African parents discourage them and encourage them to continue with academic struggles in educational system and block their talents. Areas or trades or disciplines where talents are excellently emulated and proved correct include poetry, music, dancing, sports, writing, preaching and so on. The objective is to study the best way to identify talents when children are young in primary level of education. The study would adopt descriptive-analytical method. The results are one, people realise their talents when they are old and cannot exploit them fully, two some talents exploited properly have transformed people from poverty to wealth within a short period of time, leading to economic growth and regional development for example athletics. It is concluded that the system of education in some countries in Africa does not allow children to identify their talents in early stages of education. It is recommended the governments to change the systems of education and introduce the system of education which would aid children identify talents in early stages of education.

**Key words:** *Talents, Intelligentsia, Implementation, Educational system*

### **B2015-23 Building Sustainable Competitive Advantages in of Higher Education Institutions: A Review**

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### **Abstract**

All organizations are involved in some form of competition, if not for customers, then for gaining scarce resources. With the globalization, there is no sector including the higher education where the competition has not grown significantly. The quality of education is a central factor of competition, and therefore, to maintain competitiveness, HEIs have found themselves in the position of undertaking planning – which is expected to determine the institution's continued survival and development in a highly changing and competitive environment which has brought new challenges for firms, HEIs, industries and countries. Success in such times is demanding new perspectives on competitiveness. In view of the foregoing, HEI's must be more professional and entrepreneurial in their management through strategic thinking in their management of resources and capabilities, routines, rents and appropriability; building a good image in the society; cultivating students with appropriate preparation for the job market; performance evaluation, among others. To-date, there are 67 universities in Kenya and counting, with almost fifty percent constituting private universities. Majority of them lack the resource capacity to adequately address the needs of courses in engineering, medical sciences, ICT and other sciences, even those who claim to offer these courses, use obsolete facilities, poorly remunerated and demoralized faculties with some curricula highly outdated. Furthermore, they also lack adequately trained manpower to deliver the courses that they provide, thus making the quality of some of their graduates questionable. Albeit as most of the big, both from private and public chartered universities, indicate that they are producing competent graduates, the noise coming out from the end-users, the employers – indicate that graduates from Kenyan universities are less competitive in the job market due to gaps between their training and the skills employers want, with a claim that they're "half-baked" by the time they graduate and leave college/university for the job market. In this research paper, we're are going to examine key factors and strategies that HEIs managers need to embark on in order to gain sustainable competitive advantage by acquiring attributes of being better and/or unique, good reputation, growing customer base, recognizable name, desirable market position, market oriented curricula, producing quality market ready students, engaging competent faculties including top level reputable professors, possessing an effective international network and rich experiential knowledge, etc. – to answer the question of excellence of what, reputation of what, and status of what – with a view to ultimately producing competent, highly skilled with experiential capability and hence job ready graduates.

### **B2015-26 Factors Influencing the Use of Library Information Systems by Staff and Students in Kabarak University**

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### **Abstract**

Kabarak University Library has invested heavily in ICT resources and internet connectivity in the quest of gaining a competitive advantage but despite the heavy investment by the university, there seems to be low use by majority of staff and students of Kabarak University. The low usage highlights questions on the benefits that have accrued from the investment. The study therefore, sought to find out the extent of influence of various factors on the use of the library information systems with an aim of establishing difficulties in using the information systems in the day-to-day academic activities. Specifically, the study examined the factors influencing the use of library information systems by staff and students at Kabarak University for teaching, learning and research with a view to recommending measures for improvement. The study employed a survey research design to illustrate the phenomenon under examination. The target population of the study was staff and students in Kabarak University main campus. Primary data were collected using questionnaires and analyzed using both descriptive and inferential statistics. Findings from the study indicated that University ICT centre was most popular point of access for the users followed by the library and in most instances availability of resources were associated with increased information systems' usage frequency. The study further found out that there were significant usage differences between staff and students where students had more usage preference than their staff counterparts. In addition, both information quality and system quality contributed to increased library information system usage. Based on the findings, the study concluded that demographic background of the respondents, resources availability, and user satisfaction influenced the use of the library information systems. Finally, the study recommended measures which include modalities to ensure remote access to library information systems so as to facilitate varied modes of learning, teaching and research in order to meet the needs of the varied user demographic segments; promotional campaigns (user education) to library users for availability of electronic information sources in the library; and further research be carried out to compare the influence of the factors examined in this study involving both public and private universities.

**Key words:** *Use; Information Systems; Academic Library; Kabarak.*

## **B2015 – 27 The Potential Role of Flood Crop Farming in Achieving Food Security in Turkana Central**

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### **Abstract**

Small-scale farmers dominate the agricultural sector in Kenya and depend mostly on rain-fed agriculture, which is constantly threatened by the ever-changing and unpredictable climatic variations. Droughts in arid and semi-arid Northern Kenya, compounded with other socio-economic constraints, have led to reduced agricultural productivity. Agro-pastoralists in these prone areas practice crop farming in the floodplains. During rainy seasons, rivers burst their banks and inundate the flood plains, depositing alluvial materials rich in nutrients suitable for increased crop production. This study assessed the potential role of flood crop farming in achieving food security in Turkana central constituency. Stratified random sampling was used to administer 100 questionnaires to respondents practicing flood crop farming and focused group

discussion held with relevant stakeholders. Both descriptive and inferential statistics were also used to analyze data generated from questionnaires. The study findings indicated that food crops for subsistence were cultivated at 90% of the total crop cover. The major months of adequate and inadequate food provisioning were June to August (43%) and October to January (36%), respectively. 79% and 83% of farmers preferred growing kundu and sorghum, respectively; sorghum was notably preferred because of its resistance to drought and double harvesting. 93% of flood crop farmers were food secure with improved rural incomes. Additionally, 62% of the respondents had adopted to agro-based indigenous adaptation strategies and 30% modern adaptation strategies to cope with the effects of climate change and water resource developments. In conclusion, synergies of multiple drivers are critical for policy advice to empower more resilient food systems now and in the future. This paper will contribute in informing the private and public sector to develop farmers' local capacity in achieving food security in the ASALs of Kenya. Finally, we recommend an Integrated Flood Management, which incorporates maximizing the net benefits from floodplains to attain food security and preserve riverine ecosystems, while reducing the risks and vulnerabilities due to flooding.

### **B2015-28 Effectiveness Of Project – Exit Strategies On Project Sustainability: A Case Of Community – Based Projects In Siaya County Kenya**

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#### **Abstract**

It is regrettable that we have been in development for decades but it is amazing that no serious work has been done on project/programme sustainability. Sustainability is not something one can stick into a project like a budget line! It is a way of life, a way of thinking. If we don't model it ourselves, it is difficult that we can achieve it. The success of a project is the continuation of benefits upon completion of external support or that positive effects can be sustained however, overall sustainability remains a major challenge! A responsible project/programme withdrawal requires a sustainable exit strategy which should be implemented when objectives have been met. A number of exit strategies has been in place yet, project/programme sustainability hasn't yielded much due to: flexible timelines, institutional capacity building, benchmark for measuring progress and social profiling. Therefore this paper seeks to assess the effectiveness of project-exit strategies in community based projects' sustainability! In addressing this, qualitative and quantitative research paradigms and Case study approach will be used. Both secondary and primary data will be collected in five purposely selected sub-counties. Data collection tools includes questionnaires, interviews, document and material analysis and focus group discussion. Data analysis to be done descriptively and inferentially. Data presentation will be through tables and charts. The study revealed a number of constraining elements to likelihood of future sustainability: poor formulation of viable exit strategies, weak M&E systems, limited capacity-building, insufficient systematic approach to incentives and ongoing technical support, underinvestment in institutional strengthening and capacity development etc. The study concludes that understanding sustainability (both conceptually and operationally), and intentionally engaging in sustainability enhancement efforts, has strategic importance and practical implications to donors, programme implementers and stakeholders. This study recommends full blown community preparedness prior to phase out of every project/programme.

**Key words:** *Exit Strategy, Sustainability, Projects*

**B2015-29 An Evaluation of Millennium Development Goals in Reduction of Maternal and Child Mortality in Narok County, Kenya**

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**Abstract**

Millennium Development Goals are the 21st Century worlds' concern to improve human way of life by 2015. In Kenya the Millennium Development Goals for reduction of maternal and child mortality has been recently powered by the beyond zero initiative which started in the year 2014 with the aim of reducing mortality as well as contributing towards promotion of maternal health for new born and children. Survey design was used in this study in Narok County. The target population comprised of mothers with children below five years of age in Narok County. Purposive random sampling was used to arrive at 150 as the accessible population. Questionnaires and interview guides were employed as data collection tools. Face validity of instruments was determined by Maasai Mara University specialist lecturers and health care workers in the clinic while reliability was tested by computing reliability coefficient. Data was analyzed with the aid of statistical package for social science (SPSS); the findings showed that 39% reduction of mortality rate has been realized since 2007. The study recommends that there should be a follow up protocol in projects put forward to ensure that the Millennium Development Goals are sustained in Narok County and other areas.

**B2015-30 Effectiveness Of Credit Reference Bureau On Enhancing Financial Performance: A Survey Of Financial Institutions In Nakuru County**

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**Abstract**

The study examined the effectiveness of credit reference bureau on the financial Performance in financial institutions in Nakuru County. The Study used a survey study research design. The population of the study involved 210 employees of financial institutions in Nakuru County. The study obtained primary data by the use of self- administered Questionnaires while review of related literature was used to collect secondary Data. The Primary data was analyzed using descriptive statistics. The researcher used the statistical Package for Social Sciences (SPSS) version 17 in analysis for the Study. The findings of the study were expected to provide a source of information for banking professionals to understand, control and to reduce the impact of increasing non-performing loans from the economy due to credit risk. CRB has played a significant role in as far as risk identification and monitoring is concerned. Moreover, CRB has significantly helped reduce the rate of loan default in the economy as well as increasing credit access. Lastly, it has led to a reduction in the level of moral hazard in financial institutions in

Nakuru county. It has been deduced that clients are not getting appropriately rewarded for having a good credit repayment history. Measures need to be put in place to ensure that clients get an advantage for promptly repaying their loans in terms of the interest rate they pay. It is hoped that this will help cushion those with a good credit rating from CRB hence increasing efficiency in the banking sector.

### **B2015- 31 Challenges Faced by Micro- Finance Institutions in Lending of Funds to Small Scale Businesses: A Survey of Selected Small Businesses in Nakuru CBD**

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#### **Abstract**

The general objective of the study was to determine the challenges faced by micro-finance institutions in lending of funds to small scale businesses within Nakuru CBD. The specific objectives of the study were to establish how defaults is a challenge faced by microfinance institutions in lending of funds to small scale businesses, to determine whether loan securities is a challenge faced by microfinance institutions in lending of funds, to find out how loan repayment period is a challenge faced by microfinance institutions in lending of funds and to determine whether credit policies is a challenge faced by microfinance institutions in lending of funds to small scale businesses in Nakuru CBD. The study will be beneficial to the MFIs as it will provide them with an opportunity to manage their finances with ease. The study target 200 employees of 4 selected microfinance institutions in Nakuru CBD. Stratified proportionate sampling technique was used to get a sample size of 40 respondents. Data was collected with the help of a structured questionnaire. Data analysis was done using descriptive statistic. The findings revealed that, loan defaults, loan securities, loan repayment period and credit policies was a challenge in lending of funds to small scale businesses. Based on the research findings of the study, the researcher recommended that the Association of Micro-Finance Institutions (AMFIs) should come up with rules and regulation that can reduce loan default hence enhance the lending to small scale businesses. The researcher also recommended that the type of loan security should be attainable to reduce these challenges in lending small scale businesses.

### **B2015- 33 Master in Business Administration program and the Industry: The missing link**

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#### **Abstract**

This study sought to establish the gaps in the MBA, Strategic Management program in Kenya. The study also sought to give recommendations on a more practical MBA to the corporate world. The research studied hundred MBA students in five selected universities and forty employees in five selected companies in Kenya. The universities studied include: Daystar University, Africa Nazarene University, Strathmore University, University of Nairobi and Kenyatta University. The organizations studied include EABL, KCB, Cooperative Bank, KAA, KCAA AND Compation International. The research design for this study was descriptive design, with purposive and systematic sampling design. The data was collected through structured questionnaires and interviews. The study found that the MBA-SM is relevant to the corporate and is impacting



graduates at their places of work. However some programmes lacked experiential learning or simulations in their curricula, and did not address specific needs of students depending on the nature of their industry. Most of the case studies used by MBA students to analyse industries are not local and therefore may not give true picture of local industries. Some MBA Curricula lacked some key courses that would give students a solid grounding in business such as Corporate Governance, Insurance and Risk Management and so forth . Some universities never invited experts from the industry to give lectures to their MBA students during class sessions. The study recommended integration of experiential learning or simulation, mentoring, exposure to the industry, and meet specific needs of students from different industries.

### **B2015-34 A Conceptual Framework Model for Intra-Operable E-Government for Kenya: Issues and the Solution**

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#### **Abstract**

The rapid growth of modern communication and Information Technology (IT) is having far-reaching effects on all aspects of modern life including the e-Government. At base level, it is giving rise to timely delivery of information and services; at a level above, it is enabling citizens to actually conduct transactions for those services such as paying taxes or claiming and receiving benefits. Therefore, the e-Government is not limited to the simple on-line integration and presentation of information pertaining to public administration; it rather represents a deep recasting of the procedures and structure of the administration resulting in complex yet collaborative workflows among the participating departments. This requires e- Government solutions to be intra-operable, distributed, and open in nature. The current solutions to e-Government services in Kenya have either completely ignored this extremely important point or else have not paid due attention to it. In this paper, we enlighten these issues in depth and give directions for building a new distributed, multi-domain, and multi-layered e-Government architecture based on the idea of service-oriented computing. We present a services-based model framework as a solution for intra-operable e-Government architecture for Kenyans. The framework is scalable and extensible, in the sense that it can self-configure and facilitate new and future e-services to be easily deployed and integrated into it. It also provides a solid foundation on which a secure and dependable e-Government infrastructure can be built.

### **B2015-35 Effect Debt Financing on the Profitability of Kenya Tea Development Authority Processing Factories: A Case of Kericho and Bomet Counties**

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#### **Abstract**

Companies prefer debt financing because they anticipate a higher return hence the use of leverage is one way to improve the performance of the firm. This study aimed at investigating the effects of debt financing on KTDA tea processing factories performance in Kericho and Bomet counties. This study was carried due to the fact that it was not clear how debt financing influences the financial performance of tea processing factories. This study was limited to KTDA tea processing firms in Bomet and Kericho counties and to the period 2008/2009-2012/2013 financial years. Secondary data was used in the study where two performance measures (including return on equity, and return on assets) as dependent variable and debt financing (including short –term debt, long- term debt and total debt to total assets, and total debt to total equity ) as independent variable. The study sample was from all the nine tea factories in region five of KTDA that have been in operation and/or existence for more than five years and hence the readiness of Annual Reports of the financial year 2008-2013. This study employed trend analysis for the tea processing factories financial performance trends and a panel fixed effect regression model to establish the effects of debt financing on the ROA and ROE of tea processing factories. The results indicate that firm performance, which is measured by (ROE and ROA), is significantly and positively associated with long-term debt and total debt at 1% and 5% respectively, while on the other hand, short-term debt show a negative and significant relationship at 5% in the two models. The negative relation between short-term debt and the profitability of tea processing factories means that supplying the finance through short-term debts does not lead to profitability. Therefore, based on these results the study recommends that, the tea processing factories must consider using an optimal debt financing for the firm, which in turn, will minimize the cost of capital, and hence the cost of financing the tea processing operations

### **B2015-36 An Analysis of Factors Influencing Capital Structure Decisions of Microfinance Institutions in Kenya**

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#### **Abstract**

Over the last 20 years, microfinance institutions in Kenya have largely developed through concerted grant funding. This situation prevailed up to the late 1990s when key donors started pushing MFIs to start moving towards sustainability in their operations. Most MFIs in Kenya had started off as NGOs and had built significant supply side competencies. The push towards sustainability was therefore not going to be easy for institutions previously focused on free spending outreach drives, rather than sustainable operations. Factor influencing MFIs' capital structure and its composition, has been scanty in developing countries and especially in Kenya, constituting a knowledge gap in Kenya, hence studying the field will be critical. This study sought to analyze factors influencing capital structure decisions in MFIs in Nairobi, Kenya

Despite a critical role played by capital structures in maximizing returns in MFIs, there had been scant empirical studies that determine factor influencing capital structure decisions in the institutions. The research design that was employed in this study was a descriptive survey research design inform of a survey. Descriptive statistics was used to describe the main features of a collection of data in quantitative terms. One important use of descriptive statistics is to summarize a collection of data in a clear and understandable way. The target population of this study was 65 MFI which were registered in with Association of Microfinance Institutions in Kenya (AMFIK, 2013) .This study used data for registered selected MFIs in Nairobi Kenya. The study population was 49 senior managers. Stratified sampling was used to select the sample of the study. Questionnaires were used to obtain important information about the population. The collected data was well examined and checked for completeness and comprehensibility. The data was then summarized, coded and tabulated. The Statistical Package for Social Sciences software (version 21) was used to generate data which was analyzed using descriptive statistics. Data presentation was done by the use of pie charts, bar charts and graphs, percentages and frequency tables. Inferential statistics such as regression and correlation analysis was used to establish the extent to which the factors influence capital structure decisions in MFIs. The study concluded that market conditions in which microfinance institutions operate influence capital structure decisions. These market conditions included foreign exchange rates, high interest rates, MFI funding patterns and pledging the firm's assets as collateral and regulations governing microfinance institutions and financial policies governing MFI influencing capital financing option. The study concluded that interest charged on source of financing and high cost of volatility of earnings increases an MFI's probability of financial distress and high cost of fund ration influence financing option. The study concluded that there existed a significant positive influence of business risks on capital decisions in microfinance institutions. The study also established that high cost of volatility of earnings increases a MFI's probability of financial distress and high cost of fund ration influence financing option. The study recommends that MFIs should strive to enhance growth. This was because anticipated growth rate provides a measure of extent to which earning per share (EPS) of MFIs are likely to be magnified by leverage. The management of the MFIs should make a relative cost benefit analysis against debt and equity financing in anticipation to growth to determine appropriate capital structure.

### **B2015- 37 The Collective Effect of Succession Planning, Succession Timing and Successor Commitment on Corporate Growth Strategy among Local Family Businesses in the Manufacturing Sector in Nairobi County**

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#### **Abstract**

The dilemma of management succession is considered a potential source of danger and conflict in family businesses. The continued existence and growth of family businesses is important and their growth depends on effective management succession and the growth strategies that they adopt overtime. The generally accepted figure for succession is 3 out of 10 surviving to second generation and 16% to the third. Statistics in Kenya show that 3 out of 5 businesses fail within the first three years of operation. It is estimated that approximately half of all family businesses fail to make it to the next generation because of inefficient succession and those that survive 3 to 4 generations have a complex web of structures, agreements, councils and forms of accountability to manage their wealth. Management succession is a double edged sword where

on one hand the successor may encourage strategic initiatives that move the business to a higher level or stifle the growth of the business by having no strategies in place. It is therefore important that family businesses plan the succession on time and ensure the successor is committed to the growth of the organization. This study sought to establish the combined effect of succession planning, succession timing and successor commitment on corporate growth strategy in local family businesses in the manufacturing sector in Nairobi County.

### **B2015- 38 The Contributions of ICTs to Peace building in Mount Elgon Region**

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#### **Abstract**

Conflicts have brought great distress and loss of lives across the globe. Unfortunately, the African continent has witnessed the greatest impact of these conflicts. However, from 2011, other the predominantly Muslim countries especially in the Middle East, Arabia and Africa also witnessed similar conflicts that led to loss of lives and overthrow of dictatorial regimes. The intra-ethnic conflict witnessed in Mount Elgon region between the Soy and Ndorobo clans of the Sabaot in 2006-2008 had great socio-economic implications in the region. While most literature has focused on the causes of intra-ethnic conflicts in Africa and Kenya in particular, there has been less focus on peace building. More so on the role of ICTs to the peace building process for societies emerging from conflicts. This study was designed to assess the contributions of ICTs to the peace building process in Mount Elgon region. The study was based on the conflict transformation theory which argues that conflict transformation is a long process requiring different interventions by different actors employing various approaches towards attainment of peace. The theory also posits that ICTs have the potential of transforming conflicts into peaceful co-existence characterized by new structures and new relationships. The study used questionnaires, in-depth interviews, and focus group discussions to collect data. The target sample was the residents in, state and non-state actors involved in the peace building process in Mt Elgon region. The study showed that ICTs such as mobile telephones, the Internet and radio, social media platforms and ICTs greatly contributed to the peace building process in the region. The paper contributes to the on-going dialogue on peace building efforts in Mt. Elgon and other regions experiencing similar conflicts and recommends. The study recommends more investment in ICTs by both state and non-state actors involved in the peace building process in the region. Keywords: ICTs, Peace building, Mount Elgon Region \*The paper is part of the ongoing PhD research by the student.

### **B2015-39 Application and Practice of Sustainable Procurement in Kenya**

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#### **Abstract**

Sustainable procurement isn't simply about being "green" but it's also about; socially and ethically responsible purchasing, minimizing environmental impact through the supply chain, delivering economically sound solutions and good business practice. Sustainable procurement is rising on the policy agenda for many countries but knowledge remains limited. In Kenya, the

government has put in place a wide range of policy, institutional and legislative to govern all business activities in a move towards green procurement. These include; Environmental Management and Coordination Act (EMCA) 1999, Kenya Solid Waste Management by laws of 2007, The Factories Act (Cap 514 of the Laws of Kenya), The Environmental Management and Co-ordination Regulations, 2006. However, with all these acts and legislations, adoption of green procurement has been slow resulting in lower diffusion rate in Kenya. This study therefore sought to evaluate the steps made towards sustainable procurement in Kenya, to establish the benefits accrued to a firm which embraces sustainable procurement, to establish the challenges faced by a firm which embraces sustainable procurement and to suggest opportunities for improving the use of sustainable procurement in Kenya. The study mainly relied on published secondary data from three industries in Kenya and reports by bodies such as PPOA, CIPs and UNEP. Purposive / selective sampling design was employed in selecting the three industries under study. The study established that the drive towards pollution prevention and minimization of environmental impacts at all stages of the product lifecycle from sourcing of raw materials, through manufacturing, transport, use and disposal has not been embraced by the sampled industries, there was evidence of allegations of irregular procurement at some companies, including non-adherence to environmental issues. Advantages associated with sustainable procurement included; minimizing risks, gaining market share and delivering better service provision. Challenges encountered were: employees resistant to change, the initial cost incurred, poor policy communication among others

## **B2015-40 Security, Information and Communication in Development**

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### **Abstract**

The purpose of this study was to assess the impact communication, information and security have on development. The researchers analyzed how communication and information can impact the development of a country, in this case Kenya. Through content analysis research method and an in-depth interview with a producer of a local radio station, the study attempts to answer which are the most appropriate communication strategies, media, policy makers, NGO's and community leaders can use to convey information and communicate effectively. The authors analyzed several documents and researches to demonstrate the vital role information plays in changing a people's attitudes and encouraging them to embrace new behavior that leads to development in different communities. Some of the documents examined include the Vision 2030 and the yet-to-be passed information bill. Vision 2030 is a roadmap for the country's development in various areas such as security, infrastructure, agriculture, political arena among others. The information bill if passed will ensure the right to access of information as contained in the constitution. The bill defines information as "all records held by a public entity." The in-depth interview showcased the importance of radio as a tool to combat food security which has been a challenge in the past yet communities need to be taught how to be self-sufficient by taking appropriate actions to ensure that they can fend for themselves. From our analysis of the information bill, it is clear that this law would play a crucial part in ensuring citizens get essential information for development. Communication is essential for Vision 2030 to be actualized so that the country can experience exponential development.

## **B2015- 41 Antecedents of Commitment of Academic Staff in Universities in Uganda: A Conceptual Paper**

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### **Abstract**

The importance of employee commitment in so far as enhancing employee job performance is concerned is widely recognised in scholarly literature. Committed employees may be more likely to engage in extra-role behaviours such as creativity, have less intentions of leaving the organisation, accept and enhance organisational change and involve in knowledge sharing. Despite the apparent importance of employee commitment, evidence shows that it is lacking among academic staff of universities of Uganda. Academic staff engage in frequent strikes, threats of strikes, absenteeism, delayed handing in of marks, part-time activities and show declining motivation and commitment to excellence. This means that if the problem of lack of employee commitment among academic staff persists, there will be complete decline in the academic standards of universities. This paper proposes a study on antecedents that can enhance employee commitment of academic staff in universities of Uganda that are namely, human resource management practices, organisational characteristics and personal characteristics. This paper suggests research hypotheses for future research. The antecedents will serve as a useful guideline for development of mechanisms for promoting employee commitment of academic staff. The study will be a survey based on correlational design using academic staff in universities in Uganda as units of analysis. Data will be analysed quantitatively.

## **B2015- 42 Human Resource Development pace with Emotional Intelligence Performance**

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### **Abstract**

Today, in a globalization world, Human Resource Development plays a critical role in the emotional intelligence; the subject matter has got the attention from the public and seen as an important aspect in the employee performance. Now, other than the high degree of knowledge, experience, education, and skills, employers generally know that work efficiency of an employee is closely related to emotional intelligence of a person. This is because the emotional aspects such as high self-confidence, adaptability when faced with problems and obstacles in the workplace, motivate themselves to achieve common goals, work effectively in teamwork and have the skills to deal with the conflicts is needed in the environment of work and improving the performance of a job and adapt with work environment. This is because emotional intelligence is an important element for creating a productive working condition. It is not only good for others, but also to deal with People with a fully constructive way when a problem arises. The issues of employee today such as exposed to stress, not creative, less motivated in their careers cause the organization to decrease in the productivity. All of this requires mental, emotional, and physical strength. Human Resource Development builds up an employee who can control their own actions, having resilience to achieve their goal in life, which can manage their negative feelings and build friendship with others. Conversely, a person who has a low level of emotional intelligence is a person acting accordance to their feeling, without thinking about consequences, are not clear about their goal in life, less skills to manage negative feelings, and also has less

skills to build friendship with other people. Moreover, emotions have an impact on everything that people do emotions can lead to an increased morale amongst employees, but it also can be otherwise. individual leads to the absenteeism and apathy is caused by negative emotions such as fear, anxiety, anger and hostility, use up much of the individual's energy, and lower morale.

Keywords: Emotions, Development, Performance

### **B2015- 43 Effect of Debt Financing on Financial Performance of Small and Medium Enterprises in Eldoret County (2010-2014)**

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#### **Abstract**

Small businesses are the engines for economic development both in developed as well as developing countries. Most of the existing studies on debt financing have focused on large scale firms using data from macro level while little attention have been paid to SMEs. As such this study sought to investigate on the effects of debt financing on the financial performance of small scale enterprises in Eldoret County over the period 2010- 2014. This research was guided by the following objectives; to assess the effects of trade credit on financial performance of SMEs, to determine the effects of short-term loans (loans whose repayment takes place in less than a year) on financial performance and to examine the effects of long-term loan (loans whose repayment period is extended over one year) on financial performance of SMEs. This study employed descriptive and explanatory research designs. The data was collected from a sample size of 50 SMEs, with audited financial statements for a period of four consecutive years. The research methodology employed purposive sampling methodology with the use of quantitative secondary data acquired from audited firms in Eldoret County and the data analyzed using descriptive statistics, and regression analysis. The study found out trade credit positively influence financial performance of Small medium enterprises, long term and short debt ratios negatively affect financial performance of SMEs. The study recommends SMEs calls for capacity building of areas of business management (including financial record keeping), formation of cooperative societies by SMEs where there will be a kind of risk pooling when applying for bank loans.

**Key words:** Debt, Debt Financing, Short Term Debt, Long Term Debt, Trade Credit, Financial Performance

### **B2015- 44 Effects of work life Balance on Employee Performance in Institutions of Higher Learning in Kenya. A case Study of Kabarak University, Nakuru**

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Kabarak University

#### **Abstract**

Work-life balance is basically the positive relationship between work and other equally important activities in life which include family, leisure, personal development and community development issues. The relationship cannot be clearly defined and varies from person to person according to their life demands. Work life balance is intended to allow employees greater flexibility in their working patterns so that they can balance what they do at work with the

responsibilities and interests they have outside work. The purpose of this study is to examine the effects of work life balance on employees' performance. The unit of study will be Kabarak University which is private Chartered University in Nakuru County. The main objective of the study is to analyze the effects of work life balance on employee performance in Kabarak University. The specific objectives include determining the influence of flexible working options on performance of employees, establishing the effects of work-family priorities conflict on employees' performance, finding out the effect of work overload on employees performance and to establish how employee assistance programs affect employees' performance. The research will use descriptive technique, specifically case study. Data will be collected using both primary and secondary data. Primary data will be gathered through structured questionnaires and interview guide while the secondary data will be gathered using the available records, policy documents and manuals. The target population of the study is 300 from which a sample size of 75 will be determined. Data will be analyzed using statistical package for social science (SPSS).The data will be presented using tables, figures, charts, pie charts and graphs. It is expected that the study will be utilized by the Human Resource Department of Kabarak University to understand the effects of work life balance on the performance of employees.

Key words: work-life Balance, employee performance, work overload, work-family priorities

## **B2015- 45 Effects of Recruitment and Selection Techniques on Job Performance: A Case of Universities in Kenya**

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### **Abstract**

Recent developments within organizations and within organizational business environments such as technological changes, globalization, social trends, and changes in the organization of work have brought new challenges for personnel recruitment and selection. Reliance on the old models of recruitment and selection may thus not suffice. Consequently, the present research seeks to examine the role recruitment and selection practices play in determining employee performance. Specifically the study will address the objectives regarding how candidate attraction practices, competency measurement tools, and the person-organization fit ultimately affect job performance of university staff. The study will be carried in Kenya using the descriptive survey design. The target population will comprise all the 65 public and private universities registered as at the time of the study. A multistage sampling method will be used to select the study respondents. First, a sample of 19 universities, 12 public universities and 7 private universities will be included in the study. Next, a representative sample of 352 employees will be generated from the selected universities. A stratified sampling technique will be used to select the individual respondents. Two instruments will be used to complement one another: A questionnaire will be administered on the 352 employees in the universities to elicit their views on the relationship between recruitment and selection procedures and their work performance. An interview schedule will mainly apply to the 19 specialist heads of the human resource



department to find out more detailed information of the recruitment and selection processes in the university. Data will be analyzed quantitatively and qualitatively. Quantitative data generated from the questionnaire will be analyzed with the help of STATA version 12 computer programme to explore the relationship between recruitment and selection techniques and the work performance. It will involve descriptive statistics and inferential statistics to be used will include correlation analysis, ordinary least squares regression analysis and chi-square test of independence. The data generated through interview will be analyzed using thematic content analysis with the help of NVIVO computer program for qualitative analysis. The study will help improve the predictive value of the recruitment and selection procedure so that those hired through the process would also be able to perform well in their respective areas.

**Keywords:** Recruitment, Selection Techniques, Job Performance

## SYMPOSIUM 2 (S)

### **S2015-01 Penetration Level of Auxiliary Service Voltage Transformer on a Power Transmission Network**

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#### **Abstract**

In Sub Sahara Africa, there are well established high voltage transmission networks infrastructures but poor distribution networks. These high voltage transmission lines transverse very many rural areas leaving them Un-electrified. Conventional substation set up is very expensive and power utility company will realize no return on investment if they apply them to supply the villages. Unconventional substations are capable of tapping power from high voltage transmission lines and step down to low voltages for distribution purposes. These substations include Auxiliary Service Voltage Transformer and Capacitor Coupled Substation, capable of stepping down 220KV to 11KV or lower in one step for distribution purposes. This research is aimed at establishing the penetration level of Auxiliary Service Voltage Transformer substations on a power transmission network without affecting the voltage profile and the voltage stability of the transmission network. This objective has been investigated by use of MATLAB/SIMULINK simulations to investigate the maximum number of Auxiliary Service Voltage Transformers that can be tap power from a 220KV voltage line without affecting the voltage profile and voltage stability of the system.

*Key Words: penetration level, Auxiliary Service Voltage Transformer, Capacitor Coupled Substation, Transmission line.*

### **S2015-02 Faecal Disposal Practices and their relation to the burden of faecal-oral infections in Isiolo, Kenya**

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#### **Abstract**

Inadequate sanitary conditions and poor hygiene practices play major roles in the increased burden of communicable diseases. An estimate of 2.6 billion people globally lacks access to improved sanitation facilities, whereas 1.8 billion people practice open defecation worldwide. Safe disposal of human excreta is essential for public health protection. The practice of open-defecation can be so devastating to the human health as well as to the environment, since it enhances transmission of disease causing pathogens. This study aimed at assessing faecal disposal practices and their relation to the burden of faecal-oral infections. This was achieved through a cross-sectional and observational study, whereby data collection was done through questionnaires, spot observational check list and health records. Data was analyzed through SPSS version 20 where descriptive statistics ;( frequency distribution tables and graphs) and Pearson's correlations were used. Latrine coverage was 56% and 34% of the residence had no latrine and used the bush to dispose faecal matter. Faecal disposal of children enhanced

transmission of faecal-oral infections pathogens. Diarrhoea prevalence among adults was highest with 18 per 100, intestinal worm was 17 per 100 and typhoid was 11 per 100. Among children under five years, diarrhoea prevalence was 26 per 100, intestinal worms was 12 per 100 and typhoid was 10 per 100. This study can be significant in public health surveillance and monitoring of health problems, which will provide a factual basis from which agencies can appropriately set priorities, plan programs for more effective diseases control and take actions to promote protect the public.

**Key words:** *Faeces, sanitation, faecal-oral infections, open-defecation, burden.*

### **S2015-03 Use of Ict in the Detection and Prevention of Crime in Kenya**

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#### **Abstract**

Information Communication Technology (ICT) is a generic name used to describe a range of technologies for gathering, storing, retrieving, processing, analysing, and transmitting information and its use is immense in the field of law both in the enforcement of the laws and the prosecution of the offenders. The study adopted a survey design, since this method allows determination of sample characteristics for a large group in a very short time. Surveys are also effective in determining the attitudes, opinions and perceptions of persons of interest to a study. The design was chosen because of its appropriateness in educational research findings that yield accurate information. Surveys are also effective in determining the attitudes, opinions and perceptions of persons of interest to a study. This study employed mixed methods research design that used both qualitative and quantitative approaches in a single study to gather or analyze data. The study was conducted in Eldoret town in Uasin Gishu County. The study employed simple random, stratified and proportionate probability sampling techniques. A sample of 40 respondents from police officers, court officials, bank employees and civilians were purposely selected for the study from Eldoret town. Using simple random sampling the police officers, court officials, bank employees and civilians were stratified into stratas and the total study respondents were 40. The questionnaires was administered to police officers, court officials, bank employees and civilians and whereas interview schedule was administered to magistrates and police in charge. Data collected was processed, coded and analyzed to facilitate answering the research questions. This was done using descriptive statistics. The findings would provide important strategies towards ICT detection and prevention of crime in Kenya. The study would be significant both to scholars and policy-makers in the government, among other agents, as it raises issues on the need to improve and further introduce ICT tools in prevention and detention the law enforcement agencies in Kenya.

**Key words:** *ICT, Law and Order, crime prevention*

### **S2015-04 Smallholder Farmers' Innovations for managing Climate Change Induced Water Scarcity in Lare Division Nakuru County, Kenya**

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## Abstract

Climate Change and Variability, negatively impacts on agricultural water availability in marginal areas. Smallholder farmers need innovations for water harvesting, storage and irrigation, HSI technologies to counteract water scarcity. However, adoption of these technologies is rather low in developing countries such as Kenya. Lare Division is a marginal ecosystem yet reliant on rain-fed subsistence agriculture. This paper presents an analysis of farmers' and ecological based factors that are envisaged to influence smallholder farmers' adoption of these TI. Findings indicated that the farmers generally had low education level by Kenya's standard and have innovated methods of HIS. Statistically significant relationship existed between technologies adoption and the farmers' education level, land topography, affordability of irrigation facilities and availability of technical and financial support and adoption of TI. Inadequate technical skills and financial constraints were identified as significant farmers' challenges in TI's adoption. Technical and financial empowerment coupled with policies focusing on up-scaling the farmers' technologies' adoptive capacities is advised.

**Key Words:** *Climate Change, Agricultural water, Technologies, Innovations, Adoption, Smallholder farmers, Kenya, Food and economic security*

## **S2015-05 Influence of trichoderma harzianum from Semi-arid Soils on Maize Seed Germination and Early Seedling Growth under Drought Stress.**

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## Abstract

Drought is one of the major constraints on plant productivity worldwide and is projected to augment with climatic changes while human population is at its exponential phase. *Trichoderma spp.* are plant symbionts that have been widely used as seed treatments to control diseases and to enhance plant growth and yield. The study examined the effects of maize seed treatment with *T. harzianum* on germination of seed and seedling exposed to drought stress. The study also evaluated the ability of the beneficial fungus to enhance the activity of antioxidative enzymes in maize seedlings grown under drought stress. Furthermore, the beneficial effect of the fungus under stress was assessed whether it depended on the maize genotype or not. Four concentrations of the fungus were prepared; 0%, 50%, 75% and 100%. That is; 0,  $1 \times 10^5$ ,  $1 \times 10^7$  and  $1 \times 10^{10}$  spore/ml of *T. harzianum* respectively. Three maize varieties (H614, H629 and H6210) were treated with the four concentration of *T. harzianum*, and thereafter grown under 0, 0.3, 0.6 and 0.9 MPa osmotic potentials. 50, 75 and 100% concentrations of the fungus showed significant ( $p \leq 0.05$ ) seed germination, seedling length, seedling fresh weight, root dry weight and shoot dry weight compared to control under water stress with 75% of the fungus recording maximum results under all water stress levels. The activity of antioxidative enzymes (SOD and CAT) was also greatly enhanced by the fungus in all the three varieties of maize. The three maize varieties showed significant difference in terms of seed germination and early seedling growth under water stress. However, in response to the fungus, there was no significant difference ( $p \geq 0.05$ ) between maize varieties and the concentrations of the fungus in terms of seed germination and early seedling growth under water stress.

**Key Words:** Drought stress, *Trichoderma harzianum* and maize seeds

## **S2015-06 The Impact of Climate Change on Small Holder Dairy Processors: A case Study of Lanet Division, Nakuru District, Kenya**

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### **Abstract**

The purpose of this study was to assess the impact of climate change on small holder dairy processors among the small holder dairy farmers in Kenya. The study was conducted within Lanet division in Nakuru County in Kenya. It was found out that, of the four main elements of food security, i.e., availability, stability, utilization, and access, only the first is routinely addressed in simulation studies. This presents a daunting array of food challenges and more so dairy and dairy products. The likely impacts of climate change on small holder dairy processors clearly indicate further negative impact of climate change. Questionnaires were given to respondents on how best prepared were the smallholder dairy processors in terms of dairy processing amidst climate change. The results showed that only 20% of them were had ready measures on how best to deal with processing with the climate change in mind. While only a small percentage of 6% was aware of the importance and preparation on the face of climate change. It is hoped that the recommendations made out of this research will be used by the Government both at National and County level to inform policy formulation and implementation. The outcome of the study is intended to be an effective tool for decision and policy making.

**Key Word:** *Impact, Dairy, Climate Change, Small Holder.*

## **S2015-07 A Review of Fisheries Management Systems in Kenya: Good ideas, Strategic Management, Production Estimates**

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### **Abstract**

This paper examines the fisheries management systems in Kenya with a view to suggesting better management options that may scale up the overall production of the fisheries sector. Management practices are reviewed and the current production estimates analyzed against a trajectory of previous yearly production models. The study reveals good fish farming ideas that are poorly implemented, serious challenges facing capture fisheries and a stagnated production. Suggestions are offered on strategic management, the role of supportive research and on environmental impacts so as to increase Kenya's fisheries production and improve the quality of fish reared or harvested for national food security.

**Key words:** *Good ideas, Strategic management, Production Estimates, Aquaculture, Food security, Livelihoods, Challenges*

## **S2015-08 A Review of Wetland Management Systems: A Paradigm of Kenya's Dwindling Resources.**

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## **Abstract**

Many developed and developing member States to the Ramsar Convention on Wetlands have developed their national wetlands conservation and management policies. Management systems that, on the global extent involve community based approaches have been developed. Nevertheless, many challenges in wetland conservation and management continue to determine the existence and survival of these ecosystems. Several diverse and severe threats including unsustainable human activities within the wetland catchment area and in the wetlands, lack of coordinated and holistic policy guidelines, and climate change have induced changes that have eroded the ecological and socio-economic values and services derived from wetlands. But even then, the underlying threat remains lack of recognition of the importance of wetlands and the roles they play in both the national economy and community livelihoods. Kenya's wetlands are a very good example of diminishing resources. The Kenya Wetlands Atlas, produced with funding from the Government of Kenya and the Danish International Development Agency (DANIDA) and technical support from the UN Environment Programme (UNEP), details the many challenges facing dozens of important wetland ecosystems that include the Lake Victoria North Basin Wetlands, Rift Valley Basin Wetlands, the Mara River Basin trans boundary wetlands, and the lost Nairobi River Basin wetlands. This paper reviews wetlands management systems on a global scale and suggests changes in management systems with particular emphasis on Kenya's efforts to rehabilitate and manage wetlands as a resource for development and sustenance of peoples' cultures

*Key words: Wetlands, Management systems, diminishing resources, Management strategies*

## **S2015-09 A Survey of the Socioeconomic Importance of Marura Wetland Ecosystem and its Response to increased Multiple Point Source Pollution**

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## **Abstract**

This study investigated the socioeconomic importance of Marurariverine wetland, the human impacts and the effect of multiple point source pollution on the entire ecosystem that appears to be diminishing. The wetland was found to form a significant bio-geographical island of ecological and socio economic importance that possesses rich endemic species diversity. Despite intensified harvesting of the wetland's *Cyperus papyrus*, ecosystem alteration, habitat modification through pollution and destruction are the salient issues that require management intervention if the socioeconomic and ecological benefits are to be sustained. This paper offers several important management options that are available and necessary for the survival and continuous exploitation of the resources of Marura Wetland ecosystem

*Key words: Socio economic importance, species diversity, Point pollution, Management options*

## **S2015- 10 Comparative Efficacy of Organic Oil Derivative and Microbial Larvicides on Malaria Vectors in Semi-Field Conditions**

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### **Abstract**

Malaria is a major cause of ill health and mortality especially in Sub-Saharan Africa. This debilitating parasitic infection is transmitted to the human population by female mosquitoes of the genus *Anopheles*. Malaria control strategies involve mechanisms targeting both the larval and adult stages under integrated vector management programs. Prior knowledge and understanding of the effects of any vector control measure on the target population is essential for its success when adopted as a control strategy. The objective of the current study was to determine the efficacy of two larvicides, Larvex®100 and *Bacillus thuringiensis* var *israelensis* (Bti) in semi-field conditions in Jaribuni Village of Kilifi District. The larvicides were tested for efficacy in artificial habitats consisting of plastic-made basins set on an open level ground. The two larvicides and untreated controls were tested in five replicates each and the entire experiment repeated twice. Into each basin 30 wild collected *Anopheles* mosquito larvae were introduced and their survival monitored longitudinally to record the mortality resulting from the treatments. A new set of *Anopheline* larvae was introduced into each habitat when all the larvae in the various habitats died to test for the residual effect of the larvicides. The time taken by each cohort to die out and the time since the introduction of the larvicide and the efficacy was calculated. The pupae collected were allowed to emerge into adults that were identified morphologically to species. Generally there was no significant difference in the efficacy of the two larvicides although Bti was most effective in the first 2 days post-treatment causing 98% larval reduction compared to 15-38% reduction for Larvex®100 in the same period on all the instars with high mortalities against the late instars producing 78% mortality of all the mortalities recorded. Out of the 208 adults that emerged from 318 pupae collected, 147 were identified to species. The *Anopheline* species identified consisted of *An. gambiae* s.l (97.5%) and *An. funestus* (2.5%). In conclusion, this study showed that the use of the organic oil derivatives and microbial larvicides can be adopted as an effective malaria vector control measure to boost the overall success of Integrated Vector Management (IVM)

**Key words:** *larvicides, Larvex®100, Bacillus thuringiensis* var *israelensis* (Bti), *Anopheles*

### **S2015-11 Use of Neem Crude Extracts in the Control of Mosquito Immature Stages in Malindi**

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### **Abstract**

Several mosquito control strategies targeting both adult and immature stages of the mosquito cycle have been proposed and some even put into place under the IVM programs. The mosquito vector control programs have mostly targeted the adults however, in the recent past larval control has drawn interest with several approaches being applied. Recent research undertaken using botanical products have achieved sustainable reduction in the number of malaria vectors thereby achieving sustainable reduction in these cases. There are several natural products that have recently been evaluated for control of mosquito larvae activity. *Azadirachta indica*, the Neem tree has been of great interest because it has been found to have several biologically active

compounds that have been used in the treatment of several diseases. The objective of this study was to evaluate the effectiveness of crude botanical extracts of the neem tree in control of mosquito vector diseases in comparison to microbial larvicide, Bti. This study was done in Malindi in selected natural aquatic habitats falling in 3 strata i.e. urban, peri-urban and rural. The habitats were classified as treatment pools (containing the neem crude extracts) and control pools (containing Bti and untreated controls i.e. UTCs). Sampling was done on the pools before introduction of the treatments and on day1 and day3. Thereafter larval sampling was done after 2 or 3 days post treatment. The mortalities in the neem treatments were compared with those in the Bti pools. Generally there was a significant reduction in the effectiveness of neem with a percentage reduction of 15.03% in the house drainages, 42.72% in the septic tanks and its effect was mostly felt in the swimming pools with a percentage reduction of 47.51%. The reduction due to Bti was seen to be 16.55%, 12.42% and 4.24% in the septic tanks, house drainages and swimming pools respectively in a span of 21days. In comparison to neem, Bti was found to be effective in the first 7 days after which colonization was seen in the habitats. Neem crude extracts in aquatic habitats can effectively reduce the number of adult mosquitoes and thereby reducing the impact on mosquito vector diseases on its applicability in endemic areas.

**Keywords:** *Neem, Azadirachta indica, Bti, Larvae*

## **S2015- 12 Determination of Collection Points and Optimal Route for Solid Waste Disposal in Thika Municipality Using GIS**

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### **Abstract**

Solid waste management plays a critical role in urban development. Transportation of solid waste from point of generation to point of disposal is required to be done in minimal time to avoid accumulation of solid waste at points of generation. Uncollected solid waste poses environmental and health hazards to residents. Therefore, it is important to ensure that solid waste generated in an area is collected and disposed safely. To achieve this, there should be designated solid waste collection points to control haphazard and illegal dumping of solid waste. A pre-determined route for disposal should also be known to ensure that all the collection points are visited, and also to minimize time wastage during disposal. GIS provides tools for collection, storage, manipulation and analysis of spatial data. These capabilities can be used for management and planning of solid waste transportation. In this research, GIS was used to determine proposed solid waste collection points and the optimal route for disposal in Thika municipality. This was done by solving the location allocation problem and the travelling salesman problem using network analysis. Proposed points serving 67% of the population in Thika municipality were determined. This is an improvement over the existing collection points that serve only 33% of the population. In addition, the proposed solid waste collection points provide better spatial coverage since they serve all the sub-locations in the municipality in comparison to the existing points which cover three out of four sub-locations in the municipality. The optimal route for solid waste disposal using the proposed points is 90.38 km while the current route is 59.16 km long.



### **S2015-13 Crank-Nicholson, Du-Fort and Frankel Hybrid Finite Difference Schemes Arising from Operator Splitting for Solving Two Dimensional Burgers Equation**

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#### **Abstract**

Solving Burgers equation continues to be a challenging problem. Burgers' equation is a fundamental partial differential equation from fluid mechanics. It occurs in various areas of applied mathematics, such as modeling of gas dynamics and traffic flow. It relates to the Navier-Stokes equation for incompressible flow with the pressure term removed. So far the methods that have been used to solve such equations are: Alternative Direction Implicit (ADI) methods, Variation of Iteration Method (VIM), locally one dimensional method and Finite Difference Method (FDM) approach which is used in this work. We have developed the pure Crank-Nicholson (CN) Scheme and Crank-Nicholson-Du-Fort and Frankel (CN-DF) method by Operator Splitting. Crank-Nicholson-Du-Fort and Frankel is an hybrid scheme made by combining the Crank-Nicholson and Du-Fort and Frankel schemes which are both unconditionally stable but the Du-fort scheme is explicit while the Crank-Nicholson scheme is implicit. The developed schemes are solved numerically using exact solution via Hopf-Cole transformation and separation of variables to generate the initial and boundary conditions. We use MATLAB to generate the results of the schemes developed. Analysis of the resulting schemes was found to be unconditionally stable. The results of the hybrid scheme are found to compare well with those of the pure Crank-Nicholson for a wide range of parameter variation. There is no effect found on the numerical solution with different values of Reynolds number.

### **S2015-14 An Evaluation of the Community's Resilience in Coping with the Global Climatic Change: Case of Mwala District, Machakos County**

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#### **Abstract**

The need for communities to develop resilient strategies to adapt and cope with the phenomenon of global changing climatic conditions has already gained currency. The communities are thus accelerating diverse strategies to mitigate their susceptibility and increasing their enhancement of their resilience to cope with the harsh conditions of climatic change like droughts, floods, or heat waves. Notwithstanding the fact that adaptation must occur at the community level, there are issues that need critical investigation with a view of enhancing the development of effective community's strategies at the community level so as to cope with the global climatic change. The study will investigate how communities' coping mechanisms with the drastic climatic change emanating from the global warming; three research questions:- 1. To what extent is the community aware of the effects of the global climatic change? 2. What are the effects of the global climatic change to the community socio-economic life? 3. What strategies is the community putting in place to mitigate the effects of climatic change? Research Design The nature of the problem being tackled by this paper, a descriptive, explorative and analytical design will be adopted. Because there is no standardized approach for coping with the climatic change,

the paper will add value if the community's aspirations and practices are described, explored, and analyzed in order to understand community's resilience.

### **S2015-15 Bacterial risk and contamination level of raw drinking water from ground and surface water sources in Wamba Division, Samburu District.**

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#### **Abstract**

Limited access to safe drinking water and information on water quality in sparsely populated arid and semi-arid regions has contributed to frequent outbreaks of diarrheal disease. There is therefore urgent need to determine the bacteriological quality of water in various sources in these regions. This study was undertaken in order to determine water quality in Wamba Division of Samburu District. Bacteriological analyses were carried out using multiple tube fermentation technique and heterotrophic plate counts technique. Qualitative bacterial determination confirmed the presence of thermotolerant coliforms, Shigella and Salmonella spp in most water samples examined. Faecal coliform load in dry river bed wells (mean 471.63) was higher than in the other categories of water sources (dams, rivers, springs and tap water). Bacteriological water quality analysis revealed that water from most sources had bacterial loads that exceeded the WHO value/guidelines for drinking water. The majority of the water sources (43 %) posed an intermediate risk to the consumers of its water, while 35 % posed a high risk. This study therefore concludes that water from most sources are contaminated and must thus be treated before consumption. Information on the bacterial load in water from different sources will be used by local public health officers to determine the sources of contamination and to educate the local community on how to protect the water sources from contamination.

### **S2015-16 Efficacy of Three Plant Extracts in Reducing Sediment and Heterotrophic Bacterial Load in Surface Raw Water in Samburu District, Kenya.**

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#### **Abstract**

Limited access to safe drinking water and appropriate water treatment technology in rural arid and semi-arid regions has contributed to frequent outbreaks of diarrheal disease. Thus the objective of water treatment is to provide potable water, i.e. pathogen free and which is low in physical impurities and is also aesthetically acceptable to the consumer. To attain this, cheap, effective and sustainable water treatment technology using natural plant products need to be developed. This study was undertaken in order to assess the efficacy of plant extracts in purifying water in Wamba Division of Samburu District. Bacteriological analyses was carried out using heterotrophic plate counts technique, while turbidity and pH determination were carried out using a colorimeter (Smart - 26617) and portable WTW Multiline P4 meter (Weilheim, Germany) respectively. The samples analysed frequently recorded high levels of turbidity (range, 617 – 6100 NTU), (mean, 1192) and total heterotrophic bacterial counts (range,  $2.2 \times 10^3$  -  $2.0 \times 10^7$ ), (mean  $2.75 \times 10^6$ ). Water treatment with alum, sodium hypochlorite and extracts from *Boscia coriacea* Pax. *Maerua decumbens* (Brogn.) Dewolf roots and *Moringa oleifera* Lam. seeds resulted in a varied reduction of bacterial and sediment loads of the water samples. Overall, all the treatments were found to be effective in reducing bacteria and sediment load in water samples collected from various sources, except for some unidentified residual bacteria that resisted the disinfection properties of plant extracts. Changes in the percentage load

of heterotrophic plate counts (HPC) among the treatments used differed significantly ( $P = 0.05$ ,  $DF = 5$ ). Overall mean percentage change in HPC were 26.51, 46.00, 30.20 and 14.50 for *M. Oleifera* Lam., *M. decumbens*, *B. coriacea* and the control respectively compared to 74.76 and 90.95 in the case of alum and sodium hypochlorite in the same order. These values indicate that changes in bacterial density during water treatment may be due to loss of viability or alteration in culturability. Results obtained in this study further indicated that there was no significant difference in water turbidity reduction ( $P = 0.05$ ) by *M. oleifera*, *M. decumbens* and *B. coriacea*. Both *B. coriacea* and *M. decumbens* chelants resulted in a high removal of the initial turbidity by 50.36 % and 43.87 % respectively during 30 minute treatment period while *M. oleifera* were 40.53 %. As such the three species can be considered potentially useful chelants, and should be subjected to further study. During this study, it was noted that, plant extracts changed the water pH. This observation suggests that pH change possibly plays a vital role in inactivating bacteria in water. Bacteriological water quality analysis revealed that water from most sources had bacterial loads that exceeded the WHO value/guidelines for drinking water. Isolated species of *E. coli*, *Salmonella* and *Shigella* spp from water samples also showed varied antibacterial sensitivity to crude plant water extracts. This study therefore concludes that water from most sources is contaminated and must thus be treated before consumption. It is recommended that further studies be conducted to identify the mechanism and active ingredients present in the plant extracts responsible for reducing sediment and bacterial load in water and how their efficacy is affected by the physico-chemical properties of water.

### **S2015-17 Use of Artificial Neural Networks in Optimizing Data Mining Techniques**

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#### **Abstract**

The emergence of vast databases that comprises huge volumes of data sets that are growing daily incrementally requires the need for automated methods of processing which is intelligent nature to offer optimized solutions to many real world problems using Artificial Neural Networks (ANN). In this paper, we examine Back Propagation, Particle Swarm Optimization (PSO) and Self-Organizing Maps (SOM) which are fundamental techniques that can be integrated with Artificial Neural Networks (ANN) to achieve and optimize Data Mining.

### **S2015- 18 3D for Transfer of Spatial Representation Knowledge: How Users Navigate and Familiarize Themselves with Real World Places Using Virtual Worlds**

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#### **Abstract**

Much research attention has been focussed on the study of acquiring spatial knowledge from virtual environments by individuals for application in real world spaces. VEs have been established as another means for simulating real world places. Through them adequate information can be conveyed teaching people about the physical arrangement of real world spaces. This however is only one of the many potential applications of VEs; they can also be used as effective training media to train individuals to effectively navigate and find their way in actual physical locations. Many spatial knowledge studies when taken together continue to yield inconsistent results relating to the type of framework current implementations of virtual worlds should provide in order to offer users the opportunity to develop usable cognitive maps of

their environment so that successful transfer of spatial representations learned by people navigating in a virtual environment can reflect in real world navigation performance. Whereas such problems occur anytime an environment whether real or virtual encompasses more space than can be viewed from a single vantage point, successful transfer of skills from one environment to another after learning of spatial representation has taken place in a VE is dependent upon whether the design of the virtual environment's layout incorporates design principles whose underlying structure reflects the basic organizational principles of spatial knowledge regardless of the type of space. Our research focuses on the transfer of spatial representation knowledge, and looks at how users navigate and familiarize themselves with routes in the real world not readily visible from the user's current individual visual field by view either by a 2D or 3D map application. The uniqueness of our approach lies in addressing how the building blocks of representation knowledge i.e. survey, landmark and route spatial knowledge can be used to assist individuals in task performance by providing a framework that fits these fundamentals together to enable users to navigate better and familiarize themselves with real world places. The goal of our system is therefore to ensure that users can rely on a display of interactive direction which can be followed for successful navigation in, and familiarization with an environment

### **S2015- 19 Factors Influencing the use of Library Information Systems by Staff and Students in Kabarak University**

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#### **Abstract**

Kabarak University Library has invested heavily in ICT resources and internet connectivity in the quest of gaining a competitive advantage but despite the heavy investment by the university, there seems to be low use by majority of staff and students of Kabarak University. The low usage highlights questions on the benefits that have accrued from the investment. The study therefore, sought to find out the extent of influence of various factors on the use of the library information systems with an aim of establishing difficulties in using the information systems in the day-to-day academic activities. Specifically, the study examined the factors influencing the use of library information systems by staff and students at Kabarak University for teaching, learning and research with a view to recommending measures for improvement. The study employed a survey research design to illustrate the phenomenon under examination. The target population of the study was staff and students in Kabarak University main campus. Primary data were collected using questionnaires and analyzed using both descriptive and inferential statistics. Findings from the study indicated that University ICT centre was most popular point of access for the users followed by the library and in most instances availability of resources were associated with increased information systems' usage frequency. The study further found out that there were significant usage differences between staff and students where students had more usage preference than their staff counterparts. In addition, both information quality and system quality contributed to increased library information system usage. Based on the findings, the study concluded that demographic background of the respondents, resources availability, and user satisfaction influenced the use of the library information systems. Finally, the study

recommended measures which include modalities to ensure remote access to library information systems so as to facilitate varied modes of learning, teaching and research in order to meet the needs of the varied user demographic segments; promotional campaigns (user education) to library users for availability of electronic information sources in the library; and further research be carried out to compare the influence of the factors examined in this study involving both public and private universities.

**Key words:** *Use; Information Systems; Academic Library; Kabarak.*

### **S2015- 20 Ecological Evolution of Lake Sare: The need to develop and manage Fisheries Resources of the Small Water Bodies in Kenya**

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<sup>2</sup>*South Eastern Kenya University*

#### **Abstract**

Lake Sare is one of Kenya's satellite small water bodies in the Lake Victoria basin that is categorized as a high priority ecological site for conservation and management of the resources of the basin as it has direct link with Lake Victoria. This study investigated and inventoried the potential exploitable fish species of the lake as well as ecological changes that have occurred in the past two and half decades when it was last studied. Results revealed significant changes in environmental parameters in the last 24 years. Invasion by noxious macrophytes was observed, presenting slow ecological succession that may gradually invert the lake to become completely terrestrial in years to come. Although it lacks active commercial fishery due negligence and poor or no management, it can be used as a launch site for restocking Lake Victoria with juveniles of endangered indigenous fishes. Besides, under concerted, well-managed research efforts, active fisheries of this small waterbody can be realized. There are over 65 small waterbodies around the Kenyan part of Lake Victoria Basin and, over 250 in Kenya, both natural and man-made. While our efforts have been concentrated in the exploitation of fisheries resources of the small water masses, very few or no management programmes have been designed and implemented for rehabilitation and sustainable development of these resources whose strong base must definitely increase food security of Kenyan populace. This paper outlines the importance of small water bodies for fisheries resource base development in Kenya, with the contrasting examples of Lake Sare case in Kenya and Kariba Dam in the SADC region.

**Key words:** Fish species, fisheries resources, sustainable resource development, small water bodies

### **S2015- 21 Environmental Impact Assessment of Elgeyo – Eldoret Road Project: why an EIA Report**

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#### **Abstract**

An environmental impact assessment (EIA) of the proposed Elgeyo – Kapsoya - Eldoret Road in UasinGishu County, Kenya, was carried out to ensure that all the environmental concerns are integrated in the project cycle for the sole purpose of sustainable development of the general project area and areas in its proximity. Various potential environmental and socioeconomic impacts associated with the project activities were identified. This paper provides the proposed workable mitigation measures and the formulated environmental management and monitoring plans that the county government of UasinGishu must address.

**Key Words:** *Infrastructure, EIA, Impacts, Environmental management and monitoring plans*

### **S2015-22 Effects of Selected Roofing Materials on Air Navigation Signal Strength**

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#### **Abstract**

Interference that causes partial loss of intelligence in air navigation signal is largely dependent on environment around radio navigation aids (navaids). Buildings around airports have been restricted partly because they pose a technical threat to flight navigation. Previous studies have shown that about 50% of air accidents occur during landing. However no data was available to determine the contribution of navaids to these accidents. The purpose of this study was to determine effects of roofing materials on air navigation signal strength. Radio transmitters, receivers and computers were used in a laboratory to measure signal level transmitted through six different roofing materials at a frequency of 9.4GHz. Decra offered the highest attenuation whereby 90% of the signal propagated was lost, out of which 60% was due to reflection. The equivalent transmission path field strength was 57dBmV/M against an International Civil Aviation Organization (ICAO) recommended minimum specification of minus 28dBmV/M. Similarly decra exhibited desired-to-undesired signal ratio of minus 16dB against ICAO recommended value of 20dB. Conclusively roofing material had little effect on navaids signal strength in the transmission paths but had significant effect in the reflective paths. The study recommended that highly reflective roofing materials such as steel and decra are unsuitable for use in aerodrome areas. Building industry is therefore challenged to provide solutions that will mitigate effects of highly reflective roofing materials.

**Keywords:** *Interference, navaids, propagation, strength, aerodrome*

### **S2015-23 Evaluation of Bacterial Load in Drinking Water Purified by Ceramic Pot Filters: Towards Simplifying Drinking Water Purification in the Rural Areas**

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#### **Abstract**

In developing countries, many people battle with waterborne diseases every day and because of this, every year many people die from unsafe drinking water especially in the rural areas since they have no access to clean drinking water. It is extremely difficult to invest in efficient water filtration techniques for the rural areas in the developing countries just with the bare with

minimal annual income. Low cost water filtration techniques must therefore be considered and evaluated to serve the rural residents. The main objective of this study was to assess the effectiveness of ceramic pot filters in reduction of levels of Faecal Coliforms (FC) and Total Bacterial Counts (TBC). It was conducted in 3 rural settings in Kisumu County namely Seme, Otwenya and Kisian in June 2014. The determination of levels of TC and TBC in unfiltered and ceramic-filtered water samples was performed using standard plating techniques on suitable media. The results from this study indicated that although the reduction of TBC in ceramic filtered water was generally higher than the reduction of FC, the levels of both FC and TBC in unfiltered and ceramic filtered water was significantly different. The reduction of FC in water samples from Seme, Kisian and Otwenya upon filtration using the ceramic pot filters was 75.61%, 76.68% and 73.12% respectively while the reduction of TBC in water samples from Seme, Kisian and Otwenya upon filtration with ceramic pot filters was found to be 87.53%, 78.83% and 94.25% respectively. From this study, it was concluded that the ceramic pot filters are efficient in the reduction of bacterial load and can be useful especially in areas that are out of reach of the Municipal water treatment plants.

**Keywords:** *Drinking water, ceramic filters, waterborne diseases, water quality, faecal coliforms, total bacterial counts*

### **S2015-24 Growth performance of *Oreochromis variabilis* larvae: A Case Study of Effect of Live and Formulated Diets on Growth and Survival rates**

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#### **Abstract**

*Oreochromis variabilis* Boulenger (1906) is an indigenous but endangered fish species of Lake Victoria. It is among the species targeted for stock enhancement and restoration in Kenya. Such mass stock enhancement requires knowledge and maximization of larviculture of this fish species. This study investigated the growth potential of *O. variabilis* fry using diets formulated from locally available feed materials and under uncontrolled local environment in the larviculture. Fish fry reared on formulated diets incorporating *Rastrineobola argentea* Pellegrin and *Caridina nilotica* Roux as protein source and cassava as basal feed gave higher growth and survival rates than those maintained on plankton live feed. The study concluded that viability of larviculture of *O. variabilis* using formulated artificial diets may be achieved, and that this provides important breakthrough in the propagation of seed stock of *O. variabilis* for mass culture of the species for purposes of stock enhancement, restoration and sustainable fisheries development programs of endangered fish species so as to boost food security in Kenya.

**Key words:** *Oreochromis variabilis*, endangered species, larviculture, stock enhancement, restoration, fisheries development

### **S2015-25 Experiences with Live Internet Video Streaming from Semi-Rural Sites in Kenya**

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### Abstract

Video streaming is of interest to as a means to deliver live events such as instruction, webinars or meetings without the need to travel to the event venue. This case study aimed to test live streaming principally from sites in Kenya over a period of five years and identify the key challenges to its implementation. The key initial challenge was to identify suitable Internet service providers who understood the requirements. The cost was initially high approaching US\$1,000 for three days in 2010 but dropped to about US\$35 in mid-2012 with the use of HSPA 3G wireless modems. Identifying a suitable Internet live streaming provider required some testing and experimentation. Continuous recordings of up to 8hrs a time were achieved limited only by the occasional software failure. Technical challenges to live streaming included buggy modem drivers and interference from web browsers. The quality achieved was adequate for lecture delivery but not for communicating close-up details of small objects.

**Keywords:** *Live video streaming, multimedia, developing nations, Kenya*

### S2015-30 Bioactive Limonoids from the Kenyan *Vepris Uguenensis* Engl.

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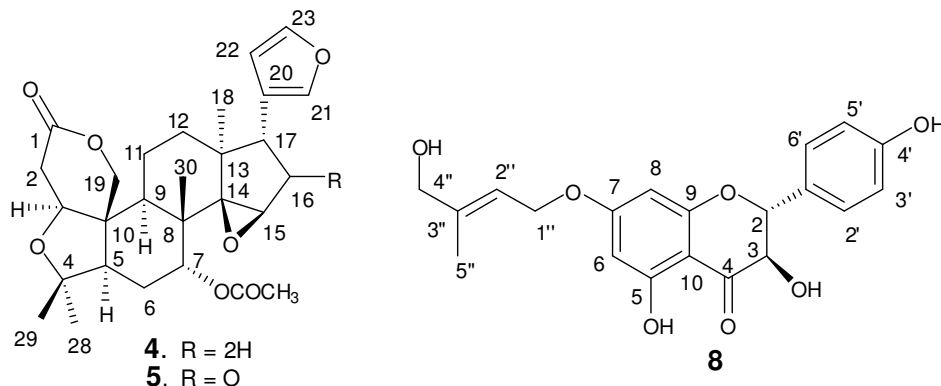
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### Abstract

Two new A, D-*seco*-limonoids, accorded the trivial names, uguenensene and uguenensone and a new C-7 prenylated flavonoid, uguenenprenol were isolated from *Vepris uguenensis* (*Rutaceae*). In addition, eleven known compounds, niloticin, chisocheton A, kihadalactone A, limonyl acetate, methyl uguenenoate, 7-O-methylaromadennin, flindersiamine, 8 $\alpha$ ,11-elemodiol, tricoccin S<sub>13</sub> acetate, skimmianine, and lupeol were isolated. The structures of the new compounds were elucidated and characterized by spectroscopic analyses (NMR, GC-MS and IR). Antioxidant activity of the isolated compounds using the 2,2-diphenyl-1-picrylhydrazyl (DPPH), Deoxyribose and Ferric Reducing Antioxidant Power (FRAP) assays showed that uguenenprenol and 7-O-methylaromadennin are good antioxidant agents. Significantly high antioxidant activity was also exhibited by 8 $\alpha$ ,11-elemodiol, which was 72% at 250  $\mu\text{g mL}^{-1}$  and 57% at 15.62  $\mu\text{g mL}^{-1}$  when tested with the Deoxyribose method. The effect of Kihadalactone A on recalcification time of bovine plasma treated with *Naja katiensis* and *Bitis arietans* venoms was also investigated. The plasma recalcification time was found to be effectively reduced in a dose dependent pattern. In plasma incubated with *N. katiensis* venom, the highest inhibitory activity of 42.3 % at 1 mg/ml dose of kihadalactone A was obtained, this was however found to decrease to a lower inhibition value of 27.3 % at 0.001 mg/ml dose. Similarly, in plasma incubated with *B. arietans* venom, an inhibitory activity of 51.2 % at 1 mg/ml dose of kihadalactone A and a low activity of 33.6 % inhibition of the increase at 0.001 mg/ml were obtained. The current contribution adds uguenensene and uguenensone to the class of citrus limonoids common to the Rutaceae which can be used not only for medicinal purposes but also as an antioxidant



supplement. In addition kihadalactone A, could effectively serve as an antidote for the reversal of increase in plasma recalcification time posed by both snake venoms.



### S2015-31 Advances in Research on Tea Species Adaptive to Climatic Changes

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#### Abstract

Research done by small scale farmers through simple random sampling in Nyagesenda village, sensi location, Kisii County, indicated five species of tea plants apart from Assam and china planted in mixed mode in their farms. The research was on experimental basis on the behavior, characteristic or features and appearance of tea harvested on production stage. The farmers experienced changes in tea behavior and characteristic in wet and dry seasons, as some ripen quickly after plucking during rainy season and others dry quickly during drought season. The farmers needed to identify a variety drought resistant, qualitative and quantitative production throughout the year. True experimental research was deliberately manipulated for ten years through observation method, on the alternating climatic changes of the area, in relation to occurrence of hail stones and drought. The research key findings of the varieties were; first, Tea leaves-slow to ripen rainy season, dark green, slender and small surface, soft plucking, and drought resistant, low weights and slow to ripen after hail stones. Second, tea leaves-quick to ripen rainy season, dark green, wide and large surface, softer plucking, dries quickly in drought season, weights high and quick to ripen after hail stones. Third, tea leaves-quick to ripen rainy season, dark green, slender and small surface, softer plucking, dries in drought, weighs low, quick to ripen after hail stones. Fourth, Tea leaves-slow to ripen rainy season, yellowish green, wide and large surface, hard plucking, drought resistant weights low, slow to ripen after hail stones. Fifth, tea leaves-quick to ripen rainy season and never dry up in drought, yellowish green, average surface, softer to pluck rainy season and hard dry season, adaptive to all seasons, weighs high during rainy season and low dry season and ripens quickly after hail stones. It is concluded as the best variety followed by second and first and third varieties and lastly fourth variety. It is recommended all varieties are significant, therefore, should be grown in sections in the farm not in a mixed variety as it is done in tea farms.

**Key words:** *Species; Experiment; Research; Adaptive.*

## **S2015-32 Developing Scalable and Sustainable ICT's for Agriculture: Lessons from the failed NALEP Monitoring and Evaluation System, Kenya.**

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### **Abstract**

A project of the size and scope that was the National Agriculture and Livestock Extension Program (NALEP) in Kenya required extensive monitoring and evaluation in order to assure donors, namely the Swedish International Development Agency (SIDA) (KES 3.3 Billion) and the Kenya government (KES 281 Million), of proper utility of their funds. The NALEP monitoring and evaluation system thus was developed in order to facilitate the monitoring and evaluation of the project. The system experienced some early successes as it was successfully developed, piloted and deployed to all district agricultural offices. However, the use of the system required the largely computer illiterate divisional agricultural officers to meet once a month at the district offices to key in the data. This data would then be written on CD's for onward transmission to the provincial offices from where it would then be sent to the national office for aggregation and analysis. The challenges of computer illiteracy and lack of transport to the district offices presented some significant challenges in the timely and accurate collection of the data leading to the slow but sure death of the system. This paper discusses the apparent lack of proper appreciation of the ICT literacy levels of the divisional agricultural extension officers, the lack of consideration of the internet for information collection and transmission leading to a very poor choice of information collection and transmission methodology. The lack of a proper sustainability strategy beyond donor funding is also discussed. The paper also highlights a number of failure factors which if addressed would have better use of valuable time and resources in rolling out the NALEP M&E system. The lessons contained herein will undoubtedly serve to inform the development of better application strategies for other ICT's for agriculture by donors and governments.

## **S2015-33 Model For Smart Buildings In Nairobi To Stem Climate change**

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### **Abstract**

The UN secretary general Ban Ki-moon has stated that “climate change is the defining challenge of our time”. “Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and the rising of the global average sea level”. The science is confirmed and leaves no doubt – climate change is real, and it is already happening. ICTs are becoming ubiquitous throughout society. Given the momentous gains that ICT has achieved in the few decades it has been in existence, it's only imperative that ICT professionals urgently search for a concrete solution to counter global warming disaster that is waiting to wipe out the entire earth. Most of the global changes on earth have been analyzed and a number of indirect measures of climate such as ice cores, tree rings, glacier lengths, pollen remains and ocean sediments and by studying changes in Earth's orbit around the sun indicate that all is not well worldwide. A significant

proportion of total worldwide energy is consumed by buildings. For example, buildings in the US account for above 40 percent of total energy consumption and greenhouse gas emission. Green house gas emission, global warming and ozone layer depletion are the dangers that need immediate attention to stem climate change. Most experts agree that over the next few decades, the world will undergo potentially dangerous changes in climate, which will have a significant impact on almost every aspect of our environment, economies and societies. The main source of greenhouse gas emissions from buildings is energy consumption, but buildings are also major emitters of other non-CO2 greenhouse emissions such as halocarbons. Energy-efficient buildings are seen by climate change experts as one of the least-cost approaches to mitigating greenhouse gas emissions. The researchers will undertake to study the existing building codes and regulations and come up with how to incorporate ICT sensor networks to help monitor all the devices in the home to make it emit less green house gasses. The case study will emphasize detailed contextual analysis of a limited number of events or conditions and their relations. Smart buildings will gather individual user data, aggregate behaviour of people and use this information to respond to their needs.

Key words: Application Enablement Platform (AEP), Climate Change, Green House Gas Emission, Intelligent Building, Internet of Things (IoT), Smart Building

### **S2015-34 Research Perspectives in Restoration of Watershed Ecosystems under a Changing Climate: Success, Opportunities and Challenges**

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#### **Abstract**

During the past decade efforts to restore watershed ecosystems in Kenya have gained considerable interest and momentum. These initiatives represent a wide range of restoration objectives and starting points. Progress in tree planting and production of high quality seedlings has resulted in large acreages plantations on public and private lands. With appreciation of the ecological characteristics and associated diverse habitat conditions, there has been greater support for research on restoration. Selection of suitable tree species management protocols to promote successful value. A greater understanding of tree-site matching is emerging through studies addressing ecosystems recovery process, silviculture, fire ecology, restoration ecology, and invasive ecology and landscape scale issues. Research challenges include silviculture and ecology of restoration woody species which further forest ecosystem development and community assembly. Long term studies on species interactions, phenology, ecological interactions, prescribed fire, re-introduction of native ground cover and effect of climate change are needed. Seed sown for ground cover restoration, adaptive management interactions, fuels, fire behaviour, regional air quality and invasive plant species are also research topics. Appropriate metrics that quantify progress and predict wildlife response to habitat development over time are needed. The greatest challenges are with an uncharted future for the space and scale of change in the physical environment. Managers will face a complex task of evaluating the implications of climate and land use changes coupled with exotic invasive plants species and

pathogens. Tools to track restoration sites and references conditions or in some cases "no-analog" references sites will be essential to adapt long-term management approaches.

*Key words: Research, watershed, restoration, climate change*

## **SYMPOSIUM 3(E)**

### **E 2015-01 Policy Formulation and Implementation in Education in Kenya: Reframing the Missing Link**

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#### **Abstract**

Education policy faces a familiar public policy challenge in Kenya today: Local implementation is difficult. This article develops a relationship framework to characterize sense-making in the implementation process that is especially relevant for recent education policy initiatives, such as standards and quality-based reforms that press for tremendous changes in classroom instruction and educational leadership. From a linking perspective, a key dimension of the implementation process is whether, and in what ways, implementing agents come to understand their practice, potentially changing their beliefs and attitudes in the process. The article draws on theoretical and empirical literature so as to develop an intergovernmental relations perspective on policy formulation and implementation. The paper reviews the processes and identifies areas where the link can make additional contributions in Educational Policy Formulation and Implementation.

*Keywords: Education Policy, Intergovernmental Relations, Policy Formulation, Policy Implementation, School Reform, Missing Link.*

### **E2015-02 The Role of Education in Social Protection and Climate Change Resilience in Kenya: The Case of Maasai Mara University**

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#### **Abstract**

Climate change is not happening in a vacuum, it is one trend interacting with many others including economic liberalization, globalization, population growth, conflicts, and unpredictable government policies, all of which threaten the lives of people. Even in a single community trying to tease out the many inert linked forces that shape peoples' lives can be daunting. Therefore education has an important role to play and Maasai Mara University has found its position. The study investigated the role of Maasai Mara University in provision and development of social protection programmes on climate change and resilience. The study was conducted in Maasai Mara University in Narok County in Kenya. The study employed mixed research methods in data collection and analysis. The participants were sampled from the university, collaborating institution, the county ministry of environment and community representatives. Interviews were conducted and questionnaires were administered in order to gather data for the study. The study established that, the University through its' cooperate social responsibility and collaborations has

established programmes to help in enhancing social protection and building resilience among the people in the university and its environs. Some of the programmes include: Development of educational programmes on Climate change, disaster risk reduction and social protection for sustainable development: sensitization of the communities: research and dissemination of the findings through the Educational and County Government forums and collaborations with other institutions, the community and the county government on issues of climate change and social protection. However issues of climate change and social protection still continue to face policy discourse, financial, political, cultural and attitudinal challenges. The study recommends that the information and social protection programmes on climate change should be presented in the most appropriate manner that targeted members of the community would be able to understand and implement in order to develop sustainable societies and reduce vulnerability to their changing environmental circumstances. The purpose of this paper is to generate more debate and research on the role of education and institutions of learning in climate change vulnerability and adaptation preparedness in Kenya

**Keywords:** *Education, Social Protection, Climate Change, Resilience*

### **E2015-03 Gender Equality Policies and Women's Access to Management Positions in Government Aided Secondary Schools in Uganda**

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#### **Abstract**

Women in management positions in secondary schools are significant models for adolescent girls. They provide career guidance and model of decision makers. Unfortunately, their contributions are not recognized. It is against this background that this study attempted to review the effectiveness of the existing government gender equality policies to enhance women's access to management positions in Government Aided secondary schools in Uganda. Gender Equality Theory undergirded this research. The conceptual framework helped to focus on the variables that hinder women's access to management positions. Descriptive Survey Research Design was used. The study population was 18 female head teachers, 460 female teachers, 32 Chief Administrative Officers (CAOs), 32 District Education Officers (DEOs, and 32 Gender Focal Persons (GFPs). The sample was 5 CAOs, 5 DEOs, 5 GFPs, 5 female head teachers, and 210 female teachers. Purposive and simple random techniques were used to select the respondents. An interview schedule, a questionnaire and Documents analysis were used to collect data. Data was analyzed using descriptive analysis, and Epi Info 7. The study established that there exists gender equality policies but they are not being implemented and therefore there is gender imbalance in the allocation of management positions in Government Aided secondary schools. The researcher recommends that: the Government should implement gender equality policies so as to allow more women to access management positions.

**Key Words:** *Policies, Discrimination, Equality, Gender, Barriers, and leadership.*

## **E2015-04 Education and the Devolution What It Should Be and Should Not Be: A Case of Mombasa County**

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### **Abstract**

The paper is assessing the performance of education in Mombasa County vis-a vis the whole country; on what should be done and not be done so as to resuscitate the lost glory. Immediately after Kenya attained its internal independence in 1963, the main concern was to fight against three major evils of ignorance, poverty and diseases. Fifty (50) years on the devolve system of government has been introduced in the country with the promulgation of the new constitution in August 2010, whereby there are two types of governments, the central and the county. Coastal region in general and Mombasa County in particular has been performing dismally in the national examinations both at primary and secondary levels. This has led to the education in this area to lag behind compared to others in the country. Mombasa may be the entrance to the finest expedition in the world but there is another group of diminutive youngsters who oblige your attention. Many of Mombasa environs are very poor, youths and orphans struggle against the tribulations of poverty, child labour, alcoholism, sex-tourism, and early pregnancy, lack of teachers, culture and drug and glue addictions. This perspective needs the attention of everyone in the County. The disturbing question that can be posed is what can be done and also not be done in order to improve the standards of education in the County so that it can be at par with other counties in the country? There is need for massive changes on the approach of education from what it is, to what it should be for the bright future.

**Key Words:** *Good and Bad Education; Devolved Governments; Education Performance indicators: Education challenges*

## **E2015-05 The Cultural Practice Of Female Genital Mutilation (FGM): Media Role In Addressing The Challenges And Opportunities In Kenya**

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### **Abstract**

There are certain issues on which no compromises can be entertained. They include activities, traditions or indulgences that pose danger to individuals, groups or entire communities. In Kenya today, there still exist communities that are clinging to outdated and old practices that border on criminality. Female Genital Mutilation (FGM) practice is one such practice of that must be shunned or the people concerned punished in accordance with the law. The so called female circumcision is no less than FGM. It is therefore shocking to hear that in some communities in Kenya today, elders are advocating for the for the continuation of this obnoxious ritual that has adverse health and social consequences. Once circumcised, these female teenagers are deemed ripe for marriage and carted off to homes of men, some of whom are old enough to be their grandfathers. Female Genital Mutilation is a major factor in the high school dropout rate in Kenya. The most affected are the pastoralist communities. It is estimated that 30 per cent of the girl child complete primary school education and that over 80 per cent of those who manage to go past high school manage to advance their careers leading to better lives. It is high time girls in

Kenya supported by men and women of goodwill by contributing to the elimination of FGM. The media so far has done its part in highlighting the plight of Kenyans by reporting and synthesizing the masses on the need for change so to “modernize” the people from practicing such outdated cultures.

*Key words: FGM reporting, Pastoralist communities, obnoxious ritual, outdated cultures, synthesizing*

### **E2015-06 Effect of Video mediated Instruction on Students’ Achievement, Attitudes and Motivation in Learning Kiswahili Proverbs in Kenya.**

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#### **Abstract**

Video-Mediated-Instruction is a development that arose due to the need for quality education that calls for quality processes which include competent teachers using active pedagogies since the last decade of the 20<sup>th</sup> Century. Videos have been used to bring realism in the classroom by showing examples of actual situations that are not normally available in class. Videos were used to help students to develop a methodology to resolve ethical dilemmas by showing them a series of video vignettes involving an ethical dilemma. Video-mediated-instructions have been used to captivate audiences and create maximum impact. Despite much development, widespread interest and use of video technology in pedagogy since the turn of the 21<sup>st</sup> century, there has been no much research that has been conducted on the use of videos to teach Kiswahili proverbs. The authors therefore intend to assess the effect of Video-Mediated-Instructions on students’ achievement, attitudes and motivation towards the learning of Kiswahili proverbs in Kenya using a quasi-experimental research design with a view to improving the mode of instructions used by teachers. In this paper the authors review the background and the problem to be addressed by the intended study, state the objectives and the hypothesis to be tested. Finally the authors will give a rationale for the study, its significance, assumptions and scope.

Keywords: Video-Mediated-Instructions, Kiswahili proverbs, attitude, achievement, motivation.

### **E2015-07 Using Computer Program as a Tool to Enhance the Teaching of Mathematics In Schools**

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#### **Abstract**

The purpose of this system is to create a set of instructions that a computer use to perform specific operations or to exhibit desired behaviors in mathematics and any other mathematical subject. Mathematics is continuous and so a computer system can be used to teach in schools. The system can be used to display mathematical objects in all dimensions for the students to visualize properly. When using the system the teacher does not require a calculator or the mathematical table to solve mathematical problems and this saves time in teaching. A database of mathematical questions can be created and the system to be used to develop a marking schemes. A printed question paper and a printed marking scheme is produced at the same time by the program. This is a model system and takes into consideration only the triangle

calculations. It can be modified to cover other areas both in mathematics and physics. The system allows you to write the question only and it prints the question and the method of solving it.

**Key words:** *Software ,Triangle , Model, System*

### **E2015-08 Church and Education: Consideration on Roles in Health Care and Nutrition Services in Early Childhood Development Subsector of Education in Kenya.**

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#### **Abstract**

The early childhood education and development centers are foundations of learning in every part of the world. Health and nutrition needs of the learners have to be met for the learning to be sustainable and continuous in all levels. The learning process in our country has been affected by the features continuously. The involvement of the church in the past on the factors was superseding in various ways. However, as time went by the church ceased involvement at societal level on education matters. It therefore, intensely directed its focus and efforts to its own learning institutions. A current view of the handling of ECDE subsector is perturbing and callous. In the face of an excellent vision on health and nutrition that can sustain learning in all levels, are countless challenges that malign the vision. This paper therefore, endeavored to institute possible involvement of church in ECDE subsector to: reinforce health care and nutrition services, Pick up ways of participation as a key stake holder ,Provide holistic perspective on policies ,Improve foundations of education and sustain learning and Appendage ways of dealing with challenges facing the subsector. The postulation of the paper was that by responding to the above concerns; the paper would in the end bring forth the importance of the roles of the church in the subsector. In the end we would witness lasting solutions which reflect light, hope and justice in the important subsector of education.

### **E2015-09 Challenges of E-Learning Implementation in Kenyan University Education. Case Study of Kimathi University in Nyeri County, Kenya**

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#### **Abstract**

E-learning is delivery of education using Information Communication Technologies. In developing countries like Kenya, e-learning is in infancy stages. The few Universities in Kenya which have adopted e-learning are using blended mode in teaching and learning. This paper is an investigation of problems facing implementation of e-learning in Kenyan Universities. The paper also proposes an e-learning implementation framework for adoption in Universities. The study was done in the School of Computing Science and IT. Total population of respondents included 3056 students, 14 lecturers and 10 ICT staff. Sample size using Yemen's formula was 354; 330

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students, 14 lecturers and 10 ICT staff. A closed ended questionnaire was designed and self administered to collect information about challenges of implementing e-learning in Kenyan Universities. Data was analyzed and presented using IBM SPSS statistics V20. Findings showed that lack of infrastructure, lack of e-learning awareness, problems of content development and management, question of ethical usage of e-learning platforms, lack of policies, control and monitoring, inadequate ICT skills and lack of management support were the main challenges that Universities face in quest to integrate e-learning in the learning process. The study concluded that Universities in Kenya require an e-learning implementation framework that should be monitored by government to ensure compliance. For Kenyan University education to be competitive globally, e-learning has to be made an integral component of education system. Needs assessment survey should be undertaken prior to implementation of e-learning projects.

**Keywords:** *E-learning, University Education, E-learning framework, Challenges, Implementation*

### **E2015-10 Prevalence of Alcohol Associated Sexual Dating Violence Among College Students at Rift Valley Institute of Science and Technology, Nakuru County, Kenya**

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#### **Abstract**

Dating violence is acknowledged as a global concern that occurs among all races, ages, cultures and socioeconomic levels in society. Sexual dating violence is a concern as it leads to physical, psychological and sexual abuse for victims and perpetrators. Students in sexual violence relationship may believe that sexual violence is acceptable in dealing with other people. This generates a violence cycle that progresses to the next stage of development. Dating violence may be associated with multiple factors, alcohol included. Alcohol use directly affects cognitive and physical function, reducing self control and leaving individuals less capable of negotiating a non violent resolution to conflicts within relationships. This study sought to investigate the prevalence of alcohol associated sexual dating violence among college students of Rift Valley Institute of Science and Technology, Nakuru County. This study adopted a descriptive survey research design and conducted in the Main and the Nakuru Town Campuses. Purposive and stratified random sampling techniques were used. The study population consisted of 3484 college students. A sample size of 346 college students was used. The research data was collected using a questionnaire. The questionnaire was considered reliable after yielding Cronbach coefficient of 0.74 in a pilot study. Data collected was analyzed using descriptive statistics with the aid of computer-based Statistical Package for Social Sciences (SPSS) programme. The study findings revealed alcohol associated sexual victimization was more prevalent than perpetration sexual dating violence. The study recommends that the college should have specialized systems to help victims of alcohol associated sexual dating violence. Furthermore, awareness should be created among parents, counselors, and students in regard to alcohol associated sexual dating violence. This may reduce alcohol associated sexual dating violence.

## **E2015-11 Teacher Education in a Rapidly Changing Learning Environment in Kenya: Pressures and Possibilities**

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### **Abstract**

This paper is premised on the fact that, Teacher education is currently facing a number of tensions as pressures have come from many quarters in the last decade, with perhaps the most intense focus being on the issue of teacher quality. The call for an improvement in the quality of teachers is welcomed by many, but there are inherent dangers too. Over the past several years, a new consensus has emerged that teacher quality is one of the most, if not the most, significant factor in students' achievement and educational improvement. In a certain sense, the good news, simply affirms what most educators have believed for years: teachers' work is important in students' achievement and in their life chances. In another sense, however, this conclusion is problematic, even dangerous. When teacher quality is unequivocally identified as the primary factor that accounts for differences in student learning, some policy makers and citizens may infer that individual teachers alone are responsible for the successes and failures of the educational system despite the mitigation of social and cultural contexts, support provided for teachers' ongoing development, the historical failure of the system to serve particular groups, the disparate resources devoted to education across schools and school systems, and the match or mismatch of school and community expectations and values. Influenced by the new consensus about teacher quality, some constituencies may infer that "teachers teaching better" is the panacea for disparities in school achievement and thus conclude that everybody else is off the hook for addressing the structural inequalities and differential power relations that permeate through educational institutions in a rapidly changing educational environment.

**Key words:** *Teacher Education, Quality, Changing Learning Environment, Classroom Instructions, Pressures, Possibilities*

## **E2015-12 Personality Disposition to HIV/AIDS; A Study of Locus of Control among HIV Positive Women in Thika Sub-County**

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### **Abstract**

The prevalence of HIV/AIDS remains a major concern in Kenya because of the high rates of infection among adult population and significantly among young people. Young women, in particular, have consistently been found to have higher prevalence rates than men in the same age group. The major purpose of this study was to investigate personality disposition of HIV/AIDS positive women in Thika district. The scare study also aimed at find out the locus of control among HIV/AIDS positive women in Thika sub-county. The central idea was to critically analyse the counseling implications of the findings. The study consisted of 70 respondents all HIV/AIDS positive from Thika sub-county. To accomplish this objective, Rotter's I-E scale was availed as an instrument for data collection. The purposive sampling procedure was used to derive the sample. Expost-facto research design was used. Descriptive statistics were employed for data analysis. It was discovered that majority of HIV/AIDS positive women in Thika District had external locus of control. Externality was noted among respondents

of low levels of education. However, it was noted that there was no difference between scores of respondents living in urban areas and those living in rural. The implications of the results were critically examined. The results were found to be of particular interests to practicing counselor's health educators and policy makers. This is because the findings can be useful in designing public health interventions in control of HIV/AIDS pandemic. Recommendations were made for counselors, education policy makers, as well as for the future researchers.

*Key words:* Locus of control, HIV/AIDS, personality disposition.

### **E2015-13: Application of Social Media in Secondary Education, a Focus on Nakuru Municipality, Nakuru County**

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#### **Abstract**

Countries in the developed world embraced opportune implementations of social media applications to improve the quality of several services; one being education. These countries are actively pursuing additional solutions that can improve educational practices. Conversely, developing countries are lagging behind in the implementation of such technologies due to educational system related problems. Social media, Internet-based tools that promote collaboration and information sharing can be used in academic settings to promote student engagement and facilitate better student learning. Very few studies on use of social media to improve education in Kenya have been done. This study aims at looking at ways through which social media can be used to improve education in Kenya, a focus on Nakuru Municipality. Social learning theory states that people learn from one another via observation, imitation, and modeling. The objectives of this study include: To understand the existing social media based educational model in developed countries, to understand the existing educational model in Kenya, to analyse possibility of improvement of the models in Kenya by applying knowledge gained from modes in developed countries. The study will employ a descriptive survey research design. The target population will be 2000 respondents consisting of 10 head teachers, 90 teachers, 5 education officers in Nakuru Municipality and 1895 students. The sample size will be 410 respondents, made up of 10 head teachers, 18 teachers, and 379 students, one DEO and two Zonal Quality Assurance and Standards Officers (ZQASOs). Proportionate sampling will be used to select the head teachers and teachers while purposive sampling will be used to select the DEO and ZQASOs. Questionnaires will be used as instruments for collecting data from the head teachers and teachers while interview schedules will be administered to the DEO and the Zonal Quality Assurance and Standards Officers (ZQASOs). Validity of the instruments will be through experts in research and piloting. Reliability will be tested by subjecting the instruments to a pilot study. Data analysis will done using descriptive statistics after data cleaning and coding. Quantitative data will be analyzed using frequency counts, means and percentages while qualitative data will analyzed by tallying the numbers of similar responses. Results of data analysis will be presented using frequency distribution tables, bar graphs and pie charts. It is hoped that the data will enable understanding of socio-economic values, culture differences, teaching methods, group work, participation methods, student interactions, and several other issues pertaining to education. This study will recommend models that can be implemented within the Kenyan education system to improve education on the basis of quality and value creation that are cost conscious to the user.

*Key words: education, social media, improvement*

### **E2015-14 Factors That Influence Principals' Managerial Effectiveness in Secondary Schools in Nakuru Municipality, Kenya**

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#### **Abstract**

Effective schools are the key to improved performance, particularly of students in all aspects. One of the key factors which may influence school effectiveness is the ability of the Principals to perform managerial functions effectively. There has been poor performance of management functions in secondary schools in Kenya, which has made the quality of education in terms of academic performance and discipline among students to decline. This paper highlights the extent to which Principals were effective in performing management functions. It attempts to assess the constraints that affected Principals' performance of management functions. Using a cross-sectional research design, data for the study were collected from a sample of 10 secondary schools in Nakuru municipality. The respondents included 10 head teachers, 80 heads of departments and 20 class teachers. Stratified random sampling technique and simple random sampling technique were used at various stages of selecting schools. A pilot study was conducted to ensure validity and reliability of data collection instruments. In this regard, test-retest method was applied and the reliability estimate was 0.93. Data was analyzed using descriptive statistics such as percentages, means, standard deviations and Pearson Correlation Coefficient. This study revealed that Principals were effective in performing management functions. However, they experienced various constraints in the course of performing management functions, which included lack of finance, time, and poor attitude towards work among others. The study will be significant to managers, policy makers and planners of secondary schools' education. The study recommended that the Government should increase budgetary allocation to schools, and relax fees structure. Principals should enhance teachers' motivation at the schools level by awarding the best teachers in various school activities.

*Key words: Principals, managerial effectiveness, Nakuru municipality, constraints, secondary schools, management functions, practices.*

### **E2015-15 Effectiveness of Constructivist Curriculum in the Classroom Management in Primary School In Kenya**

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#### **Abstract**

Classroom management as a broader and comprehensive construct that describes all teacher efforts to oversee a multitude of activities in the classroom including learning, social interaction and students behaviors. Constructivism transforms the student from a passive recipient of information to an active participant in the learning process. The study adopted a survey design, since this method allows determination of sample characteristics for a large group in a very short time. The design was chosen because of its appropriateness in educational research findings that

yield accurate information. Surveys are also effective in determining the attitudes, opinions and perceptions of persons of interest to a study. This study employed mixed methods research design that used both qualitative and quantitative approaches in a single study to gather or analyze data. The study was conducted in Eldoret East Sub County in Uasin Gishu County. The study employed simple random, stratified and proportionate probability sampling techniques. A sample of 40 respondents mainly teachers' and head teachers were purposely selected for the study from Eldoret East Sub County. Using simple random sampling teachers and head teachers were stratified into stratas as per their qualifications and responsibility in the school and the total study respondents were 40. The questionnaires were administered to teachers whereas interview schedule was administered to head teachers from randomly selected schools in the sub county. Data collected was processed, coded and analyzed to facilitate answering the research questions. This was done using descriptive statistics. The study would be significant both to scholars and policy-makers in the government, among other agents, as it raises issues on the need to improve of constructivist curriculum in the classroom management in primary schools.

**Key words:***Effectiveness, constructivist, curriculum, classroom management*

### **E2015-16 Influence of Social-Cultural and Economic Factors on Wastage Rates in Public Secondary Schools in Nyandarua County, Kenya.**

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#### **Abstract**

Wastage in Kenya's secondary schools has been a major concern to the education stakeholders since it leads to great loss of scarce resources allocated by the government and other stakeholders to this level of education. The purpose of this study was to determine the influence of social-cultural and economic factors on wastage rates in secondary schools within Nyandarua West and Central Sub counties of Nyandarua County. The study was based on Pearson's Gender Relations and Human Capital Theories. Using *ex post facto* research design, data was collected from 24 principals who were comprehensively sampled. A structured questionnaire of the likert type of scale was used in data collection. Hypotheses were tested at  $\alpha= 0.01$  level of significance using regression analysis. The findings of the study revealed that both the socio- cultural and economic factors significantly influenced wastage in secondary schools within the sub counties hence rejection of the null hypotheses. Analysis of the correlation between the social cultural factor index and wastage rates showed that the relationship between the two variables was strongly positive and statistically significant,  $r(22) = 0.951$ ,  $P<0.01$ . Additionally, the economic factor index and wastage rates were equally strongly positively correlated and statistically significant,  $r(22) = 0.900$ ;  $P< .01$ . The study recommended that concerted efforts should be made by education stakeholders (government, parents, and the community) to weed out negative socio-cultural practices which lead to wastage. Furthermore, the government needs to empower citizens and provide social safety nets through elimination of school levies to avoid students dropping out of school due to the school levies in order to curb the wastage menace experienced in the two sub counties.

**Key words:** *Wastage, socio cultural factors, economic factors*

### **E2015-17 Integrating Learner Disabilities in Inclusive Schools in Njoro Sub-County.**

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#### **Abstract**

The complexities and daily challenges experienced by learners with special needs in inclusive primary schools make them feel frustrated and unable to perform optimally in their studies. Sometimes they are unable to cope effectively with inclusive learning, and this makes them withdrawn. In order to avert such situations, counselling services are required in mainstream programmes to aid the learners develop academic, social and personal competencies that assist in their adjustment for life-long development. The purpose of this study was to explore ways of integrating disabilities into the school for international, national and personal development among learners with disabilities in Njoro Sub-County. Data was collected using two questionnaires which were administered to 100 learners and 20 teachers. Interviews were conducted among 5 education officers in the sub-county. The data was analysed using the statistical package for social sciences (SPSS) to obtain descriptive statistics (percentages and frequencies). The findings showed that learners with special in inclusive schools in Njoro sub county faced diverse psycho-social challenges including self-pity and self-devaluation among others. These challenges require well programmed guidance and counselling services. The findings of the study are expected to provide a basis upon which the ministry of Educations and the school administrators can operate to fully integrate learners with disabilities into all educational institutions for development. They can also help the ministry to formulate guidelines to address the challenges facing this special group of learners. The study recommended that the admission of learners into all schools should be so structured to include learners with disabilities irrespective of their gender and nature of impairment.

**Key words:** *Integration, disability, special needs, development*

### **E2015-18 Curriculum for a Sustainable and a Secure Kenya**

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#### **Abstract.**

Education has been identified as a solution to many social, political and economic problems that face a society. At independence Kenya identified education as a solution to enemies of development which were said to be illiteracy, ignorance and disease. At independence the country prioritised education in development plans, a trend that has continued to date. Yet research has established that there are many educated people and educational institutions yet the enemies of development persist and have taken a complex form of myriad social evils among them tribalism and corruption which leave the country exposed and threaten sustainability and security and even the very existence of the country. The purpose of this study was to investigate a kind of education that could lead to sustainable development and a secure Kenya. The study

employed document analysis which included research reports on curriculum implementation in Kenya public schools and the value based schools in Kenya, school syllabus and textbooks. It was established that school curriculum has knowledge skills and attitude that could lead to sustainable and secure Kenya if effectively and efficiently implemented. Reports on curriculum implementation indicated that the curriculum implementation in Kenya was traditional transmission, teaching learning resources were rarely used and it was inclined to attainment of high grades leaving little time to development of social skills. The value based schools emphasized both academics and development of social skills and values were lived and practised and not just memorised. This study recommended value based curriculum effectively implemented for a sustainable and a secure Kenya.

*Key words: Curriculum, sustainability, implementation, value based*

***E2015-19 Effect of Socio-Cultural Factors: Early Marriages, Puberty Related Issues and Community's view on Education on Motivation to Learn among Students in Public Secondary Schools in Laikipia West Sub-County, Laikipia County, Kenya.***

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**Abstract**

The gap in gender enrolment and academic performance between boys and girls in secondary schools has been widening in the society. Students in secondary schools face varied socio-cultural challenges in their academic work which affects their self esteem, academic aspiration and motivation. This study sought to investigate the effect of socio-cultural factors (early marriage, puberty related issues and community's view on education) on motivation in girls' and boys' academic performance at Kenya Certificate of Secondary Education Examination in Laikipia West Sub-County, Laikipia County. The study adopted a survey research design. The population included 5206 students in the 18 public secondary schools. A random sample of 349 students (including 194 boys and 155 girls) and 18 school principals was drawn from 18 randomly selected schools. Data was collected using two sets of self-structured questionnaires (one for students and another for school principals). The questionnaires were pilot-tested to validate and determine their reliability. The collected data were analyzed using descriptive statistics with the aid of Statistical Package for Social Sciences (SPSS) version 17.0 for Windows. The study findings indicate that there was no difference in the level of motivation towards learning and community views on education, effect of menstrual period on girls' education and effect of parental preference of early marriages of daughters among the respondents. The study recommends that there is a need to create awareness among the concerned stakeholders on the social as well as educational effect of withdrawal of learners from school for the purpose of early marriage. More so, there is need to include other school factors that may have more influence on student motivation to learn.

**Key Words:** *Socio-Cultural factors, Early Marriage, Puberty, and Community view to Education, Motivation and Self Esteem.*

## **E2015-20 An Investigation Into Integrating Biblical Faith And Learning For Sustainable Development**

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### **Abstract**

The climate change will continue to be a great challenge to mankind. This study will seek to investigate the influence of biblical faith in learning for sustainable development. There is a need to understand biblical doctrine on sustainable development, which gives proper interpretation of such texts as Matthew 6:34 and Genesis 1:28-30 which states that creation is sustained by God and that man should be fruitful to fill the earth and subdue it respectively. If bible is misinterpreted it means that God's word endorses indifference, ignorance, and total negation of stewardship of ecological system. There has been efforts by United Nation on Human Environment, that have held several conferences to address environmental issues which seems to fail to some extent and also succeed to certain limits. The passed dry season in Kenya is a testimony of negative effects of climate change and which has propelled this study. The case study was conducted at Mau water catchment area and environs which has been seriously affected by climate change. The target population was Church leaders, Pastors of the selected Churches, other leaders, and environmental conservatives. A Descriptive design was utilized. Random sampling was used to guide collection of the relevant data. The interview schedule and phenomenological study was done. Standard research ethics were observed. Data analysis was done using statistical package of social sciences. The finding revealed that biblical faith influences environmental conservation both negatively by indifference, and positively by some Churches leading the way by providing tress for planting, establishing demonstration farms, and teaching environmental lessons, but there is a need to corroborate with other religious groups to advance this desired goals.

**Key words:** *Reforestation, Sustainable Development, Biblical faith, Climate change, land degradation, Water catchment area, water and air pollution, and Development programs.*

## **E2015-21 The Impact of Using Digital Images in Teaching and Learning in Lower Primary Schools;Kenya**

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### **Abstract**

The increasing demand and a new opportunity for instructions to strive for quality and excellent education, make curriculum more accessible using digital to enhance learning is super-duper idea in pupils' educational settings. Images are increasingly being used in learning and teaching resource especially with the emergence of mobile phones and digital cameras, teachers are able to access quality digital images. Digital media is becoming as common as pencils and notebooks were to the parents. Therefore teachers should be ready to accept wave of ICT to meet with 21st



century teaching and learning trends. The objectives were to; explore effectiveness of including images in teaching, determine the impact of using images on teachers and learners and determine the relationship between use of images in teaching and pictures. Gardners' and Paivios' theories on ability to think in pictures and combination of verbal and visual help people to recall information informed the study. A total of 105 respondents participated in the study. The study adopted experimental design involving static group comparison. Simple random sampling was used to select the school and purposive sampling to obtain the class. Experimental class was exposed to images and control pictures (drawing) for the same duration. Post-test and questionnaire were administered to the respondents. Data was analyzed through descriptive statistics and inferential which were correlation and chi-square. Hypothesis was rejected at significant level of 0.05. The findings revealed that it is time consuming. However teachers are ready to accept the wave of digital. The study confirmed the importance of using images to assist pupils make visual association. It was enjoyable for the pupils, interesting, led to interaction, long-term memory and greater improved learning experience. The following recommendations were made; teachers should be trained, schools to have digital camera and teaching methods need to meet with 21st teaching and learning trends.

**Keywords:** *Images, Visual Learning, Effective Teaching and Digital*

## **E2015-22 An Assessment of the Influence of Women Representation on Social Economic Development in Kirinyaga County: (1992-2014)**

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### **Abstract**

There is need to pay greater attention to the declared agendas of political office seekers and set criteria and mechanisms for enforcing accountability, bearing in mind that once in government, women politicians may not automatically become the powerhouses expected; and some may only symbolically “stand for” women rather than genuinely represent or “act for” women.(Nzomo).The overall aim of this study was to determine whether there is a link between women representation and social economic development. The study used Kirinyaga County as a case study. The specific objectives of this study were as follows: (1) to establish how women have used their respective position to advance the gender and democratic agendas in elective politics in Kirinyaga County; (2) to determine if the presence of women politics have changed the patriarchal culture in elective politics in Kirinyaga County; (3) to determine the strategies that can be implemented to enhance women accountability in elective politics in Kirinyaga County. The study has made a significant contribution to the existing body of literature on the influence of women on electoral politics in Kenya. The study was based on the assumptions, the following assumptions: First, hardly do women use their position to advance gender and democratic agendas in elective politics in Kenya. Secondly, patriarchal culture still exists in elective politics in Kenya. The study employed a descriptive form of research design and further employ qualitative and quantitative research approaches. The target population of the study were all the registered voters within Kirinyaga County. Quota sampling technique was used to select respondents for the study. Semi-structured questionnaires and interviews were used as the data collection instruments for the study. The responses from the respondents were analyzed qualitatively and quantitatively. The study found out that there are some women have brought about social economic development while others have not.

**Key words;** *women, electoral process, development., mainstreaming, influence, democracy.*

### **E2015-23 Prevalence of Sexual Activities among Secondary School students in Nairobi and Busia Counties Kenya**

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#### **Abstract**

Adolescent sexuality is an important public health issue, as it affects them in many ways; they risk contracting HIV and other sexually transmitted infections; may become pregnant leading to school dropout and early marriage. The assessment of prevalence of sexual activities among them, may guide policies and programmes aimed at reducing the risks of engaging in early sex. The study used *ex post facto* research design. Target population was 20227 form three students in Nairobi and Busia Counties. Accessible population was 3568 form three students in seven districts. Multi-stage, probability proportionate to size, stratified and simple random sampling was used to select the participants. Findings of the study shows adolescents engage in sexual activities at a very young age. They engage in sex activities with multiple partners and majorities do not use contraceptives. Overall prevalence of sexual activities was 28.8% male and 14.6% female. Variables positively associated with sexual activities include age, gender, school type and location. Any intervention aimed to promote students' sexual health should be designed with appreciation of factors associated with sexual activity in due consideration.

Keywords: *Students, sexual activities, Prevalence*

### **E2015-25 The Influence of God's Law to the National Values in Enhancing Sustainable Development at Borabu Border**

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#### **Abstract**

The paper is an outcome of a study which was conducted whose major objective was to investigate the challenges of Seventh –Day Adventists on observance of God's law (book of Exodus) on perennial Borabu border violence. The area of study was Borabu Sub County. The research was anchored on Dewey's educational theory of school and society (1900), which holds that education and learning are social interactive processes and a place of both character and potential development. Descriptive survey methods were used. A sample size of 200 from a total population of 2003 was used. A questionnaire with a 5 point likert type scale, interview schedule and observation technique were used. Simple random sampling and purposive were used to select respondents for questionnaire and interview data. Concerning data collecting procedures 174 church members and 21 IDPs, copies of the questionnaire were administered. As regards to interview data, the researcher deliberately interviewed 7 pastors and 5 IDPs. As regards

analysis, data collected from the field was sorted, coded, classified and entered into the computer for analysis. Qualitative data from interview was analyzed using descriptive statistics such as percentages and frequency counts. Major findings of the study were; God's law has a great influence on the implementation of the national values at the Borabu border because the whole law of God teaches on love toward God and neighbor. In addition, the four tenets of the national values of unity/patriotism, human dignity social justice, good governance integrity and sustainable development were found to be among the major components of the Christian values contained in the six doctrinal teachings of the Seventh Day Adventist church. Therefore the conclusion drawn was that these national values shall be implemented through the observance of God's law. The other inference noted was that integration of faith and learning shall be enhanced through the implementation of both the national and biblical values enhance harmonious co-existence. The paper recommended that God's law should be integrated in the process of implementing the tenets of the national values.

*Key words: Adventist teachings, Integration of faith and learning, Violence, Values.*

## **E2015-26 Rolling out Geospatial Tools in Education: Opportunities, Challenges and Lessons from Kenya Secondary Schools**

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### **Abstract**

The Education system in Kenya has undergone tremendous changes over the last decade ranging from the introduction of Free Primary Education, changes in the secondary school curriculum, increased school enrollments, creation of more universities and colleges and the introduction of Information, Communication and Technology (ICT). Of these reforms, the most notable is how ICT is revolutionizing Education through the introduction of E-learning, Digital Content and the use of specialised computer packages for teaching.

Of late Geography seem to rediscover its self confidence as a discipline by demonstrating its relevance to the world of everyday reality and towards the development of understanding of both social and natural sciences. At the centre of this is Geographic Information Systems (GIS) which is creating avenues to cultivate a spatial perspective within diverse curricula and by extension encourage a return of geography in institutions which lack it as a formal course of study.

As a tool, GIS can be used for display, Inquiry and Analysis in problem-based learning. It is therefore envisaged as an invaluable resource for use in extending a learner understands of Geography by allowing for the visual illustration and manipulation of major concepts of the discipline. Despite the increased growth of GIS in Kenya, its use in teaching and improving the quality of geography education in secondary schools is minimal if any.

The purpose of this paper is to provide the rationale and background for calling attention the need to build awareness for GIS in schools by; reviewing the current state of Spatial Information Education in Kenya, prospects of rolling out GIS in institutions, then challenges and opportunities of promoting Geospatial Technologies in learning. Finally we conclude by emphasizing on the importance of interdisciplinary collaborative partnerships between the event sponsors and the research community.

*Keywords: GIS, Problem-based learning, Geography, Collaborative Partnership, Spatial Perspective, Awareness*

**E2015-27 The Implications of Language and Power in Gikuyu Marriage Negotiation Discursive Domain, for Kenya's Vision 2030.**

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**Abstract**

This study was conceived on the premise that there are connections between language use and unequal relations of power and there is widespread underestimation of the significance of language in the production, maintenance and change of social relations of power. There is therefore need to help increase consciousness of how language contribute to the domination of some people by others since consciousness is the first step towards emancipation. Some commonsense assumptions which are implicit in the conventions according to which people interact linguistically are identifiable in conventions which follow a pattern where one party seems more powerful as seen in the way they control the process of talk such as in the *Gikuyu* marriage negotiation discursive domain. This paper focuses on the formal discursive process of negotiating and legalising marriage in the domain of 'Ruracio' or bride wealth payment amongst the *Agikuyu* of Kenya. Data, consisting of five recorded discourses from sampled negotiation sessions and five focus group discussions from Kiambu County Kenya, was translated, transcribed and analysed with a view of investigating language use for power potentialities. Guided by principles of language and power, the study established that language use in this domain defines power differentials and this has a direct influence on how people think, act and view their society. This paper argues that such potentialities would be instrumental in building a free and fair society as envisioned in the social pillar of Kenya's Vision 2030. This way, Linguistics as an area of study would be contributing to social development. It is hoped that the findings will be useful to all language users, leaders in general and policy makers in our country.

**Key words:** *Language, Power, discursive domain, Vision 2030, Marriage negotiation*

**E2015-28 Perceptions of Teachers Towards Integration Of Adaptations, Mitigations And Cost-Reduction And Sustainability Topics On Climate Change Into Secondary School Agriculture Syllabus In Machakos County, Kenya**

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### **Abstract**

Secondary school agriculture syllabus was introduced in Kenya to equip learners with knowledge on the basic principles of farming. In the wake of the last quarter of the 20<sup>th</sup> Century, climate change became the single most challenge to the Worlds agriculture sector and socio-economic development in general. The Kenyan government acknowledges achievement of long-term sustainable economic growth up to, and beyond Vision 2030 in the face of climate change as it's a primary concern. This is evidenced through launching of the National Climate Change Response Strategy (NCCRS) agenda in 2010, to focus a nationwide adaptation and mitigation to climate change. Insufficient knowledge on climate change adaptations and mitigations restrains the agriculture syllabus from meeting its objectives, which in turn translates to a shortfall in revitalizing the agriculture sector. The problem that the study sought to investigate therefore was lack of empirical data on the perceptions of teachers towards integration of adaptation, mitigation, and cost-reduction and sustainability topics on climate change in secondary school agriculture syllabus. The design of the study was descriptive survey research. The target population was three hundred and fifty (350) agriculture teachers in public secondary schools in Machakos County. A sample of a hundred (100) agriculture teachers was selected through proportionate stratified random sampling technique. A structured questionnaire was used to collect data from the respondents. The objectives of the study were analyzed using frequencies and percentages. The main findings and conclusions drawn from the study illustrated an overwhelming majority of teacher's (87%) endorsed integration of adaptation, mitigation and cost-reduction and sustainability topics on climate change into agriculture syllabus. The major recommendation drawn from the study revealed agriculture education as a key precursor to the agriculture sector, as it translates to equipping people with desirable skills, knowledge and attitudes that cushions people from climate change effects.

### **E2015-29 The Role of Guidance And Counseling in Curbing Pornography among Youths: a Case of High School Students in Kirinyaga County- Kenya**

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### **Abstract**

Estimates suggest that up to 90% or more youth between 12 and 18 years have admittance to the Internet. Concern has been raised that this increased accessibility may lead to a rise in pornography seeking among children and adolescents, with potentially serious consequences for child and adolescent sexual development. Pornography continues to be an antagonistic substance with those on the one side arguing it's harmful to society. This study is being motivated by the public outcry due to the increase of risky sexual behaviours among high school students in the wake of the spread of deadly HIV & Aids era. It is hypothesized that guidance and counseling would protect the students from pornography use by increasing self-regulation. The study seeks to answer the question of why is pornography on the rise among high school students yet guidance and counseling programmes have been put in place to handle student's issues. The study will find out the state of guidance and counseling programme in secondary schools, establish the association between pornography use and risky sexual behaviours among students,

find out the demographic characteristics of students using pornography and establish correlates between adolescent's acceptance to guidance and counseling and pornography use. The study will employ a survey design and a sample of 400 high school students in Kirinyaga County. Stratified sampling will be used to select the study unit while convenience sampling will be used to arrive at 400 respondents. Two instruments will be used to collect data. These are focus group discussion guide and questionnaire for students. The reliability and validity of the research instrument will be safeguarded through pilot studies. The qualitative data will be analyzed through the use of quick impressionist summary and thematic analysis while the quantitative data will be analyzed through variance, chi square measure of association and Pearson moment correlation coefficient. Spss will be used to manage the data. The results of study are expected to show the role which guidance and counseling play in curbing pornography among high school students if any, and the way forward.

**Key words:** *pornography, High school students, guidance, counseling, curbing*

### **E2015-30 Integrating Biblical Faith and Learning for Sustainable Development: A Case Study of Little Jewels Support Program, town, Kenya.**

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#### **Abstract**

The objective of this paper is to illustrate that when Biblical faith forms the foundation of sustainable development then the person can achieve the status of well-being. In the other words the person will be a wholistic person. A person who will ably in turn contribute ably contribute to the well-being of others just because the person has himself/herself benefited from the contribution of others. The paper will use a case study of Little Jewels kindergarten in Gichagi slum in Ngong town, Kenya which was established in 2009 by Christhood Support Program(CSP). The program has three rehabilitates, cleans, feeds and educates children of ages between eight months and five years. Of note is the concept of attaching each child to a volunteer parent' and who comes often to sit the with the child, pray with the child, read the child stories and do minor chores for the child and with the child. It is hoped this will implant in the children the concept of responsibility at a very early age. After leaving the Kindergarten, the Christhood Support Program supports them through their primary education and still attaches them to nursery. The case study will use the one to one interview with the children, parents and partners to provide the content of the case study. In addition program reports and pictures will also be used to beef up the report. It is hoped that lessons that will be drawn from the people's initiative will move other people to act and that eventually the replication will end up ensuring that the children are molded while young and as the bible says "Bring up a child in the way he should go and when he is old he will not depart from it". Time has come for us to shape our children while young.

### **E2015-31 Counselors Perceptions of The Benefits of Counseling Supervision: A Panacea For A Secure World**

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### **Abstract**

Counseling supervision has consistently been recognized by the counseling profession as an essential component in the development of competent counselors and the delivery of therapeutic services. The purpose of this study was to explore counselors' perceptions of the benefits of counseling supervision in their work with clients, from a self-reported survey. The literature review highlights a paucity of research in this area. The study employed a survey research using a mixed method design, in a field study of 105 practicing counselors accredited by the Kenya Counseling and Psychological Association. Data collection combined Likert scale and open-ended questionnaires. Data analysis utilized descriptive statistics and factor analysis with varimax rotation, with the aid of Statistical Package for Social Scientists (SPSS) 12.0. Varimax rotation converged in three iterations resulting in two factors as also supported by the scree plot generated. Factor one was a combination of professional growth and competency, while factor two was on managing stress and burnout. The two factors explained 58.499% of the variance. Qualitative findings indicate that supervision benefits include: professional growth and development, feedback and support as well as a mechanism for managing burnout. The study contributes to the knowledge of factors that can be leveraged on in promotion of counseling supervision as a panacea for a secure world psychologically. The results suggest that future research should explore linkages between demographic variables of gender, frequency of supervision, experience as a counsellor and adequacy of supervision session; with the perceived benefits of counseling supervision. More specifically an exploration of determinants of counselors' adoption of counseling supervision should be explored.

**Keywords:** *Counselors; Counseling Supervision; Supervisors; Benefits; Perceptions*

### **E2015-32 Availability and use of Media Resources in Teaching and Learning: A Case of Selected Secondary Schools for the Hearing Impaired in Western Kenya**

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### **Abstract**

The purpose of this study was to investigate the availability and use of media resources in schools for the hearing impaired. Specifically, the study identified the constraints in selection and use of media resources in schools for the hearing impaired. The use of media resources in teaching and learning in schools for the hearing impaired has never been critically evaluated by scholars as various studies and literature reveal. This is what prompted this study. The study was guided by two theories namely: Sweller's Cognitive Load theory (2005) and Merrill's Display Component Theory (1983). The study adopted a descriptive survey design. Samples who participated in this study were principals, teachers and students from selected schools. Three main instruments were used to collect data from the respondents: questionnaires, Observation checklist and document analysis. Descriptive statistics was used to analyse finding of the respondents views, while statistical analysis using statistical package for social services (SPSS) version 22.0 was used to analyse closed ended items. Data was presented using percentages, frequency tables, pie charts and bar graphs. Data collected and analysed showed that teachers experienced several constraints. The most severe ones were competence levels

especially in modern technology, use of sign language especially when using modern technology, lack of time for preparing the media resources and inadequate supply of the same. It was concluded that the constraints teachers experience greatly affect the use of media resources in teaching and learning. Recommendations were in line with the findings and they include; Teachers be given less work load so that there is time for them to prepare instructional materials, the schools be well staffed to ease the teachers' work load, the training institutions should train the teachers thoroughly especially in the use of media resources and finally the resources should be supplied in large quantities.

**Key words:** *Availability, Media, Resources, Hearing, Impaired, Constraints.*

### **E2015-33 Availability of Computers and Capacity Development of Users to Integrate ICT in Curriculum Management in Schools in Nandi and Uasin Gishu Counties, Kenya**

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#### **Abstract**

This paper examines the status of computers and the extent to which head teachers and teachers are prepared integrate ICTs in their curriculum management practices. The study employed a descriptive survey research design. All the 8 districts of Nandi and Uasin Gishu Counties were included in the study. A total of 63 schools with functional ICTs were purposively selected and, in each school, one class teacher, 2 subject teachers and 2 heads of department were selected using stratified random sampling to give a total of 315 teachers. All head teachers from each of the 63 schools were selected through purposive sampling. The total sample of the study was 378 respondents. Triangulation approach was employed in which both qualitative and quantitative data were obtained and analysed. The main data collection techniques included the use of two questionnaires for teachers and head teachers and an interview schedule that was administered to the head teachers. Data was analysed using SPSS Version 20 and presented through descriptive statistics by use of frequencies and tables. The significance of relationships and differences of variables were tested using Pearson Correlation, Multiple Regression and Independent Samples T-test. The study established that there was an acute shortage of computers but the available ICTs were easily accessible to users. There was a low level of ICT integration into curriculum delivery and decision making. A significant relationship was found between the state of computers and the level of their integration in the management of curriculum. The study recommended that acquisition of computers should be enhanced and the training of ICT users should focus more on specialised application skills rather than basic operational skills.

**Keywords:** *Status, Computers, Capacity Development, Users, Integrate, ICT, Curriculum Management, Schools, Nandi, Uasin Gishu Counties, Kenya*



## **E2015-34 Authorship and Audience: How the Colonial Audience, the Opposition and the Post-Colonial Kenyan Citizenry Shapes Jomo Kenyatta's Identities in *Suffering Without Bitterness***

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Antony Somba Mang'oka<sup>2</sup>;

### **Abstract**

The audience that Jomo Kenyatta, Kenya's first President, targets in *Suffering Without Bitterness* constitutes a group of individuals in post-colonial Kenya that requires a close examination insofar as the way this audience shapes his perception of himself. Kenyatta perceives the Opposition and the former colonisers as threats whose intention was to destroy his image as the father of the nation who had the mandate to lead Kenya into modernity. Kenyatta, in *Suffering Without Bitterness* (hereafter referred to as *Suffering*), invokes an image that portrays him as the father of the modern Kenya, thereby rendering the prevailing representations of him from these audiences baseless. In this text, Kenyatta tries to construct an image that portrays him as a nationalist leader who is worthy of trust and who is involved in (re)constructing a post-independent state that is devoid of divisive politics and that creates an environment suitable for economic growth. It will be recalled that the audience influences the content of a speech and that almost every idea and experience that a speech writer uses has been forced by his/ her intended audience. Writers or speakers craft their message from the perspective of their audience's presumed reaction to their work. For Kenyatta, it makes good sense to know whom he is directing his work to and what it is he wants his work to accomplish. This influence is not limited to literary concerns; it determines how utterances are located within and what attitudes are taken towards a social context constituted by the audience. This paper argues that the colonial audience and the Opposition plays a significant role in the content of Kenyatta's speeches, and this role shapes the identity that Kenyatta constructs for himself in his text.

**Key words:** *Audience, Colonial Audience, the Opposition, Identities*

## **E2015-35 Causes and Approaches used in the Management of Truancy in Public Secondary Schools in Nyamira North District, Nyamira County**

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### **Abstract**

The study sought to investigate the causes and approaches used in the management of truancy in Nyamira North district in Kenya. The study was guided by the following specific objectives: (i) to analyze the school related causes of truancy in secondary schools in Nyamira North district; (ii) to assess home related causes of truancy in secondary schools in Nyamira North district; and (iii) to evaluate the approaches used in the management of truancy in secondary schools in Nyamira North district. Literature review on truancy was undertaken in order to provide a bridge and clear understanding of existing knowledge base in the problem area. The literature review is based on authoritative, recent, and original sources such as journals, books, thesis and academic

projects. A descriptive survey was used to undertake the study. The method permits gathering of data from the respondents in natural settings. A census of 36 public secondary schools in Nyamira North District was undertaken. All the school principals participated in the study. In order to obtain data from the students, stratified random sampling was used, where by in each school, forms 1, 2, 3 and 4 were each represented by 8 students, selected at random. In total 36 Principals and 288 students participated in the study. A semi-structured questionnaire was used to collect primary data from the respondents in public secondary schools in Nyamira North District. Content analysis was employed for data pertaining to the profile of the respondents while data pertaining to the objectives of the study was analyzed by employing descriptive statistics. Statistical Package for Social Sciences (SPSS) was used in data entry and analysis. The study findings showed that even though the main causes of truancy vary from study to study, a combination of home, school and individual factors may be involved. The main causal factors of truancy include individual factors, institutional factors, and family backgrounds and community factors. The individual factors include: anxiety and fear; poor social skills; low self – esteem; anti-social behavior; scholastic failure; learning problems; cognitive style; poor habits arising from initially legitimate reasons. The institutional factors include: dilapidated school building and poor facilities; school size; movement between classes during lesson changes; classroom management; bullying; educator-learner relationship; teaching or instructional approach. The family and community factors include: socio-economic status of parents; marital status of parents; poor involvement and supervision; peer influence; violence and drug use. The findings also show that the approaches used in the management of truancy in schools may be categorized into the following: personal traits, school aspects, community aspects and others. In view of the findings, the following recommendations were made: there is need for the management of schools to accord the students opportunities for connection and social bonding; there is need for the management of schools to emphasize students' commitment in schools; the management of schools should endeavor to involve students in as many school activities as possible, including day-to-day management of the schools; and belief and values should be emphasized as they are often not formally written but serve as the moral conscience of the society that determines right from wrong.

**Key Words:** *Truancy, Public Secondary schools*

### **E2015-36 Influence of Existential Fulfilment on Work Engagement among Kenya Universities Professional Counsellors**

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#### **Abstract**

This century has witnessed a paradigm shift in studies on psychological wellness of workers and researchers have shown an increasing interest in positive aspects of personal functioning in the workplace. Two person-specific variables related to work and wellness (existential fulfilment and work engagement) have received very little attention in research among Kenya universities professional counsellors. This paper explores the influence of existential fulfilment on work engagement among Kenya universities professional counsellors. A cross-sectional survey was conducted among a target population of 193 professional counsellors in 45 institutions of higher learning in Kenya. Due to the size of the target population and to for purposes of increased

external validity, purposive sampling techniques were used to conduct a census of the respondents. Quantitative data was obtained using Existential Fulfilment Scale and Work Engagement Scale. Descriptive statistics (tables, percentages and cross-tabulations) and inferential statistics (chi-square, Spearman's Rank Order Correlations Coefficient) were used in the analysis. All posited hypotheses were tested at 0.05 significant level and analysis done with aid of Statistical Package for Social Sciences (SPSS) version 20.0. It was established that existential fulfilment was moderate and work engagement was high among professional counsellors in higher learning (mean index of 2.7 and 4.23 on 5-point Likert scale respectively). All dimensions of existential fulfilment and work engagement were positively correlated with each other as well as among one another. Significant correlations were also observed for all engagement dimensions and all existential fulfilment scales except for self-actualisation. The paper presents new knowledge on existential fulfilment and work engagement among Kenya universities professional counsellors and demonstrated the importance of these variables to the promotion of positive occupational health psychology as well as the implications for future research.

**Key word:** *Existential fulfilment; work engagement; work wellness; profession counsellors*

### **E2015-37 Emancipation of Both Genders: The Need For Gender Egalitarianism And Impartiality**

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#### **Abstract**

*"Gender equality is more than a goal in itself. It is a precondition for meeting the challenge of reducing poverty, promoting sustainable development and building good governance."* Kofi Annan Since time immemorial, there have been cries of gender inequality and injustice practices in Kenya. The women have been the most affected and the cries of emancipation have for a long time been heard but not listened to. They have cried and continue to cry out for equality in job opportunities, education, the social and economic fields, empowerment in every aspect, violence against them and justice in the larger perspective. This has caused the over-emancipation and over-emphasis of women rights and equality which has consequently led to the neglect of the male gender and its oppression by the former. Both genders therefore, have had their equal share of inequality and injustice. The prevalence of the issue of gender discrimination and inequality in Kenya directly undermines the provisions of the Constitution of Kenya 2010 and the inherent ability of the Government of Kenya to espouse the human rights of its citizens. There is need therefore for civic education to be used in the sensitization of the populace on gender equality and justice of the same. This will in itself not only improve the relations but also greatly sustain the development of the society and the nation in the wider perspective. The problem that this paper therefore seeks to address is the need for gender equality and justice; the need for inculcation of civic education into the system; the effectiveness that all these will have on the legal framework and the realm of human rights as a whole. Further, having established the problem that lies herein, this paper seeks to chart and elucidate a workable formula towards a society that upholds gender equality as a natural way of life, an unwritten norm and a daily practice.

## **E2015-38 Influence of Gender on the Achievement of Form Three Students in Poetry in a Cooperative Learning Set up**

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### **Abstract**

The study investigated the influence of gender in achievement in poetry when cooperative learning is used among secondary school students. The study employed a Pre-test-posttest-Retention test non-equivalent control group, quasi-experimental research design. A sample of six secondary school classes in six schools, were purposely selected and participated in the study. Three classes formed the experimental group while the other three formed the control group. Those in the experimental group received treatment for eight weeks. The study sample comprised of 199 form three students in Baringo District, Kenya. All the students were taught the same poetry content. After an eight week intervention period, all students in six classes were post- tested using the Poetry Achievement Test (PAT). The study concludes that cooperative learning is an effective teaching strategy, which provides equal learning experiences, enhances learner's achievement in language and reduces gender differences in poetry achievement. It is recommended that curriculum developers and teachers of English incorporate concepts of cooperative learning in secondary school curricula.

**Key words:** *Cooperative Learning Strategy, Achievement in Poetry, Gender.*

## **E2015-39 Hidden Polygamy among Dignitaries in African States**

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### **Abstract**

Polygamy was guaranteed among the peoples of Africa. Therefore, it was open to all who to practice it in the African contextual framework. But in the modern contemporary society polygamy has been hidden among dignitaries working in government offices. It becomes open when the man passes away and second or third wife declares herself openly and claims the sharing of the deceased properties or estates. Polygamy refers to the marriage in which the spouse of either sex has more than one mate at the same time and form a family. Therefore, a family is complete when children are born. The problem of the study is nowadays dignitaries [men] who work in the government office who die, women reservice to claim their rights as second or third wives of the deceased. The objectives are to investigate the factors leading to the man [husband] and wife [second wife] hides their marriage until when one passes away they claim the body or properties from the deceased. The research would adopt descriptive-analytical method. The findings are many dignitaries in Africa have passed away and a second or third wife comes openly to claim the sharing of the properties of the deceased. This poses a lot of questions which needs the research to unearth. It is concluded that there is hidden polygamy among dignitaries and its evident from the children born who resemble their deceased father. It is recommended that hidden polygamy should be abolished and open polygamy should be encourage for promoting social justice for family members.

**Key words:** hidden polygamy, dignitaries, wives.

## **E2015-40 Education in Biblical perspective enhances Good Governance for Sustainable Development**

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### **Abstract**

The separation of church and state has been mistaken for a separation of religion from life. This gravely attempt is deliberately been experimented in our public-schools education where religion is not considered as essential to a good personality. Our School system is producing 'democracy conscious scholars' a misnomer, since they are solidly godless and so enemies of sustainable development which Bible faith champions by advocating good governance. This mistaken conviction has often been deepened in the minds of our young people in our state – supported universities to a level where even Christian colleges established for the promotion of the faith find it difficult to secure professors who can skillfully articulate and combine sound faith with genuine scholarship. The research used prior knowledge theory of education which; states that students who learn more in one (foundational) level will be better able to assimilate new knowledge in the next level which agrees with Matthew 13; 52 that every teacher of the law / scribe who is instructed unto the kingdom of heaven is like a man who brings forth out of his treasure things new and old. Bible faith sets a firm foundation in mind by disciplining the spirit for excellence and can render a nominally Christian nation like South Korea truly great and successful in all sense. How is this? Because religion and true success in life are mutually inclusive as much as democracy is dependent upon morality and morality in turn is dependent upon religion. So Christianity is an integral part of a well – rounded education. There is no field in which the vigorous and combined leadership of educational institutions at all levels is so sorely needed as in the spiritual. Reputed colleges and universities should start limiting their honorary degrees to men who have done big things in the world of faith in the place of men who have inventions of super-destructiveness and materialism. Attempts to remove Christian Religious studies from our education system should be resisted.

**Key words:** *Prior learning, Bible faith, Democracy, morality.*

## **E2015-41 Regulating Pictures and Photographs in Teaching in Education Systems Globally**

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### **Abstract**

Most subjects taught in both primary and secondary, reflect the study of the real world. The subjects include Geography, home science, literature, history and art and crafts. If these are taught using pictures and photographs, the learners will comprehend the concepts and retain them for long periods and as a consequence effective learning. Since they study the real world, the learners should always use pictures and photographs to demonstrate what they are taught in classroom with reference to the real world. Pictures and photographs play an important role as substitutes for reality. The problem is nowadays teachers in all levels of education; do not use pictures and photographs in interpreting and application in the contemporary society. "Gone are the days when the teachers were making the lessons enjoyable to learners using a practical approach" The objective of the research is to study the significance of the use of pictures and

photographs in teaching Geography and other subjects. The research will use survey method in collecting data from all secondary schools located in Lodwar town which will serve as a sample study of the whole universe. The findings will be important to carry the students into the realms of comparison and contrast, because learners will be involved in looking for similarities and differences between what they see in a picture and what they have seen in the field or read in the books lastly, and learners will be asked to go and verify the information from other pictures and reference works and books.

**Key words:** *Pictures; Photographs; Real.*

### **E2015-43 Effects of Hidden Costs of Free Secondary Education on Transition and Completion Rates: A Case Study of Selected Public Boarding Schools in Kisii County.**

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#### **Abstract**

One of the major challenges facing secondary education sector in Kenya over the years is low transition rate from primary to secondary. Financing secondary education is a great challenge to both governments and households. Thus cost is a key barrier to transition to secondary school especially for the poor. Objectively the study sought to establish the adequacy of cost of Free Secondary Education that is met by the government. The study was guided by the budget principal theory which emphasizes the balancing of three basic components in any ideal educational budget namely; educational programme, expenditure/cost and income/revenue. The study used a descriptive survey method. A pilot study was conducted to ensure validity and reliability of the research instruments. Cluster random sampling technique was used to select 30% of the Head teachers and 5% of the parents. Questionnaires and interview schedules were used to collect data. The data was then analyzed through use of frequencies, averages, percentages and presented in tables, bar graphs and pie charts. The study established that though the introduction of FSE Programme has greatly reduced the financial burden of public secondary school going students, parents still incur some hidden costs which to some extent contribute to low transition and completion rates. It was recommended that since the established hidden costs negatively affect access, the Government of Kenya should increase FSE budgetary allocation to schools to ease parents' burden.

**Key words:** *Hidden costs, Transition*

### **E2015-44 Kenya's Religious Institutions Role in Devolution for Sustainable Development**

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#### **Abstract**

In this paper the role of religious institutions in the success of devolution in Kenya is examined. Politics influence almost every aspect of life and so does religion. In this article the misuse of power, bad politics, hypocrisy of democracy and corruption are identified as obstacles to devolution and the development of a country. These aspects are championed passively by the powerful and privileged minority political elites who hinder national development. Devolution is the statutory granting of powers from the central government of a sovereign state to government

of a subnational level such as the county government in Kenya. It is said that whenever a state fails in the proper governing of its people, they always turn to religious institutions for solace. It would be perilous to wait until the country gets to such state. The community of faith in Kenya has a big role to play in the success of devolution both at the national level and the county level for sustainable development and for the attainment of the vision 2030. It is a tool for empowering and mobilizing the people to become the agents of their own development and liberating themselves from these dysfunctional structures that devalue them and their dignity. For long the church has been seen to be on the opposing side, opposing transitions especially the new constitution and blocking the path for reform but not all. Some clerics have bled, detained and others have died for the course. The article recommends vibrant involvement of the religious society in governance.

**Key words:** *devolution, development, governance, democracy, religion.*

### **E2015-45 The Relationship between University Students' Training in Computing and their Motivation to Utilize ICT Resources in Learning in Selected Universities in Nakuru County, Kenya**

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#### **Abstract**

Over the past few years, the use of information and communication technologies (ICT) in education has grown rapidly. The benefits of ICT adoption are evident. However, it is a known fact that teachers face many challenges in integrating ICTs in their teaching to enhance student learning. Based on a study of selected universities in Kenya, this paper examines the relationship between university students' training in computing and their motivation to use ICT resources to learn. The study was guided by Rogers Diffusion of Innovations theory of 2003 which addresses change levels that teachers progress through in technology integration. Purposive sampling technique was used to select five universities that offer Bachelor of Education degree and 404 respondents who participated in the study. Data was collected using a questionnaire. The data collected was analysed descriptively with the help of the SPSS computer program version 20.0 and presented in the form of frequencies, means, standard deviation and percentages. The inferential statistics used to determine relationships among variables was the Pearson Moment Correlation. A p-value of less than 0.05 was interpreted as significant. The results of the study indicated that there was a significant relationship between university students' level of training and their motivation to use ICT resources for learning. Based on the findings, it is recommended that ICT integration be made part of undergraduate training in universities in order to equip future educators with ICT skills and that higher education institutions should provide in-service training on ICTs for teachers. The study contributes vital knowledge on the challenges of integration of ICT in institutions of higher education in Kenya. This will help policy makers to come up with strategies to ensure ICT is integrated in learning institutions to enhance learning outcomes and improve the quality of education.

**Keywords:** *Bachelor, Education, Computing, Kenya, Teacher Training, Motivation, Integration, Universities, ICT*

## **E2015-46 The role of Samburu Body Adornment in Challenging Gender Identities in the Era of Cultural Globalisation**

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### **Abstract**

Samburu body adornment identifies a woman's beauty, husband and social rank in the community through colour, pattern and mass. In the last sixty years, as a result of Kenya's entrance into the global economy, Samburu women have turned the indigenous body adornment into commodities creating products for western tourists. The ability of Samburu women to create employment has articulated their empowerment and in turn challenged the patriarchal gerontocracy norms dominant in Samburu culture. The study was informed by cultural theory. Culture includes knowledge, beliefs, art, law, morals, customs and other skills acquired by man as a member of society. Cultural history focuses on the changes and practices in human agency. Culture is transmitted across generations through the memory which is a faculty of the individual mind. Data was collected by use of oral interviews, archival search, non-participant observation as well as thorough the examination of secondary sources from various libraries. The data was analyzed using Ex Post Facto design.

**Key Words:** *Samburu, Women, Culture, Gender, Globalisation*

## **E2015-47 The Design and Purpose of Marriage in Biblical Perspective : Is Separation or Divorce an Option?**

Esther J. Kibor

Kabarak University, Nakuru

### **Abstract**

The marriage institution has been portrayed by the media in a bad taste. The media reveals many of the problems facing the marriage institution. There are many conflicts and marital fights brought about by communication breakdown, differing practices of child rearing, financial problems, sexual problems, unhealthy relations, and myriads of selfish reasons and attitudes, most of which have been blown out of proportion. The Newspapers is replete with various examples of these marital problems and conflicts. This study attempts to answer the following questions based on the examination and discussion of biblical passages: what causes such conflicts and fights in the family? What does the Bible teach about marriage? Is there a design that God has given mankind in His Word concerning marriage? Should couples part ways whenever problems arise in marriage? Is there room for separation and / or divorce? What implications do these conflicts and marital fights have on the contemporary family in today's church? The main objective of this study is to examine and discuss the purpose of marriage as God designed it in the Bible. In the process, it will answer the question as to whether there is an option or not for separation and / or divorce on the basis of what the Bible teaches. Finally, it will suggest implications for the contemporary family, with recommendations for educational ministries of the church today for a sustainable social society and the world at large.

**Key Words:** *biblical perspective, biblical marriage, design, divorce, marital problem, purpose*



**E2015-48 The Role of Christian Family on The Promotion of Positive Ethnicity. (A Case Study of Christian Families in Rongai Constituency, Nakuru County)**

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**Abstracts**

The Nation of Kenya is struggling to fight the social scourge of negative ethnicity. This social vice has not only threatened the decline of the national cohesion and integration, but is likely to slow down the realization of vision 2030 in that, the social pillar whose focus is to enhance national unity and peaceful coexistence among the Kenyan ethnic groups will somehow be crippled. Negative ethnicity is among the leading factors in one way or another that have contributed to socio – political and economic disparities in Kenya. You will often hear some of the senior Kenyan citizens assert that Kenya was more national and cohesive during the early years of independence than it is today. The unfortunate thing is that this is happening when the world is headed toward becoming a global village with a number of regional, continental and global partnerships and corporations are being fostered. The governments of Kenya through the enactment of the new constitution promulgated in 2010 have come up with deliberate efforts to try to salvage the dwindling national unity. A commission whose task is to promote national cohesion and integration (NCIC) has been entrenched in the constitution. However with this commission in place the question still remains how will they effectively address the problem of negative ethnicity? Are they going to use institutions and schools, churches and even the nuclear family to promote this? This research will attempt to find out what role the family unit has to offer on positive ethnicity. The focus will be the Christian family because the belief is that at least some if not all members of such a family is transformed by the word of God and therefore free from ethnic prejudice and cultural stereotyping. Transformed Christians see others from a biblical perspective hence consider them as brothers and sisters and not they verse them. The research methodology which will be employed is purposive random sampling to identify Christian households and capture a wider representation of Christian families living within Rongai constituency. Data analysis would be undertaken based on the responses, then appropriate recommendations made.

**E2015-49 Towards a Cost-effective Model for Quality Supervision of Student Teachers during Teaching Practice in Public Universities in Kenya.**

Tabot, Benedicta Aiyobei and Rono Joseph Kipkurui

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**Abstract**

Teacher education is paramount in the development of human resource for the achievement of quality education to enhance sustainable development in Kenya. It is concerned with the provision of varied learning opportunities and experiences to student teachers to enable them acquire, practice, and refine their knowledge, teaching skills and instructional strategies and attitudes and develop commitment to the profession. The opportunity to demonstrate the mastery of the competencies provided in the programme comes during Teaching Practice which is seen as an integral and most valuable part of teacher education hence a prerequisite. Most universities in Kenya place student teachers in teaching practice schools in all parts of the country with the exception of a few who limit them to certain specified regions within their proximity. Though

organisation modalities may vary from one institution to the other, teaching practice has common requirements which are identifiable across all the universities. The strategies adopted by each University for these requirements to be accomplished, has put into question not only the cost effectiveness of the exercise but also the quality of supervision and consequently the quality of the teachers. It is based on this premise that this paper proposes ‘a cost effective model’ guided by the cost-effective framework, a technique that is used to determine options that provide the best approach for adoption and practice. Measuring cost-effectiveness requires an assessment of essential quality indicators, such as levels of student support provided by the University supervisors, pass rates and assessment practices, as well as the expenditure incurred. This is demonstrated in this paper using a hypothetical situation/scenario derived from the current practice in Kenya which will be empirically determined through a study which is underway.

**Key Words:** *Cost-effective, teaching practice, quality supervision, collaboration, pooling resources.*

### **E2015-50 Integrating Biblical Faith and Learning for Sustainable Development: A Case Study of Little Jewels Support Program, town, Kenya.**

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#### **Abstract**

The objective of this paper is to illustrate that when Biblical faith forms the foundation of sustainable development then the person can achieve the status of well-being. In the other words the person will be a wholistic person. A person who will ably in turn contribute ably contribute to the well-being of others just because the person has himself/herself benefited from the contribution of others. The paper will use a case study of Little Jewels kindergarten in Gichagi slum in Ngong town, Kenya which was established in 2009 by Christhood Support Program(CSP). The program has three rehabilitates, cleans, feeds and educates children of ages between eight months and five years. Of note is the concept of attaching each child to a volunteer parent’ and who comes often to sit the with the child, pray with the child, read the child stories and do minor chores for the child and with the child. It is hoped this will implant in the children the concept of responsibility at a very early age. After leaving the Kindergarten, the Christhood Support Program supports them through their primary education and still attaches them to nursery. The case study will use the one to one interview with the children, parents and partners to provide the content of the case study. In addition program reports and pictures will also be used to beef up the report. It is hoped that lessons that will be drawn from the people’s initiative will move other people to act and that eventually the replication will end up ensuring that the children are molded while young and as the bible says “Bring up a child in the way he should go and when he is old he will not depart from it”. Time has come for us to shape our children while young.

### **E2015-61 Regulating Pictures and Photographs in Teaching in Education Systems Globally**

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## **Abstract**

Most subjects taught in both primary and secondary, reflect the study of the real world. The subjects include Geography, home science, literature, history and art and crafts. If these are taught using pictures and photographs, the learners will comprehend the concepts and retain them for long periods and as a consequence effective learning. Since they study the real world, the learners should always use pictures and photographs to demonstrate what they are taught in classroom with reference to the real world. Pictures and photographs play an important role as substitutes for reality. The problem is nowadays teachers in all levels of education, do not use pictures and photographs in interpreting and application in the contemporary society. "Gone are the days when the teachers were making the lessons enjoyable to learners using a practical approach" The objective of the research is to study the significance of the use of pictures and photographs in teaching Geography and other subjects. The research will use survey method in collecting data from all secondary schools located in Lodwar town which will serve as a sample study of the whole universe. The findings will be important to carry the students into the realms of comparison and contrast, because learners will be involved in looking for similarities and differences between what they see in a picture and what they have seen in the field or read in the books lastly, and learners will be asked to go and verify the information from other pictures and reference works and books.

**Key words:** *Pictures; Photographs; Real.*

## **E2015-64 The Relationship between University Students' Training in Computing and their Motivation to Utilize ICT Resources in Learning in Selected Universities in Nakuru County, Kenya**

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## **Abstract**

Over the past few years, the use of information and communication technologies (ICT) in education has grown rapidly. The benefits of ICT adoption are evident. However, it is a known fact that teachers face many challenges in integrating ICTs in their teaching to enhance student learning. Based on a study of selected universities in Kenya, this paper examines the relationship between university students' training in computing and their motivation to use ICT resources to learn. The study was guided by Rogers Diffusion of Innovations theory of 2003 which addresses change levels that teachers progress through in technology integration. Purposive sampling technique was used to select five universities that offer Bachelor of Education degree and 404 respondents who participated in the study. Data was collected using a questionnaire. The data collected was analysed descriptively with the help of the SPSS computer program version 20.0 and presented in the form of frequencies, means, standard deviation and percentages. The inferential statistics used to determine relationships among variables was the Pearson Moment Correlation. A p-value of less than 0.05 was interpreted as significant. The results of the study indicated that there was a significant relationship between university students' level of training and their motivation to use ICT resources for learning. Based on the findings, it is recommended that ICT integration be made part of undergraduate training in universities in order to equip future educators with ICT skills and that higher education institutions should provide in-service training on ICTs for teachers. The study contributes vital knowledge on the challenges of integration of ICT in institutions of higher education in Kenya. This will help policy makers to

come up with strategies to ensure ICT is integrated in learning institutions to enhance learning outcomes and improve the quality of education.

**Keywords:** *Bachelor, Education, Computing, Kenya, Teacher Training, Motivation, Integration, Universities, ICT*

### **E2015-68 The Design and Purpose of Marriage in Biblical Perspective Is Separation or Divorce an Option?**

Esther J. Kibor

Kabarak University, Nakuru

#### **Abstract**

The marriage institution has been portrayed by the media in a bad taste. The media reveals many of the problems facing the marriage institution. There are many conflicts and marital fights brought about by communication breakdown, differing practices of child rearing, financial problems, sexual problems, unhealthy relations, and myriads of selfish reasons and attitudes, most of which have been blown out of proportion. The Newspapers is replete with various examples of these marital problems and conflicts. This study attempts to answer the following questions based on the examination and discussion of biblical passages: what causes such conflicts and fights in the family? What does the Bible teach about marriage? Is there a design that God has given mankind in His Word concerning marriage? Should couples part ways whenever problems arise in marriage? Is there room for separation and / or divorce? What implications do these conflicts and marital fights have on the contemporary family in today's church?

The main objective of this study is to examine and discuss the purpose of marriage as God designed it in the Bible. In the process, it will answer the question as to whether there is an option or not for separation and / or divorce on the basis of what the Bible teaches. Finally, it will suggest implications for the contemporary family, with recommendations for educational ministries of the church today for a sustainable social society and the world at large.

**Key Words:** *biblical perspective, biblical marriage, design, divorce, marital problem, purpose*

### **E2015-69 An Analysis Of Retention Rates Before And After The Introduction Of Government Funded Tuition In Public Secondary Schools In Kericho County**

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#### **Abstract**

Access to secondary education in Kenya has been a challenge primarily due to cost of schooling. In response, the Kenyan Government introduced subsidized secondary education in 2008 to ensure that all qualified children access secondary education regardless of their socio-economic backgrounds. While national statistics estimate that secondary school Gross and Net Enrolment Rates have increased since secondary education was subsidized, access to education in Kericho County as indicated by internal efficiency of the schools has decreased as evidenced by low retention and transition rates. This study investigated the extent to which Government funded tuition affects student retention rates in public secondary schools in Kericho County. Retention rates were examined by comparing their rates before and after the introduction of Government funded tuition. The study used causal-comparative research design. The sample of the study

consisted of 108 principals and 147 class teachers selected using simple random sampling technique. A data schedule was used to collect data from the principals and an interview guide was used to collect data from the class teachers. Data was analyzed using descriptive and inferential statistics. With regards to the descriptive statistics, means and standard deviations were determined. Concerning the inferential statistics, t-test was used to determine if there were significant differences between the means of the transition and retention rates before and after the introduction of Government funded tuition. The hypotheses were tested at significance level of 0.05. Tables were used to present the data. The study findings reveal that subsidized secondary education had contributed to the increase in retention rates in Kericho County. This study recommends that in order to improve retention rates in public secondary schools, there is need for the Government to increase the capitation amounts given to each student in order to mitigate against the indirect costs and levies that the students were charged. The findings of this study should stimulate continuous debate on FSE and also provide valuable insights that the government, stakeholders, scholars and researchers can rely on in their collective endeavor of addressing the challenges and making the FSE initiative a success. Key Words: Subsidized Secondary Education, Access, Retention, internal efficiency

### **E2015-70 Principal Leadership an agenda for secure schools: Experience of a principal in Kenya**

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#### **Abstract**

Secure schools contribute towards sustainable secure society in Kenya. A Principal of a school is the engine of school improvement in relation to secure environment in which students and staff are directed to develop and work respectively. Through principal leadership, students develop freely without feeling insecure physically, emotionally, intellectually and socially. There are times when school environment is not quite conducive to learning due to bad practices that make students feel unsafe. This paper examines how principal leadership can effectively promote secure schools in Kenya by making security the first priority in all functions, structures and systems. Through principal leadership a range of activities, roles, commitments, and material, social and collegial support, the school community is directed to work towards secure schools. The paper also argues that the principal leadership being proactive puts in place measures such as mental health services, positive behaviour trainings, integration of a healthy school climate and preparedness for eventualities. The principal being the leader in the school ensures that there is balance in physical and psychological security. This is done by implementation of policies on protection and supervisory role in all activities. The principal also interacts with the staff and students to inculcate the value of caring and nurturing for a healthy school climate where everyone feels at home and secure. The paper uses critical analysis of reviewed literature and an experience of one secondary school principal. The findings indicate that security in schools greatly depends on the leadership skills of the principal and therefore other principals can learn lessons from best practices highlighted and be encouraged to champion advocacy for secure schools in Kenya. Key words Principal, leadership, secure schools, school climate, experience

## **E2015-71 ICT, Education, Quality and Excellence**

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### **Abstract**

The use of ICT in the Education sector has enhanced the quality of education in our society as a general. The government of Kenya has conducted many initiatives to ensure that ICT is incorporated in schools via e-learning. E-learning opportunities for students have become increasingly popular with more and more institutions of higher learning finding the need to start online programs. Much of this increase is attributed to the demands of the learners' audience who are intrigued by online education. E-learning can only be considered successful when students gets the right content, in a timely manner according to their learning needs to satisfy their quench for knowledge. The tutors should ensure that the course materials are made available for the students according to their specific needs. The platform the student use must be very intuitive and offer excellence and timely service to the student. Agent based e-learning system bridges the gap. An Agent-base system is used in an institution of higher learning. An Agent oriented methodology known as Prometheus is adopted in the analysis and design of a Multi-agent based system for E-learning. The implementation of the Multi - agents was carried out using JADE Agent development kit. The students found the platform to be efficient offering quality and timely content to the students, Therefore ICT plays a major role in the education centre. In conclusion, the findings of the study highlight the importance of Agents in E-learning. It is therefore necessary for higher education institutions to incorporate E-learning Agent based environment due to its apparent benefits of efficiency, effectiveness and enhancing of learning.

**Key Words:** *Agent,jade,Prometheus methodology,multi-agent*

## **E2015-72 Latent Indicators of Student's Performance in Using Gishu County: Case of Selected Schools**

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### **Abstract**

The study examined the determinants of students performance in secondary schools in Uasin Gishu county. The study focused on selected schools in the county. In particular, two homogeneous and one heterogeneous schools were selected. The first school was a girls school, second school being a boys school and the third one was a mixed school. A total sample of 300 students was selected for the study. Secondary data from these schools was used in the study with the previous year's KCSE results taken as the replications of the study. The KCSE results for the years 2014, 2013 and 2012 was taken as replication to enhance consistency and unravel latent factors contributing to student performance in high school. Data analysis was done using Statistical Packages for Social Sciences (SPSS Version 21.0) and results was presented using factorial ANOVA tables. Multiple Hypotheses were formulated to test the main effects and interaction effects between factors. F-tests were used as a basis of rejecting or accepting null hypothesis at 5% level of significance. Where significant difference was found, Post Hoc analysis such as Tukey's HSD and LSD were employed as further tests to establish difference in

factors(variables) levels. The study findings indicated that the variables(factors) namely the student discipline, Entry behaviour, peer influence, school tradition/culture, nature of school (student) population and type of primary school one attended have a significant effect on the performance of the student. Ministry of Education and related stakeholders ought to embrace these scientific findings and integrate them into their programs and policies towards realization of better performance at KCSE level in Kenya's secondary schools.

**Keywords:** *Factorial ANOVA, Factorial design, main effects, Interaction effects, performance*

### **E2015- 73 Effect of Guidance and Counselling on Pupils in Public Primary Schools in Makadara Division of Nairobi County**

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#### **Abstract**

This study aimed at assessing the effect of of guidance and counseling on pupils in primary schools in Makadara Division, Nairobi Province. The specific objectives of the study are: (i) to assess the extent to which primary schools in Makadara Division of Nairobi province have adopted counseling and guidance; and to evaluate the effect of guidance and counseling services on pupils of primary schools in Makadara division of Nairobi Province. A survey of primary schools in Makadara Division, Nairobi Province was adopted for the study. The study too the form of descriptive survey, which is a scientific study done to describe a phenomena or an object. The study utilized a combination of both quantitative and qualitative techniques in the collection of secondary and primary data. A questionnaire, which was the main data collection instrument, enabled the researcher to gather in-depth information on phenomena under investigation. The researcher also used interview schedules, which had open questions, aimed at meeting the objectives of the study. In addition, observation method was used in confirming the questionnaire responses. In order to analyze and present information related to the profile of the respondents, graphs, charts, percentages and frequencies were used. Statistical Package for Social Sciences (SPSS) was used to aid in analysis. The findings of the study indicate that Benefits of an Effective School Counseling and Guidance Program include the following:- (i) Benefits to pupils: guarantees services to all pupils; focuses on pupils' needs; develops proactive skills for all pupils; provides age-appropriate levels of interaction and instruction; and helps pupils become more resourceful in decision making; (ii) Benefits to parents: encourages involvement of parents in pupils'; learning environment; provides parents timely, appropriate support and resources when needed; increases opportunities for parent, student and counselor interaction; and brings about better understanding of the guidance and counseling program; and (iii) Teachers: promotes a team effort to address school counseling competencies; increases teacher accessibility to counselor as a multiple resource; integrates curricula and associated competencies; and integrates interdisciplinary approach with all curricular areas.

### **E2015-74 The Need For Counseling In Work Place**

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#### **Abstract**

The quality of any products or services that are produced by any organization/industry depends on the quality of the manpower that the organization has and the way the manpower works to

deliver such products/services. Thus the future of any such organization/industry depends on the quality of goods or services that the consumer demands. Just as the economists put it in the money economy the consumer is the king. The organization/industry can exist depending on the products or services demanded in the market. For these services to attract customers the employees of the organization/industry should be motivated, appreciated and respected. This is where counseling becomes handy. Some of the workers as human beings who come from different backgrounds with different problems ranging from family issues, social life issues, economic issues and many others. Thus such issues if not well handled may affect hardworking and committed workers who are very productive. One common issue is drunkenness and absenteeism at work. If such issues are not handled carefully, they may make effective workers loose morale and leave the organization/industry. Therefore this paper will attempt to critically examine the role of guidance and counseling in the working place that enhance quality production of services.

### **E2015- 75 Effective Use of Teaching Strategies in Managing Change in the Classroom**

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#### **Abstract**

The quality of any effective learning in the classroom depends solely on the effective delivery of services to the learners. The delivery of quality services depends on the commitment of the particular personnel that is allocated to that particular class and the strategies that one chooses to use. When talking about classroom change, we are not talking about physical building. We are talking about humans who are the learners who need change. As such, strategies meant to make such changes must be “carefully” selected. The learners come from different backgrounds, environment with different interests, talents , beliefs, anxieties, curiosities and so forth. Harmonizing all these diversities is a tall order since there are those who come with intent merely to push time and let the day go while others have the feeling of only achieving the basics in education such as reading and writing as well as fulfilling the law of finishing either primary, secondary or tertiary with no serious concerns of serving the nation. Therefore the paper examines ways and means of how one can bring change among these learners with diversity of interests so as to move as a team with one particular achievement to serve the nation with commitment and dedication.

### **E2015-78 Challenges of Integration and use of Ict in Kenyan Education Sector: A case Study of the Ministry of Education**

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#### **Abstract**

Information Communication Technology (ICT) is a principal driver of economic development and social change worldwide. Further, use of ICT in developing countries is seen as an effective way to improve the population’s life and well-being. There has been various challenges on ICT and education. Many researchers have done studies on other aspects of education but on the issue of ICT, no study has been conducted on its integration. This study aims at filling the research gap by investigating the challenges of integration and use of ICT in Kenyan education sector. The study used a descriptive research study design. The population of study included the staff members of the Ministry of Education. Stratified and purposive sampling techniques were



employed to select a total of 120 respondents. Primary data was collected using questionnaires. These were structured questionnaires. Upon return from the field, the data was edited, coded and classified as per each objective so as to present the results of the data analysis in a systematic and clear way. Data was analyzed by the use of descriptive statistics and presented by means of frequency tables and charts. The study found out that internet access was the main hindrance in the integration of ICT in education. The study concludes that there were major developments that needed to be done to facilitate the process of ICT integration. The study recommends that internet access should be made available for integration of ICT. However, the study recommends further research in integrating ICT in education.

### **E2015-79 Church and Education: Consideration on Roles in Health Care and Nutrition Services in Early Childhood Development Subsector of Education in Kenya.**

TINA VUNDI

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#### **Abstract**

The early childhood education and development centers are foundations of learning in every part of the world. Health and nutrition needs of the learners have to be met for the learning to be sustainable and continuous in all levels. The learning process in our country has been affected by the features continuously. The involvement of the church in the past on the factors was superseding in various ways. However, as time went by the church ceased involvement at societal level on education matters. It therefore, intensely directed its focus and efforts to its own learning institutions. A current view of the handling of ECDE subsector is perturbing and callous. In the face of an excellent vision on health and nutrition that can sustain learning in all levels, are countless challenges that malign the vision. This paper therefore, endeavoured to institute possible involvement of church in ECDE subsector to: - Reinforce health care and nutrition services, Pick up ways of participation as a key stake holder, Provide holistic perspective on policies, Improve foundations of education and sustain learning, Appendage ways of dealing with challenges facing the subsector The postulation of the paper was that by responding to the above concerns; the paper would in the end bring forth the importance of the roles of the church in the subsector. In the end we would witness lasting solutions which reflect light, hope and justice in the important subsector of education.

### **E2015-81 Influence of Self-Regulation of Facebook Usage on Academic Performance among University Students in Nakuru Town Campuses, Nakuru County, Kenya**

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#### **Abstract**

Social network sites are among the vast widely used online tools for social networking in the last ten years. Facebook in particular has been perceived to directly or indirectly have an attribution to poor academic performance. The main study objective was to investigate the influence of self-regulation of Facebook usage on academic performance among university students in Nakuru Town campuses. To achieve this objective, the study employed an ex post facto cross sectional design. Multi stage sampling which included stratified, purposive and simple random sampling

methods to select participating campuses (n=4) from (N=12) and students (n=348) from a population of 2698 third year students. The data collection instrument was a researcher designed questionnaire which yielded a Cronbach's alpha correlation coefficient of 0.7, statistical tests included calculating for Spearman rho and Kendall's tau-b Correlation Coefficient. The study established that a significant positive relationship existed between self-regulation on Facebook usage and academic performance among university students. The data was analyzed using SPSS version 22.0. The findings could be used to inform the university counselors on the influence of Facebook usage, encourage failing student on self assessment to promote self-regulation on Facebook. The findings will also add to new knowledge on Facebook usage in Kenyan Universities.

**Keywords;** *Facebook usage, self-regulation, academic performance*

### **E2015-82 The teaching of vocabulary in Kenyan pre-schools: The elephant in the room?**

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#### **Abstract**

Vocabulary teaching has always been a keystone in English Language Teaching (ELT). However, the best vocabulary instruction strategy to be used by language teachers has always been the elephant in the room. Against this background, this paper explores vocabulary instruction on the basis of a theory in lexical semantics, the Semantic Field Theory (SFT), which looks at the semantic relatedness and its effects in the development of second language lexical repertoire. The paper uses three Gĩkũyũ songs, purposively sampled, to illustrate the applicability of SFT in the teaching of English vocabulary. The study notes that learning words with the same semantic field allows learners to connect different connotations and meanings of the lexemes. The study concludes that SFT is an effective strategy that provides learners with a cluster of words that are related in their meanings. This study recommends that teachers should find appropriate words to set up semantic fields of the vocabulary, and at the same time make presentation of vocabulary an interesting learning process for the learners.

### **E2015-83Theology of Suffering: Global Reflection in Light of Biblical Christianity**

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#### **Abstract**

This paper presents the issue of suffering as a universal problem that humanity has been wrestling with in the antiquity as well as the now. Man in trying to respond to the difficulties posed by suffering has led to the development of various theologies of suffering. The paper examines different schools of thought that relates to suffering, this includes: Greek and Hellenistic view, the medieval views, the African Traditional views, Islamic views, the secularist views and the Biblical Christianity. The study observes that some of the schools of thought do exclude God in regard to the issue of suffering. In particular, we see the Greek and Hellenistic theology on suffering and the secular approaches to suffering tend not to involve God in issues that relate to suffering. The African traditional views places suffering wholly on human agents and spirits and less of God, while Islamic worldview takes an extreme position in treating the issue of suffering squarely to Allah and to a lesser extent ,man. In Biblical Christianity we encounter of a God suffering in the person of Christ as Jesus Christ grieved over the misery of

others. We see God getting involved in the affliction of humanity. In Biblical Christianity, God offers sufficient grace to those who go through affliction and points that some affliction do happen so that God may be glorified. This piece of work notes that suffering creates much fear to man and that this fear has subjected many people to régimes of fantasy, exploitation, and religious tyranny and treachery. In Biblical Christianity we see a suffering that promote a living relationship with God and not simply paint a pretty picture of God, perhaps the real value of what it has to say about evil and suffering resides not so much in how it mars or enhances idealized images of God but in how it enriches or impoverishes the human relationship with God

## **E2015-84 Apostasy: A Theological Bottleneck in Islam in the Light of Biblical Christianity**

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### **Abstract**

This paper contends that Apostasy in Islam is a theological bottleneck in the light of biblical Christianity. To identify the theological bottleneck of apostasy in Islam, we have examine, the main sects in Islam, Islamic law in general, and the Islamic source materials that discusses on the issue of apostasy: the Quran, Hadith, Sira and Jurisprudence. The different theological interpretation by Islamic scholars to these sources has led to several discrepancies, especially on the issue of apostasy. The paper asserts that theological bottleneck of apostasy in Islam has been re-enforced by modern technology and new communication methods that now unveils the theological pitfalls in Islam or the dark side of Islam (the death penalty for the apostates) which was hidden behind language, cultural and geographic barriers. Some few outrageous acts of apostasy have been cited in this paper. In this paper, we seek to look at Biblical Christianity to be offering a better option in regards to man's relationship to God which is based on grace and not the law. The study observes that Islamic scholars are now faced with the tough task of explaining the theological pitfalls or discrepancies or contradiction between how they want Islam perceived as a tolerant, civil and peaceful religion and the realities of some of its basic tenets, which are quite the opposite, that is, the harsh doctrines that are essential to the practices of authentic Islam, like the killing the apostates. The paper sees the Hadith as the main theological bedrock for the death sentence. Some Muslim scholars opposed to apostasy, maintain that the interpretation of Hadith text that calls for the death of apostates means that (according to their view) Muslims kill the apostate who fight against Islam and not because of leaving Islamic faith. Apostasy as a theological pitfall in Islam is based on the preposition that the criminal act of apostasy is for the sake of public and social interest as well as in helping to curb crimes in the society. The paper presents the position of moderate Muslim scholars who have dismissed apostasy on the grounds that the judgment for the apostates will be during Allah's judgment day, the freedom of religion in Muslim countries, Mohammad execution was for protection and that Quran provides absolute freedom on matters of faith. The study concludes that biblical Christianity recognizes the theological bottleneck into which man has fallen for what it really is as Jesus gave a warning to his disciples, "anyone who kills you will think he is offering a service to God"... (John 16:2.). Biblical Christianity then recognizes the utter hopelessness and futility of all human schemes of salvation by man's own effort. Jesus is the Lamb of God slain for his people's sin for man's redemption from all people and nations and him alone is worth to open the scroll and to receive power, riches, wisdom, strength, honour, glory and blessings (Rev. 5:9-12)

## **E2015-85 Perceptions of Trainers on Impact of Performance Contracting on Efficiency in Management Practices in Technical Training Institutes in Mount Kenya Region, Kenya**

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### **Abstract**

Performance contracting is a freely negotiated agreement between a government, acting as the owner of a public agency, and the management of the agency. It is used in the Kenyan public to enhance efficiency. Technical training institutes face pressure to improve efficiency in management practices. It is unclear whether the introduction of performance contracting has improved efficiency in management practices in Technical training institutes. The purpose of the study was to determine the relationship between the extent to which performance contracting were implemented and performance of management functions as perceived by trainers in technical training institutes. For the purpose of conceptualization of the study, a frame work showing the relationship of the variables of the study was used. A descriptive survey was conducted in six technical training institutes. All administrators and heads of departments were included in the study. A simple random sample of 151 was drawn from a population of 502. Questionnaires and an interview schedule were used to collect data. A pilot study was conducted to ensure validity and reliability of data collection instruments using one technical training institute. In this regard, Cronbach's Alpha ( $\alpha$ ) method was applied to estimate the reliability of the instruments, the reliability estimate obtained was 0.96. Descriptive statistics such as means, standard deviations, frequency counts and percentages were used to analyze quantitative data. Pearson Correlation Co-efficient was also used to determine the relationship between the variables. The study found out that there was positive and significant relationship between the extent to which performance contracting were implemented and performance of management functions. The study recommends that technical training institutes should continue using performance contracting as a tool for monitoring and improving efficiency. The study will be significant to managers, policy makers and planners of technical training institutes.

**Key words:** Perceptions, Trainers, Performance Contracting, Efficiency and Management

## **E2015-86 Curbing Dropout Rates of Students in Co Educational Public Day Secondary Schools in Rongai Sub County, Nakuru County, Kenya.**

Jackline Sigei, Dr.Tikoko Betty,Nelson Nyang'au Ngare, Kabarak University and Tallam Evans,Mount Kenya University

### **Abstract**

This study was set to investigate the influence of home based factors on dropout rates of students in co- educational public- day secondary schools in Rongai District, Nakuru County, Kenya. The study was guided by Vroom's expectancy theory. The objective of the study was to determine ways that could be used to curb the dropouts. The study population consisted of 755 Form 3 students and 8 head teachers in 8 co educational public day secondary schools in Rongai District. The sample size consisted of 169 students which were randomly selected and 8 head teachers from all the selected schools respectively. The quantitative data was analyzed using descriptive statistics and was presented in the form of tables and pie charts respectively. The use of Statistical Package for the Social Science (SPSS) was extensively used by the

researcher in statistical analysis, data management (case selection, file reshaping, creating derived data) and data documentation. Descriptive statistics was attained through cross tabulation, frequencies, and descriptive ratio statistics. On the ways that could be used to curb the dropouts, a high number of respondents identified parents being informed on the importance of education as the most effective. Several recommendations have been made in relation to the findings. For instance, the girls who get pregnant while in school should be monitored by the school administration to ensure that they are re admitted back to school. It is expected the findings of this study will help all the stake holders in the field of education to improve the retention rates and consequently achieving one of the millennium development goals.

### **E2015-87 An Evaluation on the Level of Discipline among Students in Public Secondary Schools in Rongai Sub County, Nakuru County, Kenya.**

Tallam Evans K,Mount Kenya University;Dr.Tikoko Betty &Jackline Sigei, Kabarak University

#### **Abstract**

The purpose of this study was to investigate the contribution of the school disciplinary committee in management of student discipline in public secondary schools in Rongai Sub County, Nakuru County, Kenya. The study was guided by Kounin's theory. The objective of the study was to evaluate the level of discipline among students in public secondary schools. The study population consisted of 28 head teachers, 28 heads of Disciplinary Committee and 28 heads of counseling departments from all the 28 secondary schools in the District. Out of this, a sample of 14 head teachers, 12 heads of Disciplinary Committees and 11 disciplinary committee members and, 35 class teachers were selected through the simple random sampling technique. Questionnaires were used to collect data for the study. The study employed the descriptive survey design. Data was analyzed by using statistical Package for Social Sciences version 17.Descriptive statistics in form of means, percentages, and frequencies was used to analyze the data. It is expected that the findings of this study will help the stakeholders in the field of education and policy makers to provide policy guidelines on the function of disciplinary committee in the management of discipline in secondary schools.

### **SYMPOSIUM 4(L)**

#### **L2015-01 Economic & Financial Crimes on the Rise in Sub-Saharan Africa: A Threat to the Investment Climate and Development of the Sub Region**

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#### **Abstract**

Economic and financial crimes (White-Collar Crimes) Financial crimes have a disturbing power on the image and the socio-economic life of the global economy and individuals. Economic and financial crimes in whatever form and nature have potentially devastating impacts on the

economy, security and the social wellbeing of the people. Economic and financial crimes are kindred offences with an extremely thin line separating them, and while all economic crimes are financial crimes, not all financial crimes can be categorized as economic crimes. A country is economically, socially and environmentally secure when its financial crimes level is at barest minimum. In spite of the efforts of some governments in Sub-Saharan Africa like Nigeria and Cameroon to reduce financial crimes through established agencies, not much has been achieved as the trend of crime in these two countries has sporadically surged upwards. This paper explores the social effects of financial crime in the light of the recent financial insecurity experienced in these countries with the primary aim of exploring its causes and possible ways of controlling the menace in Nigeria and Cameroon. The paper also looks at the complex nature of financial crimes and their resultant troubling effect on the development of these developing economies. The study observed among others that the rise in the rate of financial Crime earned Nigeria as well as Cameroon disputable images both locally and internationally, and that the vulnerability of institution's internal structures and the rule of law could decoy financial crime tendencies. Cameroon and Nigeria should therefore strive to enhance the security of their respective territories through effective control of resources for a better and more reliable investment climate.

**Keywords:** *Economic and Financial Crimes, Cameroon, Nigeria, Security, Corruption, Embezzlement*

## **L2015-02 Forensic Accounting as a Cure to Fraud and Corrupt Practices**

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### **Abstract**

Nigeria is the most populous country in Africa with an estimated population of over 180 million people (173,615,345). However, it ranks third in the list of poorest nations in the world with 7% of the world poor. The latest economic grading shows that Nigeria is the largest economy in Africa but 33.1% of her population lives below poverty line. About 60% of the country is rural, with an annual rapid urbanization rate of 4.5% a strong correction exists between the incidence and severity of abject poverty, the living condition of households, access to basic needs and essential services are low. Forensic accounting sometimes called investigative accounting involves the application of accounting concept and techniques to legal problems. Fraud and Corrupt practices are the canker worm eating the Nigerian developmental marrow inhibiting sustainable developments after the Nigerian economy enormously. The corruption statue of Nigeria in the international comity of nations has discouraged foreign investors and also the non professionalization of the forensic accounting profession legitimately is a barrier towards investigation acceptability in the process of corrupt practices prosecution. The goal of this paper is to evaluate forensic accounting as a cure to fraud and corrupt practices in Nigeria. The paper is empirical with the testing of three hypotheses. The statistical model applied is Chi-Square and Statistical Package for Social Statistics (SPSS) applied to test the data gather at the

field and the three hypotheses formulated are reliable. The results show that Forensic Accounting is a financial cure to curb and resolve fraud and corrupt practices in the Nigerian economy. I recommend among others that Nigerian government expedite action on sponsoring enactments at the national assembly to professionalize forensic accounting practice in Nigeria to curb fraud and corrupt practices.

**Key words:** *Fraud, corruptpractices, forensic accounting, economic crime, financial crime, corruption*

### **L2015-03 Legislation on terrorism: A case study of the Republic of Kenya**

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#### **Abstract**

Terror attacks in the world, has left countries including Kenya counting loses. There has been increase in terrorism actives in Kenya due the favourable environment that permits terrorist operations; this include sporous borders, internal conflicts, lax financial systems, poverty, corruption, and socio cultural diversity. Hence the need to put in place preventive and mitigative measures to counter the effects of terrorist activities and the need to examine the legal response to terrorism in the context of legislation and policies to counter future threats. The article espouse on Republic of Kenya's experience and history with terrorism and the law and the challenges facing various legislation in the country, especially on human-rights grounds. This article examines the development of policies and legislation of counterterrorism in Kenya. It further evaluates the transparency in the criminal system in relation to THE TERRORISM ACT 2012. LASTLY, the article further recommends the establishment of stricter rules

**Keywords:** *Kenya, terrorism, legislation and policies*

### **L2015-04 Are Constitutional Right to Education taken Seriously?: Analysis of Domestic Child Trafficking in Tanzania**

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#### **Abstract**

Trafficking of children is one of the fastest growing illegal trade across the globe, with developing countries as a main source. United Nations and governments responded with a range of measures include anti-trafficking legislations which focused primarily on seeking to prosecute perpetrators of these abuses and neglecting rehabilitation of victims. Motivated by such practice, this study analyses the domestic child trafficking in Tanzania, focusing on its nature, forms, incidence and impacts on the education sector. It was found that despite the right to education is guaranteed in the country's constitution and existence of policies for free education, Primary Education Development Programme, PEDP I & II, parents still pay fees for uniforms, examinations, desks and supplies, this made most parents or guardians unable to pay hence, large number of children not attending school/drop-out from school and trafficked to mining, agricultural plantations and urban areas and become labourers. Further, the study revealed that since PEDP programme made education free and compulsory for every child to attend school up

to secondary school level, no parents have been arrested or prosecuted despite the thousands of children, including trafficked children, found as house helps, hawking and begging in the streets. None of these trafficked children have been questioned as to their parents or guardians and increase in the number of trafficked children cases in Tanzania. There is no significant programme on rescue, rehabilitation and re-integration of internally trafficked children into school in particular and the society in general. The most vulnerable groups to trafficked children in Tanzania are girl child, mostly trafficked for forced labour.

**Key words:** *drop-out, free education, girl child, trafficking syndicate, poverty.*

## **L2015-05 Cost of constitutional affirmative action for elective Positions in County Assemblies in Kenya**

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### **Abstract**

Article 197 of the Constitution of Kenya 2010 requires that not more than two-thirds of members of any county assembly or county executive committee shall be of the same gender. This constitutional requirement may be interpreted as an affirmative action intended to address the lack of adequate representation of women in elective positions in the past. As a matter of fact, women contestants for elective positions in national parliament over the past years has been anything but impressive. It may also be construed that this constitutional requirement was intended to increase the chances of women winning elective positions in the future through profiling the leadership skills of women and making voters experience alternative leadership. This paper seeks to establish the cost implication of the new constitutional order as contained in Article 197 for the county assemblies in Kenya. It will be observed that the two-thirds rule was achieved through nomination of members of the county assembly and thereby increasing the members of these assemblies by a significant number. It is likely that in majority of the counties women were not elected at all. Besides establishing the cost implication of the nominations needed to achieve the two-third rule, this study shall also attempt to determine whether the nominations will make women more popular and endear them to the voters as to increase their chances for election in the future. This study will be useful in political decision making. It is expected that women who have been nominated in the First county assemblies will want to try their lack by running for elections in the next general election. This is so because their nomination shall not be guaranteed in the future. The results of this study will also inform fiscal planners on the resource requirements needed to ensure compliance with this constitutional provision in the future. For the purpose of establishing the cost of the affirmative action in achieving two-thirds of either gender in the county assemblies, this study will cover all the forty seven counties in Kenya. First, the number of members of the county assemblies nominated to achieve the not less than two-thirds of one gender will be established. Second, the cost for all the nominated members shall be tabulated. These costs will include both salaries and all remunerative allowances as well as other expenses which may directly be associated with the nominated members of the assemblies. To determine the contribution of the nomination of women in increasing the chances of their (not necessarily those who were nominated) election in future, a case study of Baringo County shall be conducted. Respondents will be asked questions which will help to ascertain what effect the nomination has had on the choice of women in future



elections. This second part of the study will be important in assessing whether the costs associated with the compliance with the two-third rule will continue in the long-term or whether voters will be convinced that women are good enough to occupy elective positions.

### **L2015-06 Post 2007 Police Reform in Kenya: Towards a Responsiveness Police Reform Agenda**

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#### **Abstract**

Security sector reform has in the recent past been a critical component of peace agreements in countries emerging from armed conflicts or political crisis. In Kenya, the Commission of Inquiry into the 2007/08 Post-Election Violence (CIPEV) established that Kenya's security sector, particularly the police, bore the greatest responsibility for the violence. Police reform subsequently emerged as one of the security sector institutions that needed to reform, and continues to dominate the reform debate in Kenya. Policy and academic practitioners have since then focused on its implementation. However, there is a dearth of studies that examine the impacts of the reform on the local populations. *Thus, to what extent is police reform in Kenya responsive to public security needs?* Using a single case study approach with mixed methods research, we argue that the ongoing police reform process is less responsive to community security and safety needs of the Kenyan population. Though the setting of the reform agenda involved widespread consultation with the Kenyan public, the implementation strategy has remained largely state-centric and ignores the input of the public hence feeding into the wider perception of less responsiveness. There is therefore the need for review of the implementation strategy to a multi-layered strategy that incorporates formal and informal actors at both the macro and micro levels.

**Key word:** *Kenya, post-election violence, police reform, non-state actors, community policing, multi-layered strategy*

### **L2015-07 African Customary Law in Modern Society: A Study of the Midzi-Chenda People of Coastal Kenya**

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#### **Abstract**

The state law that Kenyans cherish today was introduced and established by Colonial British. Earlier, Kenyan indigenous communities had their own judiciary systems of addressing crucial issues in society such as; inheritance, marriage, conflicts related to land, witchcraft, oath administration and vetting leaders. In the advent of colonial governance, customary law and traditional judiciary systems were gradually suppressed, making Western Law superior. Despite the long stay and practice of Western Law in Kenya and Africa in general, evidence of research by Malindi District Cultural Association (MADCA, 2013) shows that some Kenyan community's prefer their issues addressed by African Customary Law (ACL), a propensity that parts ways with modern law. This study is to establish those primary causes that inspire the Midzi-Chenda of coastal be comfortable at this modern age with Customary Law in the

processes of employing justice for conflicting parties, rather than wholly appreciating modern law. The research employed ethnographic methodology for primary data acquisition with the use of tools such as; Key Informers (KI), participant observation, interviews, the use of questionnaires and focus groups. This study offers a new interpretation of Customary Law; as a device in justice, peace promotion, social cohesion and integration in the context of implementing the 2010 new constitutional dispensation and devolved governance in Kenya. The study adds value to African traditional courts, the academic domain as well as enriching and guiding society to seek for further constitutional reforms by probing for dialogue between ACL and state law.

**Key words:** *Customary Law, Modern Law, Traditional Courts, Justice.*

### **L2015-08 Cybercrime Security and Challenges: A review of Security cases.**

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#### **Abstract**

The study explores cybercrime security cases and the corresponding challenges in dealing with its dynamism, the organizational preparedness and strategies to effectively deal with cyber crime. Cyber threats have become so persistent; the attacks so pervasive, that organization and their Leaders have essentially become inured to cyber security and an ever-increasing threat. When organizations fall victim to cyber attacks, only then do they realize the time to take action was yesterday. In conclusion, security experts must move from their traditional reactive nature to a more proactive one. Equal priority should be on automated systems which detects the vulnerabilities as they occur, and also enable the systems to remediate these vulnerabilities immediately, before the damage occurs. Prosecutors, Law enforcement authorities, and judiciary, require developed framework, sustainable mechanisms, comprehensive technical support and solid platform for the investigation to cybercrime. The study recommended that for the digital evidence to see the light of the day in a court of law, the evidence process of acquisition, preservation, and analysis in a forensically safe manner and thus enable its presentation in court, specific equipment and software are needed and personnel and professionals concerned must be trained to recognize, properly understand, and examine the evidence presented.

**Keywords:** *Cybercrime, ICT infrastructure, organizational policies, crime investigation*

### **L2015-09 Rise in the Rate of Economic & Financial Crimes in Sub-Saharan Africa, threat to the Image and Development of these countries**

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#### **Abstract**

Economic and financial crimes (White-Collar Crimes) Financial crimes have a disturbing power on the image and the socio-economic life of the global economy and individuals. Economic and financial crimes in whatever form and nature have potentially devastating impacts on economy, security and social wellbeing of the people. Economic and financial crimes are kindred offences with extremely thin line separating them and all economic crimes are financial crimes but not all financial crimes are economic crimes. A country is economically, socially and environmentally secured when its financial crimes level is at barest minimum. In spite of the efforts of some governments in Sub-Sahara Africa like Nigeria and Cameroon to reduce financial crimes through their established agencies, not much has been achieved as the trend of crime in Nigeria and Cameroon sporadically increased. This paper explored the social effects of financial crime in the light of recent financial insecurity experienced in these countries with the primary aim of exploring its causes and possible ways of controlling the menace in Nigeria and Cameroon. The paper also looked at the difficulties of troubling effect against development in these developing countries. The study observed among others that the rise in the rate of financial Crime earned Nigeria as well as Cameroon disputable image both locally and internationally, and that vulnerability of institution's internal structure and rule of law could decoy financial crime tendencies. Therefore, the security of territorial integrity and effective resources' control measures in enhancing the growth and dignity of Nigeria as well as Cameroon's social, economic and political image should be taken much more seriously than before by all stakeholders.

**Keywords:** *Economic and Financial Crimes, Cameroon, Nigeria, Security, Corruption, Embezzlement*

## **L2015-10 The Role of Judicial Activism in Transforming the Judiciary Under the New Dispensation**

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### **Abstract**

This paper examines the role of judicial activism, a nemesis of judicial restraint, in the transformation of Judiciary through the constitutional reforms under the new dispensation. It seeks to dissect the meaning of the phrase 'judicial activism' that is passionately adored and abhorred in equal measure, and answer whether its philosophy has an element of reform that can be imported to use in the ongoing transformation in the Kenyan Judiciary. The paper assesses the progress in the judicial reforms particularly on the aspects of jurisprudence and practice, and how judicial activism may be used as a philosophy to promote transformation in Judiciary without compromising justice dispensation. Judicial activism is particularly important because landmark judicial decisions are always torn between activism and restraint, and the adoption of either of these ideologies raises more questions than answers particularly to the public. In such cases, public trust towards judiciary comes into question which the judicial reforms and transformation seeks to restore under the new order. The paper focuses on its theoretical framework the scholarly and philosophical debates on judge-made laws with regard to judicial activism. It then narrows down into specific instances where judges in superior courts have displayed activism and their general impact on transformation process of judiciary. The research draws from the Constitution of Kenya, Scholarly articles and publications, Bench bulletins and

periodic judicial reports, court decisions, media reports and interview with some judges. The aim is establish whether there are transformative aspects of activism in judicial decisions that can promote reforms in Judiciary. Lastly, we critique the political class on politicizing some judicial decisions which display activism and thereafter give recommendations that will assist the judiciary to transform through its own decisions.

## **L2015-11The Role of Law on Genetically Modified Organism Technology in Promoting Food Security in Kenya**

Charles A. Khamala  
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### **Abstract**

Kenya remains fraught with the food insecurity challenge. The 1992 Rio Declaration on Environment and Development offers no concrete proposals for fulfilling every Kenyans' right to food. While it prohibits activities that are likely to endanger the environment, the Constitution (article 43) guarantees every Kenyan the right to food of acceptable quality. Should Kenya fully invest in genetically modified organism (GMO) technology as an alternative method to food production? Previous development activities governing just economic superiority, are now focusing on rationalizing the use of natural resources and hunger eradication. Lifting the ban on GMO technology or Genetic Use Restricted Technology (GURT) presents a major economic, social and environmental opportunity for innovation and food security. Yet unless development policies pay attention to growing concerns such as changes in access to food and in the distribution of costs and benefits, physical sustainability cannot be secured. To achieve socio-economic balance, articles 69(e) and (g) of the Constitution solidify the precautionary principle, strengthening the right to a clean and healthy environment (article 43). A GMO regulatory system has thus emerged to address environmental safety, human health and explicitly adopts the notion of developmental risk. In 2000, Kenya signed the Cartagena Protocol on Bio safety, ratified in 2003. Drafting a highly participatory Bio safety Bill commenced in 2002, under the leadership of the National Council for Science and Technology, culminating in publication of the National Bio safety Bill, June, 2007. In 2009, the National Bio safety Act was enacted and in 2011, Bio safety Regulations. However, the GMO Task Force Report (2014), chaired by Kihumbu Thairu borrows heavily from the Seralini Report (2007), which the Government of Kenya used as its basis for banning GM foods in 2012.

## **L2015-12 Review of Political Party Democracy in Kenya**

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### **Abstract**

Kenya's independence elections of 1963 were contested on multi-party democracy. Over fifty years later, political parties still revolve around personalities. It is difficult to distinguish the leading political parties by clear ideology. Consequently, consolidation of political party democracy in Kenya has been derailed. The purpose of this study was to establish the institutional deficiencies that have undermined political party democracy in pre and post independent Kenya. The researcher studied the country's political history from authoritative sources and noted in narrative form the events that influenced political party democracy in

Kenya. The study found out that political party democracy in Kenya pre independence to 2010 when a new constitution was promulgated has been undermined by executive power excesses, negative ethnicity, and political corruption. The study recommended faithful and full implementation of the Constitution of Kenya 2010. Short of this, consolidation of political party democracy will remain elusive in Kenya.

**Key Words:** *Multi-Party Democracy, Political Party Democracy, Institutional Deficiencies Executive Power Excesses, Negative Ethnicity, Political Corruption.*

### **L2015-13 Devolution versus Democratization in Kenya: Where Are We Going Wrong? A Case of Makueni County Government**

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#### **Abstract**

The concept of devolution is not new in Kenya; for example during the Kenyan independence in 1963, the constitution provided for the Majimbo which is actually a replica of devolution. To date, devolution is 'celebrated' as an antidote to the many shortfalls of the highly centralized government, for example, Administrative bureaucracies and inefficiencies, Misappropriation of public resources, Marginalization of local communities, Exclusion from development process etc. However, since its inception, the euphoria that came with Devolution is waning and has been replaced by supremacy battles, and counter accusation of corruption and malpractices. This study will investigate the causes of contention in the implementation of devolution by the County governments. The central research question will be, "What factors are upsetting the implementation of devolution at the County Governments"? The study will be conducted in Makueni County. A survey research design will be adopted and the key findings, conclusions will be presented after the analysis of the data. Using the probability technique, a sample that is 30% of the population will be chosen. Data will be presented using tables and charts. The recommendations will be given in the end

### **L2015- 14 Investigating Public Perception of Corruption in Nakuru County**

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#### **Abstract**

Corruption is not a new phenomenon; we have been living with it since the birth of government's institutions. In Kenya a transition is taking place towards an understanding of corruption which transcends the accepted everyday meaning of the word. In everyday parlance, corruption usually signifies a specific, illegal or illegitimate transaction. Corruption determinants are sub-divided into economic determinants and non-economic determinants. The economic determinants include economic freedom, globalization, level of education, distribution of income and average level of income. The non-economic determinants list consists on press freedom, democracy and share of population affiliated with particular religion. The focus of this research was to determine the public perception of Corruption in Nakuru County. The methodologies used included descriptive research survey and simple random sampling technique was used to ensure equal chance of representation of all respondents selected for the purpose of this study. Instrument of data collection mainly focused on questionnaires and interviews. Findings showed bribery, extortion, embezzlement, favoritism, nepotism and fraud are forms of corruption which are rampant in

Nakuru County. I can conclude that corruption does really exist and it's very rampant in Nakuru County. Presence of opportunity, poverty or lack of money, ambitions to be rich, unexpected financial needs, poor working conditions, poor salaries and job insecurity are the main causative agents of corrupt malpractices. The government should take an initiative to address these problems. Other factors such as lack of auditing, improper supervision, unclear segregation of duties are some of contributing factors. Recommendations include Bringing those involved in corruption to face the law, protecting corruption whistleblowers and increasing transparency.

**Key words:** *corruption, embezzlement, social injustice, victim, perpetrators, and governance.*

### **L2015-15 Post 2007 Police Reform in Kenya: Towards a Responsiveness Police Reform Agenda**

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#### **Abstract**

Security sector reform has in the recent past been a critical component of peace agreements in countries emerging from armed conflicts or political crisis. In Kenya, the Commission of Inquiry into the 2007/08 Post-Election Violence (CIPEV) established that Kenya's security sector, particularly the police, bore the greatest responsibility for the violence. Police reform subsequently emerged as one of the security sector institutions that needed to reform, and continues to dominate the reform debate in Kenya. Policy and academic practitioners have since then focused on its implementation. However, there is a dearth of studies that examine the impacts of the reform on the local populations. Thus, to what extent is police reform in Kenya responsive to public security needs? Using a single case study approach with mixed methods research, we argue that the ongoing police reform process is less responsive to community security and safety needs of the Kenyan population. Though the setting of the reform agenda involved widespread consultation with the Kenyan public, the implementation strategy has remained largely state-centric and ignores the input of the public hence feeding into the wider perception of less responsiveness. There is therefore the need for review of the implementation strategy to a multi-layered strategy that incorporates formal and informal actors at both the macro and micro levels.

### **L2015- 16 Governance in Public Service in Kenya Under the New Constitutional Dispensation**

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#### **Abstract**

The highly centralized governance structure and system of public service in Kenya was inherited from British system during colonial rule and subsequently embedded in first Constitution of Kenya. The mandate of the public service included policy decisions, recruitment and disciplinary action among others (Code of Regulations for Civil Service , Revised 2006). On August 27th 2010, the new constitution was promulgated ushering in the era of devolution. Specifically, Chapter 13 of Constitution of Kenya 2010, outlines the Public Service under subsections on values and principles , establishment of Public Service Commission, functions and powers, staffing of county governments, protection of public officers and Teachers Service

Commission. Chapter 8 and Fourth Schedule of Constitution of Kenya 2010 provided guidelines on establishment of County Public Service Boards leading to haphazard recruitment at county level which also has staff representing national government. Consequently, Capacity Assessment and Rationalisation of the Public Service at National and County governments is ongoing. According to Odhiambo - Mbai (2003), good governance entails; participatory approach and inclusiveness, research, transparency and sharing information hence, efficient and effective service delivery while bad governance contributes to poor service delivery. This paper will highlight governance in public service under introduction, historical trends from colonial era through to August 26th 2010 and Constitution of Kenya, 2010. Desk top research shall be carried out through utilization of primary data from two counties; analysis of policy documents including Constitution of Kenya 2010, circulars, journal papers, books, reports and internet in compiling this paper. Findings will be discussed in review of achievements, challenges and way forward in devolved public service. Recommendations towards better governance in the public service in Kenya will be made. Key Words: Governance, Constitution, Devolution and Public Service.

### **L2015- 17 Cost of constitutional affirmative action for elective positions in County Assemblies in Kenya**

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#### **Abstract**

Article 197 of the Constitution of Kenya 2010 requires that not more than two-thirds of members of any county assembly or county executive committee shall be of the same gender. This constitutional requirement may be interpreted as an affirmative action intended to address the lack of adequate representation of women in elective positions in the past. As a matter of fact, women contestants for elective positions in national parliament over the past years has been anything but impressive. It may also be construed that this constitutional requirement was intended to increase the chances of women winning elective positions in the future through profiling the leadership skills of women and making voters experience alternative leadership. This paper seeks to establish the cost implication of the new constitutional order as contained in Article 197 for the county assemblies in Kenya. It will be observed that the two-thirds rule was achieved through nomination of members of the county assembly and thereby increasing the members of these assemblies by a significant number. It is likely that in majority of the counties women were not elected at all. Besides establishing the cost implication of the nominations needed to achieve the two-third rule, this study shall also attempt to determine whether the nominations will make women more popular and endear them to the voters as to increase their chances for election in the future. Objective of the Study This study will be useful in political decision making. It is expected that women who have been nominated in the First county assemblies will want to try their lack by running for elections in the next general election. This is so because their nomination shall not be guaranteed in the future. The results of this study will also inform fiscal planners on the resource requirements needed to ensure compliance with this constitutional provision in the future. Methodology For the purpose of establishing the cost of the affirmative action in achieving two-thirds of either gender in the county assemblies, this study will cover all the forty seven counties in Kenya. First, the number of members of the county assemblies nominated to achieve the not less than two-thirds of one gender will be

established. Second, the cost for all the nominated members shall be tabulated. These costs will include both salaries and all remunerative allowances as well as other expenses which may directly be associated with the nominated members of the assemblies. To determine the contribution of the nomination of women in increasing the chances of their (not necessarily those who were nominated) election in future, a case study of Baringo County shall be conducted. Respondents will be asked questions which will help to ascertain what effect the nomination has had on the choice of women in future elections. This second part of the study will be important in assessing whether the costs associated the compliance with the two-third rule will continue in the long-term or whether voters will be convinced that women are good enough to occupy elective positions.

### **L2015-18 The Future of Administrative Law in Kenya**

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#### **Abstract**

Administrative actions by government, in pre and post colonial Kenya, have consistently fallen short of serving public interest. This has been so despite the existence of administrative law. The purpose of this study was to establish the developments in administrative law vis-à-vis the attitude of the government towards public service. The researcher randomly identified some key historical events and noted how they have influenced public policy, executive actions, judicial decisions, and legislation. The study found that a flawed philosophy of governance undermined the ability of institutions of governance to serve public interest pre independence to the year 2010. However since administrative law was constitutionalized in 2010, administrative actions are being influenced by judicial decisions, legislation, and public policy of the government. Thus, the study concluded that the future of administrative law will depend on the quality of judicial decisions, legislation, and public policy of the government. The study recommended that public participation in the legislative, judicial, and public policy formulation processes should be encouraged by all.

**Key Words:** *Administrative Action, Public Interest, Administrative Law, Judicial Decisions, Legislation, Public Policy.*

### **L2015-19 The Role of Mediation in Settling Disputes in Succession Matters in Kenya: An Exploratory Study.**

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#### **Abstract**

Mediation is a voluntary Alternative Dispute Resolution (ADR) mechanism, being an alternative to litigation, where the parties in a dispute achieve a settlement themselves with the aid on an impartial and independent third party, who is chosen by parties to the dispute. Mediation is a non-binding process in so far as any party is free to cease participating in the process at any time before settlement and without fear of any repercussions. The advantages are that it is voluntary, cheap, confidential and fast in resolving disputes. The Constitution of Kenya 2010 by dint of



Article 159 promotes the use of ADR in resolving disputes. However, there does not exist in Kenya at present any statute or regulatory framework, other than the Civil Procedure rules, that governs Mediation. As such, since it is only mentioned in the Civil Procedure Rules, there is no mechanism for its use in Succession Disputes. It will be noted that the law of Succession uses its own unique procedure as contained in the Law of Succession Act and, save in limited circumstances, the civil procedure act is inapplicable. Conversely, mediation is not provided for under the Law of Succession Act, which is the statute that contains the substantive and procedural law in Succession matters and disputes. Desk research has been employed in this research including reference relevant laws and scholarly articles, viz to the Constitution of Kenya 2010, the Law of Succession Act, etc. This paper shows the gap that exists in the implementation of mediation in Succession disputes in Kenya. The paper recommends that for mediation as an ADR mechanism to take proper root in succession matters Kenya, the public has to be sensitized on the same and the government, civil society and even the judiciary should take part in the sensitization exercise. This is especially so in succession matters where litigation should be a last resort because families, especially in the African context, should continue their personal relationships despite the existence of a dispute. Where the estate left behind by a deceased is of a high monetary value, court cases are often protracted and family members' relationships are harmed as a result of the court cases. A lot of time and expense can be saved, leave alone the psychological and emotional damage that can be avoided by the parties, siblings and children of the disputants.

**Key Words:** *Mediation, Alternative Dispute Resolution, Succession, the Constitution of Kenya 2010, Disputes*

## **SYMPOSIUM 5(H)**

### **H2015-01 Age estimation using radiographic staging of medial clavicular epiphysis**

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#### **Abstract**

The determination of an individual's age is an important aspect of forensic medicine, and the medial clavicular epiphysis have proved to be one of the important indicators of age estimation. However, there is paucity of information in Africa regarding the application of this method and therefore the main aim of this study was to evaluate the ossification process of the medial epiphyses of the clavicle in the African population. In this study, Digital chest X-rays of 300 individuals aged between 14 to 30 years from King Edward Hospital, Durban, South Africa were studied. The timing of ossification process of medial clavicular epiphysis was scored in 5 stages and the estimated age was cross-tabulated with the actual age of each case. In this study, the onset of ossification process was recorded in stage 1 at a mean age of 15.4 and 16.14 years for female and male subjects respectively. There was no statistical significance in the laterality of medial clavicular epiphyses ( $p = 0.812$ ). However, the regression analysis recorded a close match (SE  $0.5 \pm 0.21$ ) between the estimated and actual age of this population in the early stages of epiphyseal union. In this study, the onset of clavicular ossification was noted earlier in women than men; however, there was no statistically significant difference between the right and the left clavicle. The results also indicated that conventional X-ray of medial clavicle can be effective

tool in age estimation; however, there is still need to develop population specific reference values for particular geographical areas.

**Key words:** *Clavicle, X-ray, Ossification, Age estimation.*

### **H2015-02 The prevalence of and factors contributing to complicated malaria in children under 5 years at Kampala International University Teaching Hospital**

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#### **Abstract**

The main objective for this study was to determine the prevalence of complicated malaria in children under five years and assess the common complications and risk factors contributing to complicated malaria. It was a retrospective cross sectional study carried out at Kampala International University Teaching Hospital and data was obtained from inpatient files between August 2013 to December 2014 (age, sex, complications, preventive measures, discharge status). After data collection, statistical analysis was performed using the SPSS (Version 21.0) statistical package. Descriptive and analytical statistical tests were applied. Results were then expressed as minimum, maximum, mean  $\pm$  standard deviation (SD) and median with lower and upper quartiles. In this study, there was a high prevalence rate (13%) of complicated malaria in children under 5 years whilst most male children got complicated malaria as compared to female. It was also noted that the three most common complications of malaria were convulsions (69%), hyperparasitemia (67%) and hypoglycaemia (59%) in children under 5 years. Complicated malaria has high mortality rate with 28 (14%) deaths of the total 200 cases while most deaths were noted in male children despite the high frequency of preventive measures used. Complicated malaria commonly affected children of age group two to three years while male children from low socioeconomic were most affected in this study. Reduced prevalence and improved outcomes can be achieved by giving special attention to specific age groups, early management, preventive measures and more health workers to reduce complicated malaria.

**Key words:** *Malaria, Prevalence, Children.*

### **H2015-03 Assessment of Stigmatization Patterns among Clients Attending HIV/AIDS Clinic in Kitagata Hospital**

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#### **Abstract**

The aim of this study was to establish the fears and perceived risks with regard to beliefs (stigma) toward patients and people living with HIV and to find out the common practices and relationships among health providers that discriminate against HIV-positive patients in Kitagata Hospital. Using a cross-sectional retrospective study design, data was collected in this study through interpersonal interviews using a structured survey instrument, as well as hospital records. The sample size was calculated using the EPI IFO Statistical Program version 21 based on Kish and Leslie and in total 200 participants was used. The results indicated that the majority of the participants 59(59%) were aware of HIV/AIDS stigmatization. Moreover; 67(67%) of

those affected felt stigmatized while seeking hospital services whilst 39(39%) of those attending the HIV clinic felt discriminated even though the services were mainly free. It was also noted that 83(83%) of the participants stressed that the patient to health worker ration was very low due to stigmatization. A big number of the participants 48(48%) said also noted that the time allocated to each client during counselling depended on the number of the patients who have turned up for service on that day. Basing on this results, it was concluded that despite the awareness most HIV/AIDS patients still felt stigmatized while seeking health care services within the hospital setting hence there is need to have regular seminars on medical ethics to the health workers so as to improve patient confidence. As well the community should be sensitized that HIV/AIDS people are like other people and should not be discriminated.

**Key words:** *Stigma, Patients, HIV/AIDS.*

### **H2015-04 Modelling the effects of peer-educators' campaign on the dynamics of HIV/AIDS in Rwanda**

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#### **Abstract.**

We present a sex-structured model for heterosexual transmission of HIV/AIDS in a community. The model is formulated using integro- equations, which help to account for a time delay due to incubation period of infective before developing AIDS. The sex-structured HIV/AIDS model divides the population into two subpopulations, namely; females and males. Both disease Free equilibrium and the endemic equilibrium points for the model are determined and their stability are examined. We extend the model to assess the effect of peer- educational campaigns in slowing or eradicating the epidemic. The exposure risk of infection after each intervention is obtained. Basic reproductive numbers for these models are computed and compared to assess the effectiveness of each intervention in a community. The models are numerically analyzed to assess the effectiveness of the treatment free measure, namely; peer educational campaign on the transmission dynamics of HIV/AIDS using demographic and epidemiological parameters of Rwanda. The study demonstrates the use of sex-structured HIV/AIDS models in assessing the effectiveness of educational campaigns as a preventive strategy in a heterosexually active population.

AMS (MOS) Subject classifications (2000): 92C60, 92D30, 37N25, 34K25, 34K18

**Key words:** Stability, Basic reproductive numbers, Equilibrium, Bifurcation

### **H2015-05 An Analysis into the Factors Influencing Consumer Preference Choice of Health Facility in Kenyan Health Sector (A Survey of Selected Hospitals in Nyeri Municipality)**

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#### **Abstract**

The environment of the Kenyan health sector has never been so complex and challenging as at present. There are huge influences on hospitals in the current climate. Managers in these hospitals are finding themselves, more than ever before, confronted by increasing pressures and demands which they must seek to understand in order to stay afloat. This research attempted to identify the variables that are important to consumers' preference when it comes to making the choice of the health facility. The study sought to identify specific patient and provider related attributes that influence consumer preference choice of health facility. The study was guided by the following specific objectives:-To establish if the gender and number of children have influence on the choice of health facility, to determine if age, income and insurance type payment source have influence of choice of health facility. To establish this factors the research utilized both quantitative and qualitative research methods relying more upon survey method to arrive at major findings. The general hypothesis for the study suggests that the choice of health care may be influenced by a range of factors relating to the patients as individuals and the providers of such health care. Purposive random sampling was used to select the hospitals in Nyeri then stratified random sampling was used in order to collect data from the target population. The scope of the study was respondents from the two health facilities in Nyeri Municipality. The target population was 280 respondents from the general outpatient of the two health hospitals. Simple random sampling was used to determine the sample size. Questionnaire was used to collect primary data and secondary data was collected from records, journals and internet. Data was then analyzed using SPSS where it gave regression results on the factors influencing the preference of health facilities in Nyeri. The findings of the study were that health insurance; education had positive effect on the choice of private outpatient clinic. The interpretation was that health care offered in public hospitals does not meet their expectations. Education act as a proxy for better knowledge. On the age the respondents were independent. The study recommended that patients gave different preferences on their choice for health care service.